

# NEAR FIELD COMMUNICATION-BASED ORDER PROCESSING

## TECHNICAL FIELD

[0001] This disclosure relates to the field of data processing technologies, and in particular, to near field communication-based order processing.

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## BACKGROUND

[0002] With continuous development of internet technologies, continuous improvement of users' living standards, and continuous upgrading of hardware devices, increasingly more intelligent devices begin to appear in users' lives, greatly facilitating the users' lives. A near field communication (NFC) technology features convenience, security, etc., and therefore is widely applied to fields such as a smart door card and identity recognition. With continuous development of the NFC technology, the NFC technology is gradually increasingly applied to the payment field. Users can quickly and securely perform order payment through NFC. As increasingly more users use the NFC technology for payment, requirements of the users are constantly changing, and how to provide a better NFC service and payment service becomes a focus of increasing attention.

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## SUMMARY

[0003] One or more embodiments of this disclosure provide a first near field communication-based order processing method, including: invoking a near field communication component to establish a near field communication connection in cooperation with a merchant device of a merchant, and receiving, through the near field communication connection, settlement information sent by the merchant device; sending the settlement information to a server, to make an identity credential query and obtain identity credential data corresponding to an identity credential status of a user in the merchant; performing page rendering and display based on the settlement information and the identity credential data delivered by the server, and performing identity credential processing in cooperation with the server based on a displayed identity credential page;

and if a settlement instruction based on an identity credential is detected, redirecting to a merchant subprogram, and sending the settlement information and a user identifier, to perform order confirmation and order payment in the merchant subprogram.

5     **[0004]**     One or more embodiments of this disclosure provide a second near field communication-based order processing method, including: receiving settlement information sent by a user terminal, where the settlement information is sent by a merchant device to the user terminal through an established near field communication connection; making an identity credential query based on a user identifier and a merchant identifier included in the settlement information; obtaining, based on a found identity credential status of a user in a merchant, identity  
10    credential data corresponding to the identity credential status, and delivering the identity credential data to the user terminal; and performing identity credential processing in cooperation with the user terminal, so that the user terminal redirects to a merchant subprogram after detecting a settlement instruction based on an identity credential, to perform order confirmation and order payment.

15    **[0005]**     One or more embodiments of this disclosure provide a third near field communication-based order processing method, including: obtaining settlement information entered through a settlement page, and rendering and displaying a near field payment page of the settlement information; invoking a near field communication component to perform user terminal detection, and establishing a near field communication connection to a detected user terminal; and sending  
20    the settlement information to the user terminal through the near field communication connection, so that the user terminal performs identity credential processing in cooperation with a server based on the settlement information, and redirects to a merchant subprogram based on a settlement instruction of an identity credential of a user in a merchant, to perform order confirmation and order payment.

25    **[0006]**     One or more embodiments of this disclosure provide a first near field communication-based order processing apparatus, including: a settlement information receiving module, configured to: invoke a near field communication component to establish a near field communication connection in cooperation with a merchant device of a merchant, and receive, through the near field communication connection, settlement information sent by the merchant  
30    device; a settlement information sending module, configured to send the settlement information to a server, to make an identity credential query and obtain identity credential data corresponding to

an identity credential status of a user in the merchant; an identity credential page display module, configured to: perform page rendering and display based on the settlement information and the identity credential data delivered by the server, and perform identity credential processing in cooperation with the server based on a displayed identity credential page; and a subprogram redirection module that is run if a settlement instruction based on an identity credential is detected, where the subprogram redirection module is configured to: redirect to a merchant subprogram, and send the settlement information and a user identifier, to perform order confirmation and order payment in the merchant subprogram.

**[0007]** One or more embodiments of this disclosure provide a second near field communication-based order processing apparatus, including: a settlement information receiving module, configured to receive settlement information sent by a user terminal, where the settlement information is sent by a merchant device to the user terminal through an established near field communication connection; an identity credential query module, configured to make an identity credential query based on a user identifier and a merchant identifier included in the settlement information; an identity credential data sending module, configured to: obtain, based on a found identity credential status of a user in a merchant, identity credential data corresponding to the identity credential status, and deliver the identity credential data to the user terminal; and an identity credential processing module, configured to perform identity credential processing in cooperation with the user terminal, so that the user terminal redirects to a merchant subprogram after detecting a settlement instruction based on an identity credential, to perform order confirmation and order payment.

**[0008]** One or more embodiments of this disclosure provide a third near field communication-based order processing apparatus, including: a settlement information obtaining module, configured to: obtain settlement information entered through a settlement page, and render and display a near field payment page of the settlement information; a near field communication connection establishment module, configured to: invoke a near field communication component to perform user terminal detection, and establish a near field communication connection to a detected user terminal; and a settlement information sending module, configured to send the settlement information to the user terminal through the near field communication connection, so that the user terminal performs identity credential processing in cooperation with a server based on the settlement information, and redirects to a merchant subprogram based on a settlement

instruction of an identity credential of a user in a merchant, to perform order confirmation and order payment.

**[0009]** One or more embodiments of this disclosure provide a first near field communication-based order processing device, including: a processor; and a storage, configured to store computer-executable instructions. When the computer-executable instructions are executed, the processor is enabled to perform the following operations: invoking a near field communication component to establish a near field communication connection in cooperation with a merchant device of a merchant, and receiving, through the near field communication connection, settlement information sent by the merchant device; sending the settlement information to a server, to make an identity credential query and obtain identity credential data corresponding to an identity credential status of a user in the merchant; performing page rendering and display based on the settlement information and the identity credential data delivered by the server, and performing identity credential processing in cooperation with the server based on a displayed identity credential page; and if a settlement instruction based on an identity credential is detected, redirecting to a merchant subprogram, and sending the settlement information and a user identifier, to perform order confirmation and order payment in the merchant subprogram.

**[0010]** One or more embodiments of this disclosure provide a second near field communication-based order processing device, including: a processor; and a storage, configured to store computer-executable instructions. When the computer-executable instructions are executed, the processor is enabled to perform the following operations: receiving settlement information sent by a user terminal, where the settlement information is sent by a merchant device to the user terminal through an established near field communication connection; making an identity credential query based on a user identifier and a merchant identifier included in the settlement information; obtaining, based on a found identity credential status of a user in a merchant, identity credential data corresponding to the identity credential status, and delivering the identity credential data to the user terminal; and performing identity credential processing in cooperation with the user terminal, so that the user terminal redirects to a merchant subprogram after detecting a settlement instruction based on an identity credential, to perform order confirmation and order payment.

**[0011]** One or more embodiments of this disclosure provide a third near field communication-based order processing device, including: a processor; and a storage, configured to store computer-

executable instructions. When the computer-executable instructions are executed, the processor is enabled to perform the following operations: obtaining settlement information entered through a settlement page, and rendering and displaying a near field payment page of the settlement information; invoking a near field communication component to perform user terminal detection, and establishing a near field communication connection to a detected user terminal; and sending the settlement information to the user terminal through the near field communication connection, so that the user terminal performs identity credential processing in cooperation with a server based on the settlement information, and redirects to a merchant subprogram based on a settlement instruction of an identity credential of a user in a merchant, to perform order confirmation and order payment.

**[0012]** One or more embodiments of this disclosure provide a first storage medium, configured to store computer-executable instructions. When the computer-executable instructions are executed by a processor, the following procedure is implemented: invoking a near field communication component to establish a near field communication connection in cooperation with a merchant device of a merchant, and receiving, through the near field communication connection, settlement information sent by the merchant device; sending the settlement information to a server, to make an identity credential query and obtain identity credential data corresponding to an identity credential status of a user in the merchant; performing page rendering and display based on the settlement information and the identity credential data delivered by the server, and performing identity credential processing in cooperation with the server based on a displayed identity credential page; and if a settlement instruction based on an identity credential is detected, redirecting to a merchant subprogram, and sending the settlement information and a user identifier, to perform order confirmation and order payment in the merchant subprogram.

**[0013]** One or more embodiments of this disclosure provide a second storage medium, configured to store computer-executable instructions. When the computer-executable instructions are executed by a processor, the following procedure is implemented: receiving settlement information sent by a user terminal, where the settlement information is sent by a merchant device to the user terminal through an established near field communication connection; making an identity credential query based on a user identifier and a merchant identifier included in the settlement information; obtaining, based on a found identity credential status of a user in a merchant, identity credential data corresponding to the identity credential status, and delivering

the identity credential data to the user terminal; and performing identity credential processing in cooperation with the user terminal, so that the user terminal redirects to a merchant subprogram after detecting a settlement instruction based on an identity credential, to perform order confirmation and order payment.

5   **[0014]**   One or more embodiments of this disclosure provide a third storage medium, configured to store computer-executable instructions. When the computer-executable instructions are executed by a processor, the following procedure is implemented: obtaining settlement information entered through a settlement page, and rendering and displaying a near field payment page of the settlement information; invoking a near field communication component to perform  
10   user terminal detection, and establishing a near field communication connection to a detected user terminal; and sending the settlement information to the user terminal through the near field communication connection, so that the user terminal performs identity credential processing in cooperation with a server based on the settlement information, and redirects to a merchant subprogram based on a settlement instruction of an identity credential of a user in a merchant, to  
15   perform order confirmation and order payment.

## **BRIEF DESCRIPTION OF DRAWINGS**

**[0015]**   To describe the technical solutions in one or more embodiments of this disclosure or in the conventional technology more clearly, the following briefly describes the accompanying drawings needed for describing the embodiments or the conventional technology. Clearly, the  
20   accompanying drawings in the following descriptions merely show some embodiments of this disclosure, and a person of ordinary skill in the art can still derive other drawings from these accompanying drawings without creative efforts.

**[0016]**   FIG. 1 is a schematic diagram of an implementation environment of a near field communication-based order processing method according to one or more embodiments of this  
25   disclosure;

**[0017]**   FIG. 2 is a flowchart of a first near field communication-based order processing method according to one or more embodiments of this disclosure;

**[0018]**   FIG. 3(a) is a schematic diagram of a first settlement page of a merchant device according to one or more embodiments of this disclosure;

- [0019] FIG. 3(b) is a schematic diagram of a second settlement page of a merchant device according to one or more embodiments of this disclosure;
- [0020] FIG. 3(c) is a schematic diagram of a third settlement page of a merchant device according to one or more embodiments of this disclosure;
- 5 [0021] FIG. 4 is a schematic diagram of a near field payment page of a merchant device according to one or more embodiments of this disclosure;
- [0022] FIG. 5 is a schematic diagram of a scan-to-pay page of a merchant device according to one or more embodiments of this disclosure;
- [0023] FIG. 6 is a schematic diagram of a loading page of a user terminal according to one or  
10 more embodiments of this disclosure;
- [0024] FIG. 7 is a schematic diagram of a credential interaction page of a user terminal according to one or more embodiments of this disclosure;
- [0025] FIG. 8(a) is a schematic diagram of a credential registration page of a user terminal according to one or more embodiments of this disclosure;
- 15 [0026] FIG. 8(b) is a schematic diagram of an identity credential page of a user terminal according to one or more embodiments of this disclosure;
- [0027] FIG. 9 is a schematic diagram of a product page of a user terminal according to one or more embodiments of this disclosure;
- [0028] FIG. 10 is a processing timing diagram of a near field communication-based order  
20 processing method applied to a registered member payment scenario according to one or more embodiments of this disclosure;
- [0029] FIG. 11 is a processing timing diagram of a near field communication-based order processing method applied to an unregistered member payment scenario according to one or more embodiments of this disclosure;
- 25 [0030] FIG. 12 is a processing flowchart of a second near field communication-based order processing method according to one or more embodiments of this disclosure;
- [0031] FIG. 13 is a processing flowchart of a third near field communication-based order processing method according to one or more embodiments of this disclosure;
- [0032] FIG. 14 is a schematic diagram of an embodiment of a first near field communication-  
30 based order processing apparatus according to one or more embodiments of this disclosure;
- [0033] FIG. 15 is a schematic diagram of an embodiment of a second near field

communication-based order processing apparatus according to one or more embodiments of this disclosure;

[0034] FIG. 16 is a schematic diagram of an embodiment of a third near field communication-based order processing apparatus according to one or more embodiments of this disclosure;

5 [0035] FIG. 17 is a schematic structural diagram of a first near field communication-based order processing device according to one or more embodiments of this disclosure;

[0036] FIG. 18 is a schematic structural diagram of a second near field communication-based order processing device according to one or more embodiments of this disclosure; and

[0037] FIG. 19 is a schematic structural diagram of a third near field communication-based  
10 order processing device according to one or more embodiments of this disclosure.

## DESCRIPTION OF EMBODIMENTS

[0038] To make a person skilled in the art better understand the technical solutions in one or more embodiments of this disclosure, the following clearly and comprehensively describes the technical solutions in the one or more embodiments of this disclosure with reference to the  
15 accompanying drawings in the one or more embodiments of this disclosure. Clearly, the described embodiments are merely some but not all of the embodiments of this disclosure. All other embodiments obtained by a person of ordinary skill in the art based on the one or more embodiments of this disclosure without creative efforts shall fall within the protection scope of this disclosure.

20 [0039] The near field communication-based order processing method provided in one or more embodiments of this disclosure can be applied to an implementation environment of order payment. With reference to FIG. 1, the implementation environment includes at least a user terminal 101. The user terminal 101 can be a smartphone, a tablet computer, an e-book reader, a wearable device, a device that performs information exchange based on augmented reality (AR)/virtual reality (VR),  
25 etc. The user terminal 101 is configured to: establish a near field communication connection to a merchant device 103 to obtain settlement information, interact with a server 102 to perform identity credential processing, and redirect to a merchant mini-program to perform order confirmation and order payment. A client of an application to which the merchant mini-program belongs can be configured in the user terminal 101, to perform identity credential processing and

redirect to the merchant subprogram in the application. In addition, the user terminal 101 can further perform order payment in cooperation with a merchant server 104 and the server 102.

**[0040]** The implementation environment further includes at least the server 102. The server 102 can be one or more servers, a server cluster including several servers, or a cloud server of a cloud computing platform. The server 102 can be configured to store identity credential data of each user in a merchant, to query an identity credential status of the user in the merchant, and perform identity credential processing in cooperation with the user terminal 101. The server 102 can further perform order payment processing in cooperation with the merchant server 104. In addition, some functions of the server 102 can be implemented by the merchant server 104. For example, the merchant server 104 can store identity credential data and/or an identity credential status of each user in a merchant, and the server 102 can send a query request to the merchant server 104, so that the merchant server 104 queries the identity credential data and/or the identity credential status of the user in the merchant, and returns the identity credential data and/or the identity credential status to the server 102.

**[0041]** The implementation environment further includes at least the merchant device 103. The merchant device 103 can be a terminal device configured with an NFC component and a screen. The merchant device 103 is configured to: obtain settlement information entered externally, establish a near field communication connection to the user terminal 101, and transmit the settlement information to the user terminal 101. The settlement information can be entered after a merchant member interacts with the merchant device 103.

**[0042]** The implementation environment can further include the merchant server 104. The merchant server 104 can be one or more servers, a server cluster including several servers, or a cloud server of a cloud computing platform. The merchant server 104 can be configured to carry running of the merchant subprogram, that is, the merchant server 104 can perform order confirmation and order payment in cooperation with the user terminal 101. In addition, the merchant server 104 can further perform order payment in cooperation with the server 102, that is, the merchant server 104 sends order information to the server 102 after the user terminal 101 performs order conformation, and the server 102 performs payment processing based on the order information. Furthermore, the merchant server 104 can store identity credential data and/or an identity credential status of each user in a merchant.

**[0043]** In this implementation environment, in a process of performing order payment, the

merchant device 103 first obtains settlement information entered by a merchant member, renders and displays a payment guide page, invokes a near field communication component to perform user terminal detection, establishes a near field communication connection to the detected user terminal 101, and sends the settlement information to the user terminal 101 through the near field communication connection. The user terminal 101 forwards the settlement information to the server 102. The server 102 queries an identity credential status of a user in a merchant based on a user identifier and a merchant identifier in the settlement information, obtains identity credential data corresponding to the identity credential status, and delivers the identity credential data to the user terminal 101. The user terminal 101 renders an identity credential page based on the settlement information and the identity credential data, displays the identity credential page, performs identity credential processing in cooperation with the server 102, and after detecting a settlement instruction based on an identity credential, redirects to a merchant subprogram, and sends the settlement information and the user identifier to the merchant server 104. The merchant server 104 performs order confirmation and order payment in cooperation with the user terminal 101.

**[0044]** One or more embodiments of a first near field communication-based order processing method provided in this disclosure are as follows:

**[0045]** With reference to FIG. 2, the near field communication-based order processing method provided in this embodiment can be applied to a user terminal, and specifically includes step S202 to step S208.

**[0046]** Step S202: Invoke a near field communication component to establish a near field communication connection in cooperation with a merchant device of a merchant, and receive, through the near field communication connection, settlement information sent by the merchant device.

