***Three Level Security(User authentication)***

1. Most of nowadays applications prioritize availability over security. A simple user name, a password, and data can be accessed, no matter how sensible they are. Techniques like cryptography and hashing have been used to try and keep those passwords secure from any adversary, but attacks like online and offline dictionary attacks have seen those security measures broken. And if broken then your everything can be accessed. For a system that requires a lot of security, there is a need for more security when we talk about authentication. In this project three-layer authentication security system will be designed, advantages and disadvantages will also be discussed.

At first, the user will need to be registered into our system and he will be asked for a strong password, a not obvious passphrase, and three of his most liked numbers. Every user will of course need a username. All the information will be transferred and stored in our database in a hashed form, using one of the hashing algorithms in its state of the art.

For the login part, the user will be first asked for his username and password, upon success, he will be directed to a page that will be asking a question about his passphrase, if successful again, a certain number of images will be presented to him and he has to select all the images that contain any of his favourite numbers. Note that failure to any of the steps will restart the operation from the password point and after 3 failed attempts to the authentication, the account will be suspended. For any forgotten password, a two-level retrieval will be done. 2 of the numbers should be presented before retrieving access to any account. Note that upon a successful operation the registration will start again by providing the password and passphrase and 3 numbers that the user like.

1. In this project authentication and password, retrieval will be functionality or security policies implemented.
2. PHP, cryptography and hashing for a password(using state of the art algorithm). A server simulator for the database. A computer.