RESOURCE ALLOCATION METHOD AND DEVICE, AND ELECTRONIC PAYMENT METHOD

TECHNICAL FIELD

This application relates to the field of computer technologies, in particular to a resource allocation method and device, and an electronic payment method.

BACKGROUND

With the development of Internet technology and the popularization of intelligent terminal equipment, greater convenience has been brought to people and resource allocation has become more and more common. In existing resource allocation methods, both sides of resource allocation often need to obtain part of the private information of the other side to realize resource allocation, thus posing a potential threat to the privacy information security of both sides of resource allocation.

By embodying the resource as funds and resource allocation as fund transfer, mobile payment has been widely used to realize fund transfer. Existing mobile payment methods can be carried out by scanning a payment two-dimensional code by a payee (fund receiver in a transfer process) or by scanning a collection two-dimensional code by a payer (fund transferor in a transfer process). Compared with a traditional bank transfer method, the existing mobile payment methods do not require a side to inform the other side of the bank account information of the side for transfer, thus playing a certain information shielding role for both the payee and the payer, and protecting the personal privacy of both sides to a certain extent.

However, the existing mobile payment methods still inform the payee or the payer of the registration information of the other side on a payment platform, which may include member account, real name, portrait photo, and mobile phone number, so for both sides of the transfer, there is still a risk of privacy breach. In situations such as sporadic transactions between strangers, the risk of privacy breach further increases.

SUMMARY

Embodiments of this application provide a resource allocation method and device for protecting the privacy information of both sides of resource allocation and ensuring the

information security of resource allocation.

The embodiments of this application provide an electronic payment method for protecting the privacy information of both sides of electronic payment and ensuring the information security of fund transfer.

The embodiments of this application adopt the following technical solution:

a resource allocation method provided by the embodiments of this application includes:

receiving a first request sent by a first client for accessing a server, wherein the first request carries token information corresponding to resource information of a second client;

determining, according to the token information carried in the first request, the resource information of the second client corresponding to the token information;

receiving resource allocation information input by the first client; and completing resource allocation according to the resource allocation information input by the first client and the resource information of the second client.

Another resource allocation method provided by the embodiments of this application includes:

a first client sends a first request to a server for accessing the server so that the server determines, according to token information carried in the first request, resource information of a second client corresponding to the token information, wherein the first request carries the token information corresponding to the resource information of the second client; and

resource allocation information is input and sent to the server for the server to complete resource allocation according to the resource allocation information input by the first client and the resource information of the second client.

A resource allocation device provided by the embodiments of this application includes:

a request receiving module, configured to receive a first request sent by a first client for accessing a server, wherein the first request carries token information corresponding to resource information of a second client;

a resource information determining module, configured to determine, according to the token information carried in the first request, the resource information of the second client corresponding to the token information;

an information receiving module, configured to receive resource allocation information input by the first client; and

a resource allocation module, configured to complete resource allocation according to the resource allocation information input by the first client and the resource information of the second client.

An electronic payment method provided by this application includes:

receiving a first request sent by a payment side for accessing a server, wherein the first request carries token information corresponding to collection information of a collection side;

determining, according to the token information carried in the first request, the collection information of the collection side corresponding to the token information; and

receiving payment information input by the payment side, and completing electronic payment from the payment side to the collection side according to the payment information input by the payment side and the collection information of the collection side.

Preferably, in the electronic payment method provided by this application, the first request sent by the payment side for accessing the server is sent by the payment side after scanning identification code information of the collection side.

Preferably, in the electronic payment method provided by this application, the first request is specifically a uniform resource locator in one-to-one correspondence with the identification code information for accessing the server, and the uniform resource locator carries token information for determining the collection information of the collection side.

Preferably, in the electronic payment method provided by this application, the establishment of the correspondence between the token information and the collection information of the collection side specifically includes:

generating a uniform resource locator carrying the token information and corresponding to the collection side, and determining the correspondence between the token information and the collection information of the collection side.

Preferably, in the electronic payment method provided by this application, the step of generating the uniform resource locator carrying the token information and corresponding to the collection side, and determining the correspondence between the token information and the collection information of the collection side specifically includes:

acquiring the collection information of the collection side;

establishing a first correspondence between the collection information and the token information when the collection information is verified, and generating the uniform resource locator carrying the token information and corresponding identification code information; and

saving the first correspondence between the collection information and the token information and a second correspondence between the token information and the uniform resource locator, and sending the identification code information to the collection side.

Preferably, in the electronic payment method provided by this application, the step of determining, according to the token information carried in the first request, the collection

information of the collection side corresponding to the token information specifically includes:

extracting the token information carried in the uniform resource locator corresponding to the first request; and

determining, according to the token information, the collection information of the collection side which establishes the first correspondence with the token information at the server.

Preferably, in the electronic payment method provided by this application, the identification code information is a bar code and/or a two-dimensional code.

Preferably, in the electronic payment method provided by this application, the payment information input by the payment side specifically includes payment account information of the payment side and electronic payment amount information; and the collection information of the collection side specifically includes identity information and collection account information of the collection side.

Preferably, in the electronic payment method provided by this application, the payment account information includes bank account information of the payment side and/or user registration account information of the payment side at the server; and the collection account information includes bank account information of the collection side and/or user registration account information of the collection side at the server.

Preferably, in the electronic payment method provided by this application, the server includes a platform server and at least one financial server, and the method specifically includes:

the platform server receives the first request sent by the payment side for accessing the platform server, wherein the first request carries token information corresponding to the collection information of the collection side;

the platform server determines, according to the token information carried in the first request, the collection information of the collection side corresponding to the token information;

the platform server receives the payment information input by the payment side; and

the financial server completes electronic payment from the payment side to the collection side according to the payment information input by the payment side and the collection information of the collection side.

Preferably, in the electronic payment method provided by this application, after the platform server receives the payment information input by the payment side, and before the

financial server completes electronic payment from the payment side to the collection side according to the payment information input by the payment side and the collection information of the collection side, the method further includes:

the platform server determines, according to the payment account information of the payment side, a financial server corresponding to the payment account information; and

the platform server sends a payment instruction to the financial server corresponding to the payment account information for the financial server corresponding to the payment account information to complete electronic payment from the payment side to the collection side.

