CLAIMS

1. A transaction execution method, applicable in a client terminal, comprising:

scanning an offline object and multiple identification codes including an identification code corresponding to the offline object, the identification code comprising positioning assistance information of the offline object, wherein during scanning of the offline object and the multiple identification codes, the offline object and the multiple identification codes are comprised in a same scanning view frame;

triggering a recognition process for the offline object and the identification code corresponding to the offline object that are scanned by:

determining whether the identification code corresponding to the offline object is successfully scanned and recognized in a specified area of the scanning view frame, and

responsive to determining the identification code corresponding to the offline object is not successfully scanned and recognized in the specified area of the scanning view frame, determining the target offline object according to a relative position relationship between one or more other scanned and recognized identification codes and the specified area; and

executing a transaction with respect to the offline object based on the recognition process.

2. The method according to claim 1, wherein, when the identification code corresponding to the offline object is successfully scanned and recognized in a specified area of the scanning view frame, the triggering a recognition process for the offline object and the identification code that are scanned further comprises:

recognizing an image obtained through scanning of the offline object, to obtain item information of the offline object; and

performing feature extraction and analysis on the scanned identification code corresponding to the offline object, to recognize the positioning assistance information of the offline object.

3. The method according to claim 2, wherein the recognizing an image obtained through scanning of the offline object, to obtain item information of the offline object comprises:

performing, by the client terminal, feature extraction on the image obtained through scanning the offline object;

sending an extracted image feature to a server, for the server to recognize the item information of the offline object by performing feature comparison of the image feature; and

the performing feature extraction and analysis on the scanned identification code corresponding to the offline object, to recognize the positioning assistance information of the offline object comprises:

recognizing, by the client terminal, the positioning assistance information of the offline object, and sending the positioning assistance information to the server.

4. The method according to claim 1, wherein the executing a transaction with respect to the offline object based on the recognition process comprises:

obtaining an association relationship between a current user of the client terminal and the offline object, the association relationship being determined by the client terminal or a server based on a recognition result corresponding to the recognition process; and

executing the transaction with respect to the offline object according to the association relationship.

5. The method according to claim 4, wherein the offline object comprises at least one commodity displayed in a vending machine, the identification code corresponding to the offline object also being displayed in the vending machine, and the positioning assistance information comprising identification information of the vending machine; and

the executing a transaction with respect to the offline object based on the recognition process comprises:

paying for the at least one commodity using a payment account of the current user according to the association relationship, and enabling the at least one commodity in the vending machine to be delivered to a pick-up port.

6. The method according to claim 5, wherein the paying for the at least one commodity using a payment account of the current user according to the association relationship comprises:

determining a to-be-paid order generated by the server for the at least one commodity according to the association relationship; and

paying for the to-be-paid order using the payment account of the current user.

7. The method according to claim 6, wherein the vending machine delivers the at least one commodity to the pick-up port based on an instruction of the server to an operating entity of the vending machine; wherein

the instruction is based on the recognition result corresponding to the recognition process.

8. A transaction execution method, applicable in a server, comprising:

obtaining a recognition result corresponding to a recognition process triggered by a

client terminal, the recognition process being performed for an offline object and multiple identification codes including an identification code corresponding to the offline object that are scanned by the client terminal, wherein during scanning of the offline object and the multiple identification codes, the offline object and the multiple identification codes are comprised in a same scanning view frame, and the identification code corresponding to the offline object comprising positioning assistance information of the offline object, by:

determining whether the identification code corresponding to the offline object is successfully scanned and recognized in a specified area of the scanning view frame, and

responsive to determining the identification code corresponding to the offline object is not successfully scanned and recognized in the specified area of the scanning view frame, determining the target offline object according to a relative position relationship between one or more other scanned and recognized identification codes and the specified area; and

executing a transaction with respect to the offline object according to the recognition result.

9. The method according to claim 8, wherein the executing a transaction with respect to the offline object according to the recognition result comprises:

obtaining an association relationship between a current user of the client terminal and the offline object, the association relationship being determined by the client terminal or the server based on the recognition result corresponding to the recognition process, and the recognition result comprising item information and the positioning assistance information of the offline object; and

executing the transaction with respect to the offline object according to the association relationship.