**[0047]** In actual application, there is a situation in which the merchant has a large site, and a settlement region and/or a checkout region are/is overcrowded. For example, a large supermarket and a large shopping mall have an excessively large area and a fixed payment region, and a user needs to queue after shopping. In view of this, in this embodiment, the settlement information is entered into the handheld wireless merchant device, and the settlement information is transmitted to the user terminal through the NFC connection, so that the user terminal performs order confirmation and order payment in a merchant subprogram, to implement quick order creation,

order confirmation, and order payment without a checkout device. Further, the user terminal can further query an identity credential of the user in the merchant in cooperation with a server, and submit a settlement instruction based on the identity credential, to implement quick member payment without a fixed checkout region.

5   **[0048]**   In this embodiment, the merchant device is a handheld wireless device, and is configured to: receive settlement information or product information entered by a merchant member, and send the settlement information to the user terminal through the NFC connection. Specifically, the merchant device can include an NFC device configured with a display component and an NFC component. The merchant device can be further configured with a client of a third-  
10   party application. The merchant device inputs the settlement information through the installed third-party application. For example, the merchant device can be configured with a client of a payment application, and the merchant device inputs the settlement information through the payment application. The merchant device can render a near field payment page through the third-party application, and send the settlement information to the user terminal, that is, the user terminal  
15   can establish an NFC connection to the merchant device in the third-party application. Optionally, the third-party application renders the near field payment page by invoking a near field payment interface, and sends the settlement information to the user terminal.

**[0049]**   Further, the merchant device can be a network-connected device connected to the internet. The merchant device can interact with a merchant server to obtain settlement information  
20   of each product for selection and input by the merchant member, and send the settlement information to the user terminal through the third-party application via the internet. Further, the third-party application can invoke, through a network connection of the merchant device, a server to which the third-party application belongs to render the near field payment page, and the merchant device is only configured to receive and display the near field payment page. In addition,  
25   the merchant device can be an offline NFC device, and the settlement information of each product is stored in the merchant device for selection and input by the merchant member. Further, the third-party application is an offline application, and the third-party application invokes the near field payment interface, renders the near field payment page through a rendering component of the merchant device, and displays the near field payment page.

30   **[0050]**   In specific implementation, the merchant member first interacts with the merchant device to enter settlement information. After receiving the settlement information, the merchant

device renders and displays a near field payment page of the settlement information, invokes an NFC component to perform user terminal detection, and when detecting that there is a user terminal in an NFC broadcast range, invokes the NFC component to establish an NFC connection to the detected user terminal, and sends the settlement information to the user terminal through the

5 NFC connection. The user terminal invokes the near field communication component to establish an NFC connection in cooperation with the merchant device, and receives, through the NFC connection, the settlement information transmitted by the merchant device.

**[0051]** In this embodiment, the settlement information is settlement information of a product entered by the merchant member, and can be specifically product details information, a settlement

10 amount of the product, merchant information, receipt information of the product, etc., or can be a combination of two or more pieces of information in the above-mentioned information. This is not limited in this embodiment. Optionally, the settlement information includes product information and a merchant identifier. The product information includes the product details information and/or the settlement amount.

**[0052]** Specifically, the settlement information can be entered by the merchant member through a settlement page displayed on the merchant device. After obtaining the settlement information, the merchant device can further render and display the near field payment page of the settlement information, that is, the merchant device obtains the settlement information entered through the settlement page, and renders and displays the near field payment page of the settlement

20 information. As shown in FIG. 3(a), FIG. 3(b), FIG. 3(c), and FIG. 4, the merchant member triggers a "Create new product order" button 301 on a first settlement page shown in FIG. 3(a), to enter a second settlement page shown in FIG. 3(b), enters the product information of the product and the merchant identifier of the merchant on the second settlement page, and then triggers a "Submit" button 302, to enter a third settlement page shown in FIG. 3(c). After the merchant member triggers

25 an "Initiate collection" button 303 on the third settlement page, a near field payment page shown in FIG. 4 is displayed, to direct the user terminal to establish a near field communication connection to the merchant device. In addition, the merchant identifier can be written into the settlement page through the merchant device, that is, the merchant device generates a settlement page that carries the merchant identifier, and the merchant member enters the product information

30 on the settlement page, to obtain the settlement information on the settlement page.

**[0053]** In a specific execution process, when the merchant device displays the near field

payment page, or after the merchant device displays the near field payment page, the near field communication component can be further invoked to perform user terminal detection, and an NFC connection to the detected user terminal is established, to send the settlement information to the user terminal. Optionally, the near field communication connection is established after the merchant device obtains the settlement information entered through the settlement page and renders and displays the near field payment page of the settlement information. Optionally, the near field communication connection is established after the merchant device detects the user terminal by invoking the near field communication component; and the near field communication component is invoked after the settlement information entered through the settlement page is obtained and the near field payment page of the settlement information is rendered.

**[0054]** In addition, when the merchant device does not detect the user terminal by invoking the near field communication component, or when the merchant device fails to establish an NFC connection to the user terminal by invoking the near field communication component, a near field communication reminder page can be displayed. The near field communication reminder page can be displayed after a display time of the near field payment page expires, to remind the user to turn on an NFC switch and then approach the merchant device to implement an NFC connection. Specifically, the merchant device can detect, through a detection component such as an infrared component or an image capture component, whether there is a user terminal close to the merchant device. When it is detected that there is a user terminal close to the merchant device and the NFC connection fails, the near field communication reminder page can be displayed. Optionally, after detecting the user terminal, the detection component of the merchant device invokes the near field communication component to establish a near field communication connection to the detected user terminal. If the connection fails, the near field communication reminder page is displayed.

**[0055]** It should be noted that the near field payment page displayed by the merchant device can be replaced with a scan-to-pay page. Specifically, after detecting a switching instruction of the near field payment page, the merchant device renders and switches to a scan-to-pay page that carries a payment code and an order amount. As shown in FIG. 5, after the merchant member triggers a switching button 501 of the near field payment page, the merchant device renders and switches to the scan-to-pay page that carries the payment code and the order amount. Further, when the merchant device displays the scan-to-pay page, the user terminal can scan the payment code, and redirect to the merchant subprogram based on a scanning result, to perform order confirmation

and order payment in the merchant subprogram. In an optional implementation provided in this embodiment, the method further includes: scanning the payment code, decoding the payment code, and based on a decoding result, redirecting to the merchant subprogram, and sending the settlement information and the user identifier, to perform order confirmation and order payment in the merchant subprogram.

**[0056]** Step S204: Send the settlement information to a server, to make an identity credential query and obtain identity credential data corresponding to an identity credential status of a user in the merchant.

**[0057]** In this embodiment, in a manner in which the user terminal cooperates with the server, the settlement information is sent to the server, so that the server determines, based on the identity credential status of the user in the merchant, whether the user is a registered user of the merchant, and the user performs order payment based on an identity credential in the merchant, to implement payment based on the identity credential outside a settlement region.

**[0058]** In specific implementation, the user terminal sends the settlement information sent by the merchant device to the server. The server receives the settlement information sent by the user terminal, makes an identity credential query based on the user identifier and the merchant identifier included in the settlement information, obtains, based on the found identity credential status of the user in the merchant, the identity credential data corresponding to the identity credential status, and delivers the identity credential data to the user terminal. Specifically, the server can query, in a registered user table of the merchant based on the merchant identifier, an identity credential status of a user corresponding to the user identifier, and obtain identity credential data corresponding to the identity credential status.

**[0059]** In this embodiment, the identity credential is an identity credential registered by the user with the merchant. Specifically, the identity credential can be a membership identity registered by the user with the merchant. Correspondingly, when the user registers a membership identity of the merchant, the identity credential status can be a membership identity state of the user in the merchant, and the identity credential data can be membership points, a membership balance, a membership group owner status, a membership discount benefit, etc. of the user in the merchant. In addition, when the user does not register a membership identity of the merchant, the identity credential status can be an unregistered membership identity state of the user in the merchant, and the identity credential data can be identity credential registration data of the merchant, for example,

membership promotion information of the merchant. Optionally, if the identity credential status is an unregistered state, the identity credential data includes the identity credential registration data of the merchant.

5     **[0060]**     In a specific identity credential query process, the server can query, based on the user identifier and the merchant identifier, whether there is a user corresponding to the user identifier in the merchant, and determine the identity credential status of the user in the merchant based on a query result. In an optional implementation provided in this embodiment, the making an identity credential query includes: querying, based on the user identifier of the user and the merchant identifier included in the settlement information, whether the user performs identity credential registration with the merchant; and if yes, determining that the identity credential status is a registered state; or if no, determining that the identity credential status is an unregistered state.

10     **[0061]**     Specifically, the server can store a registered user table of each merchant. The server determines a registered user table of the merchant based on the merchant identifier, and queries, in the registered user table of the merchant, whether there is a registered user corresponding to the user identifier; and if there is a registered user corresponding to the user identifier, determines that the identity credential status of the user is the registered state; or if there is no registered user corresponding to the user identifier, determines that the identity credential status of the user is the unregistered state.

20     **[0062]**     In addition, merchants can store respective registered user tables in respective corresponding merchant servers. The server can invoke a query interface of a corresponding merchant server based on the merchant identifier to query a registered user table, query, in the registered user table, whether there is a registered user corresponding to the user identifier, and determine the identity credential status of the user based on a query result. In another optional implementation provided in this embodiment, the making an identity credential query includes:

25     invoking, based on the merchant identifier, a query interface of the merchant corresponding to the merchant identifier to make a registered user query, and determining, based on a query result, whether the user corresponding to the user identifier performs identity credential registration with the merchant; and if yes, determining that the identity credential status is the registered state; or if no, determining that the identity credential status is the unregistered state.

30     **[0063]**     In a specific execution process, the merchant can issue various identity benefits and/or discount benefits to the registered user. The merchant can further invite the registered user to enter

a registered user group to manage and maintain the registered user. For the registered user, the server can use credential information of an identity credential of the user, an identity benefit associated with the identity credential, and the registered user group, and/or a status of the user for the registered user group as identity credential data. In an optional implementation provided in this embodiment, if the identity credential status is the registered state, the obtaining identity credential data corresponding to an identity credential status of a user in the merchant includes: obtaining credential information of the identity credential registered by the user with the merchant and an identity benefit associated with the identity credential; and determining a registered user group created by the merchant for a registered user whose identity credential is registered.

5 [0064] In addition, for an unregistered user, the merchant can deliver a to-be-claimed identity benefit and/or discount benefit, namely, a benefit that can be obtained after the user registers with the merchant. For the unregistered user, the server can use the identity credential registration data of the merchant as the identity credential data, and send the identity credential data to the user terminal.

15 [0065] It should be noted that the user terminal can alternatively send only the merchant identifier included in the settlement information to the server. The server can make an identity credential query based on the received merchant identifier and the user identifier of the user to which the user terminal belongs. That is, step S204 can be replaced with the following: Send the merchant identifier to the server, to make an identity credential query and obtain the identity credential data corresponding to the identity credential status of the user in the merchant.

20 [0066] Step S206: Perform page rendering and display based on the settlement information and the identity credential data delivered by the server, and perform identity credential processing in cooperation with the server based on a displayed identity credential page.

[0067] In this embodiment, a payment page corresponding to the identity credential is rendered by using the settlement information sent by the merchant device and the identity credential data delivered by the server and is displayed, to transfer a checkout function of the merchant to the user terminal for implementation, and perform order creation, order confirmation, and order payment through the user terminal. The merchant device transmits the settlement information, to implement quick order payment in a scenario such as retail, a commercial supermarket, or a large shopping mall, and avoid an efficiency problem caused due to an excessively concentrated settlement or checkout region.

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**[0068]** In specific implementation, the identity credential page is rendered and displayed based on the settlement information sent by the merchant device and the identity credential data delivered by the server, and identity credential processing is performed in cooperation with the server based on a triggering instruction of the user for the displayed identity credential page. Specifically, the user can trigger a registration control configured on the identity credential page, to register the identity credential with the merchant. The user can further trigger a login control configured on the identity credential page, to perform login processing of the identity credential. The user can further trigger a claim control configured on the identity credential page, to claim a benefit issued by the merchant. The user can further trigger a cancellation control configured on the identity credential page, to close the identity credential page to enter an order confirmation page. The identity credential page can be displayed in the third-party application. For example, the user terminal establishes an NFC connection to the merchant device in the payment application, and renders and displays the identity credential page in the payment application.

**[0069]** In a specific execution process, when performing page rendering and display, the user terminal needs to exchange data with the server and invoke each component, for example, a rendering component, and needs some processing time to perform rendering and display processing. In view of this, a loading page can be rendered and displayed, to indicate to the user that the user terminal is performing rendering and display processing. As shown in FIG. 6, the loading page is first displayed before the identity credential page is displayed. In addition, different user terminals may use different operating systems. For different operating systems, the loading page can be rendered and displayed, or a display reminder of the identity credential page can be displayed on a locked screen or a home screen, so that the user triggers a display button to display the identity credential page.

**[0070]** In a specific execution process, different identity credential pages can be rendered based on identity credential statuses of different users. For a user in the registered state, the identity credential page can be rendered based on the settlement amount included in the settlement information, the identity credential information, the identity benefit, etc., and identity credential processing is performed in cooperation with the server based on different triggering instructions of the user. For the unregistered user, the identity credential page can be rendered based on the settlement amount included in the settlement information and the identity credential registration data of the merchant, and identity credential processing is performed in cooperation with the server

based on different triggering instructions of the user. The following separately describes identity credential pages in the registered state and the unregistered state.

**[0071]** (1) Registered state

**[0072]** For a user in the registered state, a membership benefit that can be claimed, a remaining  
5 identity benefit of a membership account, credential information corresponding to a membership level, a settlement amount, etc. can be displayed on the identity credential page, so that the user quickly perceives the identity credential data. In an optional implementation provided in this embodiment, the performing page rendering and display includes: rendering a credential  
10 settlement information, the credential information, and the identity benefit, and displaying the credential interaction page.

**[0073]** Optionally, a login control, a claim control of the identity benefit, and/or a participation control of the user group are/is configured on the credential interaction page.

**[0074]** As shown in FIG. 7, a login button 701, a coupon claim button 702, and a member  
15 group participation button 703 are configured on the credential interaction page, and the credential interaction page further displays the settlement amount and points and a balance of the user in the membership account.

**[0075]** In a specific execution process, the user can trigger different controls configured on the identity credential page, and send a request corresponding to the control to the server, to perform  
20 corresponding identity credential processing in cooperation with the server. In an optional implementation provided in this embodiment, the performing identity credential processing in cooperation with the server includes: if the participation control is triggered, generating a participation request and sending the participation request to the server, to add the user to the registered user group; if the claim control is triggered, sending a claim request of the identity  
25 benefit to the server, to associate the identity benefit with the identity credential, or allocate the identity benefit to a payment account of the user; or if the login control is triggered, performing login processing of the identity credential in cooperation with the server.

**[0076]** Optionally, the settlement instruction is generated after the login processing succeeds.

**[0077]** In the above-mentioned example, after triggering the login button 701, the user submits  
30 a login instruction to the server, and the server invokes an access interface of the merchant subprogram based on the login instruction, so that the user terminal enters the merchant

subprogram based on the identity credential. That is, the user submits a settlement instruction based on the identity credential to the user terminal by triggering the login button 701. After the user triggers the claim button 702, a claim request of the identity benefit is generated and sent to the server, and the server associates the identity benefit with the identity credential of the user in the merchant, or adds the identity benefit to a payment account of the user in the payment application. After the user triggers the participation button 703, a participation request is generated and sent to the server, and the server adds the user to the member group created by the merchant in the payment application.

**[0078]** In addition, a login cancellation control can be further configured on the credential interaction page. After the user triggers the login cancellation control, the user terminal performs identity credential processing in cooperation with the server, so that the user enters the merchant subprogram based on the unregistered state. In the above-mentioned example, after the user triggers a login cancellation button 704, a login cancellation instruction is submitted to the server, and the server invokes the access interface of the merchant subprogram based on the login cancellation instruction, so that the user terminal enters the merchant subprogram based on the unregistered state.

**[0079]** (2) Unregistered state

**[0080]** For a user in the unregistered state, a to-be-claimed membership benefit and a settlement amount can be displayed on the identity credential page, so that the user quickly perceives a benefit that can be obtained after identity credential registration is performed. In an optional implementation provided in this embodiment, the performing page rendering and display includes: rendering a credential registration page that includes the settlement amount included in the settlement information and the identity credential registration data, and displaying the credential registration page.

**[0081]** Optionally, an identity credential registration control is configured on the credential registration page.

**[0082]** As shown in FIG. 8(a), the credential registration page displays the settlement amount and the benefit that can be obtained after identity credential registration is performed. An identity credential registration button 801 is further configured on the credential registration page.

**[0083]** Further, after the user triggers the registration control configured on the credential registration page, credential registration processing can be performed in cooperation with the

server, the identity benefit can be associated with the identity credential, and the identity credential page can be rendered and displayed based on the identity benefit, so that the user perceives identity credential registration. In an optional implementation provided in this embodiment, the performing identity credential processing in cooperation with the server includes: if the registration control  
5 configured on the credential registration page is triggered, sending a credential registration request to the server, to perform identity credential registration of the user with the merchant to obtain the identity credential; and receiving an identity benefit that is associated with the identity credential and that is delivered by the server, and rendering and displaying an identity credential page based on the identity benefit.

10 **[0084]** Optionally, the settlement instruction is generated after a settlement control configured on the identity credential page is triggered.