Preferably, in the electronic payment method provided by this application, the payment instruction sent by the platform server to the financial server corresponding to the payment account information specifically contains collection account information of the collection side and the payment account information of the payment side.

This application further provides another electronic payment method, including:

receiving a first request sent by a collection side for accessing a server, wherein the first request carries token information corresponding to payment information of a payment side;

determining, according to the token information carried in the first request, the payment information of the payment side corresponding to the token information; and

receiving collection information input by the collection side, and completing electronic payment from the payment side to the collection side according to the collection information input by the collection side and the payment information of the payment side.

At least one technical solution adopted by the embodiments of this application can achieve the following beneficial effects:

in the embodiments of this application, the first client sends the first request for accessing the server to the server. The first request does not carry the resource information of the second client, but carries the token information corresponding to the resource information of the second client. After receiving the first request carrying the token information, the server can determine the resource information of the second client corresponding to the token information by identifying the token information in the first request, so that the server can know which second client the first client wishes to allocate resources with. According to this embodiment of this application, since the first client does not identify the resource information of the second client, and both the resource allocation information of the first client and the resource information of the second client are processed in the server, the first client and the second client can complete resource allocation without knowing the private

information of the other side, therefore, the privacy information of the first client and the second client is more effectively and comprehensively protected, and the technical purpose of this application is achieved.

Both sides of resource allocation (i.e., the first client and the second client) during resource allocation can be embodied as a collection side and a payment side of electronic payment to complete electronic payment from the payment side to the collection side, so the embodiments of this application are applicable to scenarios such as fund transfer, and electronic payment.

BRIEF DESCRIPTION OF THE DRAWINGS

The accompanying drawings set forth herein are used for providing a further understanding of this application and constitute a part of this application. Exemplary embodiments of this application and the description thereof are used for explaining this application, and does not constitute any improper limitation on this application. In the accompanying drawings:

FIG. 1-1 is a flow chart of a resource allocation method according to an embodiment of this application;

FIG. 1-2 is a flow chart of a second resource allocation method according to an embodiment of this application;

FIG. 1-3 is a flow chart of a third resource allocation method according to an embodiment of this application;

FIG. 1-4 is a flow chart of a fourth resource allocation method according to an embodiment of this application;

FIG. 1-5 is a schematic diagram of application scenarios of a fifth resource allocation method according to an embodiment of this application;

FIG. 1-6 is a flow chart of a sixth resource allocation method according to an embodiment of this application;

FIG. 1-7 is a flow chart of a seventh resource allocation method according to an embodiment of this application;

FIG. 2 is a flow chart of an eighth resource allocation method according to an embodiment of this application;

FIG. 3-1 is a schematic diagram of an interface of a resource allocation method according to an embodiment of this application;

FIG. 3-2 is a schematic diagram of a second interface of a resource allocation method

according to an embodiment of this application;

FIG. 3-3 is a schematic diagram of a third interface of a resource allocation method according to an embodiment of this application;

FIG. 4 is a structural diagram of a resource allocation device provided by an embodiment of this application; and

FIG. 5 is a flow chart of an electronic payment method according to an embodiment of this application.

DETAILED DESCRIPTION OF THE INVENTION

To make the objectives, technical solutions, and advantages of this application clearer, the technical solutions of this application will be clearly and completely described below with reference to specific embodiments of this application and the accompanying drawings. Apparently, the described embodiments are only some embodiments rather than all the embodiments of this application. All other embodiments obtained by a person of ordinary skill in the art based on the embodiments of this application without creative efforts shall fall within the protection scope of this application.

The technical solution provided by various embodiments of this application will be described in detail below with reference to the accompanying drawings.

Embodiment 1

Referring to FIG. 1, FIG. 1 shows a resource allocation method according to an embodiment of this application. The method is applicable to servers and includes:

S101: receiving a first request sent by a first client for accessing a server, wherein the first request carries token information corresponding to resource information of a second client;

S102: determining, according to the token information carried in the first request, the resource information of the second client corresponding to the token information;

S103: receiving resource allocation information input by the first client; and

S104: completing resource allocation according to the resource allocation information input by the first client and the resource information of the second client.

Preferably, the first request sent by the first client for accessing the server may be sent by the first client after scanning identification code information (corresponding to the uniform resource locator of the second client) of the second client. In the embodiments of this application, the first client sends the first request for accessing the server to the server after

scanning the identification code information of the second client. The first request carries the token information which enables the server to determine the resource information of the second client, but does not carry the resource information of the second client. After executing the step S101, that is, receiving the first request, the server executes the step S102, that is, determining, according to the token information carried in the first request, the resource information of the second client corresponding to the token information, so that the server can know which second client the first client wishes to allocate resources with. Further, after receiving the resource allocation information input by the first client by executing the step S103, the server can execute the step S104 to complete resource allocation.

According to the above embodiment, since the first client cannot identify the resource information of the second client through the identification code information of the second client, and both the resource allocation information of the first client and the resource information of the second client are processed in the server, the first client and the second client can complete resource allocation without knowing the private information of the other side, therefore, the privacy information of the first client and the second client can be more effectively and comprehensively protected, and the technical purpose of this application is achieved.

The specific implementation of the embodiments of this application will be described below in detail from various aspects.

Before the server receives the first request by executing the step S101, the first client can scan the identification code information of the second client, which may be publicly released by the second client or directionally displayed to the first client. The identification code information can be obtained through mapping by the server according to the existing resource information of the second client, or can be determined by the server according to the resource information submitted by the second client upon an application of the second client, as shown in FIG. 1-2. Specifically, the server may execute the step S100 to generate the uniform resource locator carrying the token information and corresponding to the collection side, and further establish the correspondence between the token information and the resource information of the second client. Specifically, the following steps may be included, as shown in FIG. 1-3:

S1001: acquiring the resource information of the second client;

S1002: verifying, by the server, the resource information of the second client and judging whether the resource information of the second client is verified; if not, executing step S1003 and feeding the verification failure result back to the second client; and if yes, executing steps

S1004-S1006;

S1004: establishing the first correspondence between the resource information and the token information when the resource information is verified, and generating the uniform resource locator carrying the token information and the corresponding identification code information;

S1005: saving the first correspondence between the resource information and the token information and a second correspondence between the token information and the uniform resource locator; and

S1006: sending the identification code information to the second client.

