CLAIMS

1. An1. A computer-implemented method for authentication method, comprising:

obtaining a first image, wherein the first image is an image of an identification (ID) document captured when the ID document is tilted at a first angle relative to a light source whilstwhile a light from the light source is projected thereon;on the ID document;

obtaining a second image, wherein the second image is ananother image of the ID document captured when the ID document is tilted at a second angle relative to the light source whilstwhile the light from the light source is projected thereonon the ID document; and

authenticating the ID document based on performing operations comprising:

identification of identifying a first illuminated region of the first image and a second illuminated region, of the second image, wherein the first illuminated region is associated withbrighter than a remaining area of the first image other than the first illuminated region, and the second illuminated region is associated withbrighter than a remaining area of the second image, other than the second illuminated region and

a comparison betweencomparing a first position of the first illuminated region and a second position of the second illuminated region. to determine whether the first position and the second position are a same position in the ID document, wherein the first position is a center point of the first illuminated region and the second position is a center point of the second illuminated region.

2. The computer-implemented method as claimed inof claim 1, wherein:

the first angle relative to the light source which the ID document is tilted at is between 60 degrees and 80 degrees or 100 degrees and 120 degrees; and

the second angle relative to the light source which the ID document is tilted at is between 60 degrees and 80 degrees or 100 degrees and 120 degrees, and wherein the second angle is different from the first angle.

3. The computer-implemented method as claimed in of claim 1 or 2, wherein the light is a flashlight.

4. The computer-implemented method as claimed in any one of the preceding claimsof claim 1, further comprising:

performing image processing, using an image erosion method or an image dilation method, on the first image; and

performing the image processing, using the image erosion method or the image dilation method, on the second image.

5. The computer-implemented method ~~as claimed in any one of the preceding claims~~of claim 1, wherein authenticating the ID document comprises authenticating the ID document on a condition that the first illuminated region and the second illuminated region are identified, and on another condition that the first position of the first illuminated region and the second position of the second illuminated region are different.

6. The computer-implemented method ~~as claimed in any one of the preceding claims~~claim 1, wherein:

the first angle relative to the light source which the ID document is tilted at is smaller than the second angle relative to the light source which the ID document is tilted at; and

authenticating the ID document comprises authenticating the ID document on a condition that the first position of the first illuminated region has a shorter distance from a tilt axis than the second position of the second illuminated region from the tilt axis.

7. The computer-implemented method ~~as claimed in any one of the preceding claims~~claim 1, wherein authenticating the ID document comprises:

~~———~~determining a first coordinate, wherein the first coordinate corresponds to a first center point of the first illuminated region;

~~———~~determining a second coordinate, wherein the second coordinate corresponds to a second center point of the second illuminated region; and

~~———~~authenticating the ID document on a condition that the first coordinate is different from the second coordinate.

8. ~~An~~A non-transitory computer-readable medium storing one or more instructions executable by a computer system to perform operations for authentication ~~system~~, comprising:

~~———an image~~ obtaining ~~device to:~~

~~obtain~~ a first image, wherein the first image is an image of an identification (ID) document captured when the ID document is tilted at a first angle relative to a light source ~~whilst~~while a light from the light source is projected ~~thereon, and~~on the ID document;

~~obtain~~obtaining a second image, wherein the second image is ~~an~~another image of the ID document captured when the ID document is tilted at a second angle relative to the light source ~~whilst~~while the light from the light source is projected ~~thereon~~on the ID document; and

~~———an~~ authenticating ~~device to authenticate~~ the ID document based on performing operations comprising:

~~identification of~~ identifying a first illuminated region of the first image and a second illuminated region~~,~~ of the second image, wherein the first illuminated region is ~~associated with~~brighter than a remaining area of the first image other than the first illuminated region, and the second illuminated region is ~~associated with~~brighter than a remaining area of the second image~~,~~ other than the second illuminated region and

~~a comparison between~~comparing a first position of the first illuminated region and a second position of the second illuminated region~~.~~ to determine whether the first position and the second position are a same position in the ID document, wherein the first position is a center point of the first illuminated region and the second position is a center point of the second illuminated region.

9. The ~~system as claimed in~~ non-transitory computer-readable medium of claim 8, wherein:

~~the~~ the first angle relative to the light source which the ID document is tilted at is between 60 degrees and 80 degrees or 100 degrees and 120 degrees; and

~~the~~ the second angle relative to the light source which the ID document is tilted at is between 60 degrees and 80 degrees or 100 degrees and 120 degrees, and wherein the second angle is different from the first angle.

10. The ~~system as claimed in~~ non-transitory computer-readable medium of claim 8 ~~or 9~~, wherein the light is a flashlight.

