

CSCI 2110 Data Structures and Algorithms

Laboratory No. 9

This is an optional lab, and is mainly for students who may have missed an earlier lab. However, everyone is encouraged to complete this lab. The best 8 out of 9 lab grades will be used towards the final grade.

Deadline for submission: Sunday, December 3, 2017, 11.55 P.M.

Exercise: Your friend is starting up a new web site that is going to have users register as members. He asks you to help implement an application that would validate a member's login. Your task is to write a program that reads a file containing the full name, username, and password for each user. **Create a hashmap with the username as key and the password as value. Create another hashmap with the username as key and full name as value.**

After the file is read, prompt the user to enter the login name and password. If the password is incorrect, give the user two more chances. If the password is incorrect all three times, the program quits. If the login is successful, print a welcome message. Use the first hashmap to check the username and password match, and use the second hashmap to print the welcome message.

Here's a sample input file:

Ichabod Crane	icrane	qwerty123
Brom Bones	bbones	pass456!
Emboar Pokemon	epokemon	password123
Rayquazza Pokemon	rpokemon	drow456
Cool Dude	cdude	gh456!32
Trend Chaser	tchaser	xpxo567!
Chuck Norris	cnorris	power332*
Drum Dude	ddude	jflajdljfped

In the above file, for example, Ichabod Crane is the full name, icrane is the username and qwerty123 is the password. In practice, the passwords are encrypted, but for this program, you can store them in plaintext.

Here are two sample runs of the program:

Sample Run 1

Login: rpokemon
Password: drow456

Login successful
Welcome Rayquazza Pokemon

In practice, the password is hidden when it is typed, but don't worry about that in your program.

Sample Run2

Login: cdude
Password: trythis

Either the username or password is incorrect. You have 2 more attempts.
Login: cdude
Password: trythat

Either the username or password is incorrect. You have 1 more attempt.
Login: cdude
Password: 675rtht!

Sorry. Incorrect login. Please contact the system administrator.

What to submit: Source code, sample input file used, and at least 3 sample runs of the program.