When the step S1001 is executed, the resource information of the second client may be obtained in a variety of ways, either being read by the server from a database, or being submitted by the second client to the server. When the step S1002 is executed to verify the resource information of the second client, the verification content and verification process of the resource information may vary according to different resource information submitted to the server by the second client. For example, if the resource information submitted by the second client includes the name and bank account of a second client user, the server can verify the consistency and correspondence of relevant information such as name, bank account, and bank information. Specifically, if the server can directly verify the information (for example, the server includes a bank system server or stores the account information of a bank system), the server can directly give out a verification result; and if the server cannot directly verify the information, the information needs to be sent to a competent authority (such as a central bank system) for verification, and whether the information can be verified is determined according to a verification result obtained by feedback. For another example, if the resource information submitted by the second client includes the member registration information of the second client user on the platform server, such as registered member account, and account password, the server can verify the membership of the second client user on the platform server and determine whether the information is verified according to the verification result. For another example, if the resource information submitted by the second client includes the business applied for and relevant qualification certificates (such as business license, and food hygiene license), the server can verify the correspondence between the subject qualification of the second client and the qualification certificates. The resource information submitted by the second client may also include a service type corresponding to the identification code information applied by the second client user, the service type may indicate whether the second client user will act as a resource transferor or a resource receiver

in a resource allocation process, or may also indicate a type of industry the second client user is engaged in, such as catering industry, and clothing industry. In a word, this embodiment does not make specific restrictions on what form the second client submits the resource information, which resource information to submit, and the like, nor does it make specific restrictions on what processes and means the server uses to verify the resource information, which resource information to verify, and how to determine whether the resource information is verified according to the verification results, and the like, as long as the resource information corresponding to the second client saved by the server can meet the requirements for resource allocation when the step S104 is executed.

When the resource information is verified, the server executes the steps S1004-S1006 to establish the first correspondence between the resource information and the token information, generates the uniform resource locator carrying the token information and the corresponding identification code information, and then sends the identification code information to the second client so that the second client can display the identification code information to the first client. In various embodiments of this application, the identification code information may be a bar code or a two-dimensional code, or a combination of the two, preferably a two-dimensional code with large amount of information, easy identification, strong fault tolerance, low cost, and high durability. When the first client needs to allocate resources with the second client, the uniform resource locator corresponding to the identification code information can be identified by scanning the identification code information, thereby making the first request for accessing the server, namely, a request for accessing an address corresponding to the uniform resource locator.

The uniform resource locator (URL) mentioned in the above embodiment is a concise representation of a location and access method of a file available on the Internet, and is an access address of a standard file on the Internet. Each file on the Internet has a unique URL, and the information contained therein usually indicates the location of the file and how the file should be handled. In this embodiment, the server executes the step S1004 to establish the first correspondence between the resource information and the token information, and establish the second correspondence between the token information and the uniform resource locator, thereby mapping the resource information of the second client into a URL by means of a bridge function of the token information, and when establishing the correspondences, token information corresponding to the token information of the resource information of the second client is added to the URL. Therefore, after receiving the first request carrying the token information (i.e., the uniform resource locator URL in one-to-one correspondence with

the identification code information for accessing the server) sent by the first client, the server can determine the second client and the resource information thereof corresponding to the URL through the token information carried in the URL when determining the resource information of the second client corresponding to the token information in step S102, thus enabling the server to know which second client the first client wishes to allocate resources with, and retrieve the resource information of the second client to allocate resources. Further, the URL does not carry the resource information of the second client, therefore, after the first client scans the identification code information corresponding to the URL, the resource information such as name, bank account, and member account of the second client will not be identified, so that the privacy information of the second client is protected when the first client scans the identification code information.

During establishment of the correspondence between the token information and the resource information of the second client, in addition to the above method, a uniform resource locator carrying the token information can also be formed first on the server, and then the correspondence between the token information and the resource information of the second client can be determined after the resource information of the second client is received. Similarly, the correspondence between the token information and the resource information can be established.

More specifically, when the server executes the step S102 to determine, according to the token information carried in the first request, the resource information of the second client corresponding to the token information, as shown in FIG. 1-4, the following steps may be included:

S1021: extracting the token information carried in the uniform resource locator corresponding to the first request; and

S1022: determining, according to the token information, the resource information of the second client which establishes the first correspondence with the token information at the server.

In this embodiment, the token information carried in the uniform resource locator can be understood as a bridge between the uniform resource identifier and the resource information of the second client; on the one hand, the uniform resource locator is not directly associated with the resource information of the second client, so that the first client cannot obtain the resource information of the second client through the uniform resource locator; and on the other hand, since the server stores the first correspondence between the resource information and the token information and the second correspondence between the token information and

the uniform resource locator, the server can find the resource information which establishes a correspondence with the token information at the server through the token information carried in the uniform resource locator, thereby being able to determine the resource information corresponding to the uniform resource locator and realize resource allocation. It should be noted that in the specific implementation, the token information having correspondence with the resource information of the second client and the token information carried in the URL may be the same character string, or character strings which are combined and/or calculated according to a preset rule to obtain a preset conclusion.

The above details the process that the server generates the identification code information for the second client according to the resource information of the second client, and the process that the server determines the resource information of the second client according to the first request sent by the first client after scanning the identification code information. The implementation of the above processes in a specific application scenario will be described in more detail below with reference to the embodiment shown in FIG. 1-5:

a payee (equivalent to the second client) submits information such as name, payee bank account, mobile phone number, contact address, member account, and the like to the server as application information (equivalent to resource information) for applying for a collection two-dimensional code (equivalent to identification code information); after verifying the application information, the server maps the input application information into a collection two-dimensional code and a corresponding URL, and the URL corresponding to the collection two-dimensional code contains a Token (equivalent to token information); and the server stores the collection two-dimensional code, the URL, and the collection bank account information, as well as the correspondence between the information. The correspondence is that the collection two-dimensional code corresponds to the two-dimensional code URL containing the Token, and the Token contained in the two-dimensional code URL corresponds to the name, the collection bank account, the mobile phone number, the contact address, the member account, and other information of the payee. The two-dimensional code URL containing the Token plays a role in information isolation between the collection two-dimensional code and the private information of the payee, thus protecting the privacy of the payee.

