CLAIMS

[Claim 1] A method, which is performed by a holderless card having a physical form in a state where a user is not registered and which is used to register the user in the holderless card by using an authentication virtual code, the method comprising:

receiving current time data from a terminal of the user through card tagging;

generating a virtual code for authenticating the user based on the current time data and pre-stored seed data by using an applet included in the card; and

requesting verification of the virtual code by transmitting the virtual code to a verification server through the user terminal,

wherein, when the card is produced while the user is not registered, and the verification is completed, the card is connected to a mobile card already owned by the user in the verification server such that the user is registered; and

wherein, when the verification server is a server of a financial institution and the card is produced by a card manufacturer affiliated with the financial institution, the requesting of the verification includes:

requesting the verification by further transmitting a pre-stored card number of the card and a pre-stored eigenvalue of the card to the verification server through the user terminal, and

wherein, when the verification is completed, the seed data, the card number of the card, and the eigenvalue of the card are matched with user information generated by the user terminal in the verification server so as to be stored.

[Claim 2] The method of claim 1, wherein the card number of the card, the eigenvalue of the card, and the seed data are delivered by the verification server to a server of the card manufacturer and are embedded in an IC chip when the card is manufactured,

wherein the card number of the card includes an identification code of the financial institution, and

wherein the eigenvalue of the card is a value sequentially assigned to each card manufactured by the card manufacturer.

[Claim 3] The method of claim 1, wherein, when the verification server is a service server providing a card issuance agency service, and the card is produced by a provider of the card issuance agency service, the user is registered in a first method based on an application for physical card registration or a second method based on an interface for physical card registration.

[Claim 4] The method of claim 3, wherein the user terminal is equipped with the application provided by the service server, and

wherein user registration in the first method is made through the card tagging after a card number of the mobile card is entered through the application.

[Claim 5] The method of claim 4, wherein the user registration in the first method is made by the service server by matching a card number of the card found based on the virtual code with the card number of the mobile card,

wherein the card number of the card is transmitted from a payment server to the service server through a payment network when a payment is requested through

the card for which the registration is completed, and

wherein the card number of the mobile card matched to the card number of the card is transmitted from the service server to the payment server through the payment network.

[Claim 6] The method of claim 5, wherein user registration in the second method is made through the card tagging after the interface operating in conjunction with the card issuance agency service is generated in an application of a financial institution.

[Claim 7] The method of claim 6, wherein the user registration in the second method is made based on an eigenvalue of the user and the virtual code transmitted to the service server through the interface,

wherein, when a payment is requested through the card for which the registration is completed, the card number of the card is transmitted from a payment server to the service server through a payment network and is used to extract the eigenvalue of the user, and

wherein the eigenvalue of the user is transmitted to a server of the financial institution and is used to extract the card number of the mobile card.

[Claim 8] The method of claim 1, wherein, in the receiving, the current time data is received along with an APDU command for driving the applet, upon the card tagging, and

wherein, in the generating, the applet is driven and generated depending on the APDU command.

[Claim 9] A computer program coupled with a computer and stored in a computer-readable recording medium to perform the method of claim 1.

[Claim 10] A holderless card device having a physical form in a state where a user is not registered, the holderless card device comprising:

an NFC module configured to perform NFC-based communication when tagging a terminal of the user; and

an IC module including an applet for generating a virtual code for authentication of the user,

wherein the IC module is configured to:

when tagging the user terminal, receive current time data from the user terminal through the NFC module;

allow the applet to generate the virtual code based on the current time data and pre-stored seed data; and

make a request for verification of the virtual code to the verification server by transmitting the virtual code to a verification server through the user terminal, and

wherein, when the card device is produced while the user is not registered, and the verification is completed, the card device is connected to a mobile card already owned by the user in the verification server such that the user is registered; and

wherein, when the verification server is a server of a financial institution and the card is produced by a card manufacturer affiliated with the financial institution, the requesting of the verification includes:

requesting the verification by further transmitting a pre-stored card number of the card and a pre-stored eigenvalue of the card to the verification server through the

user terminal, and

wherein, when the verification is completed, the seed data, the card number of the card, and the eigenvalue of the card are matched with user information generated by the user terminal in the verification server so as to be stored.