CLAIMS

1. A terminal device comprising an application processor, an optical fingerprint sensor and a touch screen, the touch screen comprising a first area, and the optical fingerprint sensor being arranged under the first area, wherein

the application processor is configured to detect a fingerprint capturing instruction sent by a currently running application being one of a plurality of applications, to determine a first luminance based on the currently running application when the fingerprint capturing instruction sent by the currently running application is detected, to control light-emitting units for the first area to emit light with the first luminance; and

the optical fingerprint sensor is configured to capture the fingerprint when the light with the first luminance illuminates the first area,

being characterized in that,

each application of the plurality of applications is assigned to one security level, and each security level is assigned to one specific luminance; when the security level of an application *i* is greater than the security level of an application *j*, the first luminance corresponding to the application *i* is greater than the first luminance corresponding to the application *j*,

wherein the higher the luminance, the higher a sharpness of a fingerprint captured by the optical fingerprint sensor.

2. The terminal device according to claim 1, wherein the currently running application is a fingerprint payment application, a currently displayed interface on the touch screen is a payment interface, the touch screen further comprises a second area, the first area and the second area are mutually exclusive, and

the application processor is further configured to control light-emitting units for the second area to emit light with a second luminance when controlling the light-emitting units for the first area to emit the light with the first luminance, wherein the second luminance is less than the first luminance;

or

the application processor is further configured to disable light-emitting units for the second area when controlling the light-emitting units for the first area to emit the light with the first luminance.

3. The terminal device according to claim 2, wherein the application processor is further configured to control the light-emitting units for the second area and the light-emitting units for the first area to emit light with a third luminance when the fingerprint payment application finishes payment;

or

the application processor is further configured to control the light-emitting units for the second area and the light-emitting units for the first area to emit light with a third luminance when the fingerprint payment application finishes payment.

4. The terminal device according to any one of claims 1 to 3, wherein the first area comprises N subareas, N is an integer greater than 1, and the application processor is further configured to:

control light-emitting units for M subareas comprised in the N subareas to emit the light with the first luminance;

wherein a horizontal projection of the finger is located within the M subareas, and M is a positive integer.

5. The terminal device according to claim 4, wherein the application processor is further configured to disable light-emitting units for other subareas comprised in the N subareas than the M subareas when controlling the light-emitting units for the M subareas comprised in the N subareas to emit the light with the first luminance.

6. The terminal device according to claim 4, wherein the application processor is further configured to control light-emitting units for other subareas comprised in the N subareas than the M subareas to emit light with a fourth luminance when controlling the light-emitting units for the M subareas comprised in the N subareas to emit the light with the first luminance, wherein the fourth luminance is lower than the first luminance.

7. A method for capturing a fingerprint, applicable to a terminal device comprising an application processor, an optical fingerprint sensor and a touch screen, the touch screen comprising a first area, and the optical fingerprint sensor being arranged under the first area, wherein the method comprises:

detecting a fingerprint capturing instruction sent by a currently running application being one of a plurality of applications;

determining a first luminance based on the currently running application when the fingerprint capturing instruction sent by the currently running application is detected;

controlling light-emitting units for the first area to emit light with the first luminance; and

capturing the fingerprint when the light with the first luminance illuminates the first area,

being characterized in that,

each application of the plurality of applications is assigned to one security level, and each security level is assigned to one specific luminance; when the security level of an application *i* is greater than the security level of an application *j*, the first luminance corresponding to the application *i* is greater than the first luminance corresponding to the application *j*,

wherein the higher the luminance, the higher a sharpness of a fingerprint captured by the optical fingerprint sensor.

8. The method according to claim 7, wherein the currently running application is a fingerprint payment application, a currently displayed interface on the touch screen is a payment interface, the touch screen further comprises a second area, the first area and the second area are mutually exclusive, the method further comprises:

controlling light-emitting units for the second area to emit light with a second luminance when controlling the light-emitting units for the first area to emit the light with the first luminance, wherein the second luminance is less than the first luminance;

or

the method further comprises:

disabling light-emitting units for the second area when controlling the light-emitting units for the first area to emit the light with the first luminance.

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

controlling the light-emitting units for the second area and the light-emitting units for the first area to emit light with a third luminance when the fingerprint payment application finishes payment;

or

controlling the light-emitting units for the second area and the light-emitting units for the first area to emit light with a third luminance when the fingerprint payment application finishes payment.

10. The method according to any one of claims 7 to 9, wherein the first area comprises N subareas, N is an integer greater than 1, controlling the light-emitting units for the first area to emit the light with the first luminance comprises:

controlling light-emitting units for M subareas comprised in the N subareas to emit the light with the first luminance, wherein a horizontal projection of the finger is located within the M subareas, and M is a positive integer.

11. The method according to claim 10, further comprising:

disabling light-emitting units for other subareas comprised in the N subareas than the M subareas when controlling the light-emitting units for the M subareas comprised in the N subareas to emit the light with the first luminance

12. The method according to claim 10, further comprising:

controlling light-emitting units for other subareas comprised in the N subareas than the M subareas to emit light with a fourth luminance when controlling the light-emitting units for the M subareas comprised in the N subareas to emit the light with the first luminance, wherein the fourth luminance is lower than the first luminance.

13. A computer readable storage medium, storing computer programs for exchanging electrical data, wherein the computer programs cause a terminal device to execute the method according to any one of claims 1 to 6, in which the terminal device comprises an application processor, an optical fingerprint sensor and a touch screen, the touch screen comprises a first area, the optical fingerprint sensor is arranged under the first area.