After the server receives the first request for accessing the server sent by the first client after scanning the identification code information of the second client in step S101, and before receiving the resource allocation information input by the first client in step S103, as shown in FIG. 1-6, the method may further include:

S105: sending a second request for prompting the first client to input the resource allocation information to the first client.

After receiving the first request sent by the first client, the server may, on the one hand, execute the step S102 to determine the resource information of the corresponding second client, and on the other hand, either wait to receive the resource allocation information sent by the first client, or execute the step S105 to actively send the second request to the first client to prompt the first client to input the resource allocation information. In this embodiment, the execution sequence of the step S105 and the step S102 is not specifically limited, and the two steps can be executed one after the other or simultaneously executed.

Further, preferably, in the step S105, the second request sent by the server to the first client does not contain the resource information of the second client analyzed by the token information, so that the first client can be further prevented from knowing the privacy information of the second client, and the privacy information security in the resource allocation process can be guaranteed.

After executing the step S104 to complete resource allocation according to the resource allocation information input by the first client and the resource information of the second client, as shown in FIG. 1-7, the method may further include:

S106: forwarding a result of the resource allocation to the first client and the second client.

Specifically, the result of the resource allocation forwarded to the first client and the second client may include a result of successful resource allocation or a result of failed resource allocation, but preferably does not include the resource information of the second client or the resource allocation information input by the first client. Therefore, the privacy information of the first client and the second client is continuously protected after resource allocation is completed, and the information security of resource allocation is protected.

In various embodiments of this application, the resource allocation information input by the first client may specifically include the first resource management account information and the resource allocation data information of the first client. The resource allocation data information may be embodied as quantifying the resources which are expected to be allocated with specific data information, and may also include relevant descriptions such as the purpose of resource allocation, and users. Taking the application scenario of bank transfer as an example, the resource allocation data information can be embodied as an amount to be transferred, and can also include remarks such as the purpose of the transfer. The first resource management account information input by the first client may be determined by a

first client user according to the actual situation of the first client user. For example, when the first client needs to make a transfer, if the first client user is not a registered user of the payment platform, the input first resource management account information may be relevant information such as the bank account, name, opening bank, and bank password used by the user for the transfer; and if the first client user is a registered user of the payment platform, the input first resource management account information may also be the user name and password that the user has registered in the payment platform.

In various embodiments of this application, the resource information of the second client may specifically include the identity information and the second resource management account information of the second client, and the specific content may be selected and determined according to the actual situation of the second client. For example, the identity information of the second client may include one or more pieces of relevant information related to identity authentication of the second client, such as name, identity card number, mobile phone number, contact address, business registration information, and qualification authentication information. The second resource management account information may also contain a plurality of optional contents. For example, when the second client wants to receive a transfer payment, if the second client user is not a registered user of the payment platform, the second resource management account information may be relevant information such as the bank account, name, and opening bank used by the user for the transfer; and if the second client user is a registered user of the payment platform, the second resource management account information may also be the user name and password that the user has registered in the payment platform.

It can be seen that according to the embodiments of this application, if the first client and the second client wish to allocate resources, it is only necessary to provide the server with the necessary information needed to allocate resources, that is, only the resources to be allocated and part of information, closely related to the allocated resources, of the resource transferor and the resource receiver need to be provided, while there is no restriction on whether the first client and the second client have registered as members on the platform and whether the first client and the second client are registered members on the same platform. More specifically, by embodying the resource as funds and resource allocation as fund transfer, the first client and the second client may or may not be registered members of the payment platform, and may or may not be registered members on the same payment platform. If the first client or the second client is not a registered member of the payment platform, it is only necessary to provide a bank account which can be used for the fund transfer to the server.

Therefore, preferably, the first resource management account information may not contain the user registration information of the first client at the server, and/or the second resource management account information may not contain the user registration information of the second client at the server, thus simplifying the step of member registration of the first client and/or the second client at the server before resource allocation, and there is no restriction on whether the first client user and the second client user are registered members on the same platform, which is beneficial to improving the applicability of the embodiments of this application.

In the specific implementation of this embodiment, the server may be operated by independent operators or by different operators. For example, a platform server and at least one resource manager may be included. Taking the embodiment shown in FIG. 1-1 as an example, the platform server executes the steps S101-S103 and the resource manager executes the step S104. In the embodiment shown in FIG. 1-2 and FIG. 1-3, the step S100 and the specific steps S1001-S1006 are executed by the platform server. In the embodiment shown in FIG. 1-6, the step S105 is executed by the platform server. In the embodiment shown in FIG. 1-7, the step 106 may be executed by the platform server, or by the resource manager, or by a combination of the two.

Further, if there are multiple optional resource managers, assuming that the first client is the resource transferor and the second client is the resource receiver, a matched resource manager may be determined according to the resource transferor (the first client here). Specifically, after the platform server receives the resource allocation information input by the first client, and before the resource manager completes resource allocation according to the resource allocation information input by the first client and the resource information of the second client, the method may further include:

the platform server determines, according to first resource management account information input by the first client, the resource manager corresponding to the first resource management account information; and

the platform server sends a resource allocation instruction to the resource manager corresponding to the first resource management account information for the resource manager corresponding to the first resource management account information to complete resource allocation.

Based on the above example, since the resource allocation information input by the first client is stored in the platform server and the resource information of the second client is also stored in the platform server, in order to realize resource allocation by the resource manager,

the second resource management account information of the second client and the resource allocation data information input by the first client can be added to the resource allocation instruction sent by the platform server to the resource manager corresponding to the first resource management account information.