**[0085]** Specifically, after the user triggers the registration control configured on the credential registration page, the credential registration request is sent to the server, and the server can add the user to a registered user table stored by the merchant in the server, or the server invokes a  
15 registration interface of the merchant server to perform identity credential registration of the user, and issues the identity benefit associated with the identity credential to the user terminal, to issue a merchant discount benefit to the identity credential, and issue a payment discount benefit to a payment account.

**[0086]** In a specific execution process, after the user terminal displays the identity credential page, the user can trigger a control displayed on the identity credential page to perform identity credential processing in cooperation with the server. Specifically, a participation control configured on the identity credential page can be triggered for addition to a registered user group, and a claim control of the identity benefit can be further triggered to claim the benefit. In an optional implementation provided in this embodiment, after the identity credential page is rendered  
25 and displayed based on the identity benefit, the method further includes: if the participation control that is of the registered user group and that is configured on the identity credential page is triggered, adding the user to the registered user group in cooperation with the server; or if the claim control that is of the identity benefit and that is configured on the identity credential page is triggered, associating the identity benefit with the identity credential in cooperation with the server, or  
30 allocating the identity benefit to a payment account of the user.

**[0087]** As shown in FIG. 8(b), the user triggers a member group participation button 802

configured on the identity credential page to submit a group participation instruction to the server, and the server adds the user to a registered user group created by the merchant in the payment application. The user triggers an identity benefit claim button 803 configured on the identity credential page to submit a benefit claim instruction to the server, and the server associates the merchant discount benefit with the identity credential of the user in the merchant based on a type of the benefit, or allocates the payment discount benefit to the payment account of the user. The user can further trigger a payment button 804 configured on the identity credential page, so that the user redirects to the merchant subprogram, and performs order confirmation and order payment based on the identity credential, that is, the user submits a settlement instruction based on the identity credential to the user terminal by triggering the payment button 804.

**[0088]** It should be noted that after the user in the unregistered state completes identity credential registration with the merchant, the user terminal can display the identity credential page in the registered state. For specific content displayed on the identity credential page and a configured control, references can be made to the credential interaction page in the registered state. For a specific interaction process on the identity credential page, references can be made to the interaction process on the credential interaction page. Details are not described herein again in this embodiment.

**[0089]** In addition, a login cancellation control can be further configured on the identity credential page. After the user triggers the login cancellation control, the user terminal performs identity credential processing in cooperation with the server, so that the user enters the merchant subprogram based on the unregistered state. In the above-mentioned example, after the user triggers a login cancellation button 805, a login cancellation instruction is submitted to the server, and the server invokes the access interface of the merchant subprogram based on the login cancellation instruction, so that the user terminal enters the merchant subprogram based on the unregistered state.

**[0090]** It should be noted that the user terminal can alternatively perform page rendering and display only based on the settlement amount included in the settlement information and the identity credential data. That is, step S206 can be replaced with the following: Perform page rendering and display based on the settlement amount and the identity credential data delivered by the server, and perform identity credential processing in cooperation with the server based on the displayed identity credential page.

**[0091]** Step S208: If a settlement instruction based on an identity credential is detected, redirect to a merchant subprogram, and send the settlement information and a user identifier, to perform order confirmation and order payment in the merchant subprogram.

**[0092]** In this embodiment, an available benefit is displayed to the user before payment is performed by the user, and a benefit obtained after identity credential registration is performed is displayed to the unregistered user. This avoids a complex process in which the user first claims the benefit and then performs order processing, and enables the user to intuitively perceive an identity benefit that can be enjoyed after identity registration is performed, thereby improving order processing efficiency and improving user perception. In addition, in this embodiment, order processing that is not limited by a checkout region is implemented through the wireless merchant device, increasing an order processing mode.

**[0093]** In this embodiment, the merchant subprogram is a subprogram that is configured by the merchant in an application and that is used to perform order creation, order confirmation, and order payment of a product order. Specifically, the merchant subprogram can be a subprogram configured by the merchant in the third-party application, for example, a subprogram configured in the payment application, to redirect from the identity credential page displayed by the third-party application to the merchant subprogram in the third-party application.

**[0094]** In specific implementation, when the settlement instruction that is based on the identity credential and that is submitted by the user on the identity credential page is detected, the settlement information and the user identifier are sent to the merchant subprogram, so that the merchant subprogram generates an order page, and redirection from the identity credential page to the order page of the merchant subprogram is implemented, to perform order confirmation and order payment processing in the merchant subprogram.

**[0095]** In a specific execution process, after receiving the settlement information and the user identifier that are sent by the user terminal, the merchant subprogram can create, based on the settlement information and the user identifier, a product page of a product included in the settlement information, settle the product based on the identity benefit associated with the identity credential of the user, to obtain a settlement amount, and after obtaining an order placement instruction submitted by the user on the product page, create a product order based on the settlement amount, and generate an order payment instruction to perform order payment. In an optional implementation provided in this embodiment, the performing order confirmation in the

merchant subprogram includes: settling the product information included in the settlement information based on the identity benefit associated with the identity credential, to obtain a settlement result; and if an order placement instruction is detected, creating an order based on the settlement information and the settlement result, and generating an order payment instruction to perform order payment.

5 [0096] As shown in FIG. 9, a product page is generated based on the product information included in the settlement information, and a product amount is settled based on the identity benefit associated with the identity credential of the user, to obtain a settlement result. The user can trigger an order placement button 901 configured on the product page to submit an order placement instruction, so that the merchant subprogram creates a product order based on the settlement result and the product information, and generates an order payment instruction to perform order payment processing.

10 [0097] Further, a product included in the settlement information can alternatively be delivered to the user through logistics delivery. In view of this, the user can further add delivery information of the product to a product page, and a settlement result is jointly calculated based on a product amount included in the settlement information, a delivery fee, and the identity benefit. In addition, the product included in the settlement information may be a product given to the user, that is, the settlement result is calculated based on the delivery fee and the identity benefit. In an optional implementation provided in this embodiment, the performing order confirmation in the merchant subprogram includes: settling the product information included in the settlement information based on the identity benefit associated with the identity credential, to obtain a settlement result, and/or obtaining delivery information entered by using the merchant subprogram; and if an order placement instruction is detected, creating an order based on the settlement information and the settlement result and/or the delivery information, and generating an order payment instruction to perform order payment.

20 [0098] In the above-mentioned example, the user can further trigger an "Add new delivery address" button 902 configured on the product page to add the delivery information, and calculate a settlement result including the delivery fee, so that the merchant subprogram creates a product order based on the settlement result, the product information, and the delivery address, and generates an order payment instruction to perform order payment processing.

30 [0099] In a specific order payment process, the merchant subprogram can invoke a payment

interface based on the generated order payment instruction to perform order payment. Specifically, a payment interface of the third-party application can be invoked to perform order payment. The third-party application can be the above-mentioned application that establishes the NFC connection and displays the identity credential page, for example, the payment application. In an optional implementation provided in this embodiment, the performing order payment in the merchant subprogram includes: invoking the payment interface based on the order payment instruction generated by the merchant subprogram to perform order payment.

**[0100]** Optionally, the payment interface performs the following operation in response to the interface invocation: performing order payment to the merchant based on payment information carried in the order payment instruction, or querying an identity benefit of a payment account of the user based on the user identifier carried in the order payment instruction, and performing order payment to the merchant based on the identity benefit.

**[0101]** For example, after generating the order payment instruction, the merchant subprogram invokes the payment interface of the payment application to perform order payment, and a server to which the payment application belongs queries the identity benefit of the payment account of the user based on the user identifier carried in the order payment instruction, calculates, based on the identity benefit, an amount transferred out from the user account, transfers the amount that is transferred out to a merchant account for order payment, and performs benefit write-off to the merchant based on the identity benefit.

**[0102]** It should be noted that the merchant subprogram can be a merchant application, or can be an application subprogram. Correspondingly, the user terminal can redirect from an application to which the identity credential page belongs to the merchant application, or the user terminal can enter, from an application to which the identity credential page belongs, the merchant subprogram to which the application belongs. The application can be the payment application. In addition, the server to which the third-party application belongs and/or the server to which the payment application belongs can be a server that performs identity credential processing in cooperation with the user terminal. This is not limited in this embodiment.

**[0103]** In conclusion, one or more near field communication-based order processing methods provided in this embodiment can be applied to a user terminal. In a process of performing order processing, a near field communication component is invoked to establish an NFC connection in cooperation with a merchant device of a merchant, and settlement information sent by the merchant

device is received through the NFC connection; the settlement information is sent to a server, to make an identity credential query and obtain identity credential data corresponding to an identity credential status of a user in the merchant; page rendering and display are performed based on the settlement instruction and the identity credential data delivered by the server, and identity credential processing is performed in cooperation with the server based on a displayed identity credential page; and after a settlement instruction based on an identity credential is detected, redirection to a merchant subprogram is implemented, to perform order confirmation and order payment in the merchant subprogram. This implements order creation, order confirmation, and order payment without a checkout device, improves order processing efficiency, and avoids a problem of low efficiency in a scenario with a concentrated checkout region.

**[0104]** Further, different identity credential pages can be rendered based on the found identity credential status of the user, so that before payment is performed, the user can perceive a benefit that can be enjoyed after identity credential registration is performed or a benefit that can be enjoyed in a current order, thereby improving a perception degree of the user. Furthermore, a plurality of controls can be further configured on the identity credential page. Before payment is performed, the user can claim each identity benefit and join a user group by using the configured control on the identity credential page, which avoids a complex process in which a coupon is first claimed and then order processing is performed. In addition, different controls can be configured on identity credential pages of an unregistered user and a registered user, so that the unregistered user perceives a benefit that can be enjoyed after identity credential registration is performed, thereby improving order processing efficiency and improving user perception.

**[0105]** An implementation process of the first near field communication-based order processing method provided above can be performed by the user terminal, an implementation process of a second near field communication-based order processing method provided in the following method embodiment can be performed by the server, an implementation process of a third near field communication-based order processing method provided in the following method embodiment can be performed by the merchant device, and the three near field communication-based order processing methods can cooperate with each other in an execution process. Therefore, for reading of the above-mentioned implementation process, references can be made to corresponding content in the following embodiment of the second near field communication-based order processing method and corresponding content in the following embodiment of the third near

field communication-based order processing method. Correspondingly, for reading of the following embodiment of the second near field communication-based order processing method and the following embodiment of the third near field communication-based order processing method, references can be made to corresponding content in the above-mentioned method embodiment. In addition, in an execution process, the implementation process of the second near field communication-based order processing method provided below can cooperate with the implementation process of the third near field communication-based order processing method provided in the following method embodiment. Therefore, for reading of the corresponding content in the following embodiment of the second near field communication-based order processing method, references can be made to the corresponding content in the following embodiment of the third near field communication-based order processing method. Correspondingly, for reading of the following embodiment of the third near field communication-based order processing method, references can be made to the corresponding content in the above-mentioned embodiment of the second near field communication-based order processing method.

**[0106]** The near field communication-based order processing method provided in this embodiment is further described below by using an example in which the near field communication-based order processing method provided in this embodiment is applied to a registered member payment scenario. With reference to FIG. 10, the near field communication-based order processing method applied to the registered member payment scenario specifically includes the following steps.

**[0107]** Step S1008: Invoke an NFC component to establish an NFC connection to a merchant device, and receive, through the NFC connection, settlement information sent by the merchant device.

**[0108]** Step S1010: Send a merchant identifier to a server.

**[0109]** Step S1020: Render a credential interaction page of an identity credential based on a settlement amount and identity credential data sent by the server, and display the credential interaction page.

**[0110]** Step S1022: Perform identity credential processing in cooperation with the server based on the displayed credential interaction page.

**[0111]** Step S1024: If a settlement instruction based on the identity credential is detected, redirect to a merchant subprogram, and send the settlement information and a user identifier.

**[0112]** Step S1026: Perform order confirmation in the merchant subprogram, so that the merchant subprogram settles product information included in the settlement information based on an identity benefit associated with the identity credential, to obtain a settlement result, and obtains delivery information entered by using the merchant subprogram; and after an order placement instruction is detected, creates an order based on the settlement information, the settlement result, and the delivery information, and generates an order payment instruction to perform order payment.

**[0113]** Herein, a user triggers the order placement instruction by triggering an order placement control configured on a product page displayed by the merchant subprogram.

**[0114]** Step S1028: Perform order payment in the merchant subprogram, so that the merchant subprogram invokes a payment interface based on the order payment instruction to perform order payment. The payment interface performs the following operation in response to the interface invocation: performing order payment to a merchant based on payment information carried in the order payment instruction.

**[0115]** Optionally, step S1022 can be replaced with the following: If it is detected that a participation control that is of a registered user group and that is displayed on the credential interaction page is triggered, generate a participation request and send the participation request to the server, to add the user to the registered user group; step S1022 can be replaced with the following: If a claim control that is of the identity benefit and that is displayed on the credential interaction page is triggered, send a claim request of the identity benefit to the server, to associate the identity benefit with the identity credential, or allocate the identity benefit to a payment account of the user; or step S1022 can be replaced with the following: If it is detected that a login control that is of the identity credential and that is displayed on the credential interaction page is triggered, send login processing of the identity credential to the server, to log in to the merchant subprogram based on the identity credential, where the settlement instruction is generated after the login succeeds.

**[0116]** Step S1008, step S1010, and step S1020 to step S1028 provided in this embodiment can be performed by a user terminal. It should be noted that step S1008, step S1010, and step S1020 to step S1028 performed by the user terminal can cooperate, in an execution process, with step S1012 to step S1018 that can be performed by a server in the following embodiment, and can cooperate, in an execution process, with step S1002 to step S1006 that can be performed by a merchant device in the following embodiment. Therefore, for reading of this embodiment,

references can be made to corresponding content of step S1012 to step S1018 that can be performed by the server provided in the following method embodiment and corresponding content of step S1002 to step S1006 that can be performed by the merchant device, and for reading of the following method embodiment, references can be made to corresponding content of step S1008, step S1010, and step S1020 to step S1028 provided in this embodiment.

**[0117]** The near field communication-based order processing method provided in this embodiment is further described below by using an example in which the near field communication-based order processing method provided in this embodiment is applied to an unregistered member payment scenario. With reference to FIG. 11, the near field communication-based order processing method applied to the unregistered member payment scenario specifically includes the following steps.

**[0118]** Step S1108: Invoke an NFC component to establish an NFC connection to a merchant device, and receive, through the NFC connection, settlement information sent by the merchant device.

**[0119]** Step S1110: Send a merchant identifier to a server.

**[0120]** Step S1118: Render a credential registration page that includes a settlement amount and identity credential registration data, and display the credential registration page.

**[0121]** Step S1120: Send a credential registration request to the server.

**[0122]** Previously, a user triggered a registration control configured on the credential registration page.

**[0123]** Step S1124: Receive an identity benefit sent by the server, and render and display an identity credential page based on the identity benefit.

**[0124]** Step S1126: If a settlement instruction based on an identity credential is detected, redirect to a merchant subprogram, and send the settlement information and a user identifier.

**[0125]** Previously, the user triggers a settlement control configured on the identity credential page, and then submits the settlement instruction.

**[0126]** Step S1128: Perform order confirmation in the merchant subprogram, so that the merchant subprogram settles product information included in the settlement information based on an identity benefit associated with the identity credential, to obtain a settlement result, and obtains delivery information entered by using the merchant subprogram; and after an order placement instruction is detected, creates an order based on the settlement information, the settlement result,

and the delivery information, and generates an order payment instruction to perform order payment.

**[0127]** Herein, the user triggers the order placement instruction by triggering an order placement control configured on a product page displayed by the merchant subprogram.

**[0128]** Step S1130: Perform order payment in the merchant subprogram, so that the merchant  
5 subprogram invokes a payment interface based on the order payment instruction to perform order payment.

**[0129]** The payment interface performs the following operation in response to the interface invocation: querying an identity benefit of a payment account of the user based on the user identifier carried in the order payment instruction, and performing order payment to a merchant  
10 based on the identity benefit.

**[0130]** Step S1108, step S1110, step S1118, step S1120, and step S1124 to step S1130 provided in this embodiment can be performed by a user terminal. It should be noted that step S1108, step S1110, step S1118, step S1120, and step S1124 to step S1130 performed by the user terminal can cooperate, in an execution process, with step S1112 to step S1116 and step S1122 that can be  
15 performed by a server in the following embodiment, and can cooperate, in an execution process, with step S1102 to step S1106 that can be executed by a merchant device in the following embodiment. Therefore, for reading of this embodiment, references can be made to corresponding content of step S1112 to step S1116 and step S1122 that can be performed by the server provided in the following method embodiment and corresponding content of step S1102 to step S1106 that  
20 can be performed by the merchant device, and for reading of the following method embodiment, references can be made to corresponding content of step S1108, step S1110, step S1118, step S1120, and step S1124 to step S1130 provided in this embodiment.

**[0131]** One or more embodiments of the second near field communication-based order processing method provided in this disclosure are as follows:

**[0132]** With reference to FIG. 12, the near field communication-based order processing method provided in this embodiment can be applied to a server, and specifically includes step S1202 to step S1208.  
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**[0133]** Step S1202: Receive settlement information sent by a user terminal.

