**Login and Registration System - C++ Code**

#include <iostream>

#include <fstream>

#include <string> #include <unordered\_map>

using namespace std;

unordered\_map<string, string> loadUsers() { unordered\_map<string, string> users; ifstream file("users.txt"); string username, password;

while (file >> username >> password) { users[username] = password; }

file.close(); return users; }

void registerUser() {

unordered\_map<string, string> users = loadUsers(); string username, password;

cout << "Register a New User\n"; cout << "Enter Username: "; cin >> username;

if (users.find(username) != users.end()) { cout << "Error: Username already exists!\n"; return; }

cout << "Enter Password: "; cin >> password;

ofstream file("users.txt", ios::app); file << username << " " << password << endl; file.close();

cout << "Registration Successful!\n"; }

void loginUser() {

unordered\_map<string, string> users = loadUsers(); string username, password;

cout << "Login\n"; cout << "Enter Username: "; cin >> username; cout << "Enter Password: "; cin >> password;

if (users.find(username) != users.end() && users[username] == password) { cout << "Login Successful! Welcome, " << username << "!\n"; } else {

cout << "Error: Invalid username or password.\n"; } }

int main() { int choice;

do {

cout << "\n--- Login and Registration System ---\n"; cout << "1. Register\n"; cout << "2. Login\n"; cout << "3. Exit\n"; cout << "Choose an option: "; cin >> choice;

switch (choice) {

case 1: registerUser(); break; case 2: loginUser(); break; case 3: cout << "Exiting...\n"; break; default: cout << "Invalid choice!\n"; } } while (choice != 3);

return 0;

}

**Sample Output**

--- Login and Registration System ---

1. Register
2. Login
3. Exit

Choose an option: 1

Register a New User

Enter Username: alice

Enter Password: pass123 Registration Successful!

--- Login and Registration System ---

1. Register
2. Login
3. Exit

Choose an option: 1

Register a New User

Enter Username: bob

Enter Password: qwerty Registration Successful!

--- Login and Registration System ---

1. Register
2. Login
3. Exit

Choose an option: 1

Register a New User

Enter Username: alice Error: Username already exists!

--- Login and Registration System ---

1. Register
2. Login
3. Exit

Choose an option: 2

Login

Enter Username: alice

Enter Password: pass123 Login Successful! Welcome, alice!

--- Login and Registration System ---

1. Register
2. Login
3. Exit

Choose an option: 2

Login

Enter Username: bob

Enter Password: wrongpass Error: Invalid username or password.

--- Login and Registration System ---

1. Register
2. Login
3. Exit

Choose an option: 3 Exiting...