It should be noted that the first client in the embodiments of this application may be a resource transferor or a resource receiver, as long as the first client and the second client are opposite parties of resource allocation. Taking the application of the above embodiment in a fund transfer as an example, either a payer (the first client here) scans identification code information (can be embodied as two-dimensional code) corresponding to a payee (the second client here) to make a payment, or the payee (the first client here) scans identification code information (can be embodied as two-dimensional code) corresponding to the payer (the second client here) to make a collection. In practical applications, if the payer is the first client and the payee is the second client, the fund safety of the payer can be better guaranteed, and the high-frequency collection of the payee can also be ensured with high efficiency. The method can be used by a merchant to collect money from customers, and can also be used in situations where individuals need to transfer money. In practical applications, if the payer is the second client and the payee is the first client, the fund security of the payer can be protected by combining with other technical or non-technical means. The method can be used by a tax department (the first client here, as the payee) to collect taxes from individuals or enterprises (the second client here, as the payer), or by a social security department (the first client here, as the payee) to deduct money from individuals or enterprises (the second client here, as the payer).

Embodiment 2

Referring to FIG. 2, this application further provides a resource allocation method applicable to a first client, including:

S201: the first client sends a first request to a server for accessing the server so that the server determines, according to token information carried in the first request, resource information of a second client corresponding to the token information, wherein the first request carries the token information corresponding to the resource information of the second client; and

S202: resource allocation information is input and sent to the server for the server to complete resource allocation according to the resource allocation information input by the first client and the resource information of the second client.

The first client in the above embodiment can scan identification code information by

using an instrument with a scanning function, or by using an intelligent mobile terminal equipped with an Application (APP for short) to send the first request.

Further, after sending the first request for accessing the server to the server, and before inputting the resource allocation information, the method may further include:

receiving a second request sent by the server for prompting the first client to input the resource allocation information.

The first client in this embodiment cooperates with the server in Embodiment 1 to realize the technical purpose of this application. The relevant explanations in Embodiment 1 are applicable to this embodiment and will not be repeated here.

Embodiment 3

This application further provides a resource allocation method suitable for a second client. After receiving identification code information, the second client displays the identification code information to a first client so that a server can perform the following steps:

receiving a first request sent by the first client for accessing the server, wherein the first request carries token information corresponding to resource information of the second client;

determining, according to the token information carried in the first request, the resource information of the second client corresponding to the token information; and

receiving resource allocation information input by the first client, and completing resource allocation according to the resource allocation information input by the first client and the resource information of the second client.

Specifically, when applying for the identification code information to the server, the second client can submit the resource information for applying for the identification code information to the server, so that the server establishes a first correspondence between the resource information and the token information when the resource information is verified, generates a uniform resource locator carrying the token information and the corresponding identification code information, and saves the first correspondence between the resource information and the token information and a second correspondence between the token information and the uniform resource locator. After the server sends the identification code information to the second client, the second client can display the identification code information to the first client.

In specific implementation, the resource information can be submitted to the server in a form of an offline paper material, or on a web page corresponding to the server, or by an app of a mobile terminal.

FIG. 3-1 to FIG. 3-3 show an embodiment of the second client applying for the two-dimensional code to the server, and taking the second client as a payee, the second client applies to the server for issuing a collection two-dimensional code. FIG. 3-1 shows an application interface of the collection two-dimensional code, including: resource information for applying for the collection two-dimensional code that the server requires the second client (the payee here) to fill in. The resource information may include at least one user unique identifier, such as mobile phone number, and bank card number. As shown in FIG. 3-1, the resource information may contain three user unique identifiers, specifically, the mobile phone number "13333333333" input by the user, the name of a cardholder "XXX", and the bank card number "666666666666666", and may also contain a verification code obtained in real time according to the mobile phone number.

After the "next step" operation is performed under the interface of FIG. 3-1, the above information is submitted to the server so that the server can verify the resource information. After the resource information is verified, the resource information is mapped into the collection two-dimensional code and a corresponding URL (the URL carries token information for determining the resource information). Further, the server issues the collection two-dimensional code to the second client, which can be achieved in a variety of ways, such as sending the collection two-dimensional code to the second client in an electronic form, or as shown in FIG. 3-2 or FIG. 3-3, requiring the second client to provide a delivery address of the collection two-dimensional code or the server to display the obtained delivery address to the second client for confirmation, so that the server can send the collection two-dimensional code to the second client after printing.

After receiving the collection two-dimensional code, the second client can display the collection two-dimensional code to a specific or unspecified first client, so that the first client can scan the collection two-dimensional code and make a transfer.

The second client in this embodiment cooperates with the server in Embodiment 1 to realize the technical purpose of this application. The relevant explanations in Embodiment 1 are applicable to this embodiment and will not be repeated here.

Embodiment 4

Referring to FIG. 4, corresponding to the resource allocation method provided in Embodiment 1, this application further provides a resource allocation device, including:

a request receiving module 101, configured to receive a first request sent by a first client for accessing a server, wherein the first request carries token information corresponding to resource information of a second client;

a resource information determining module 102, configured to determine, according to the token information carried in the first request, the resource information of the second client corresponding to the token information;

an information receiving module 103, configured to receive resource allocation information input by the first client; and

a resource allocation module 104, configured to complete resource allocation according to the resource allocation information input by the first client and the resource information of the second client.

This embodiment can also be understood as an implementation solution of the server. When the server is divided into a platform server and a resource manager, the request receiving module 101, the resource information determining module 102, and the information receiving module 103 can be considered as part of the platform server, and the resource allocation module 104 can be considered as part of the resource manager.

Since this embodiment corresponds to the resource management method in Embodiment 1, the relevant explanations in Embodiment 1 are applicable to this embodiment and will not be repeated here.