**[0134]** In actual application, there is a situation in which a merchant has a large site, and a settlement region and/or a checkout region are/is overcrowded. For example, a large supermarket  
30 and a large shopping mall have an excessively large area and a fixed payment region, and a user

needs to queue after shopping. In view of this, in this embodiment, the settlement information is entered into a handheld wireless merchant device, and the settlement information is transmitted to the user terminal through an NFC connection, so that the user terminal performs order confirmation and order payment in a merchant subprogram, to implement quick order creation, order confirmation, and order payment without a checkout device. Further, the user terminal can further query an identity credential of the user in the merchant in cooperation with the server, and submit a settlement instruction based on the identity credential, to implement quick member payment without a fixed checkout region.

**[0135]** In this embodiment, the merchant device is a handheld wireless device, and is configured to: receive settlement information or product information entered by a merchant member, and send the settlement information to the user terminal through the NFC connection. Specifically, the merchant device can include an NFC device configured with a display component and an NFC component. The merchant device can be further configured with a client of a third-party application. The merchant device inputs the settlement information through the installed third-party application. For example, the merchant device can be configured with a client of a payment application, and the merchant device inputs the settlement information through the payment application. The merchant device can render a near field payment page through the third-party application, and send the settlement information to the user terminal, that is, the user terminal can establish an NFC connection to the merchant device in the third-party application. Optionally, the third-party application renders the near field payment page by invoking a near field payment interface, and sends the settlement information to the user terminal.

**[0136]** Further, the merchant device can be a network-connected device connected to the internet. The merchant device can interact with a merchant server to obtain settlement information of each product for selection and input by the merchant member, and send the settlement information to the user terminal through the third-party application via the internet. Further, the third-party application can invoke, through a network connection of the merchant device, a server to which the third-party application belongs to render the near field payment page, and the merchant device is only configured to receive and display the near field payment page. In addition, the merchant device can be an offline NFC device, and the settlement information of each product is stored in the merchant device for selection and input by the merchant member. Further, the third-party application is an offline application, and the third-party application invokes the near field

payment interface, renders the near field payment page through a rendering component of the merchant device, and displays the near field payment page.

**[0137]** In specific implementation, the merchant member first interacts with the merchant device to enter settlement information. After receiving the settlement information, the merchant device renders and displays a near field payment page of the settlement information, invokes an NFC component to perform user terminal detection, and when detecting that there is a user terminal in an NFC broadcast range, invokes the NFC component to establish an NFC connection to the detected user terminal, and sends the settlement information to the user terminal through the NFC connection. The user terminal invokes the near field communication component to establish an NFC connection in cooperation with the merchant device, receives, through the NFC connection, the settlement information transmitted by the merchant device, and sends the settlement information to the server. The server receives the settlement information sent by the user terminal. Optionally, the settlement information is sent by the merchant device to the user terminal through the established near field communication connection.

**[0138]** In this embodiment, the settlement information is settlement information of a product entered by the merchant member, and can be specifically product details information, a settlement amount of the product, merchant information, receipt information of the product, etc., or can be a combination of two or more pieces of information in the above-mentioned information. This is not limited in this embodiment. Optionally, the settlement information includes product information and a merchant identifier. The product information includes the product details information and/or the settlement amount.

**[0139]** Specifically, the settlement information can be entered by the merchant member through a settlement page displayed on the merchant device. After obtaining the settlement information, the merchant device can further render and display the near field payment page of the settlement information, that is, the merchant device obtains the settlement information entered through the settlement page, and renders and displays the near field payment page of the settlement information. As shown in FIG. 3 and FIG. 4, the merchant member triggers a "Create new order" button 301 on a first settlement page shown in FIG. 3(a), to enter a second settlement page shown in FIG. 3(b), enters the product information of the product and the merchant identifier of the merchant on the second settlement page, and then triggers a "Submit" button 302, to enter a third settlement page shown in FIG. 3(c). After the merchant member triggers an "Initiate collection"

button 303 on the third settlement page, a near field payment page shown in FIG. 4 is displayed, to direct the user terminal to establish a near field communication connection to the merchant device. In addition, the merchant identifier can be written into the settlement page through the merchant device, that is, the merchant device generates a settlement page that carries the merchant  
5 identifier, and the merchant member enters the product information on the settlement page, to obtain the settlement information on the settlement page.

**[0140]** In a specific execution process, when the merchant device displays the near field payment page, or after the merchant device displays the near field payment page, the near field communication component can be further invoked to perform user terminal detection, and an NFC  
10 connection to the detected user terminal is established, to send the settlement information to the user terminal. Optionally, the near field communication connection is established after the merchant device obtains the settlement information entered through the settlement page and renders and displays the near field payment page of the settlement information. Optionally, the near field communication connection is established after the merchant device detects the user  
15 terminal by invoking the near field communication component; and the near field communication component is invoked after the settlement information entered through the settlement page is obtained and the near field payment page of the settlement information is rendered.

**[0141]** In addition, when the merchant device does not detect the user terminal by invoking the near field communication component, or when the merchant device fails to establish an NFC  
20 connection to the user terminal by invoking the near field communication component, a near field communication reminder page can be displayed. The near field communication reminder page can be displayed after a display time of the near field payment page expires, to remind the user to turn on an NFC switch and then approach the merchant device to implement an NFC connection. Specifically, the merchant device can detect, through a detection component such as an infrared  
25 component or an image capture component, whether there is a user terminal close to the merchant device. When it is detected that there is a user terminal close to the merchant device and the NFC connection fails, the near field communication reminder page can be displayed. Optionally, after detecting the user terminal, the detection component of the merchant device invokes the near field communication component to establish a near field communication connection to the detected user  
30 terminal. If the connection fails, the near field communication reminder page is displayed.

**[0142]** It should be noted that the near field payment page displayed by the merchant device

can be replaced with a scan-to-pay page. Specifically, after detecting a switching instruction of the near field payment page, the merchant device renders and switches to a scan-to-pay page that carries a payment code and an order amount. As shown in FIG. 5, after the merchant member triggers a switching button 501 of the near field payment page, the merchant device renders and switches to the scan-to-pay page that carries the payment code and the order amount. Further, when the merchant device displays the scan-to-pay page, the user terminal can scan the payment code, and redirect to the merchant subprogram based on a scanning result, to perform order confirmation and order payment in the merchant subprogram. In an optional implementation provided in this embodiment, the method further includes: scanning the payment code, decoding the payment code, and based on a decoding result, redirecting to the merchant subprogram, and sending the settlement information and the user identifier, to perform order confirmation and order payment in the merchant subprogram.

**[0143]** Step S1204: Make an identity credential query based on a user identifier and a merchant identifier included in the settlement information.

**[0144]** In this embodiment, in a manner in which the user terminal cooperates with the server, the settlement information is sent to the server, so that the server determines, based on the identity credential status of the user in the merchant, whether the user is a registered user of the merchant, and the user performs order payment based on an identity credential in the merchant, to implement payment based on the identity credential outside a settlement region.

**[0145]** In specific implementation, the identity credential query is made based on the user identifier and the merchant identifier included in the settlement information, and the identity credential status of the user in the merchant is determined based on a query result. Specifically, an identity credential status of a user corresponding to the user identifier can be queried in a registered user table of the merchant based on the merchant identifier.

**[0146]** In this embodiment, the identity credential is an identity credential registered by the user with the merchant. Specifically, the identity credential can be a membership identity registered by the user with the merchant. Correspondingly, when the user registers a membership identity of the merchant, the identity credential status can be a membership identity state of the user in the merchant, and the identity credential data can be membership points, a membership balance, a membership group owner status, a membership discount benefit, etc. of the user in the merchant. In addition, when the user does not register a membership identity of the merchant, the identity

credential status can be an unregistered membership identity state of the user in the merchant, and the identity credential data can be identity credential registration data of the merchant, for example, membership promotion information of the merchant. Optionally, if the identity credential status is an unregistered state, the identity credential data includes the identity credential registration data of the merchant.

**[0147]** In a specific identity credential query process, the server can query, based on the user identifier and the merchant identifier, whether there is a user corresponding to the user identifier in the merchant, and determine the identity credential status of the user in the merchant based on a query result. In an optional implementation provided in this embodiment, the making an identity credential query includes: querying, based on the user identifier of the user and the merchant identifier included in the settlement information, whether the user performs identity credential registration with the merchant; and if yes, determining that the identity credential status is a registered state; or if no, determining that the identity credential status is an unregistered state.

**[0148]** Specifically, the server can store a registered user table of each merchant. The server determines a registered user table of the merchant based on the merchant identifier, and queries, in the registered user table of the merchant, whether there is a registered user corresponding to the user identifier; and if there is a registered user corresponding to the user identifier, determines that the identity credential status of the user is the registered state; or if there is no registered user corresponding to the user identifier, determines that the identity credential status of the user is the unregistered state.

**[0149]** In addition, merchants can store respective registered user tables in respective corresponding merchant servers. The server can invoke a query interface of a corresponding merchant server based on the merchant identifier to query a registered user table, query, in the registered user table, whether there is a registered user corresponding to the user identifier, and determine the identity credential status of the user based on a query result. In another optional implementation provided in this embodiment, the making an identity credential query includes: invoking, based on the merchant identifier, a query interface of the merchant corresponding to the merchant identifier to make a registered user query, and determining, based on a query result, whether the user corresponding to the user identifier performs identity credential registration with the merchant; and if yes, determining that the identity credential status is the registered state; or if no, determining that the identity credential status is the unregistered state.

**[0150]** Step S1206: Obtain, based on a found identity credential status of a user in a merchant, identity credential data corresponding to the identity credential status, and deliver the identity credential data to the user terminal.

**[0151]** In specific implementation, the identity credential data corresponding to the identity credential status of the user is queried based on the identity credential status of the user in the merchant, and sent to the user terminal. The user terminal renders and displays an identity credential page based on the settlement information sent by the merchant device and the identity credential data delivered by the server.

**[0152]** In a specific execution process, the merchant can issue various identity benefits and/or discount benefits to the registered user. The merchant can further invite the registered user to enter a registered user group to manage and maintain the registered user. For the registered user, the server can use credential information of an identity credential of the user, an identity benefit associated with the identity credential, and the registered user group, and/or a status of the user for the registered user group as identity credential data. In an optional implementation provided in this embodiment, if the identity credential status is the registered state, the obtaining identity credential data corresponding to an identity credential status of a user in the merchant includes: obtaining credential information of the identity credential registered by the user with the merchant and an identity benefit associated with the identity credential; and determining a registered user group created by the merchant for a registered user whose identity credential is registered.

**[0153]** In addition, for an unregistered user, the merchant can deliver a to-be-claimed identity benefit and/or discount benefit, namely, a benefit that can be obtained after the user registers with the merchant. For the unregistered user, the server can use the identity credential registration data of the merchant as the identity credential data, and send the identity credential data to the user terminal.

**[0154]** Optionally, if the identity credential status is the registered state, the obtaining identity credential data, and delivering the identity credential data to the user terminal includes: obtaining credential information of the identity credential registered by the user with the merchant and an identity benefit associated with the identity credential, determining a registered user group created by the merchant for a registered user whose identity credential is registered, and delivering the credential information, the identity benefit, and the registered user group to the user terminal. If the identity credential status is the unregistered state, the identity credential registration data of the

merchant is obtained and delivered to the user terminal, for example, identity credential registration promotion data of the merchant.

**[0155]** Step S1208: Perform identity credential processing in cooperation with the user terminal, so that the user terminal redirects to a merchant subprogram after detecting a settlement instruction based on an identity credential, to perform order confirmation and order payment.

**[0156]** In this embodiment, a payment page corresponding to the identity credential is rendered by using the settlement information sent by the merchant device and the identity credential data delivered by the server and is displayed, to transfer a checkout function of the merchant to the user terminal for implementation, and perform order creation, order confirmation, and order payment through the user terminal. The merchant device transmits the settlement information, to implement quick order payment in a scenario such as retail, a commercial supermarket, or a large shopping mall, and avoid an efficiency problem caused due to an excessively concentrated settlement or checkout region.

**[0157]** In specific implementation, the user terminal first renders and displays the identity credential page based on the settlement information sent by the merchant device and the identity credential data delivered by the server, and performs identity credential processing in cooperation with the server based on a triggering instruction of the user for the displayed identity credential page. The server performs identity credential processing in cooperation with the user terminal based on each request submitted by the user terminal. After completing the identity credential processing and detecting the settlement instruction based on the identity credential, the user terminal redirects to the merchant subprogram, to perform order confirmation and order payment.

**[0158]** Specifically, when the identity credential status of the user is the registered state, the performing identity credential processing in cooperation with the user terminal includes: if a participation request sent by the user terminal is received, adding the user to the registered user group; if a claim request that is of the identity benefit and that is sent by the user terminal is received, associating the identity benefit with the identity credential, or allocating the identity benefit to a payment account of the user; or if a login request sent by the user terminal after a login control configured on a credential interaction page is triggered is received, performing login processing of the identity credential, where the settlement instruction is generated after the login processing succeeds. When the identity credential status of the user is the unregistered state, the performing identity credential processing in cooperation with the user terminal includes: obtaining

a registration request submitted by the user terminal by triggering a registration control, and performing identity credential registration processing of the user with the merchant based on the registration request.

**[0159]** It should be noted that after the user completes registration, the user terminal can display a page obtained after identity credential registration is performed, and the user terminal can perform identity credential processing in the registered state in cooperation with the server. For a specific cooperative processing process, references can be made to that in the registered state. Details are not described herein again in this embodiment.

**[0160]** In this embodiment, the merchant subprogram is a subprogram that is configured by the merchant in an application and that is used to perform order creation, order confirmation, and order payment of a product order. Specifically, the merchant subprogram can be a subprogram configured by the merchant in the third-party application, for example, a subprogram configured in the payment application, to redirect from the identity credential page displayed by the third-party application to the merchant subprogram in the third-party application.

**[0161]** In a specific execution process, when performing page rendering and display, the user terminal needs to exchange data with the server and invoke each component, for example, a rendering component, and needs some processing time to perform rendering and display processing. In view of this, a loading page can be rendered and displayed, to indicate to the user that the user terminal is performing rendering and display processing. As shown in FIG. 6, the loading page is first displayed before the identity credential page is displayed. In addition, different user terminals may use different operating systems. For different operating systems, the loading page can be rendered and displayed, or a display reminder of the identity credential page can be displayed on a locked screen or a home screen, so that the user triggers a display button to display the identity credential page.

**[0162]** In a specific execution process, different identity credential pages can be rendered based on identity credential statuses of different users. For a user in the registered state, the identity credential page can be rendered based on the settlement amount included in the settlement information, the identity credential information, the identity benefit, etc., and identity credential processing is performed in cooperation with the server based on different triggering instructions of the user. For the unregistered user, the identity credential page can be rendered based on the settlement amount included in the settlement information and the identity credential registration

data of the merchant, and identity credential processing is performed in cooperation with the server based on different triggering instructions of the user. The following separately describes identity credential pages in the registered state and the unregistered state.

**[0163]** (1) Registered state

5 **[0164]** For a user in the registered state, a membership benefit that can be claimed, a remaining identity benefit of a membership account, credential information corresponding to a membership level, a settlement amount, etc. can be displayed on the identity credential page, so that the user quickly perceives the identity credential data. In an optional implementation provided in this embodiment, the performing page rendering and display includes: rendering a credential  
10 interaction page of the identity credential based on the settlement amount included in the settlement information, the credential information, and the identity benefit, and displaying the credential interaction page.

**[0165]** Optionally, a login control, a claim control of the identity benefit, and/or a participation control of the user group are/is configured on the credential interaction page.

15 **[0166]** As shown in FIG. 7, a login button 701, a coupon claim button 702, and a member group participation button 703 are configured on the credential interaction page, and the credential interaction page further displays the settlement amount and points and a balance of the user in the membership account.

**[0167]** In a specific execution process, the user can trigger different controls configured on the  
20 identity credential page, and send a request corresponding to the control to the server, to perform corresponding identity credential processing in cooperation with the server. In an optional implementation provided in this embodiment, the performing identity credential processing in cooperation with the server includes: if the participation control is triggered, generating a participation request and sending the participation request to the server, to add the user to the  
25 registered user group; if the claim control is triggered, sending a claim request of the identity benefit to the server, to associate the identity benefit with the identity credential, or allocate the identity benefit to a payment account of the user; or if the login control is triggered, performing login processing of the identity credential in cooperation with the server.

**[0168]** Optionally, the settlement instruction is generated after the login processing succeeds.

30 **[0169]** In the above-mentioned example, after triggering the login button 701, the user submits a login instruction to the server, and the server invokes an access interface of the merchant

subprogram based on the login instruction, so that the user terminal enters the merchant subprogram based on the identity credential. That is, the user submits a settlement instruction based on the identity credential to the user terminal by triggering the login button 701. After the user triggers the claim button 702, a claim request of the identity benefit is generated and sent to the server, and the server associates the identity benefit with the identity credential of the user in the merchant, or adds the identity benefit to a payment account of the user in the payment application. After the user triggers the participation button 703, a participation request is generated and sent to the server, and the server adds the user to the member group created by the merchant in the payment application.

10 [0170] In addition, a login cancellation control can be further configured on the credential interaction page. After the user triggers the login cancellation control, the user terminal performs identity credential processing in cooperation with the server, so that the user enters the merchant subprogram based on the unregistered state. In the above-mentioned example, after the user triggers a login cancellation button 704, a login cancellation instruction is submitted to the server, and the server invokes the access interface of the merchant subprogram based on the login cancellation instruction, so that the user terminal enters the merchant subprogram based on the unregistered state.

