

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...