Embodiment 5

This application further provides an electronic payment method when the method given in Embodiment 1 is applied to the financial field, that is, when the resource is embodied as funds, the allocation method is embodied as electronic payment, and the first client and the second client are embodied as opposite parties of electronic payment. By embodying the first client as a payment side, the second client as a collection side, the resource information as collection information, and the resource allocation information as payment information, the electronic payment method may specifically include:

receiving a first request sent by the payment side for accessing a server, wherein the first request carries token information corresponding to collection information of the collection side;

determining, according to the token information carried in the first request, the collection information of the collection side corresponding to the token information; and

receiving payment information input by the payment side, and completing electronic payment from the payment side to the collection side according to the payment information input by the payment side and the collection information of the collection side.

In the above embodiment, the first request for accessing the server sent by the payment side may be sent by the payment side after scanning identification code information of the

collection side, or may be sent by the payment side after inputting a designated web address or a designated character string. Further, the identification code information may be a bar code or two-dimensional code, thus simplifying the operation of electronic payment and improving efficiency.

The first request may include a uniform resource locator for accessing the server, and the uniform resource locator carries token information for determining the collection information of the collection side.

Preferably, the establishment of the correspondence between the token information and the collection information of the collection side may include:

generating a uniform resource locator carrying the token information and corresponding to the collection side, and determining the correspondence between the token information and the collection information of the collection side.

Preferably, the correspondence between the token information and the collection information of the collection side may be specifically established by:

acquiring the collection information of the collection side;

establishing a first correspondence between the collection information and the token information when the collection information is verified, and generating the uniform resource locator carrying the token information and corresponding identification code information; and

saving the first correspondence between the collection information and the token information and a second correspondence between the token information and the uniform resource locator, and sending the identification code information to the collection side.

Thus, the uniform resource locator is generated and the correspondence between the token information and the collection information is established after the collection information of the collection side is obtained, and the specific content of the token information may be related to the specific content of the collection information.

The correspondence between the token information and the collection information may also be established by:

generating the uniform resource locator carrying the token information and the corresponding identification code information; and

after receiving the collection information of the collection side, establishing the correspondence between the token information and the collection information of the collection side.

By establishing the correspondence in this way, the uniform resource locator carrying the token information may be generated in advance at the server. After the server receives the

collection information of the collection side, the collection information may be further verified; and after the collection information is verified, the correspondence between the collection information and the pre-generated uniform resource locator carrying the token information may be established, thus establishing the correspondence between the token information and the collection information of the collection side. In this way, the specific contents of the token information and the uniform resource locator are not related to the collection information of the collection side, but only the correspondence between the token information and the collection information is established at the server.

Preferably, the step that the server determines, according to the token information carried in the first request, the collection information of the collection side corresponding to the token information specifically includes:

extracting the token information carried in the uniform resource locator corresponding to the first request; and

determining, according to the token information, the collection information of the collection side which establishes the first correspondence with the token information at the server.

The payment information input by the payment side may specifically include payment account information of the payment side and electronic payment amount information; and the collection information of the collection side may specifically include identity information and collection account information of the collection side. Further, the payment account information may include bank account information of the payment side and/or user registration account information of the payment side at the server; and the collection account information may include bank account information of the collection side and/or user registration account information of the collection side at the server. It should be noted that if the server has already obtained the payment account information of the payment side before making the electronic payment, the payment information input by the payment side when the electronic payment is made may only include the electronic payment amount information corresponding to this electronic payment.

Further, the server may include a platform server and at least one financial server, and the electronic payment method may specifically include:

the platform server receives the first request sent by the payment side for accessing the platform server, wherein the first request carries token information corresponding to the collection information of the collection side;

the platform server determines, according to the token information carried in the first

request, the collection information of the collection side corresponding to the token information;

the platform server receives the payment information input by the payment side; and

the financial server completes electronic payment from the payment side to the collection side according to the payment information input by the payment side and the collection information of the collection side.

Further, after the platform server receives the payment information input by the payment side, and before the financial server completes electronic payment from the payment side to the collection side according to the payment information input by the payment side and the collection information of the collection side, the method preferably includes:

the platform server determines, according to the payment account information of the payment side, a financial server corresponding to the payment account information; and

the platform server sends a payment instruction to the financial server corresponding to the payment account information for the financial server corresponding to the payment account information to complete electronic payment from the payment side to the collection side. The payment instruction sent by the platform server to the financial server corresponding to the payment account information may specifically contain collection account information of the collection side and the payment account information of the payment side.

In contrast to the above embodiment, by embodying the first client as a collection side, the second client as a payment side, the resource information as payment information, and the resource allocation information as collection information, the electronic payment method according to the embodiments of this application may specifically include:

receiving a first request for accessing a server sent by the collection side after scanning identification code information of the payment side, wherein the first request carries token information corresponding to the payment information of the payment side;

determining, according to the token information carried in the first request, the payment information of the payment side corresponding to the identification code information; and

receiving the collection information input by the collection side, and completing electronic payment from the payment side to the collection side according to the collection information input by the collection side and the payment information of the payment side.

The electronic payment method of this embodiment is the implementation of Embodiment 1 under the application scenario of fund transfer and electronic payment. The relevant contents set forth in Embodiment 1 are applicable to this embodiment and will not be

described here again.

It should be noted that the resource allocation method and device provided in the embodiments of this application are applicable to other situations requiring resource allocation between a first client and a second client in addition to the scenario of this embodiment. This embodiment should not be construed as limiting the application scenario of Embodiment 1.

Embodiment 6

With reference to the preferred embodiments in Embodiments 1-5, taking the first client as the payment side and the second client as the collection side, the process of electronic payment is explained in the application scenario of electronic payment, in which the payment side, the collection side, the platform server, and the financial server cooperate with each other to realize electronic payment.

Referring to FIG. 5:

S01: the collection side submits collection information to the platform server;

S02: the platform server verifies the collection information submitted by the collection side;

S03: after the collection information is verified, the platform server sends identification code information to the collection side, wherein the identification code information may be a bar code or a two-dimensional code, and the identification code information can be sent in an electronic identification code form for the collection side to download, print, and display, or can be printed by the server and then sent to the collection side in a paper identification code form;

S04: after receiving the identification code information, the collection side displays the identification code information to the paying side;

S05: the payment side scans the identification code information;

S06: the payment side sends a first request to the platform server, wherein the first request carries token information, and preferably, the first request does not carry collection information of the collection side;

S07: the platform server determines, according to the token information carried in the first request, the collection information of the corresponding collection side;

S08: the platform server sends a second request to the payment side for prompting the payment side to input payment information;

S09: the payment side inputs payment information and sends the payment information to the platform server;

S10: the platform server sends a resource allocation instruction to the financial server, which includes payment information input by the payment side and collection information of the collection side;

S11: the financial server performs electronic payment according to the payment information and the collection information;

S12: the financial server feeds back an electronic payment result to the platform server; and

S13: the platform server forwards the electronic payment result to the payment side and the collection side.

