CLAIMS

What is claimed is:

1. A method for barcode-based mobile payment, the method comprising:

binding an account with a plurality of mobile devices, wherein binding comprises

obtaining unique IDs of each mobile device of the plurality of mobile devices,

establishing and storing mapping relationships between the account and the unique IDs of the plurality of mobile devices at a server that is configured to complete payments;

preconfiguring service rules for each of the plurality of mobile devices for performing service processing for the corresponding mobile device, wherein the service rules include limits preconfigured for each of the plurality of mobile devices bound to the account;

based on a unique ID of a first mobile device, account information of the account bound with the first mobile device, and service information for a payment service to be executed, generating, by the first mobile device, a barcode to execute the payment service;

receiving, at the server and by the first mobile device, the barcode used to execute the payment service, wherein the barcode is scanned by a barcode reader;

parsing the barcode;

performing, by the server, identity authentication to determine whether the first mobile device is one of the plurality of mobile devices bound with the account based on the account information and the unique ID of the first mobile device obtained through parsing, wherein performing the identity authentication comprises

determining whether a mapping relationship exists at the server between the parsed account information and the parsed unique ID of the first mobile device by querying the server; and

in response to a successful authentication, querying the service rules of the account to determine a payment limit based on the unique ID of the first mobile device, wherein the service rules include service rules preconfigured for the first mobile device by the account bound with the first mobile device, wherein the payment limit is a maximum payment limit for expending for a given time period through the first mobile device that is computed as a difference between a control limit that remains unchanged and is preconfigured for the account bound with the first mobile

device and a billing limit used within the given time period by the account bound with the first mobile device;

making the payment service based on the payment limit when an amount to be used for the payment service does not exceed the payment limit; and

updating the payment limit after the payment service is completed, wherein an updated payment limit is computed as a difference between the control limit and the billing limit, the control limit is a total payment limit in the given time period and preconfigured for the first mobile device by the account bound with the first mobile device, and the billing limit is auto-changed to include the amount used of the first mobile device in the given time period.

2. The method according to claim 1, wherein the method further comprises: saving payment information after the payment service is completed, wherein the payment information comprises a payment time and the used amount.

3. The method according to any one of claims 1 to 2, wherein parsing the barcode and performing the identity authentication based on the account information and the unique ID of the first mobile device obtained through parsing comprises:

parsing the barcode to obtain the account information and the unique ID of the first mobile device; and querying, based on the account information and the unique ID of the first mobile device, a payment status preconfigured for the first mobile device by the account; and

when the payment status is enabled, performing the identity authentication based on the account information and the unique ID of the first mobile device.

4. The method according to any one of claims 1 to 3, wherein the method further comprises binding the account with the first mobile device by using a second mobile device.

5. The method according to any one of claims 1 to 4, wherein the first mobile device is a wearable smart device.

6. The method according to any one of claims 1 to 5, wherein the account is bound with at least two mobile devices comprising the first mobile device.

7. The method according to any one of claims 1 to 6, wherein the barcode comprises a QR code.

8. The method according to any one of claims 1 to 7, wherein the first mobile device comprises a smartwatch.

9. The method according to any one of the claims 1 to 8, wherein the method further comprises:

establishing a mapping relationship between the account and the unique ID of the first mobile device and optionally an ID of a second mobile device bound, such as a smartwatch or a smartphone; and

storing the mapping relationship at a server for helping identity authentication during the payment service.

10. The method according to claim 7, further comprising:

performing decryption on the QR code by using a public key corresponding to a private key delivered to the first terminal device, the first terminal device being a smartwatch, wherein the QR code is generated based on encrypting a smartwatch ID, an account name, and a time stamp based on an algorithm mark by using the private key;

when content of the QR code after decryption cannot be parsed, obtaining the smartwatch ID, the account name, and the time stamp through the decryption to authenticate whether the time stamp is valid and to perform a second authentication.

11. The method according to claim 10, further comprising:

after the second authentication succeeded, performing a query on a payment status of the smartwatch based on the smartwatch ID and the account name;

when a payment status is enabled, authenticating whether a binding relationship is correct based on the smartwatch ID and the account name, to perform a third authentication.

12. The method according to any one of claims 1 to 11, wherein the barcode comprises a one dimensional bar code or a two dimensional bar code.

13. An apparatus for barcode-based mobile payment, the apparatus comprising a plurality of modules configured to perform the method of any one of claims 1 to 12.