CLAIMS

1. A method for verifying an identity document, comprising:

collecting, by a first camera, an identity document image of a current identity document, comprising:

determining position information and orientation information of the identity document;

determining whether a photographing condition for the identity document is satisfied according to the position information and the orientation information, comprising: determining whether a body of the identity document is completely located within a preset area according to the position information and determining whether a target surface of the identity document faces towards a first direction according to the orientation information, the first direction being configured to represent a direction pointing from the preset area to the first camera; and determining that the photographing condition for the identity document is satisfied if the body of the identity document is completely located within the preset area and the target surface faces towards the first direction; determining that the photographing condition for the identity document is not satisfied if the body of the identity document is completely located outside the preset area, a part of the body of the identity document is located outside the preset area, or the target surface faces towards a second direction, wherein the first direction is different from the second direction;

obtaining, by the first camera, the identity document image by photographing the identity document if the photographing condition is satisfied;

recognizing characters in the identity document image to obtain first identity document data;

obtaining, by an identity document reader, second identity document data of the identity document; and

verifying authenticity of the identity document according to the first identity document data and the second identity document data.

2. The method according to claim 1, wherein the first identity document data at least comprises one of the following data: name, gender, nationality, date of birth, residential address, citizen identification number, photo data, issuing authority information, or validity period of the identity document; the second identity document

data at least comprises one of the following data: name, gender, nationality, date of birth, residential address, citizen identification number, photo data, issuing authority information, or validity period of the identity document; and

the step of verifying the authenticity of the identity document according to the first identity document data and the second identity document data comprises:

comparing corresponding data in the first identity document data and the second identity document data;

determining the identity document to be true if the corresponding data in the first identity document data and the second identity document data are identical; and

determining the identity document to be false if at least one corresponding data between the first identity document data and the second identity document data is different.

3. The method according to claim 2, further comprising:

presenting a different data content of the corresponding data between the first identity document data and the second identity document data in response to the identity document being determined to be false.

~~4. The method according to claim 1, wherein the step of collecting, by the first camera, the identity document image of the current identity document comprises:~~

~~determining position information and orientation information of the identity document;~~

~~determining whether a photographing condition for the identity document is satisfied according to the position information and the orientation information; and~~

~~obtaining, by the first camera, the identity document image by photographing the identity document if the photographing condition is satisfied.~~

~~5. The method according to claim 4, the step of determining whether the photographing condition for the identity document is satisfied according to the position information and the orientation information comprises:~~

~~determining whether a body of the identity document is completely located within a preset area according to the position information and determining whether a target surface of the identity document faces towards a first direction according to the orientation information, the first direction being configured to represent a direction pointing from the preset area to the first camera; and~~

~~determining that the photographing condition for the identity document is satisfied if the body of the identity document is completely located within the preset~~

~~area and the target surface faces towards the first direction.~~

~~6. The method according to claim 5, further comprising:~~

~~determining that the photographing condition for the identity document is not satisfied if the body of the identity document is completely located outside the preset area, a part of the body of the identity document is located outside the preset area, or the target surface faces towards a second direction, wherein the first direction is different from the second direction.~~

~~7~~4. The method according to claim ~~5 or 6~~1, wherein the target surface comprises an identity document surface containing data to be compared.

~~8~~5. The method according to any of claims ~~4-7~~1-4, further comprising:

generating and presenting prompt information for indicating an adjustment of the identity document if the photographing condition is not satisfied.

~~9~~6. The method according to any of claims 2-~~8~~5, wherein the second identity document data further comprises fingerprint data; and the method further comprises:

obtaining fingerprint data of a target user in response to the identity document being determined to be true;

comparing the fingerprint data of the target user with fingerprint data in the second identity document data; and

determining that the identity document match with the target user if the fingerprint data of the target user is identical to the fingerprint data in the second identity document data.

~~10~~7. The method according to claim ~~9~~6, further comprising:

determining that the identity document does not match with the target user if the fingerprint data of the target user is different from the fingerprint data in the second identity document data.

~~11~~8. The method according to any of claims 2-~~8~~5, further comprising:

collecting a user image of the target user in response to the identity document being determined to be true;

obtaining photo data of the target user by performing facial recognition on the user image;

separately comparing the photo data of the target user with photo data in the first identity document data and photo data in the second identity document data; and

determining that the identity document matches with the target user if the photo data of the target user is identical to both the photo data in the first identity document

data and the photo data in the second identity document data.