[0171] (2) Unregistered state

20 [0172] For a user in the unregistered state, a to-be-claimed membership benefit and a settlement amount can be displayed on the identity credential page, so that the user quickly perceives a benefit that can be obtained after identity credential registration is performed. In an optional implementation provided in this embodiment, the performing page rendering and display includes: rendering a credential registration page that includes the settlement amount included in the settlement information and the identity credential registration data, and displaying the credential registration page.

[0173] Optionally, an identity credential registration control is configured on the credential registration page.

30 [0174] As shown in FIG. 8(a), the credential registration page displays the settlement amount and the benefit that can be obtained after identity credential registration is performed. An identity credential registration button 801 is further configured on the credential registration page.

[0175] Further, after the user triggers the registration control configured on the credential

registration page, credential registration processing can be performed in cooperation with the server, the identity benefit can be associated with the identity credential, and the identity credential page can be rendered and displayed based on the identity benefit, so that the user perceives identity credential registration. In an optional implementation provided in this embodiment, the performing  
5 identity credential processing in cooperation with the server includes: if the registration control configured on the credential registration page is triggered, sending a credential registration request to the server, to perform identity credential registration of the user with the merchant to obtain the identity credential; and receiving an identity benefit that is associated with the identity credential and that is delivered by the server, and rendering and displaying an identity credential page based  
10 on the identity benefit.

**[0176]** Optionally, the settlement instruction is generated after a settlement control configured on the identity credential page is triggered.

**[0177]** Specifically, after the user triggers the registration control configured on the credential registration page, the credential registration request is sent to the server, and the server can add the  
15 user to a registered user table stored by the merchant in the server, or the server invokes a registration interface of the merchant server to perform identity credential registration of the user, and issues the identity benefit associated with the identity credential to the user terminal, to issue a merchant discount benefit to the identity credential, and issue a payment discount benefit to a payment account.

**[0178]** In a specific execution process, after the user terminal displays the identity credential page, the user can trigger a control displayed on the identity credential page to perform identity credential processing in cooperation with the server. Specifically, a participation control configured on the identity credential page can be triggered for addition to a registered user group, and a claim control of the identity benefit can be further triggered to claim the benefit. In an  
25 optional implementation provided in this embodiment, after the identity credential page is rendered and displayed based on the identity benefit, the method further includes: if the participation control that is of the registered user group and that is configured on the identity credential page is triggered, adding the user to the registered user group in cooperation with the server; or if the claim control that is of the identity benefit and that is configured on the identity credential page is triggered,  
30 associating the identity benefit with the identity credential in cooperation with the server, or allocating the identity benefit to a payment account of the user.

**[0179]** As shown in FIG. 8(b), the user triggers a member group participation button 802 configured on the identity credential page to submit a group participation instruction to the server, and the server adds the user to a registered user group created by the merchant in the payment application. The user triggers an identity benefit claim button 803 configured on the identity credential page to submit a benefit claim instruction to the server, and the server associates the merchant discount benefit with the identity credential of the user in the merchant based on a type of the benefit, or allocates the payment discount benefit to the payment account of the user. The user can further trigger a payment button 804 configured on the identity credential page, so that the user redirects to the merchant subprogram, and performs order confirmation and order payment based on the identity credential, that is, the user submits a settlement instruction based on the identity credential to the user terminal by triggering the payment button 804.

**[0180]** In addition, a login cancellation control can be further configured on the identity credential page. After the user triggers the login cancellation control, the user terminal performs identity credential processing in cooperation with the server, so that the user enters the merchant subprogram based on the unregistered state. In the above-mentioned example, after the user triggers a login cancellation button 805, a login cancellation instruction is submitted to the server, and the server invokes the access interface of the merchant subprogram based on the login cancellation instruction, so that the user terminal enters the merchant subprogram based on the unregistered state.

**[0181]** In a specific execution process, after receiving the settlement information and the user identifier that are sent by the user terminal, the merchant subprogram can create, based on the settlement information and the user identifier, a product page of a product included in the settlement information, settle the product based on the identity benefit associated with the identity credential of the user, to obtain a settlement amount, and after obtaining an order placement instruction submitted by the user on the product page, create a product order based on the settlement amount, and generate an order payment instruction to perform order payment. In an optional implementation provided in this embodiment, the performing order confirmation in the merchant subprogram includes: settling the product information included in the settlement information based on the identity benefit associated with the identity credential, to obtain a settlement result; and if an order placement instruction is detected, creating an order based on the settlement information and the settlement result, and generating an order payment instruction to

perform order payment.

**[0182]** As shown in FIG. 9, a product page is generated based on the product information included in the settlement information, and a product amount is settled based on the identity benefit associated with the identity credential of the user, to obtain a settlement result. The user can trigger an order placement button 901 configured on the product page to submit an order placement instruction, so that the merchant subprogram creates a product order based on the settlement result and the product information, and generates an order payment instruction to perform order payment processing.

**[0183]** Further, a product included in the settlement information can alternatively be delivered to the user through logistics delivery. In view of this, the user can further add delivery information of the product to a product page, and a settlement result is jointly calculated based on a product amount included in the settlement information, a delivery fee, and the identity benefit. In addition, the product included in the settlement information may be a product given to the user, that is, the settlement result is calculated based on the delivery fee and the identity benefit. In an optional implementation provided in this embodiment, the performing order confirmation in the merchant subprogram includes: settling the product information included in the settlement information based on the identity benefit associated with the identity credential, to obtain a settlement result, and/or obtaining delivery information entered by using the merchant subprogram; and if an order placement instruction is detected, creating an order based on the settlement information and the settlement result and/or the delivery information, and generating an order payment instruction to perform order payment.

**[0184]** In the above-mentioned example, the user can further trigger an "Add new delivery address" button 902 configured on the product page to add the delivery information, and calculate a settlement result including the delivery fee, so that the merchant subprogram creates a product order based on the settlement result, the product information, and the delivery address, and generates an order payment instruction to perform order payment processing.

**[0185]** In a specific order payment process, the merchant subprogram can invoke a payment interface based on the generated order payment instruction to perform order payment. Specifically, a payment interface of the third-party application can be invoked to perform order payment. The third-party application can be the above-mentioned application that establishes the NFC connection and displays the identity credential page, for example, the payment application. In an

optional implementation provided in this embodiment, the performing order payment in the merchant subprogram includes: invoking the payment interface based on the order payment instruction generated by the merchant subprogram to perform order payment.

**[0186]**     Optionally, the payment interface performs the following operation in response to the interface invocation: performing order payment to the merchant based on payment information carried in the order payment instruction, or querying an identity benefit of a payment account of the user based on the user identifier carried in the order payment instruction, and performing order payment to the merchant based on the identity benefit.

**[0187]**     For example, after generating the order payment instruction, the merchant subprogram invokes the payment interface of the payment application to perform order payment, and a server to which the payment application belongs queries the identity benefit of the payment account of the user based on the user identifier carried in the order payment instruction, calculates, based on the identity benefit, an amount transferred out from the user account, transfers the amount that is transferred out to a merchant account for order payment, and performs benefit write-off to the merchant based on the identity benefit.

**[0188]**     In conclusion, one or more near field communication-based order processing methods provided in this embodiment can be applied to a server. In a process of performing order processing, settlement information sent by a user terminal is received; an identity credential query is made based on a user identifier and a merchant identifier included in the settlement information; based on a found identity credential status of a user in a merchant, identity credential data corresponding to the identity credential status is obtained and delivered to the user terminal; and identity credential processing is performed in cooperation with the user terminal, so that the user terminal redirects to a merchant subprogram after detecting a settlement instruction based on an identity credential, to perform order confirmation and order payment. This implements order creation, order confirmation, and order payment without a checkout device, improves order processing efficiency, and avoids a problem of low efficiency in a scenario with a concentrated checkout region.

**[0189]**     Further, different identity credential pages can be rendered based on the found identity credential status of the user, so that before payment is performed, the user can perceive a benefit that can be enjoyed after identity credential registration is performed or a benefit that can be enjoyed in a current order, thereby improving a perception degree of the user. Furthermore, a

plurality of controls can be further configured on the identity credential page. Before payment is performed, the user can claim each identity benefit and join a user group by using the configured control on the identity credential page, which avoids a complex process in which a coupon is first claimed and then order processing is performed. In addition, different controls can be configured on identity credential pages of an unregistered user and a registered user, so that the unregistered user perceives a benefit that can be enjoyed after identity credential registration is performed, thereby improving order processing efficiency and improving user perception.

**[0190]** The near field communication-based order processing method provided in this embodiment is further described below by using an example in which the near field communication-based order processing method provided in this embodiment is applied to a member payment scenario. With reference to FIG. 10, the near field communication-based order processing method applied to the registered member payment scenario specifically includes the following steps.

**[0191]** Step S1012: Receive settlement information sent by a user terminal, and query, based on a user identifier of a user and a merchant identifier, an identity credential registered by the user with a merchant.

**[0192]** Step S1014: Obtain credential information of the identity credential registered by the user with the merchant and an identity benefit associated with the identity credential.

**[0193]** Step S1016: Determine a registered user group created by the merchant for a registered user whose identity credential is registered.

**[0194]** Step S1018: Send the credential information, the identity benefit, and the registered user group as identity credential data to the user terminal.

**[0195]** The near field communication-based order processing method provided in this embodiment is further described below by using an example in which the near field communication-based order processing method provided in this embodiment is applied to an unregistered member payment scenario. With reference to FIG. 11, the near field communication-based order processing method applied to the unregistered member payment scenario specifically includes the following steps.

**[0196]** Step S1112: Receive settlement information sent by a user terminal, and query an identity credential of a user in a merchant based on a user identifier of the user and a merchant identifier.

[0197] Step S1114: When an identity credential status is an unregistered state, obtain identity credential registration data of the merchant.

[0198] Step S1116: Send identity credential data to the user terminal.

[0199] Step S1122: Perform identity credential registration of the user to obtain the identity credential, obtain an identity benefit associated with the identity credential, and send the identity benefit to the user terminal.

[0200] One or more embodiments of the third near field communication-based order processing method provided in this disclosure are as follows:

[0201] With reference to FIG. 13, the near field communication-based order processing method provided in this embodiment can be applied to a merchant device, and specifically includes step S1302 to step S1306.

[0202] Step S1302: Obtain settlement information entered through a settlement page, and render and display a near field payment page of the settlement information.

[0203] In actual application, there is a situation in which a merchant has a large site, and a settlement region and/or a checkout region are/is overcrowded. For example, a large supermarket and a large shopping mall have an excessively large area and a fixed payment region, and a user needs to queue after shopping. In view of this, in this embodiment, the settlement information is entered into the handheld wireless merchant device, and the settlement information is transmitted to a user terminal through an NFC connection, so that the user terminal performs order confirmation and order payment in a merchant subprogram, to implement quick order creation, order confirmation, and order payment without a checkout device. Further, the user terminal can further query an identity credential of the user in the merchant in cooperation with a server, and submit a settlement instruction based on the identity credential, to implement quick member payment without a fixed checkout region.

[0204] In this embodiment, the merchant device is a handheld wireless device, and is configured to: receive settlement information or product information entered by a merchant member, and send the settlement information to the user terminal through the NFC connection. Specifically, the merchant device can include an NFC device configured with a display component and an NFC component. The merchant device can be further configured with a client of a third-party application. The merchant device inputs the settlement information through the installed third-party application. For example, the merchant device can be configured with a client of a

payment application, and the merchant device inputs the settlement information through the payment application. The merchant device can render a near field payment page through the third-party application, and send the settlement information to the user terminal, that is, the user terminal can establish an NFC connection to the merchant device in the third-party application. Optionally, the third-party application renders the near field payment page by invoking a near field payment interface, and sends the settlement information to the user terminal.

**[0205]** Further, the merchant device can be a network-connected device connected to the internet. The merchant device can interact with a merchant server to obtain settlement information of each product for selection and input by the merchant member, and send the settlement information to the user terminal through the third-party application via the internet. Further, the third-party application can invoke, through a network connection of the merchant device, a server to which the third-party application belongs to render the near field payment page, and the merchant device is only configured to receive and display the near field payment page. In addition, the merchant device can be an offline NFC device, and the settlement information of each product is stored in the merchant device for selection and input by the merchant member. Further, the third-party application is an offline application, and the third-party application invokes the near field payment interface, renders the near field payment page through a rendering component of the merchant device, and displays the near field payment page.

**[0206]** In specific implementation, the merchant member interacts with the settlement page displayed by the merchant device to obtain the settlement information entered through the settlement page, and the near field payment page of the settlement information is rendered and displayed based on the settlement information.

**[0207]** In this embodiment, the settlement information is settlement information of a product entered by the merchant member, and can be specifically product details information, a settlement amount of the product, merchant information, receipt information of the product, etc., or can be a combination of two or more pieces of information in the above-mentioned information. This is not limited in this embodiment. Optionally, the settlement information includes product information and a merchant identifier. The product information includes the product details information and/or the settlement amount.

**[0208]** Specifically, the settlement information can be entered by the merchant member through a settlement page displayed on the merchant device. After obtaining the settlement

information, the merchant device can further render and display the near field payment page of the settlement information, that is, the merchant device obtains the settlement information entered through the settlement page, and renders and displays the near field payment page of the settlement information. As shown in FIG. 3(a), FIG. 3(b), FIG. 3(c), and FIG. 4, the merchant member triggers a "Create new order" button 301 on a first settlement page shown in FIG. 3(a), to enter a second settlement page shown in FIG. 3(b), enters the product information of the product and the merchant identifier of the merchant on the second settlement page, and then triggers a "Submit" button 302, to enter a third settlement page shown in FIG. 3(c). After the merchant member triggers an "Initiate collection" button 303 on the third settlement page, a near field payment page shown in FIG. 4 is displayed, to direct the user terminal to establish a near field communication connection to the merchant device. In addition, the merchant identifier can be written into the settlement page through the merchant device, that is, the merchant device generates a settlement page that carries the merchant identifier, and the merchant member enters the product information on the settlement page, to obtain the settlement information on the settlement page.

**[0209]** In a specific execution process, when the merchant device displays the near field payment page, or after the merchant device displays the near field payment page, the near field communication component can be further invoked to perform user terminal detection, and an NFC connection to the detected user terminal is established, to send the settlement information to the user terminal. Optionally, the near field communication connection is established after the merchant device obtains the settlement information entered through the settlement page and renders and displays the near field payment page of the settlement information. Optionally, the near field communication connection is established after the merchant device detects the user terminal by invoking the near field communication component; and the near field communication component is invoked after the settlement information entered through the settlement page is obtained and the near field payment page of the settlement information is rendered.

**[0210]** Step S1304: Invoke a near field communication component to perform user terminal detection, and establish a near field communication connection to a detected user terminal.

**[0211]** In specific implementation, the NFC component is invoked to perform user terminal detection, and when the user terminal is detected, a near field communication connection to the user terminal is established.

**[0212]** In addition, when the merchant device does not detect the user terminal by invoking

the near field communication component, or when the merchant device fails to establish an NFC connection to the user terminal by invoking the near field communication component, a near field communication reminder page can be displayed. The near field communication reminder page can be displayed after a display time of the near field payment page expires, to remind the user to turn  
5 on an NFC switch and then approach the merchant device to implement an NFC connection. Specifically, the merchant device can detect, through a detection component such as an infrared component or an image capture component, whether there is a user terminal close to the merchant device. When it is detected that there is a user terminal close to the merchant device and the NFC connection fails, the near field communication reminder page can be displayed. Optionally, after  
10 detecting the user terminal, the detection component of the merchant device invokes the near field communication component to establish a near field communication connection to the detected user terminal. If the connection fails, the near field communication reminder page is displayed.

**[0213]** It should be noted that the near field payment page displayed by the merchant device can be replaced with a scan-to-pay page. Specifically, after detecting a switching instruction of the  
15 near field payment page, the merchant device renders and switches to a scan-to-pay page that carries a payment code and an order amount. As shown in FIG. 5, after the merchant member triggers a switching button 501 of the near field payment page, the merchant device renders and switches to the scan-to-pay page that carries the payment code and the order amount. Further, when the merchant device displays the scan-to-pay page, the user terminal can scan the payment code,  
20 and redirect to the merchant subprogram based on a scanning result, to perform order confirmation and order payment in the merchant subprogram. In an optional implementation provided in this embodiment, the method further includes: scanning the payment code, decoding the payment code, and based on a decoding result, redirecting to the merchant subprogram, and sending the settlement information and the user identifier, to perform order confirmation and order payment in the  
25 merchant subprogram.

**[0214]** Step S1306: Send the settlement information to the user terminal through the near field communication connection, so that the user terminal performs identity credential processing in cooperation with the server based on the settlement information, and redirects to a merchant subprogram based on a settlement instruction of an identity credential of a user in a merchant, to  
30 perform order confirmation and order payment.

**[0215]** In specific implementation, the merchant device sends the settlement information to

the user terminal through the NFC connection. After receiving the settlement information, the user terminal forwards the settlement information to the server, to perform identity credential processing in cooperation with the server based on the settlement information, and redirects to the merchant subprogram based on the settlement instruction of the identity credential of the user in the merchant, to perform order confirmation and order payment.

