

What is claimed is:

1. A method for authenticating a user for a transaction, the method comprising:
 - recording, by a terminal device when the transaction is initiated by the user at the terminal device by way of a payment mode, an input personal identification number (PIN) entered by the user, an input pattern drawn by the user on a touch screen of the terminal device, and input biometric information of the user while the input pattern is being drawn by the user; and
 - executing, by the terminal device, the transaction based on an authentication of the user, wherein the user is authenticated when the input PIN matches a reference PIN, the input pattern matches a reference pattern from among a plurality of reference patterns, and the input biometric information matches reference biometric information, that is associated with the reference pattern, from among a plurality of reference biometric information;
 - wherein, the reference PIN, the plurality of reference patterns and the plurality of biometric information are linked to the payment mode.
2. The method of claim 1, wherein the terminal device is at least one of an automated teller machine or a point-of-sale device.
3. The method of claim 1, wherein the input and reference biometric information correspond to input and reference fingerprints of fingers utilized by the user to draw the input and reference patterns, respectively.
4. The method of claim 1, further comprising recording, by the terminal device prior to the initiation of the transaction by the user, the reference pattern drawn by the user for a plurality of times, the reference biometric information while the reference pattern is being drawn by the user for the plurality of times, and a plurality of reference time-durations taken by the user to draw the reference pattern for the plurality of times, respectively, wherein:
 - the reference pattern and the reference biometric information are linked to the payment mode when the reference pattern is same for each of the plurality of times and the reference biometric information is same for each of the plurality of times, and
 - a time range for authenticating the user is determined based on the plurality of reference time-durations, and wherein the determined time range is linked to the payment mode.

5. The method of claim 4, further comprising recording, by the terminal device when the transaction is initiated by the user, an input time-duration taken by the user to draw the input pattern, wherein the user is authenticated when the input time-duration is within the determined time range, and wherein when the user is authenticated, the determined time range is updated based on the input time-duration.

6. The method of claim 1, further comprising recording, by the terminal device prior to the initiation of the transaction by the user, the reference pattern drawn by the user for a plurality of times, the reference biometric information while the reference pattern is being drawn by the user for the plurality of times, and a plurality of reference pressure values corresponding to pressures applied by the user for drawing the reference pattern for the plurality of times, respectively, wherein:

the reference pattern and the reference biometric information are linked to the payment mode when the reference pattern is same for each of the plurality of times and the reference biometric information is same for each of the plurality of times, and

a pressure range for authenticating the user is determined based on the plurality of reference pressure values, and wherein the determined pressure range is linked to the payment mode.

7. The method of claim 6, further comprising recording, by the terminal device when the transaction is initiated by the user, an input pressure value corresponding to a pressure applied by the user for drawing the input pattern, wherein the user is authenticated when the input pressure value is within the determined pressure range, and wherein when the user is authenticated, the determined pressure range is updated based on the input pressure value.

8. A terminal device, comprising:

a numeric keypad configured to record an input PIN entered by a user for initiating a transaction at the terminal device;

a touch screen configured to display a first plurality of objects, and record an input pattern that is drawn by the user by connecting a second plurality of objects of the first plurality of objects; and

a set of biometric sensors configured to record input biometric information of the user while the input pattern is being drawn by the user, wherein the user is authenticated for the transaction when the input PIN matches a reference PIN, the input pattern matches a reference pattern from among a plurality of reference patterns, and the input biometric

information matches reference biometric information, that is associated with the reference pattern, from among a plurality of reference biometric information;

wherein, the reference PIN, the plurality of reference patterns and the plurality of biometric information are linked to the payment mode.

9. The terminal device of claim 8, wherein the terminal device is at least one of an automated teller machine or a point-of-sale device.

10. The terminal device of claim 8, wherein the input and reference biometric information correspond to input and reference fingerprints of fingers utilized by the user to draw the input and reference patterns, respectively.

