

CLAIMS

1. A computer-implemented method for account login into a server, the method comprising:
 - receiving a login request from a mobile apparatus for an application (app), wherein the login request comprises a variable apparatus identifier (ID) (S210);
 - searching a user account database for user account information corresponding to the variable apparatus ID (S220);
 - determining whether the user account information corresponding to the variable apparatus ID is identified;
 - in response to determining that the user account information corresponding to the variable apparatus ID is identified, determining, based on a timestamp in the variable apparatus ID and a current time of the server, whether an update of the variable apparatus ID is requested (S230);
 - in response to determining that the update of the variable apparatus ID is requested, updating the variable apparatus ID (S240); and
 - transmitting an account login permission instruction and an updated variable apparatus ID to the mobile apparatus (S250).
2. The computer-implemented method of claim 1, wherein the variable apparatus ID has a validity period and can identify the mobile apparatus.
3. The computer-implemented method of claim 2, wherein the validity period of the variable apparatus ID varies with an app type.
4. The computer-implemented method of claim 1, wherein determining whether the update is requested comprises:
 - determining a survival period of the variable apparatus ID based on the timestamp in the variable apparatus ID and the current time of the server;
 - determining whether the survival period is shorter than a validity period; and
 - if the survival period is not shorter than the validity period, updating the variable apparatus ID.

5. The computer-implemented method of claim 1, wherein, in response to determining that the update is not requested, sending an account login permission instruction and the variable apparatus ID to the mobile apparatus.

6. The computer-implemented method of claim 1, wherein the variable apparatus ID comprises an apparatus token that has a validity period.

7. The computer-implemented method of claim 1, wherein the variable apparatus ID is generated by the server based on an app, an apparatus ID, a validity period, and a timestamp.

8. The computer-implemented method of claim 7, wherein the apparatus ID is a unique ID generated by the server based on terminal apparatus information of the mobile apparatus.

9. The computer-implemented method of claim 8, wherein the user account database stores a mapping relationship between an apparatus ID and a variable apparatus ID, a mapping relationship between the variable apparatus ID and a user name, and a mapping relationship between the apparatus ID and the user name.

10. The computer-implemented method of claim 9, wherein searching the user account database for user account information corresponding to the variable apparatus ID comprises:
searching the user account database for an apparatus ID corresponding to the variable apparatus ID.

11. The computer-implemented method of claim 9, wherein the login request comprises a variable apparatus ID and a user name.

12. The computer-implemented method of claim 11, wherein searching the user account database for user account information corresponding to the variable apparatus ID comprises:
searching the user account database for an apparatus ID corresponding to the variable apparatus ID, and determining whether the user name is a user name corresponding to the

apparatus ID.

13. The computer-implemented method of any one of claims 1 to 12, wherein, in response to updating the variable apparatus ID, updating the user account database by using the updated variable apparatus ID.

14. A server, comprising:

a receiving unit, configured to perform the method of any one of claims 1 to 13 comprising receiving a login request from a mobile apparatus, wherein the login request comprises a variable apparatus ID;

a storage unit, configured to store a user account database;

a searching unit, configured to search the user account database for user account information corresponding to the variable apparatus ID;

a determining unit, configured to determine whether the variable apparatus ID needs to be updated;

an update unit, configured to update the variable apparatus ID based on a timestamp in the variable apparatus ID and a current time of the server; and

a sending unit, configured to send an account login permission instruction and an updated variable apparatus ID to the mobile apparatus.

15. An apparatus for account login, the apparatus comprising a plurality of modules configured to perform the method of any one of claims 1 to 13.