10. The method according to claim 9, wherein the offline object comprises at least one commodity displayed in a vending machine, the identification code corresponding to the offline object also being displayed in the vending machine, and the positioning assistance information comprising identification information of the vending machine; and

the executing the transaction with respect to the offline object according to the association relationship comprises:

generating a to-be-paid order for the at least one commodity according to the association relationship, and sending the order to the client terminal, for the client terminal to pay for the to-be-paid order using a payment account of the current user.

11. The method according to claim 10, wherein the executing the transaction with

respect to the offline object according to the association relationship comprises:

submitting an instruction to an operating entity of the vending machine based on the recognition result, for the operating entity to enable the vending machine to deliver the at least one commodity to a pick-up port.

12. A transaction execution method, applicable in a client terminal, comprising:

scanning and recognizing multiple identification codes, the multiple identification codes comprising positioning assistance information of multiple corresponding offline objects, wherein during scanning of the multiple identification codes, the multiple identification codes are comprised in a same scanning view frame;

determining a target offline object according to a recognition result by:

determining whether one of the multiple identification codes is successfully scanned and recognized in a specified area of the scanning view frame, and

responsive to determining the one of the multiple identification codes is not successfully scanned and recognized in the specified area of the scanning view frame, determining the target offline object according to a relative position relationship between one or more other scanned and recognized identification codes and the specified area; and

executing a transaction with respect to the target offline object.

13. The method according to claim 12, wherein the determining a target offline object according to the recognition result further comprises:

responsive to determining the one of the multiple identification codes is successfully scanned and recognized in the specified area of the scanning view frame, determining that an offline object corresponding to the one of the multiple identification codes in the specified area is the target offline object.

14. The method according to claim 12, wherein the determining the target offline object according to a relative position relationship between the one or more other scanned and recognized identification codes and the specified area comprises:

determining at least two scanned and recognized identification codes adjacent to the specified area;

determining, according to a relative position relationship between the at least two identification codes and the specified area and a recognition result of the at least two identification codes, positioning assistance information comprised in the identification code corresponding to the target offline object; and

determining the target offline object according to the determined positioning assistance information.

15. The method according to claim 12, wherein the executing a transaction with respect to the target offline object comprises:

obtaining an association relationship between a current user of the client terminal and the target offline object, the association relationship being determined by the client terminal or a server based on positioning assistance information comprised in the identification code corresponding to the target offline object; and

executing the transaction with respect to the target offline object according to the association relationship.

16. The method according to claim 15, wherein the one or more offline objects comprise at least one commodity displayed in a vending machine, the multiple identification codes are displayed in the vending machine, and the positioning assistance information of the one or more offline objects comprises identification information of the vending machine and position information of the at least one commodity in the vending machine; and

the executing the transaction with respect to the target offline object according to the association relationship comprises:

determining a to-be-paid order generated by the server for the at least one commodity according to the association relationship; and

paying for the to-be-paid order using a payment account of the current user.

17. The method according to claim 16, wherein the vending machine delivers the at least one commodity to a pick-up port based on an instruction of the server to an operating entity of the vending machine; wherein

the instruction is based on the positioning assistance information of the target offline object.

18. A transaction execution apparatus, applicable in a client terminal, comprising:

a scanning module configured to scan an offline object and multiple identification codes including an identification code corresponding to the offline object, wherein during scanning of the offline object and the multiple identification codes, the offline object and the multiple identification codes are comprised in a same scanning view frame, and the identification code corresponding to the offline object comprising positioning assistance information of the offline object;

a recognition module configured to trigger a recognition process for the offline object and the identification code that are scanned by:

determining whether the identification code corresponding to the offline object is successfully scanned and recognized in a specified area of the scanning view frame, and

responsive to determining the identification code corresponding to the offline object is not successfully scanned and recognized in the specified area of the scanning view frame, determining the target offline object according to a relative position relationship between one or more other scanned and recognized identification codes and the specified area; and

a transaction module configured to execute a transaction with respect to the offline object based on the recognition process.