11. The terminal device of claim 8, wherein prior to the initiation of the transaction by the user:

the touch screen is further configured to record the reference pattern that is drawn by the user for a plurality of times; and

the set of biometric sensors is further configured to record the reference biometric information while the reference pattern is being drawn by the user for the plurality of times, wherein the reference pattern and the reference biometric information are linked to the payment mode when the reference pattern is same for each of the plurality of times and the reference biometric information is same for each of the plurality of times.

12. The terminal device of claim 11, further comprising:

a timer configured to:

record a plurality of reference time-durations taken by the user to draw the reference pattern for the plurality of times, respectively; and

record an input time-duration taken by the user to draw the input pattern, wherein the user is authenticated when the input time-duration is within a time range linked to the payment mode, and wherein the time range is determined based on the plurality of reference time-durations; and

a set of pressure sensors configured to:

record a plurality of reference pressure values corresponding to pressures applied by the user for drawing the reference pattern for the plurality of times, respectively; and

record an input pressure value corresponding to a pressure applied by the user for drawing the input pattern, wherein the user is authenticated when the input pressure value is within a pressure range linked to the payment mode, and wherein the pressure range is determined based on the plurality of reference pressure values.

13. A system for authenticating a user for a transaction, the system comprising:

a terminal device, comprising:

a numeric keypad configured to record an input PIN entered by the user for initiating the transaction at the terminal device;

a touch screen configured to display a first plurality of objects, and record an input pattern that is drawn by the user by connecting a second plurality of objects of the first plurality of objects; and

a set of biometric sensors configured to record input biometric information of the user while the input pattern is being drawn by the user; and

a server that is communicatively coupled to the terminal device, and is configured to authenticate the user when the input PIN matches a reference PIN, the input pattern matches a reference pattern from among a plurality of reference patterns, and the input biometric information matches reference biometric information, that is associated with the reference pattern, from among a plurality of reference biometric information;

wherein, the reference PIN, the plurality of reference patterns and the plurality of biometric information are linked to the payment mode.

14. The system of claim 13, wherein the terminal device is at least one of an automated teller machine or a point-of-sale device.

15. The system of claim 13, wherein the input and reference biometric information correspond to input and reference fingerprints of fingers utilized by the user to draw the input and reference patterns, respectively.

16. The system of claim 13, wherein prior to the initiation of the transaction by the user:

the touch screen is further configured to record the reference pattern that is drawn by the user for a plurality of times;

the set of biometric sensors is further configured to record the reference biometric information while the reference pattern is being drawn by the user for the plurality of times; and

the server is further configured to link the reference pattern and the reference biometric information to the payment mode when the reference pattern is same for each of the plurality of times and the reference biometric information is same for each of the plurality of times.

17. The system of claim 16, wherein the terminal device further comprises a timer, and wherein:

the timer is configured to record a plurality of reference time-durations taken by the user to draw the reference pattern for the plurality of times, respectively; and

the server is further configured to:

determine, based on the plurality of reference time-durations recorded by the terminal device, a time range for authenticating the user; and
link the time range to the payment mode.

18. The system of claim 17, wherein when the transaction is initiated by the user:

the timer is further configured to record an input time-duration taken by the user to draw the input pattern; and

the server is further configured to:

determine whether the input time-duration is within the time range linked to the payment mode, wherein the user is authenticated when the input time-duration is within the time range; and

update, when the user is authenticated, the time range based on the input time-duration.

19. The system of claim 16, wherein the terminal device further comprises a set of pressure sensors, and wherein:

the set of pressure sensors is configured to record a plurality of reference pressure values corresponding to pressures applied by the user for drawing the reference pattern for the plurality of times, respectively; and

the server is further configured to:

determine, based on the plurality of reference pressure values recorded by the terminal device, a pressure range for authenticating the user; and
link the pressure range to the payment mode.

20. The system of claim 19, wherein when the transaction is initiated by the user:

the set of pressure sensors is further configured to record an input pressure value corresponding to a pressure applied by the user for drawing the input pattern; and

the server is further configured to:

determine whether the input pressure value is within the pressure range linked to the payment mode, wherein the user is authenticated when the input pressure value is within the pressure range; and

update, when the user is authenticated, the pressure range based on the input pressure value.