~~12~~9. The method according to claim ~~11~~8, further comprising:

determining that the identity document does not match with the target user if the photo data of the target user is different from both the photo data in the first identity document data and the photo data in the second identity document data.

~~13~~10. An apparatus for verifying an identity document, comprising:

an image collection module, configured to collect an identity document image of a current identity document by means of a first camera; the image collection module comprises: an information determining sub-module, configured to determine position information and orientation information of the identity document; a condition judging sub-module, configured to determine whether a photographing condition for the identity document is satisfied according to the position information and the orientation information; and an identity document photographing sub-module, configured to obtain the identity document image by photographing the identity document by means of the first camera if the photographing condition is satisfied; the condition judging sub-module is configured to determine whether a body of the identity document is completely located within a preset area according to the position information and determine whether a target surface of the identity document faces towards a first direction according to the orientation information, the first direction being configured to represent a direction pointing from the preset area to the first camera, and determine that the photographing condition for the identity document is satisfied if the body of the identity document is completely located within the preset area and the target surface faces towards the first direction; the condition judging sub-module is further configured to determine that the photographing condition for the identity document is not satisfied if the body of the identity document is completely located outside the preset area, a part of the body of the identity document is located outside the preset area, or the target surface faces towards a second direction, wherein the first direction is different from the second direction;

a character recognition module, configured to recognize characters in the identity document image to obtain first identity document data;

a data obtaining module, configured to obtain second identity document data of the identity document by means of an identity document reader; and

a data verification module, configured to verify authenticity of the identity document according to the first identity document data and the second identity

document data.

~~14. The apparatus according to claim 13, wherein the image collection module comprises:~~

~~an information determining sub-module, configured to determine position information and orientation information of the identity document;~~

~~a condition judging sub-module, configured to determine whether a photographing condition for the identity document is satisfied according to the position information and the orientation information; and~~

~~an identity document photographing sub-module, configured to obtain the identity document image by photographing the identity document by means of the first camera if the photographing condition is satisfied.~~

~~15. The apparatus according to claim 14, wherein the condition judging sub-module is configured to determine whether a body of the identity document is completely located within a preset area according to the position information and determine whether a target surface of the identity document faces towards a first direction according to the orientation information, the first direction being configured to represent a direction pointing from the preset area to the first camera, and determine that the photographing condition for the identity document is satisfied if the body of the identity document is completely located within the preset area and the target surface faces towards the first direction.~~

~~16. The apparatus according to claim 15, wherein the condition judging sub-module is further configured to determine that the photographing condition for the identity document is not satisfied if the body of the identity document is completely located outside the preset area, a part of the body of the identity document is located outside the preset area, or the target surface faces towards a second direction, wherein the first direction is different from the second direction.~~

~~17~~11. The apparatus according to ~~claim 15 or 16~~claim 10, wherein the target surface comprises an identity document surface containing data to be compared.

~~18~~12. The apparatus according to any of claims ~~14-17~~10-11, further comprising:

an information prompt module, configured to generate and present prompt information for indicating an adjustment of the identity document if the photographing condition is not satisfied.

~~19~~13. An electronic device, comprising a processor and a memory, wherein

the memory is configured to store at least one executable instruction and the

executable instruction enables the processor to execute the method for verifying an identity document according to any of claims 1-~~12~~9.

~~20~~14. A computer readable storage medium, which stores:

an executable instruction, configured ~~to collect~~ for collecting an identity document image of a current identity document by means of a first camera, collecting an identity document image of a current identity document by means of a first camera comprising: determining position information and orientation information of the identity document; determining whether a photographing condition for the identity document is satisfied according to the position information and the orientation information, comprising: determining whether a body of the identity document is completely located within a preset area according to the position information and determining whether a target surface of the identity document faces towards a first direction according to the orientation information, the first direction being configured to represent a direction pointing from the preset area to the first camera; and determining that the photographing condition for the identity document is satisfied if the body of the identity document is completely located within the preset area and the target surface faces towards the first direction; determining that the photographing condition for the identity document is not satisfied if the body of the identity document is completely located outside the preset area, a part of the body of the identity document is located outside the preset area, or the target surface faces towards a second direction, wherein the first direction is different from the second direction; obtaining, by the first camera, the identity document image by photographing the identity document if the photographing condition is satisfied;

an executable instruction, configured to recognize characters in the identity document image to obtain first identity document data;

an executable instruction, configured to obtain second identity document data of the identity document by means of an identity document reader; and

an executable instruction, configured to verify authenticity of the identity document according to the first identity document data and the second identity document data.