19. A transaction execution apparatus, applicable in a client terminal, comprising:

an obtaining module configured to obtain a recognition result corresponding to a recognition process triggered by the client terminal, the recognition process being performed for an offline object and multiple identification codes including an identification code corresponding to the offline object that are scanned by the client terminal, wherein during scanning of the offline object and the multiple identification codes, the offline object and the multiple identification codes are comprised in a same scanning view frame, and the identification code corresponding to the offline object comprising positioning assistance information of the offline object, by:

determining whether the identification code corresponding to the offline object is successfully scanned and recognized in a specified area of the scanning view frame, and

responsive to determining the identification code corresponding to the offline object is not successfully scanned and recognized in the specified area of the scanning view frame, determining the target offline object according to a relative position relationship between one or more other scanned and recognized identification codes and the specified area; and

a transaction module configured to execute a transaction with respect to the offline object according to the recognition result.

20. A transaction execution apparatus, applicable in a client terminal, comprising:

a scanning and recognition module configured to scan and recognize multiple identification codes, each identification code comprising positioning assistance information of a corresponding offline object thereof, wherein during scanning of the multiple identification codes, the multiple identification codes are comprised in a same scanning view frame;

a determining module configured to determine a target offline object according to a recognition result by:

determining whether one of the multiple identification codes is successfully

scanned and recognized in a specified area of the scanning view frame, and

responsive to determining the one of the multiple identification codes is not successfully scanned and recognized in the specified area of the scanning view frame, determining the target offline object according to a relative position relationship between one or more other scanned and recognized identification codes and the specified area; and

a transaction module configured to execute a transaction with respect to the target offline object.

21. A transaction execution device, applicable in a client terminal, comprising:

at least one processor; and

a memory communicatively connected to the at least one processor; wherein

the memory stores instructions executable by the at least one processor, and the instructions, when executed by the at least one processor, cause the at least one processor to:

scan an offline object and multiple identification codes including an identification code corresponding to the offline object, wherein during scanning of the offline object and the multiple identification codes, the offline object and the multiple identification codes are comprised in a same scanning view frame, and the identification code corresponding to the offline object comprising positioning assistance information of the offline object;

trigger a recognition process for the offline object and the identification code that are scanned by:

determining whether the identification code corresponding to the offline object is successfully scanned and recognized in a specified area of the scanning view frame, and

responsive to determining the identification code corresponding to the offline object is not successfully scanned and recognized in the specified area of the scanning view frame, determining the target offline object according to a relative position relationship between one or more other scanned and recognized identification codes and the specified area; and

execute a transaction with respect to the offline object based on the recognition process.

22. A transaction execution device, applicable in a client terminal, comprising:

at least one processor; and

a memory communicatively connected to the at least one processor; wherein

the memory stores instructions executable by the at least one processor, and the instructions, when executed by the at least one processor, cause the at least one processor to:

obtain a recognition result corresponding to a recognition process triggered by the client terminal, the recognition process being performed for an offline object and multiple

identification codes including an identification code corresponding to the offline object that are scanned by the client terminal, wherein during scanning of the offline object and the multiple identification codes, the offline object and the multiple identification codes are comprised in a same scanning view frame and the identification code corresponding to the offline object comprising positioning assistance information of the offline object, by:

determining whether the identification code corresponding to the offline object is successfully scanned and recognized in a specified area of the scanning view frame, and

responsive to determining the identification code corresponding to the offline object is not successfully scanned and recognized in the specified area of the scanning view frame, determining the target offline object according to a relative position relationship between one or more other scanned and recognized identification codes and the specified area; and

execute a transaction with respect to the offline object according to the recognition result.

23. A transaction execution device, applicable in a client terminal, comprising:

at least one processor; and

a memory communicatively connected to the at least one processor; wherein

the memory stores instructions executable by the at least one processor, and the instructions, when executed by the at least one processor, cause the at least one processor to:

scan and recognize multiple identification codes, the multiple identification codes comprising positioning assistance information of multiple corresponding offline objects thereof, wherein during scanning of the multiple identification codes, the multiple identification codes are comprised in a same scanning view frame;

determine a target offline object according to a recognition result by:

determining whether one of the multiple identification codes is successfully scanned and recognized in a specified area of the scanning view frame, and

responsive to determining the one of the multiple identification codes is not successfully scanned and recognized in the specified area of the scanning view frame, determining the target offline object according to a relative position relationship between one or more other scanned and recognized identification codes and the specified area; and

execute a transaction with respect to the target offline object.