

SALECLIENT SPECIFICATIONS - Merged Phase

In this phase, a C console application would be developed according to following specifications;

- ☐ 1. Upon startup, the client application will prompt the user to input the IP address and port number. These will serve as the connection details for the server.
- ☐ 2. After obtaining the IP and port information, the client application will request the user to enter their user ID and password.
- ☐ 3 The client application will hash the provided user ID and password and send them to the server over TCP.
- ☐ 4. The server application, on startup, will initiate a TCP server to listen for incoming connections from client
- ☐ 5 When a client connects, the server will process the incoming message:
 - ☐ 5.1 If the operation type is "log in"
 - ☐ 5.1.1 The server will search for the user ID received in the message.
 - ☐ 5.1.2 If the ID is found, the server will retrieve the corresponding password and calculate its hash(SHA1).
 - ☐ 5.1.3 The server will compare the hash from the request message with the calculated hash.
 - ☐ 5.1.4 If the hashes match, the server will fetch the user's name and surname from the database and send them to the client.
 - ☐ 5.1.5 If the ID is not found or the password hash doesn't match, the server will send an appropriate error code

☐ 6 If the server successfully responds to the client's login attempt, the client will proceed to the menu created in Phase 1 (saledemo.c).

☐ 7 In case of a failed login attempt, the client application will prompt the user to enter their user ID and password again."

☐ 8. In case of a failed login attempt, the client application will prompt the user to enter their user ID and password

☐ 9. **Request Message Format:**

For a login request, the format of the message will be:
<length><command><data>, where data includes the user ID and password hash.

☐ 10. **Response Message Format:**

For a login response, the format of the message will be:
If successful: **<length><response code><data>**, response code = 0: data = name surname where data includes the user's name and surname. If unsuccessful, response code = 1: **<length><response code>** User not found. If unsuccessful, response code = 2: **<length><response code>** Incorrect password

☐ 11. **Timeout Handling:**

If the client does not receive a response from the server within 5 seconds, it will display a connection failure message on the client's screen