**[0216]** In this embodiment, the identity credential is an identity credential registered by the user with the merchant. Specifically, the identity credential can be a membership identity registered by the user with the merchant. Correspondingly, when the user registers a membership identity of the merchant, the identity credential status can be a membership identity state of the user in the merchant, and the identity credential data can be membership points, a membership balance, a membership group owner status, a membership discount benefit, etc. of the user in the merchant. In addition, when the user does not register a membership identity of the merchant, the identity credential status can be an unregistered membership identity state of the user in the merchant, and the identity credential data can be identity credential registration data of the merchant, for example, membership promotion information of the merchant. Optionally, if the identity credential status is an unregistered state, the identity credential data includes the identity credential registration data of the merchant.

**[0217]** In a specific identity credential query process, the server can query, based on the user identifier and the merchant identifier, whether there is a user corresponding to the user identifier in the merchant, and determine the identity credential status of the user in the merchant based on a query result. In an optional implementation provided in this embodiment, the making an identity credential query includes: querying, based on the user identifier of the user and the merchant identifier included in the settlement information, whether the user performs identity credential registration with the merchant; and if yes, determining that the identity credential status is a registered state; or if no, determining that the identity credential status is an unregistered state.

**[0218]** Specifically, the server can store a registered user table of each merchant. The server determines a registered user table of the merchant based on the merchant identifier, and queries, in the registered user table of the merchant, whether there is a registered user corresponding to the user identifier; and if there is a registered user corresponding to the user identifier, determines that the identity credential status of the user is the registered state; or if there is no registered user corresponding to the user identifier, determines that the identity credential status of the user is the

unregistered state.

**[0219]** In addition, merchants can store respective registered user tables in respective corresponding merchant servers. The server can invoke a query interface of a corresponding merchant server based on the merchant identifier to query a registered user table, query, in the registered user table, whether there is a registered user corresponding to the user identifier, and determine the identity credential status of the user based on a query result. In another optional implementation provided in this embodiment, the making an identity credential query includes: invoking, based on the merchant identifier, a query interface of the merchant corresponding to the merchant identifier to make a registered user query, and determining, based on a query result, whether the user corresponding to the user identifier performs identity credential registration with the merchant; and if yes, determining that the identity credential status is the registered state; or if no, determining that the identity credential status is the unregistered state.

**[0220]** In a specific execution process, the merchant can issue various identity benefits and/or discount benefits to the registered user. The merchant can further invite the registered user to enter a registered user group to manage and maintain the registered user. For the registered user, the server can use credential information of an identity credential of the user, an identity benefit associated with the identity credential, and the registered user group, and/or a status of the user for the registered user group as identity credential data. In an optional implementation provided in this embodiment, if the identity credential status is the registered state, the obtaining identity credential data corresponding to an identity credential status of a user in the merchant includes: obtaining credential information of the identity credential registered by the user with the merchant and an identity benefit associated with the identity credential; and determining a registered user group created by the merchant for a registered user whose identity credential is registered.

**[0221]** In addition, for an unregistered user, the merchant can deliver a to-be-claimed identity benefit and/or discount benefit, namely, a benefit that can be obtained after the user registers with the merchant. For the unregistered user, the server can use the identity credential registration data of the merchant as the identity credential data, and send the identity credential data to the user terminal.

**[0222]** In a specific execution process, when performing page rendering and display, the user terminal needs to exchange data with the server and invoke each component, for example, a rendering component, and needs some processing time to perform rendering and display

processing. In view of this, a loading page can be rendered and displayed, to indicate to the user that the user terminal is performing rendering and display processing. As shown in FIG. 6, the loading page is first displayed before the identity credential page is displayed. In addition, different user terminals may use different operating systems. For different operating systems, the loading page can be rendered and displayed, or a display reminder of the identity credential page can be displayed on a locked screen or a home screen, so that the user triggers a display button to display the identity credential page.

**[0223]** In a specific execution process, different identity credential pages can be rendered based on identity credential statuses of different users. For a user in the registered state, the identity credential page can be rendered based on the settlement amount included in the settlement information, the identity credential information, the identity benefit, etc., and identity credential processing is performed in cooperation with the server based on different triggering instructions of the user. For the unregistered user, the identity credential page can be rendered based on the settlement amount included in the settlement information and the identity credential registration data of the merchant, and identity credential processing is performed in cooperation with the server based on different triggering instructions of the user. The following separately describes identity credential pages in the registered state and the unregistered state.

**[0224]** (1) Registered state

**[0225]** For a user in the registered state, a membership benefit that can be claimed, a remaining identity benefit of a membership account, credential information corresponding to a membership level, a settlement amount, etc. can be displayed on the identity credential page, so that the user quickly perceives the identity credential data. In an optional implementation provided in this embodiment, the performing page rendering and display includes: rendering a credential interaction page of the identity credential based on the settlement amount included in the settlement information, the credential information, and the identity benefit, and displaying the credential interaction page.

**[0226]** Optionally, a login control, a claim control of the identity benefit, and/or a participation control of the user group are/is configured on the credential interaction page.

**[0227]** As shown in FIG. 7, a login button 701, a coupon claim button 702, and a member group participation button 703 are configured on the credential interaction page, and the credential interaction page further displays the settlement amount and points and a balance of the user in the

membership account.

**[0228]** In a specific execution process, the user can trigger different controls configured on the identity credential page, and send a request corresponding to the control to the server, to perform corresponding identity credential processing in cooperation with the server. In an optional implementation provided in this embodiment, the performing identity credential processing in cooperation with the server includes: if the participation control is triggered, generating a participation request and sending the participation request to the server, to add the user to the registered user group; if the claim control is triggered, sending a claim request of the identity benefit to the server, to associate the identity benefit with the identity credential, or allocate the identity benefit to a payment account of the user; or if the login control is triggered, performing login processing of the identity credential in cooperation with the server.

**[0229]** Optionally, the settlement instruction is generated after the login processing succeeds.

**[0230]** In the above-mentioned example, after triggering the login button 701, the user submits a login instruction to the server, and the server invokes an access interface of the merchant subprogram based on the login instruction, so that the user terminal enters the merchant subprogram based on the identity credential. That is, the user submits a settlement instruction based on the identity credential to the user terminal by triggering the login button 701. After the user triggers the claim button 702, a claim request of the identity benefit is generated and sent to the server, and the server associates the identity benefit with the identity credential of the user in the merchant, or adds the identity benefit to a payment account of the user in the payment application. After the user triggers the participation button 703, a participation request is generated and sent to the server, and the server adds the user to the member group created by the merchant in the payment application.

**[0231]** In addition, a login cancellation control can be further configured on the credential interaction page. After the user triggers the login cancellation control, the user terminal performs identity credential processing in cooperation with the server, so that the user enters the merchant subprogram based on the unregistered state. In the above-mentioned example, after the user triggers a login cancellation button 704, a login cancellation instruction is submitted to the server, and the server invokes the access interface of the merchant subprogram based on the login cancellation instruction, so that the user terminal enters the merchant subprogram based on the unregistered state.

**[0232]** (2) Unregistered state

**[0233]** For a user in the unregistered state, a to-be-claimed membership benefit and a settlement amount can be displayed on the identity credential page, so that the user quickly perceives a benefit that can be obtained after identity credential registration is performed. In an optional implementation provided in this embodiment, the performing page rendering and display includes: rendering a credential registration page that includes the settlement amount included in the settlement information and the identity credential registration data, and displaying the credential registration page.

**[0234]** Optionally, an identity credential registration control is configured on the credential registration page.

**[0235]** As shown in FIG. 8(a), the credential registration page displays the settlement amount and the benefit that can be obtained after identity credential registration is performed. An identity credential registration button 801 is further configured on the credential registration page.

**[0236]** Further, after the user triggers the registration control configured on the credential registration page, credential registration processing can be performed in cooperation with the server, the identity benefit can be associated with the identity credential, and the identity credential page can be rendered and displayed based on the identity benefit, so that the user perceives identity credential registration. In an optional implementation provided in this embodiment, the performing identity credential processing in cooperation with the server includes: if the registration control configured on the credential registration page is triggered, sending a credential registration request to the server, to perform identity credential registration of the user with the merchant to obtain the identity credential; and receiving an identity benefit that is associated with the identity credential and that is delivered by the server, and rendering and displaying an identity credential page based on the identity benefit.

**[0237]** Optionally, the settlement instruction is generated after a settlement control configured on the identity credential page is triggered.

**[0238]** Specifically, after the user triggers the registration control configured on the credential registration page, the credential registration request is sent to the server, and the server can add the user to a registered user table stored by the merchant in the server, or the server invokes a registration interface of the merchant server to perform identity credential registration of the user, and issues the identity benefit associated with the identity credential to the user terminal, to issue

a merchant discount benefit to the identity credential, and issue a payment discount benefit to a payment account.

**[0239]** In a specific execution process, after the user terminal displays the identity credential page, the user can trigger a control displayed on the identity credential page to perform identity credential processing in cooperation with the server. Specifically, a participation control configured on the identity credential page can be triggered for addition to a registered user group, and a claim control of the identity benefit can be further triggered to claim the benefit. In an optional implementation provided in this embodiment, after the identity credential page is rendered and displayed based on the identity benefit, the method further includes: if the participation control that is of the registered user group and that is configured on the identity credential page is triggered, adding the user to the registered user group in cooperation with the server; or if the claim control that is of the identity benefit and that is configured on the identity credential page is triggered, associating the identity benefit with the identity credential in cooperation with the server, or allocating the identity benefit to a payment account of the user.

**[0240]** As shown in FIG. 8(b), the user triggers a member group participation button 802 configured on the identity credential page to submit a group participation instruction to the server, and the server adds the user to a registered user group created by the merchant in the payment application. The user triggers an identity benefit claim button 803 configured on the identity credential page to submit a benefit claim instruction to the server, and the server associates the merchant discount benefit with the identity credential of the user in the merchant based on a type of the benefit, or allocates the payment discount benefit to the payment account of the user. The user can further trigger a payment button 804 configured on the identity credential page, so that the user redirects to the merchant subprogram, and performs order confirmation and order payment based on the identity credential, that is, the user submits a settlement instruction based on the identity credential to the user terminal by triggering the payment button 804.

**[0241]** In addition, a login cancellation control can be further configured on the identity credential page. After the user triggers the login cancellation control, the user terminal performs identity credential processing in cooperation with the server, so that the user enters the merchant subprogram based on the unregistered state. In the above-mentioned example, after the user triggers a login cancellation button 805, a login cancellation instruction is submitted to the server, and the server invokes the access interface of the merchant subprogram based on the login

cancellation instruction, so that the user terminal enters the merchant subprogram based on the unregistered state.

**[0242]** In this embodiment, the merchant subprogram is a subprogram that is configured by the merchant in an application and that is used to perform order creation, order confirmation, and order payment of a product order. Specifically, the merchant subprogram can be a subprogram configured by the merchant in the third-party application, for example, a subprogram configured in the payment application, to redirect from the identity credential page displayed by the third-party application to the merchant subprogram in the third-party application.

**[0243]** In a specific execution process, after receiving the settlement information and the user identifier that are sent by the user terminal, the merchant subprogram can create, based on the settlement information and the user identifier, a product page of a product included in the settlement information, settle the product based on the identity benefit associated with the identity credential of the user, to obtain a settlement amount, and after obtaining an order placement instruction submitted by the user on the product page, create a product order based on the settlement amount, and generate an order payment instruction to perform order payment. In an optional implementation provided in this embodiment, the performing order confirmation in the merchant subprogram includes: settling the product information included in the settlement information based on the identity benefit associated with the identity credential, to obtain a settlement result; and if an order placement instruction is detected, creating an order based on the settlement information and the settlement result, and generating an order payment instruction to perform order payment.

**[0244]** As shown in FIG. 9, a product page is generated based on the product information included in the settlement information, and a product amount is settled based on the identity benefit associated with the identity credential of the user, to obtain a settlement result. The user can trigger an order placement button 901 configured on the product page to submit an order placement instruction, so that the merchant subprogram creates a product order based on the settlement result and the product information, and generates an order payment instruction to perform order payment processing.

**[0245]** Further, a product included in the settlement information can alternatively be delivered to the user through logistics delivery. In view of this, the user can further add delivery information of the product to a product page, and a settlement result is jointly calculated based on a product

amount included in the settlement information, a delivery fee, and the identity benefit. In addition, the product included in the settlement information may be a product given to the user, that is, the settlement result is calculated based on the delivery fee and the identity benefit. In an optional implementation provided in this embodiment, the performing order confirmation in the merchant subprogram includes: settling the product information included in the settlement information based on the identity benefit associated with the identity credential, to obtain a settlement result, and/or obtaining delivery information entered by using the merchant subprogram; and if an order placement instruction is detected, creating an order based on the settlement information and the settlement result and/or the delivery information, and generating an order payment instruction to perform order payment.

**[0246]** In the above-mentioned example, the user can further trigger an "Add new delivery address" button 902 configured on the product page to add the delivery information, and calculate a settlement result including the delivery fee, so that the merchant subprogram creates a product order based on the settlement result, the product information, and the delivery address, and generates an order payment instruction to perform order payment processing.

**[0247]** In a specific order payment process, the merchant subprogram can invoke a payment interface based on the generated order payment instruction to perform order payment. Specifically, a payment interface of the third-party application can be invoked to perform order payment. The third-party application can be the above-mentioned application that establishes the NFC connection and displays the identity credential page, for example, the payment application. In an optional implementation provided in this embodiment, the performing order payment in the merchant subprogram includes: invoking the payment interface based on the order payment instruction generated by the merchant subprogram to perform order payment.

**[0248]** Optionally, the payment interface performs the following operation in response to the interface invocation: performing order payment to the merchant based on payment information carried in the order payment instruction, or querying an identity benefit of a payment account of the user based on the user identifier carried in the order payment instruction, and performing order payment to the merchant based on the identity benefit.

**[0249]** For example, after generating the order payment instruction, the merchant subprogram invokes the payment interface of the payment application to perform order payment, and a server to which the payment application belongs queries the identity benefit of the payment account of

the user based on the user identifier carried in the order payment instruction, calculates, based on the identity benefit, an amount transferred out from the user account, transfers the amount that is transferred out to a merchant account for order payment, and performs benefit write-off to the merchant based on the identity benefit.

5   **[0250]**     In conclusion, one or more near field communication-based order processing methods provided in this embodiment can be applied to a merchant device. In a process of performing order processing, settlement information entered through a settlement page is obtained, and a near field payment page of the settlement information is rendered and displayed; a near field communication component is invoked to perform user terminal detection, and a near field communication  
10   connection to a detected user terminal is established; and the settlement information is sent to the user terminal through the NFC connection, so that the user terminal performs identity credential processing in cooperation with the server based on the settlement information, and redirects to a merchant subprogram based on a settlement instruction of an identity credential of a user in a merchant, to perform order confirmation and order payment. This implements order creation, order  
15   confirmation, and order payment without a checkout device, improves order processing efficiency, and avoids a problem of low efficiency in a scenario with a concentrated checkout region.

**[0251]**     Further, different identity credential pages can be rendered based on the found identity credential status of the user, so that before payment is performed, the user can perceive a benefit that can be enjoyed after identity credential registration is performed or a benefit that can be  
20   enjoyed in a current order, thereby improving a perception degree of the user. Furthermore, a plurality of controls can be further configured on the identity credential page. Before payment is performed, the user can claim each identity benefit and join a user group by using the configured control on the identity credential page, which avoids a complex process in which a coupon is first claimed and then order processing is performed. In addition, different controls can be configured  
25   on identity credential pages of an unregistered user and a registered user, so that the unregistered user perceives a benefit that can be enjoyed after identity credential registration is performed, thereby improving order processing efficiency and improving user perception.

**[0252]**     The near field communication-based order processing method provided in this embodiment is further described below by using an example in which the near field  
30   communication-based order processing method provided in this embodiment is applied to a registered member payment scenario. With reference to FIG. 10, the near field communication-

based order processing method applied to the registered member payment scenario specifically includes the following steps.

**[0253]** Step S1002: Obtain settlement information entered through a settlement page, and invoke a near field payment interface through a third-party application to render and display a near field payment page of the settlement information.

**[0254]** Previously, a merchant member enters the settlement information through the settlement page displayed by the third-party application installed in a merchant device.

**[0255]** Step S1004: Invoke an NFC component to perform user terminal detection, and establish an NFC connection to a detected user.

**[0256]** Step S1006: Invoke the near field payment interface through the third-party application to send the settlement information to the user terminal through the NFC connection.

**[0257]** The near field communication-based order processing method provided in this embodiment is further described below by using an example in which the near field communication-based order processing method provided in this embodiment is applied to an unregistered member payment scenario. With reference to FIG. 11, the near field communication-based order processing method applied to the unregistered member payment scenario specifically includes the following steps.

**[0258]** Step S1102: Obtain settlement information entered through a settlement page, and invoke a near field payment interface through a third-party application to render and display a near field payment page of the settlement information.

**[0259]** Previously, a merchant member enters the settlement information through the settlement page displayed by the third-party application installed in a merchant device.

**[0260]** Step S1104: Invoke an NFC component to perform user terminal detection, and establish an NFC connection to a detected user.