11. The ~~system as claimed in any one of claims~~non-transitory computer-readable medium of claim 8 ~~to 10~~, further comprising:

~~an image processing device to perform~~

~~image~~ processing, using an image erosion method or an image dilation method, ~~on~~ the first image; and

~~the image~~ processing, using the image erosion method or the image dilation method, ~~on~~ the second image.

12. The ~~system as claimed in any one of claims~~non-transitory computer-readable medium of claim 8 ~~to 11~~, wherein ~~the~~ authenticating ~~device further authenticates~~the ID document comprises authenticating the ID document on a condition that the first illuminated region and the second illuminated region are identified, and on another condition that the first position of the first illuminated region and the second position of the second illuminated region are different.

13. The ~~system as claimed in any one~~non-transitory computer-readable medium of ~~claims~~claim 8 ~~to 12~~, wherein:

the first angle relative to the light source which the ID document is tilted at is smaller than the second angle relative to the light source which the ID document is tilted at; and

~~the~~ authenticating ~~device further authenticates~~the ID document comprises authenticating the ID document on a condition that the first position of the first illuminated region has a shorter distance from a tilt axis than the second position of the second illuminated region from the tilt axis.

14. The ~~system as claimed in any one~~non-transitory computer-readable medium of ~~claims~~claim 8 ~~to 13~~, wherein~~:~~

~~the~~ authenticating ~~device~~the ID document comprises ~~a coordinate :~~

determining ~~device to determine~~

a first coordinate, wherein the first coordinate corresponds to a first center point of the first illuminated region; ~~and~~

determining a second coordinate, wherein the second coordinate corresponds to a second center point of the second illuminated region; and

~~the~~ authenticating ~~device further authenticates~~ the ID document on a condition that the first coordinate is different from the second coordinate.

15. A ~~computing~~computer-implemented system for authentication, comprising:

~~at least~~ one ~~processor;~~or more computers; and

~~a~~one or more computer memory devices interoperably coupled with the one or more computers and having tangible, non-transitory ~~computer~~, machine-readable ~~storage medium coupled to the at least one processor and~~ media storing ~~programming~~one or more instructions ~~for execution~~that, when executed by the ~~at least~~ one ~~processor,~~or more computers, cause the ~~programming instructions instruct the at least one processor to~~one or more computers to perform one or more operations comprising:

~~obtain~~obtaining a first image, wherein the first image is an image of an identification (ID) document captured when the ID document is tilted at a first angle relative to a light source ~~whilst~~while a light from the light source is projected ~~thereon;~~on the ID document;

~~obtain~~obtaining a second image, wherein the second image is ~~an~~another image of the ID document captured when the ID document is tilted at a

second angle relative to the light source ~~whilst~~while the light from the light source is projected ~~thereon~~on the ID document; and

~~authenticate~~authenticating the ID document based on performing operations comprising:

~~identification of~~ identifying a first illuminated region of the first image and a second illuminated region~~,~~ of the second image, wherein the first illuminated region is ~~associated with~~brighter than a remaining area of the first image other than the first illuminated region, and the second illuminated region is ~~associated with~~brighter than a remaining area of the second image~~,~~ other than the second illuminated region and

~~a comparison between~~comparing a first position of the first illuminated region and a second position of the second illuminated region~~.~~ to determine whether the first position and the second position are a same position in the ID document, wherein the first position is a center point of the first illuminated region and the second position is a center point of the second illuminated region.

16. The computer-implemented system of claim 15, wherein:

the first angle relative to the light source which the ID document is tilted at is between 60 degrees and 80 degrees or 100 degrees and 120 degrees; and

the second angle relative to the light source which the ID document is tilted at is between 60 degrees and 80 degrees or 100 degrees and 120 degrees, and wherein the second angle is different from the first angle.

17. The computer-implemented system of claim 15, further comprising:

processing, using an image erosion method or an image dilation method, the first image; and

processing, using the image erosion method or the image dilation method, the second image.

18. The computer-implemented system of claim 15, wherein authenticating the ID document comprises authenticating the ID document on a condition that the first illuminated region and the second illuminated region are identified, and on another condition that the first position of the first illuminated region and the second position of the second illuminated region are different.

19. The computer-implemented system of claim 15, wherein:

the first angle relative to the light source which the ID document is tilted at is smaller than the second angle relative to the light source which the ID document is tilted at; and

authenticating the ID document comprises authenticating the ID document on a condition that the first position of the first illuminated region has a shorter distance from a tilt axis than the second position of the second illuminated region from the tilt axis.

20. The computer-implemented system of claim 15, wherein authenticating the ID document comprises:

determining a first coordinate, wherein the first coordinate corresponds to a first center point of the first illuminated region;

determining a second coordinate, wherein the second coordinate corresponds to a second center point of the second illuminated region; and

authenticating the ID document on a condition that the first coordinate is different from the second coordinate.