For matters not covered in this embodiment, please refer to relevant explanations in Embodiments 1-5, which will not be repeated here.

A person skilled in the art should understand that the embodiments of the present invention may be provided as a method, a system, or a computer program product. Therefore, the present invention may be in a form of complete hardware embodiments, complete software embodiments, or embodiments combining software and hardware. Moreover, the present invention may use a form of a computer program product that is implemented on one or more computer-usable storage media (including but not limited to a disk memory, a CD-ROM, an optical memory, and the like) that include computer-usable program code.

The present invention 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 the present invention. It should be understood that computer program instructions may be used for implementing each process and/or each block in the flowcharts and/or the block diagrams and a combination of a process and/or a block in the flowcharts and/or the block diagrams. These computer program instructions may be provided for a general-purpose computer, a dedicated computer, an embedded processor, or a processor of any other programmable data processing device to generate a machine, so that the instructions executed by a computer or a processor of any other programmable data processing device generate an apparatus for implementing a specific function in one or more processes in the flowcharts and/or in one or more blocks in the block diagrams.

These computer program instructions may also be stored in a computer readable memory that can guide 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 a product including an instruction apparatus, where the instruction apparatus implements functions specified in one or more processes in the flowcharts and/or one or more blocks in

the block diagrams.

These computer program instructions may also be loaded into a computer or another programmable data processing device, so that a series of operation steps are performed on the computer or another programmable data processing device to generate processing implemented by a computer, and instructions executed on the computer or another programmable data processing device provide steps for implementing functions specified in one or more processes in the flowcharts and/or one or more blocks in the block diagrams.

In a typical configuration, the computer device includes one or more processors (CPUs), an input/output interface, a network interface, and a memory.

The memory may include, among computer readable media, a non-persistent memory such as a random access memory (RAM) and/or a non-volatile memory such as a read-only memory (ROM) or a flash memory (flash RAM). The memory is an example of the computer-readable medium.

The computer-readable medium includes persistent, non-persistent, movable, and unmovable media that may implement information storage by using any method or technology. Information may be a computer-readable instruction, a data structure, a program module, or other data. Examples of computer storage media include but are not limited to a phase change memory (PRAM), a static random access memory (SRAM), a dynamic random access memory (DRAM), other type of random access memory (RAM), a read-only memory (ROM), an electrically erasable programmable read-only memory (EEPROM), a flash memory or other memory technology, a compact disc read-only memory (CD-ROM), a digital versatile disc (DVD) or other optical storage, a cassette magnetic tape, tape and disk storage or other magnetic storage device or any other non-transmission media that may be configured to store information that a computing device can access. Based on the definition in the present disclosure, the computer-readable medium does not include transitory computer readable media (transitory media), such as a modulated data signal and a carrier.

It should also be noted that the terms "include", "comprise" and any other variants mean to cover the non-exclusive inclusion. Thereby, the process, method, article, or device which include a series of elements not only include those elements, but also include other elements which are not clearly listed, or include the inherent elements of the process, method, article and device. Without further limitation, the element defined by a phrase ¡°include one¡-¡-¡± does not exclude other same elements in the process, method, article or device which include the element.

A person skilled in the art should understand that the embodiments of this application

may be provided as a method, a system, or a computer program product. Therefore, this application may use a form of hardware only embodiments, software only embodiments, or embodiments with a combination of software and hardware. Moreover, this application may use a form of a computer program product that is implemented on one or more computer-usable storage media (including but not limited to a disk memory, a CD-ROM, an optical memory, and the like) that include computer-usable program code.

The foregoing descriptions are merely embodiments of this application and are not intended to limit this application. For a person skilled in the art, various modifications and variations can be made to this application. Any modification, equivalent replacement, or improvement made without departing from the spirit and principle of this application shall fall within the scope of the claims of this application.

CLAIMS

1. A resource allocation method, comprising:

acquiring, by a server, account information of a second client operated by a merchant;

establishing, by the server, a first correspondence between the account information and token information when the account information is verified, and generating, by the server, a uniform resource locator carrying the token information and identification code information corresponding to the uniform resource locator;

saving, by the server, the first correspondence between the account information and the token information and a second correspondence between the token information and the uniform resource locator;

sending, by the server, the identification code information to the second client to enable the second client to display the identification code information to a first client operated by a customer;

receiving, by the server, a first request sent by the first client for accessing the server based on the uniform resource locator, wherein the first request is generated by the first client after the first client scans the identification code information displayed by the second client to obtain the uniform resource locator;

determining, by the server, the token information carried in the uniform resource locator based on the second correspondence;

determining, by the server according to the token information, the account information of the second client based on the first correspondence;

receiving resource allocation information from the first client; and

completing resource allocation according to the resource allocation information from the first client and the account information of the second client.

2. The method according to claim 1,

wherein the step of determining, by the server according to the token information carried in the first request, the account information of the second client based on the first correspondence further comprises:

extracting the token information carried in the uniform resource locator corresponding to

the first request; and

determining, according to the token information, the account information of the second client.

3. The method according to claim 1, wherein after receiving the first request sent by the first client for accessing the server, and before receiving the resource allocation information from the first client, the method further comprises:

sending to the first client a second request for prompting the first client to input the resource allocation information.

4. The method according to claim 1, wherein after completing resource allocation according to the resource allocation information from the first client and the account information of the second client, the method further comprises:

forwarding a result of the resource allocation to the first client and the second client.

5. The method according to claim 4, wherein the result of the resource allocation forwarded to the first client and the second client comprises a result of successful resource allocation or a result of failed resource allocation.