**[0261]** Step S1106: Invoke the near field payment interface through the third-party application to send the settlement information to the user terminal through the NFC connection.

**[0262]** An embodiment of a first near field communication-based order processing apparatus provided in this disclosure is as follows:

**[0263]** In the above-mentioned embodiment, the first near field communication-based order processing method is provided. Correspondingly, a near field communication-based order processing apparatus is further provided. The following provides descriptions with reference to the

accompanying drawings.

**[0264]** FIG. 14 is a schematic diagram of an embodiment of a first near field communication-based order processing apparatus according to an embodiment.

**[0265]** The apparatus embodiment corresponds to the method embodiment, and therefore is briefly described. For a related part, references can be made to the corresponding descriptions of the method embodiment provided above. The following described apparatus embodiment is merely an example.

**[0266]** The first near field communication-based order processing apparatus provided in this embodiment includes: a settlement information receiving module 1402, configured to: invoke a near field communication component to establish a near field communication connection in cooperation with a merchant device of a merchant, and receive, through the near field communication connection, settlement information sent by the merchant device; a settlement information sending module 1404, configured to send the settlement information to a server, to make an identity credential query and obtain identity credential data corresponding to an identity credential status of a user in the merchant; an identity credential page display module 1406, configured to: perform page rendering and display based on the settlement information and the identity credential data delivered by the server, and perform identity credential processing in cooperation with the server based on a displayed identity credential page; and a subprogram redirection module 1408 that is run if a settlement instruction based on an identity credential is detected, where the subprogram redirection module 1408 is configured to: redirect to a merchant subprogram, and send the settlement information and a user identifier, to perform order confirmation and order payment in the merchant subprogram.

**[0267]** An embodiment of a second near field communication-based order processing apparatus provided in this disclosure is as follows:

**[0268]** In the above-mentioned embodiment, the second near field communication-based order processing method is provided. Correspondingly, a near field communication-based order processing apparatus is further provided. The following provides descriptions with reference to the accompanying drawings.

**[0269]** FIG. 15 is a schematic diagram of an embodiment of a second near field communication-based order processing apparatus according to an embodiment.

**[0270]** The apparatus embodiment corresponds to the method embodiment, and therefore is

briefly described. For a related part, references can be made to the corresponding descriptions of the method embodiment provided above. The following described apparatus embodiment is merely an example.

**[0271]** The second near field communication-based order processing apparatus provided in this embodiment includes: a settlement information receiving module 1502, configured to receive settlement information sent by a user terminal, where the settlement information is sent by a merchant device to the user terminal through an established near field communication connection; an identity credential query module 1504, configured to make an identity credential query based on a user identifier and a merchant identifier included in the settlement information; an identity credential data sending module 1506, configured to: obtain, based on a found identity credential status of a user in a merchant, identity credential data corresponding to the identity credential status, and deliver the identity credential data to the user terminal; and an identity credential processing module 1508, configured to perform identity credential processing in cooperation with the user terminal, so that the user terminal redirects to a merchant subprogram after detecting a settlement instruction based on an identity credential, to perform order confirmation and order payment.

**[0272]** An embodiment of a third near field communication-based order processing apparatus provided in this disclosure is as follows:

**[0273]** In the above-mentioned embodiment, the third near field communication-based order processing method is provided. Correspondingly, a near field communication-based order processing apparatus is further provided. The following provides descriptions with reference to the accompanying drawings.

**[0274]** FIG. 16 is a schematic diagram of an embodiment of a third field communication-based order processing apparatus according to an embodiment.

**[0275]** The apparatus embodiment corresponds to the method embodiment, and therefore is briefly described. For a related part, references can be made to the corresponding descriptions of the method embodiment provided above. The following described apparatus embodiment is merely an example.

**[0276]** The third near field communication-based order processing apparatus provided in this embodiment includes: a settlement information obtaining module 1602, configured to: obtain settlement information entered through a settlement page, and render and display a near field payment page of the settlement information; a near field communication connection establishment

module 1604, configured to: invoke a near field communication component to perform user terminal detection, and establish a near field communication connection to a detected user terminal; and a settlement information sending module 1606, configured to send the settlement information to the user terminal through the near field communication connection, so that the user terminal performs identity credential processing in cooperation with a server based on the settlement information, and redirects to a merchant subprogram based on a settlement instruction of an identity credential of a user in a merchant, to perform order confirmation and order payment.

**[0277]** An embodiment of a first near field communication-based order processing device provided in this disclosure is as follows:

**[0278]** Corresponding to the first near field communication-based order processing method described above, based on a same technical concept, one or more embodiments of this disclosure further provide a near field communication-based order processing device. The near field communication-based order processing device is configured to perform the first near field communication-based order processing method provided above. FIG. 17 is a schematic structural diagram of a first near field communication-based order processing device according to one or more embodiments of this disclosure.

**[0279]** The first near field communication-based order processing device provided in this embodiment includes the following.

**[0280]** As shown in FIG. 17, the near field communication-based order processing device can vary greatly because of a difference in configuration or performance, and can include one or more processors 1701 and a storage 1702. The storage 1702 can store one or more storage applications or data. The storage 1702 can be a transitory storage or a persistent storage. The application stored in the storage 1702 can include one or more modules (not shown in the figure), and each module can include a series of computer-executable instructions in the near field communication-based order processing device. Furthermore, the processor 1701 can be configured to communicate with the storage 1702 to execute, on the near field communication-based order processing device, a series of computer-executable instructions in the storage 1702. The near field communication-based order processing device can further include one or more power supplies 1703, one or more wired or wireless network interfaces 1704, one or more input/output interfaces 1705, one or more keyboards 1706, etc.

**[0281]** In a specific embodiment, the near field communication-based order processing device

includes a storage and one or more programs. The one or more programs are stored in the storage. The one or more programs can include one or more modules, and each module can include a series of computer-executable instructions in a first device of a payer. The one or more programs are configured to be executed by one or more processors to execute the following computer-executable instructions: invoking a near field communication component to establish a near field communication connection in cooperation with a merchant device of a merchant, and receiving, through the near field communication connection, settlement information sent by the merchant device; sending the settlement information to a server, to make an identity credential query and obtain identity credential data corresponding to an identity credential status of a user in the merchant; performing page rendering and display based on the settlement information and the identity credential data delivered by the server, and performing identity credential processing in cooperation with the server based on a displayed identity credential page; and if a settlement instruction based on an identity credential is detected, redirecting to a merchant subprogram, and sending the settlement information and a user identifier, to perform order confirmation and order payment in the merchant subprogram.

**[0282]** An embodiment of a second near field communication-based order processing device provided in this disclosure is as follows:

**[0283]** Corresponding to the second near field communication-based order processing method described above, based on a same technical concept, one or more embodiments of this disclosure further provide a near field communication-based order processing device. The near field communication-based order processing device is configured to perform the second near field communication-based order processing method provided above. FIG. 18 is a schematic structural diagram of a second near field communication-based order processing device according to one or more embodiments of this disclosure.

**[0284]** The second near field communication-based order processing device provided in this embodiment includes the following.

**[0285]** As shown in FIG. 18, the near field communication-based order processing device can vary greatly because of a difference in configuration or performance, and can include one or more processors 1801 and a storage 1802. The storage 1802 can store one or more storage applications or data. The storage 1802 can be a transitory storage or a persistent storage. The application stored in the storage 1802 can include one or more modules (not shown in the figure), and each module

can include a series of computer-executable instructions in the near field communication-based order processing device. Furthermore, the processor 1801 can be configured to communicate with the storage 1802 to execute, on the near field communication-based order processing device, a series of computer-executable instructions in the storage 1802. The near field communication-based order processing device can further include one or more power supplies 1803, one or more wired or wireless network interfaces 1804, one or more input/output interfaces 1805, one or more keyboards 1806, etc.

**[0286]** In a specific embodiment, the near field communication-based order processing device includes a storage and one or more programs. The one or more programs are stored in the storage.

The one or more programs can include one or more modules, and each module can include a series of computer-executable instructions in the near field communication-based order processing device. The one or more programs are configured to be executed by one or more processors to execute the following computer-executable instructions: receiving settlement information sent by a user terminal, where the settlement information is sent by a merchant device to the user terminal through an established near field communication connection; making an identity credential query based on a user identifier and a merchant identifier included in the settlement information; obtaining, based on a found identity credential status of a user in a merchant, identity credential data corresponding to the identity credential status, and delivering the identity credential data to the user terminal; and performing identity credential processing in cooperation with the user terminal, so that the user terminal redirects to a merchant subprogram after detecting a settlement instruction based on an identity credential, to perform order confirmation and order payment.

**[0287]** An embodiment of a third near field communication-based order processing device provided in this disclosure is as follows:

**[0288]** Corresponding to the third near field communication-based order processing method described above, based on a same technical concept, one or more embodiments of this disclosure further provide a near field communication-based order processing device. The near field communication-based order processing device is configured to perform the third near field communication-based order processing method provided above. FIG. 19 is a schematic structural diagram of a near field communication-based order processing device according to one or more embodiments of this disclosure.

**[0289]** The near field communication-based order processing device provided in this

embodiment includes the following.

**[0290]** As shown in FIG. 19, the near field communication-based order processing device can vary greatly because of a difference in configuration or performance, and can include one or more processors 1901 and a storage 1902. The storage 1902 can store one or more storage applications or data. The storage 1902 can be a transitory storage or a persistent storage. The application stored in the storage 1902 can include one or more modules (not shown in the figure), and each module can include a series of computer-executable instructions in the near field communication-based order processing device. Furthermore, the processor 1901 can be configured to communicate with the storage 1902 to execute, on the near field communication-based order processing device, a series of computer-executable instructions in the storage 1902. The near field communication-based order processing device can further include one or more power supplies 1903, one or more wired or wireless network interfaces 1904, one or more input/output interfaces 1905, one or more keyboards 1906, etc.

**[0291]** In a specific embodiment, the near field communication-based order processing device includes a storage and one or more programs. The one or more programs are stored in the storage. The one or more programs can include one or more modules, and each module can include a series of computer-executable instructions in the near field communication-based order processing device. The one or more programs are configured to be executed by one or more processors to execute the following computer-executable instructions: obtaining settlement information entered through a settlement page, and rendering and displaying a near field payment page of the settlement information; invoking a near field communication component to perform user terminal detection, and establishing a near field communication connection to a detected user terminal; and sending the settlement information to the user terminal through the near field communication connection, so that the user terminal performs identity credential processing in cooperation with a server based on the settlement information, and redirects to a merchant subprogram based on a settlement instruction of an identity credential of a user in a merchant, to perform order confirmation and order payment.

**[0292]** An embodiment of a computer-readable storage medium provided in this disclose is as follows:

**[0293]** Corresponding to the first near field communication-based order processing method described above, based on a same technical concept, one or more embodiments of this disclosure

further provide a computer-readable storage medium.

**[0294]** The first computer-readable storage medium provided in this embodiment is configured to store computer-executable instructions. When the computer-executable instructions are executed, the following procedure is implemented: invoking a near field communication component to establish a near field communication connection in cooperation with a merchant device of a merchant, and receiving, through the near field communication connection, settlement information sent by the merchant device; sending the settlement information to a server, to make an identity credential query and obtain identity credential data corresponding to an identity credential status of a user in the merchant; performing page rendering and display based on the settlement information and the identity credential data delivered by the server, and performing identity credential processing in cooperation with the server based on a displayed identity credential page; and if a settlement instruction based on an identity credential is detected, redirecting to a merchant subprogram, and sending the settlement information and a user identifier, to perform order confirmation and order payment in the merchant subprogram.

**[0295]** It should be noted that the embodiment of the first computer-readable storage medium in this disclosure and the embodiment of the first near field communication-based order processing method in this disclosure are based on a same invention concept. Therefore, for specific embodiment of this embodiment, references can be made to the implementation of the corresponding method. Repeated parts are not described again.

**[0296]** An embodiment of a second computer-readable storage medium provided in this disclose is as follows:

**[0297]** Corresponding to second near field communication-based order processing method described above, based on a same technical concept, one or more embodiments of this disclosure further provide a computer-readable storage medium.

**[0298]** The computer-readable storage medium provided in this embodiment is configured to store computer-executable instructions. When the computer-executable instructions are executed by a processor, the following procedure is implemented: receiving settlement information sent by a user terminal, where the settlement information is sent by a merchant device to the user terminal through an established near field communication connection; making an identity credential query based on a user identifier and a merchant identifier included in the settlement information; obtaining, based on a found identity credential status of a user in a merchant, identity credential

data corresponding to the identity credential status, and delivering the identity credential data to the user terminal; and performing identity credential processing in cooperation with the user terminal, so that the user terminal redirects to a merchant subprogram after detecting a settlement instruction based on an identity credential, to perform order confirmation and order payment.

5   **[0299]**   It should be noted that the embodiment of the second computer-readable storage medium in this disclosure and the embodiment of the second near field communication-based order processing method in this disclosure are based on a same invention concept. Therefore, for specific embodiment of this embodiment, references can be made to the implementation of the corresponding method. Repeated parts are not described again.

10   **[0300]**   An embodiment of a third computer-readable storage medium provided in this disclosure is as follows:

**[0301]**   Corresponding to the third near field communication-based order processing method described above, based on a same technical concept, one or more embodiments of this disclosure further provide a computer-readable storage medium.

15   **[0302]**   The computer-readable storage medium provided in this embodiment is configured to store computer-executable instructions. When the computer-executable instructions are executed by a processor, the following procedure is implemented: obtaining settlement information entered through a settlement page, and rendering and displaying a near field payment page of the settlement information; invoking a near field communication component to perform user terminal  
20   detection, and establishing a near field communication connection to a detected user terminal; and sending the settlement information to the user terminal through the near field communication connection, so that the user terminal performs identity credential processing in cooperation with a server based on the settlement information, and redirects to a merchant subprogram based on a settlement instruction of an identity credential of a user in a merchant, to perform order  
25   confirmation and order payment.

**[0303]**   It should be noted that the embodiment of the third computer-readable storage medium in this disclosure and the embodiment of the third near field communication-based order processing method in this disclosure are based on a same invention concept. Therefore, for specific embodiment of this embodiment, references can be made to the implementation of the  
30   corresponding method. Repeated parts are not described again.

**[0304]**   The embodiments of this disclosure are described in a progressive manner. For same

or similar parts in the embodiments, references can be made to each other. Each embodiment focuses on a difference from other embodiments. For example, the apparatus embodiment, the device embodiment, and the storage medium embodiment are all similar to the method embodiment, and therefore are briefly described. For reading of related content in the apparatus  
5 embodiment, the device embodiment, and the storage medium embodiment, references can be made to some descriptions in the method embodiment.

**[0305]** Specific embodiments of this disclosure are described above. Other embodiments fall within the scope of the appended claims. In some cases, the actions or steps described in the claims can be performed in an order different from that in the embodiments, and the desired results can  
10 still be achieved. In addition, the process depicted in the accompanying drawings does not necessarily require the shown particular execution order to achieve the desired results. In some implementations, multitasking and parallel processing are feasible or may be advantageous.

**[0306]** In the 1930s, whether a technical improvement is a hardware improvement (for example, an improvement to a circuit structure, such as a diode, a transistor, or a switch) or a  
15 software improvement (an improvement to a method procedure) can be clearly distinguished. However, as technologies develop, current improvements to many method procedures can be considered as direct improvements to hardware circuit structures. Almost all designers program an improved method procedure into a hardware circuit, to obtain a corresponding hardware circuit structure. Therefore, a method procedure can be improved by using a hardware entity module. For  
20 example, a programmable logic device (PLD) (for example, a field programmable gate array (FPGA)) is such an integrated circuit, and a logical function of the programmable logic device is determined by a user through device programming. The designer performs programming to "integrate" a digital system to a PLD without requesting a chip manufacturer to design and produce an application-specific integrated circuit chip. In addition, currently, instead of manually  
25 manufacturing an integrated circuit chip, such programming is mostly implemented by using "logic compiler" software. The "logic compiler" software is similar to a software compiler used to develop and write a program. Original code needs to be written in a particular programming language before being compiled. The language is referred to as a hardware description language (HDL). There are many HDLs such as the Advanced Boolean Expression Language (ABEL), the  
30 Altera Hardware Description Language (AHDL), Confluence, the Cornell University Programming Language (CUPL), HDCal, the Java Hardware Description Language (JHDL), Lava,

Lola, MyHDL, PALASM, and the Ruby Hardware Description Language (RHDL). Currently, the Very-High-Speed Integrated Circuit Hardware Description Language (VHDL) and Verilog are most commonly used. It should also be clear to a person skilled in the art that a hardware circuit that implements a logical method procedure can be readily obtained once the method procedure is

5 logically programmed by using the several hardware description languages described above and is programmed into an integrated circuit.

