CLAIMS

1. A method for user authentication, the method comprising:

displaying a picture pre-specified by a first user, the picture comprising a gesture password input interface customized by the first user (S201);

detecting an interactive operation of a second user for the picture (S202);

generating interactive operation information of the second user based on the detected interactive operation of the second user (S203); and

performing authentication to determine whether the second user is the first user by matching the interactive operation information of the second user and standard information, wherein the standard information is generated based on an interactive operation of the first user for the picture (S204),

wherein generating the standard information based on the interactive operation of the first user for the picture comprises:

retrieving the picture specified by the first user (S301);

displaying the picture, and determining one or more feature areas on the picture (S302), wherein determining the one or more feature areas on the picture specifically comprises:

selecting, based on one or more features of the picture, one or more of a plurality of image feature detection algorithms as selected algorithm;

performing feature detection on the picture, and determining the one or more feature areas on the specific picture through feature detection using the selected algorithm; and/or

determining one or more areas specified by the first user on the specific picture, and using the one or more areas as the feature area;

detecting an interactive operation of the first user for the one or more feature areas (S303); and

generating the standard information based on the detected interactive operation of the first user (S304).

2. The method according to claim 1, wherein, before displaying the picture pre-specified by the first user, the method further comprises:

performing setting for the one or more feature areas, wherein setting is used to determine whether to mark the one or more feature areas on the displayed picture pre-specified by the first user.

3. The method according to claim 1, wherein, after determining one or more feature areas on the picture, the method further comprises:

generating corresponding identification information for each feature area.

4. The method according to claim 3, wherein generating the standard information based on the detected interactive operation of the first user comprises:

determining an operation order of the first user for the one or more feature areas based on the detected interactive operation of the first user; and

generating a feature area identification information sequence used to indicate the operation order based on the operation order and identification information corresponding to the one or more feature areas, and using the feature area identification information sequence as the standard information.

5. The method according to claim 4, wherein generating the interactive operation information of the second user based on the detected interactive operation of the second user comprises:

determining an operation order of the second user for the one or more feature areas based on the detected interactive operation of the second user, when it is determined that the interactive operation of the second user comprises an interactive operation of the second user for the one or more feature areas; and

generating a feature area identification information sequence used to indicate the operation order based on the operation order and the identification information corresponding to the one or more feature areas, and using the feature area identification information sequence as the interactive operation information of the second user.

6. The method according to claim 5, wherein performing authentication to determine whether the second user is the first user by matching the interactive operation information of the

second user and standard information specifically comprises:

determining whether the interactive operation information of the second user and the standard information are the same by matching the interactive operation information of the second user and the standard information; and

if yes, authenticating the second user as the first user.

7. The method according to any one of claims 1 to 6, wherein performing the authentication to determine whether the second user is the first user by matching the interactive operation information of the second user and standard information comprises:

determining whether an interactive operation corresponding to the interactive operation information of the second user and an interactive operation corresponding to the standard information are the same by matching the interactive operation information of the second user and the standard information, and if yes, authenticating the second user as the first user; or

determining whether a similarity between an interactive operation corresponding to the interactive operation information of the second user and an interactive operation corresponding to the standard information is not less than a predetermined similarity threshold, by matching the interactive operation information of the second user and the standard information, and if yes, authenticating the second user as the first user.

8. The method according to any one of claims 1 to 7, wherein the interactive operation for the picture comprises at least one of:

a tapping operation for the one or more feature areas on the picture; and

a sliding operation of performing sliding from one feature area to another when there are a plurality of feature areas on the picture.

9. The method according to claim 8, wherein the tapping operation comprises a tapping force, a tapping time, a number of taps, and a tapping frequency.

10. The method according to claim 8, wherein the sliding operation comprises a sliding force, a sliding time, a sliding distance, and a sliding track.

11. An authentication device, for user authentication the device comprising a plurality of modules configured to perform the method of any one of claims 1 to 10.