6. The method according to any one of the preceding claims, wherein the identification code information is a bar code and/or a two-dimensional code.

7. The method according to any one of the preceding claims, wherein the server comprises a platform server and at least one resource manager, the method further comprises:

the platform server receiving the first request sent by the first client for accessing the platform server, wherein the first request carries token information corresponding to the account information of the second client;

the platform server determining, according to the token information carried in the first request, the account information of the second client corresponding to the token information;

the platform server receiving resource allocation information from the first client; and

the resource manager completing the resource allocation according to the resource allocation information from the first client and the account information of the second client.

8. The method according to claim 7, wherein

the resource allocation information from the first client further comprises first resource management account information and resource allocation data information of the first client; the account information of the second client specifically comprises identity information and second resource management account information of the second client;

after the platform server receives the resource allocation information from the first client, and before the resource manager completes the resource allocation according to the resource allocation information from the first client and the account information of the second client, the method further comprises:

the platform server determining, according to first resource management account information from the first client, a resource manager corresponding to the first resource management account information; and

the platform server sending a resource allocation instruction to the resource manager corresponding to the first resource management account information for the resource manager corresponding to the first resource management account information to complete the resource allocation.

9. The method according to claim 8, wherein the resource allocation instruction sent by the platform server to the resource manager corresponding to the first resource management account information further contains the second resource management account information of the second client and the resource allocation data information from the first client.

10. A resource allocation device, comprising:

at least one processor; and

a memory configured to store instructions executable by the at least one processor to cause the at least one processor to:

acquire account information of a second client operated by a merchant;

establish a first correspondence between the resource account and token information when the account information is verified, and generate a uniform resource locator carrying the token information and identification code information corresponding to the uniform resource locator;

save the first correspondence between the account information and the token information and a second correspondence between the token information and the uniform resource locator;

send the identification code information to the second client to enable the second client to display the identification code information to a first client operated by a customer;

receive a first request sent by the first client for accessing the server based on the uniform resource locator, wherein the first request is generated by the first client after the first client scans the identification code information displayed by the second client to obtain the uniform resource locator;

determine the token information carried in the uniform resource locator based on the second correspondence;

determine, according to the token information , the account information of the second client based on the first correspondence;

receive resource allocation information from the first client; and

complete resource allocation according to the resource allocation information from the first client and the account information of the second client.

11. An electronic payment method, comprising:

acquiring, by a server, collection information of a collection side;

establishing, by the server, a first correspondence between the collection information and token information when the collection information is verified, and generating, by the server, a uniform resource locator carrying the token information and identification code information corresponding to the uniform resource locator;

saving, by the server, the first correspondence between the collection information and the token information and a second correspondence between the token information and the uniform resource locator;

sending, by the server, the identification code information to the collection side to enable the collection side to display the identification code information to a payment side;

receiving, by the server, a first request sent by the payment side for accessing the server, wherein the first request is generated after the payment side scans the identification code information displayed by the collection side to obtain the uniform resource locator;

determining, by the server, the token information carried in the uniform resource locator based on the second correspondence;

determining, by the server according to the token information, the collection information of the collection side based on the first correspondence; and

receiving payment information from the payment side, and completing electronic payment from the payment side to the collection side according to the payment information from the payment side and the collection information of the collection side.

12. The method according to claim 11, wherein the step of determining, by the server according to the token information, the collection information of the collection side based on the first correspondence further comprises:

extracting the token information carried in the uniform resource locator corresponding to the first request; and

determining, according to the token information, the collection information of the collection side.

13. The method according claim 11 or claim 12, wherein the identification code information is a bar code and/or a two-dimensional code.

14. The method according to any one of the preceding claims 11 to 13, wherein the server comprises a platform server and at least one financial server, and the method further comprises:

the platform server receiving the first request sent by the payment side for accessing the platform server, wherein the first request carries token information corresponding to the collection information of the collection side;

the platform server determining, according to the token information carried in the first request, the collection information of the collection side corresponding to the token information;

the platform server receiving the payment information from the payment side; and

the financial server completing the electronic payment from the payment side to the collection side according to the payment information from the payment side and the collection information of the collection side.

15. The method according to claim 14, wherein the payment information from the payment side further comprises payment account information of the payment side and electronic payment amount information; the collection information of the collection side specifically comprises identity information and collection account information of the collection side;

after the platform server receives the payment information from the payment side, and before the financial server completes the electronic payment from the payment side to the collection side according to the payment information from the payment side and the collection information of the collection side, the method further comprises:

the platform server determines, according to the payment account information of the payment side, a financial server corresponding to the payment account information; and

the platform server sends a payment instruction to the financial server corresponding to the payment account information for the financial server corresponding to the payment account information to complete electronic payment from the payment side to the collection side.

16. The method according to claim 15, wherein the payment instruction sent by the platform server to the financial server corresponding to the payment account information further contains collection account information of the collection side and the payment account information of the payment side.

17. The method according to claim 15 or claim 16, wherein

the payment account information comprises bank account information of the payment side and/or user registration account information of the payment side at the server; and

the collection account information comprises bank account information of the collection side and/or user registration account information of the collection side at the server.

18. An electronic payment method, comprising:

acquiring, by a server, payment information of a payment side;

establishing, by the server, a first correspondence between the payment information and token information when the payment information is verified, and generating, by the server, a uniform resource locator carrying the token information and identification code information corresponding to the uniform resource locator;

saving, by the server, the first correspondence between the payment information and the token information and a second correspondence between the token information and the uniform resource locator;

sending, by the server, the identification code information to the payment side to enable the payment side to display the identification code information to a collection side;

receiving, by the server, a first request sent by the collection side for accessing the server, wherein the first request is generated after the collection side scans the identification code information displayed by the payment side to obtain the uniform resource locator;

determining, by the server, the token information carried in the uniform resource locator based on the second correspondence;

determining, by the server according to the token information, the payment information of the payment side based on the first correspondence; and

receiving collection information from the collection side, and completing electronic payment from the payment side to the collection side according to the collection information from the collection side and the payment information of the payment side.