**[0307]** A controller can be implemented in any suitable manner, for example, the controller can use a form such as a microprocessor, a processor, or a computer-readable medium, a logic gate, a switch, an application specific integrated circuit (ASIC), a programmable logic controller, or an

10 embedded microcontroller storing computer-readable program code (such as software or firmware) that can be executed by the (micro)processor. Examples of the controller include but are not limited to the following microcontrollers: ARC 626D, Atmel AT151SAM, Microchip PIC18F26K20, and Silicone Labs C8061F320. A storage controller can also be implemented as a part of control logic of the storage. A person skilled in the art also knows that in addition to implementing the controller

15 by using only the computer-readable program code, logic programming can be performed on method steps to enable the controller to implement a same function in a form of a logic gate, a switch, an application-specific integrated circuit, a programmable logic controller, an embedded microcontroller, etc. Therefore, the controller can be considered as a hardware component, and an apparatus configured to implement various functions in the controller can also be considered as a

20 structure in the hardware component. Alternatively, the apparatus configured to implement various functions can even be considered as both a software module implementing the method and a structure in the hardware component.

**[0308]** The system, apparatus, module, or unit illustrated in the above-mentioned embodiments can be implemented by using a computer chip or an entity, or can be implemented

25 by using a product having a certain function. A typical implementation device is a computer. Specifically, the computer can be, for example, a personal computer, a laptop computer, a cellular phone, a camera phone, a smartphone, a personal digital assistant, a media player, a navigation device, an email device, a game console, a tablet computer, a wearable device, or a combination of any of these devices.

30 **[0309]** For ease of description, the above-mentioned apparatus is separately described by dividing the apparatus into various units based on functions. Certainly, when the embodiments of

this disclosure are implemented, functions of the units can be implemented in one or more pieces of software and/or hardware.

**[0310]** A person skilled in the art should understand that one or more embodiments of this disclosure can be provided as a method, system, or computer program product. Therefore, the one or more embodiments of this disclosure can use a form of hardware only embodiments, software only embodiments, or embodiments with a combination of software and hardware. In addition, this disclosure can use a form of a computer program product implemented on one or more computer-usable storage media (including but not limited to a magnetic disk memory, a CD-ROM, an optical memory, etc.) including computer-usable program code.

**[0311]** This disclosure is described with reference to the flowcharts and/or block diagrams of the method, the device (system), and the computer program product according to the embodiments of this disclosure. It should be understood that computer program instructions can be used to implement each procedure and/or block in the flowcharts and/or the block diagrams and a combination of procedures and/or blocks in the flowcharts and/or the block diagrams. These computer program instructions can be provided to a general-purpose computer, a dedicated computer, an embedded processor, or a processor of another programmable data processing device to generate a machine, so that the instructions executed by the computer or the processor of the another programmable data processing device generate an apparatus for implementing a specific function in one or more procedures in the flowcharts and/or in one or more blocks in the block diagrams.

**[0312]** Alternatively, these computer program instructions can be stored in a computer-readable memory that can instruct a computer or another programmable data processing device to work in a specific manner, so that the instructions stored in the computer-readable memory generate an artifact that includes an instruction apparatus. The instruction apparatus implements a specific function in one or more procedures in the flowcharts and/or in one or more blocks in the block diagrams.

**[0313]** Alternatively, these computer program instructions can be loaded onto a computer or another programmable data processing device, so that a series of operations and steps are performed on the computer or the another programmable device, thereby generating computer-implemented processing. Therefore, the instructions executed on the computer or the another programmable device provide steps for implementing a specific function in one or more

procedures in the flowcharts and/or in one or more blocks in the block diagrams.

**[0314]** In a typical configuration, a computing device includes one or more processors (CPUs), an input/output interface, a network interface, and a memory.

**[0315]** The memory may include a non-persistent memory, a random access memory (RAM),  
5 a non-volatile memory, and/or another form in a computer-readable medium, for example, a read-only memory (ROM) or a flash memory (flash RAM). The memory is an example of the-computer readable medium.

**[0316]** The computer-readable medium includes persistent, non-persistent, removable, and non-removable media that can store information by using any method or technology. The  
10 information can be computer-readable instructions, a data structure, a program module, or other data. Examples of the computer storage medium include but are not limited to a phase change random access memory (PRAM), a static random access memory (SRAM), a dynamic random access memory (DRAM), another type of random access memory (RAM), a read-only memory (ROM), an electrically erasable programmable read-only memory (EEPROM), a flash memory or  
15 another memory technology, a compact disc read-only memory (CD-ROM), a digital versatile disc (DVD) or another optical storage, a magnetic cassette, a magnetic tape/magnetic disk storage or another magnetic storage device, or any other non-transmission medium that can be configured to store information that can be accessed by the computing device. As specified in this specification, the computer-readable medium does not include transitory computer-readable media (transitory  
20 media), such as a modulated data signal and a carrier.

**[0317]** It should be further noted that the terms "include", "comprise", or any other variants thereof are intended to cover a non-exclusive inclusion, so that a process, a method, a product, or a device that includes a list of elements not only includes those elements but also includes other elements which are not expressly listed, or further includes elements inherent to such a process,  
25 method, product, or device. Without more constraints, an element preceded by "includes a ..." does not preclude the presence of additional identical elements in the process, method, product, or device that includes the element.

**[0318]** The one or more embodiments of this disclosure can be described in the general context of computer-executable instructions executed by a computer, for example, a program module.  
30 Usually, the program module includes a routine, a program, an object, a component, a data structure, etc. for executing a specific task or implementing a specific abstract data type. The one

or more embodiments of this disclosure can alternatively be practiced in distributed computing environments. In the distributed computing environments, tasks are executed by remote processing devices that are connected through a communication network. In the distributed computing environments, the program module can be located in local and remote computer storage media including storage devices.

**[0319]** The above-mentioned descriptions are merely embodiments of this disclosure, and are not intended to limit this disclosure. A person skilled in the art can make various modifications and changes to this disclosure. Any modification, equivalent replacement, improvement, etc. made without departing from the spirit and principle of this disclosure shall fall within the scope of the claims of this disclosure.

## CLAIMS

What is claimed is:

1. A near field communication-based order processing method, comprising:
  - invoking a near field communication component to establish a near field communication
  - 5 connection in cooperation with a merchant device of a merchant, and receiving, through the near field communication connection, settlement information sent by the merchant device;
  - sending the settlement information to a server, to make an identity credential query and obtain identity credential data corresponding to an identity credential status of a user in the merchant;
  - performing page rendering and display based on the settlement information and the identity
  - 10 credential data delivered by the server, and performing identity credential processing in cooperation with the server based on a displayed identity credential page; and
  - if a settlement instruction based on an identity credential is detected, redirecting to a merchant subprogram, and sending the settlement information and a user identifier, to perform order confirmation and order payment in the merchant subprogram.
- 15 2. The near field communication-based order processing method according to claim 1, wherein the near field communication connection is established after the merchant device obtains the settlement information entered through a settlement page and renders and displays a near field payment page of the settlement information.
3. The near field communication-based order processing method according to claim 1,
- 20 wherein the making an identity credential query comprises:
  - querying, based on the user identifier of the user and a merchant identifier comprised in the settlement information, whether the user performs identity credential registration with the merchant; and if yes, determining that the identity credential status is a registered state; or if no, determining that the identity credential status is an unregistered state.
- 25 4. The near field communication-based order processing method according to claim 3, wherein if the identity credential status is the registered state, the obtaining identity credential data corresponding to an identity credential status of a user in the merchant comprises:
  - obtaining credential information of the identity credential registered by the user with the merchant and an identity benefit associated with the identity credential; and
  - 30 determining a registered user group created by the merchant for a registered user whose

identity credential is registered.

5. The near field communication-based order processing method according to claim 4, wherein the performing page rendering and display based on the settlement information and the identity credential data delivered by the server comprises:

5 rendering a credential interaction page of the identity credential based on a settlement amount comprised in the settlement information, the credential information, and the identity benefit, and displaying the credential interaction page, wherein

a login control, a claim control of the identity benefit, and/or a participation control of the registered user group are/is configured on the credential interaction page.

10 6. The near field communication-based order processing method according to claim 5, wherein the performing identity credential processing in cooperation with the server based on a displayed identity credential page comprises:

if the participation control is triggered, generating a participation request and sending the participation request to the server, to add the user to the registered user group;

15 if the claim control is triggered, sending a claim request of the identity benefit to the server, to associate the identity benefit with the identity credential, or allocate the identity benefit to a payment account of the user; or

if the login control is triggered, performing login processing of the identity credential in cooperation with the server, wherein the settlement instruction is generated after the login  
20 processing succeeds.

7. The near field communication-based order processing method according to claim 3, wherein if the identity credential status is the unregistered state, the identity credential data comprises identity credential registration data of the merchant; and

correspondingly, the performing page rendering and display based on the settlement  
25 information and the identity credential data delivered by the server comprises:

rendering a credential registration page that comprises the identity credential registration data and a settlement amount comprised in the settlement information, and displaying the credential registration page.

8. The near field communication-based order processing method according to claim 7,  
30 wherein the performing identity credential processing in cooperation with the server based on a displayed identity credential page comprises:

if a registration control configured on the credential registration page is triggered, sending a credential registration request to the server, to perform identity credential registration of the user with the merchant to obtain the identity credential; and

receiving an identity benefit that is associated with the identity credential and that is delivered by the server, and rendering and displaying an identity credential page based on the identity benefit, wherein the settlement instruction is generated after a settlement control configured on the identity credential page is triggered.

9. The near field communication-based order processing method according to claim 8, wherein after the sub-step of receiving an identity benefit that is associated with the identity credential and that is delivered by the server, and rendering and displaying an identity credential page based on the identity benefit is performed, the method further comprises:

if a participation control that is of a registered user group and that is configured on the identity credential page is triggered, adding the user to the registered user group in cooperation with the server; or

if a claim control that is of the identity benefit and that is configured on the identity credential page is triggered, associating the identity benefit with the identity credential in cooperation with the server, or allocating the identity benefit to a payment account of the user.

10. The near field communication-based order processing method according to claim 1, wherein the performing order confirmation in the merchant subprogram comprises:

settling product information comprised in the settlement information based on an identity benefit associated with the identity credential, to obtain a settlement result, and/or obtaining delivery information entered by using the merchant subprogram; and

if an order placement instruction is detected, creating an order based on the settlement information and the settlement result and/or the delivery information, and generating an order payment instruction to perform order payment.

11. The near field communication-based order processing method according to claim 10, wherein the performing order payment in the merchant subprogram comprises:

invoking a payment interface based on the order payment instruction to perform order payment, wherein

the payment interface performs the following operation in response to the interface invocation: performing order payment to the merchant based on payment information carried in the order

payment instruction, or querying an identity benefit of a payment account of the user based on the user identifier carried in the order payment instruction, and performing order payment to the merchant based on the identity benefit.

12. The near field communication-based order processing method according to claim 2,  
5 wherein after detecting a switching instruction of the near field payment page, the merchant device renders and switches to a scan-to-pay page that carries a payment code and an order amount; and correspondingly, the method further comprises:

scanning the payment code, decoding the payment code, and based on a decoding result, redirecting to the merchant subprogram, and sending the settlement information and the user  
10 identifier, to perform order confirmation and order payment in the merchant subprogram.

13. The near field communication-based order processing method according to claim 1, wherein the merchant device comprises an NFC device configured with a display component and an NFC component; and

the NFC device inputs the settlement information through an installed third-party application,  
15 and the third-party application renders a near field payment page by invoking a near field payment interface, and sends the settlement information to a user terminal.

14. The near field communication-based order processing method according to claim 1, wherein after the operation of receiving, through the near field communication connection, settlement information sent by the merchant device is performed, and before the operation of  
20 sending the settlement information to a server is performed, the method further comprises:

entering an application in which the merchant subprogram is run, wherein the identity credential page is displayed in the application, wherein

the application is configured with an access entry for accessing credential storage space, and after the access entry is triggered, credential information of the identity credential registered by  
25 the user with the merchant is queried and displayed.

15. A near field communication-based order processing method, comprising:

receiving settlement information sent by a user terminal, wherein the settlement information is sent by a merchant device to the user terminal through an established near field communication connection;

30 making an identity credential query based on a user identifier and a merchant identifier comprised in the settlement information;

obtaining, based on a found identity credential status of a user in a merchant, identity credential data corresponding to the identity credential status, and delivering the identity credential data to the user terminal; and

performing identity credential processing in cooperation with the user terminal, so that the user terminal redirects to a merchant subprogram after detecting a settlement instruction based on an identity credential, to perform order confirmation and order payment.

16. The near field communication-based order processing method according to claim 15, wherein the near field communication connection is established after the merchant device detects the user terminal by invoking a near field communication component; and

the near field communication component is invoked after the settlement information entered through a settlement page is obtained and a near field payment page of the settlement information is rendered and displayed.

17. The near field communication-based order processing method according to claim 15, wherein if the identity credential status is a registered state, the obtaining identity credential data corresponding to the identity credential status, and delivering the identity credential data to the user terminal comprises:

obtaining credential information of the identity credential registered by the user with the merchant and an identity benefit associated with the identity credential, determining a registered user group created by the merchant for a registered user whose identity credential is registered, and delivering the credential information, the identity benefit, and the registered user group to the user terminal; and

correspondingly, the performing identity credential processing in cooperation with the user terminal comprises:

if a participation request sent by the user terminal is received, adding the user to the registered user group;

if a claim request that is of the identity benefit and that is sent by the user terminal is received, associating the identity benefit with the identity credential, or allocating the identity benefit to a payment account of the user; or

if a login request sent by the user terminal after a login control configured on a credential interaction page is triggered is received, performing login processing of the identity credential, wherein the settlement instruction is generated after the login processing succeeds.

18. The near field communication-based order processing method according to claim 15, wherein if the identity credential status is an unregistered state, the identity credential data comprises identity credential registration data of the merchant; and

correspondingly, the performing identity credential processing in cooperation with the user  
5 terminal comprises:

if a credential registration request sent by the user terminal is received, performing identity credential registration of the user with the merchant to obtain the identity credential; and

querying an identity benefit associated with the identity credential, and delivering the identity benefit to the user terminal, so that the user terminal renders and displays an identity credential  
10 page based on the identity benefit, wherein the settlement instruction is generated after a settlement control configured on the identity credential page is triggered.

19. A near field communication-based order processing method, comprising:

obtaining settlement information entered through a settlement page, and rendering and displaying a near field payment page of the settlement information;

15 invoking a near field communication component to perform user terminal detection, and establishing a near field communication connection to a detected user terminal; and

sending the settlement information to the user terminal through the near field communication connection, so that the user terminal performs identity credential processing in cooperation with a server based on the settlement information, and redirects to a merchant subprogram based on a  
20 settlement instruction of an identity credential of a user in a merchant, to perform order confirmation and order payment.

20. The near field communication-based order processing method according to claim 19, wherein the near field communication-based order processing method is applied to a merchant device, and the merchant device comprises an NFC device configured with a display component  
25 and an NFC component; and

the NFC device inputs the settlement information through an installed third-party application, and the third-party application renders a near field payment page by invoking a near field payment interface, and sends the settlement information to the user terminal.

21. A near field communication-based order processing apparatus, wherein the apparatus  
30 comprises:

a settlement information receiving module, configured to: invoke a near field communication

component to establish a near field communication connection in cooperation with a merchant device of a merchant, and receive, through the near field communication connection, settlement information sent by the merchant device;

a settlement information sending module, configured to send the settlement information to a server, to make an identity credential query and obtain identity credential data corresponding to an identity credential status of a user in the merchant;

an identity credential page display module, configured to: perform page rendering and display based on the settlement information and the identity credential data delivered by the server, and perform identity credential processing in cooperation with the server based on a displayed identity credential page; and

a subprogram redirection module that is run if a settlement instruction based on an identity credential is detected, wherein the subprogram redirection module is configured to: redirect to a merchant subprogram, and send the settlement information and a user identifier, to perform order confirmation and order payment in the merchant subprogram.

22. A near field communication-based order processing apparatus, wherein the apparatus comprises:

a settlement information receiving module, configured to receive settlement information sent by a user terminal, wherein the settlement information is sent by a merchant device to the user terminal through an established near field communication connection;

an identity credential query module, configured to make an identity credential query based on a user identifier and a merchant identifier comprised in the settlement information;

an identity credential data sending module, configured to: obtain, based on a found identity credential status of a user in a merchant, identity credential data corresponding to the identity credential status, and deliver the identity credential data to the user terminal; and

an identity credential processing module, configured to perform identity credential processing in cooperation with the user terminal, so that the user terminal redirects to a merchant subprogram after detecting a settlement instruction based on an identity credential, to perform order confirmation and order payment.

23. A near field communication-based order processing apparatus, wherein the apparatus comprises:

a settlement information obtaining module, configured to: obtain settlement information

entered through a settlement page, and render and display a near field payment page of the settlement information;

a near field communication connection establishment module, configured to: invoke a near field communication component to perform user terminal detection, and establish a near field

5 communication connection to a detected user terminal; and

a settlement information sending module, configured to send the settlement information to the user terminal through the near field communication connection, so that the user terminal performs identity credential processing in cooperation with a server based on the settlement information, and redirects to a merchant subprogram based on a settlement instruction of an  
10 identity credential of a user in a merchant, to perform order confirmation and order payment.

24. A near field communication-based order processing device, comprising:

a processor; and a storage, configured to store computer-executable instructions, wherein the processor executes the computer-executable instructions to implement the steps of the method according to claim 1, 15, or 19.

15 25. A computer-readable storage medium, configured to store computer-executable instructions, wherein when the computer-executable instructions are executed, the steps of the method according to claim 1, 15, or 19 are implemented.