Cloud Client

Encryption

Socket Connection

Decryption

Client Authentication

Input/output

Network

Cloud Server

Socket Connection

Encryption

Decryption

Data storage

The client authenticates the user on the server using it authentication class and set the authentication status which will be tested to enable connection to the server. The user input (Change password, login, upload, download, etc) will pass through the encryption method of the crypto class to encrypt the data (files or user credentials) before transferring it to the socket connection class which handle every communication between the server and the client. On getting to the server the connection is received at the socket connection and will be passing to decryption method of the crypto class for decryption before storage.

During download (receiving form the server; file or authentication status) the server also performs the sending process of the client while the client performs the receiving function as done by the server. (Note write this out as I have written the client transmission).

**Client classes**

ClientCon (Methods: conServer) {Argument: int \_ip, int \_port, bool \_status}

UserAuthen (Methods: authUser, setStatus) {Argument: string \_pwd, string \_user, bool \_status}

Crypto (Methods: decryption, encryption) {Argument: String public\_key, String private\_key, byte \_data}

HashFunc (Methods: hashFunc) {string \_pwd, string \_user, string \_key, string \_salt}

DataTranfer (Methods: dataValid, sendFile, receiveFile) {Argument: byte \_data}

**Server classes**

ConListener (Methods: clientList) {Argument: int \_ip, int \_port, bool \_status}

Crypto (Methods: decryption, encryption) {Argument: String public+key, String private\_key,byte \_data}

DataTranfer (Methods: dataValid, sendFile, receiveFile) {Argument: byte \_data}

DataStoreage (Methods: dataRec, dataStore){ Argument: byte \_data}

Note: you can use the above class listed to draw your DML diagram to give your work more credibility. You can also explain the classes as their name implies. Nobody cares about how the code is written, explain to your best understanding and add beauty. Also use the new client for update reason