INFO 6079: Security Application
Week 4 Lab 4 - Modules

FANSHAWE School of Information Technology

Lab week 4 objective:

- Working with modules
- Learn how modules interact with application
- How to change a module and it will affect the python files that uses it.

Lab Time:

You will be required to submit the slides for this lab to drop box by the due time.
Due Date January 31, 2023 11:59pm

General comments:

- Header Info to be added to .py file
- Make sure that you use proper spaces needed in the blocks:
- You only required to make changes to 1 of the 3 files downloaded from FOL.
- The third (3) file will only be changed if you want to make further options in application. It is not required.

Start of Lab

- You are going to work with 3 python files
  - user_interaction.py
  - LAB04_logic.py
  - connect_DB.py

You can and should download them from FOL and save them in a folder that you know we they are.
While you run them for the first time, a fourth file will be created. It will be called **logins.db**, it is a database that the script will work with.

It will hold the username(s) that you will add during the lab.

The database by default is set that it starts with a *user* **Admin** with *password* **Admin** and *role* ***admin***. Please not of the capital **As** for the user and password and lower case for role.

Your goal is to make changes to ***LAB04_logic.py*** serving as a module to user_interaction.py and print the information through user_interaction.py
*** notice that ***connect_DB.py*** serves as a module for ***LAB04_logic.py****
Steps:

1) Make sure you have all files downloaded and in the same (current) folder.
2) Run **user_interaction.py.** When prompt "Are you an existing user? [y,n]" Answer either y or Y

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3) Answer "Admin" for Username and Password.
4) You should get: notice that it says Table has been created

```
Table has been created
Are you an existing user? [y,n] y
Username: Admin
Password: Admin
Hello  Admin
change method so it would call the read_all_users() method from dconnect_DB
```

5) Take a ***screen-print 2*** and put it on the PowerPoint.
6) Run again but this time answer "y" or "Y" but for Username and password put anything but "Admin" for at least one of them. Should get something like:

```
Table exists already!!!
Are you an existing user? [y,n] y
Username: ADmin
Password: ADmiN
Wrong credentials , try again
Username:
```

Notice that top line has changed and that it says that "Wrong credentials, try again" and that you need to try again. Should be allowed 3 tries.

7) Go to ***LAB04_logic.py***. and make changes to get_user_table():
This method needs to call the *get_all_users()* method in *connect_DB* and save it to a variable. Once receiving data from the *get_all_users()* method run a for loop that would print all the users in the database.
Example:

```
for user in users:
    print(users)
```

Then debug from user_interaction.py and take ***screen-print 3*** of output.

Results for ***screen-print 4*** should get:

```
Debug I/O (stdin, stdout, stderr) appears below
Table exists already!!!
Are an excisting user? [y,n] y
Username: Admin
Password: Admin
Hello  Admin
('Admin', 'Admin', 'admin')
None
```

*** Delete the print("change method so it would call the read_all_users() method from **connect_DB**") command in the method.

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```
Debug I/O (stdin, stdout, stderr) appears below
Table exists already!!!
Are you an existing user? [y,n] y
Username: Admin
Password: Admin
Hello  Admin
username: Admin, Password: Admin, Role: admin
```

8) Go to ***LAB04_logic.py***. and make changes to add_user(name, password, role):

Before adding a user, the following should be checked: ***User name, password, role***

9. you will not be able to add a username that is in data base without code.
   a. This can be done by using check_for_user(user):
   b. method in connect_DB.py Method returns a None type if there is no username in database.

If user exists that send a message of "Username unavailable"
Run the program from **user_interaction.py**.
This time answer n or N when asked "Are you an existing user?"

10. Put "Admin" for username and your FOL_ID for password and role. This is to test the Username duplication.
    a. Take a screen Print of the output.
    b. Put screen print in print screen 5
    c. Stop the run.

11. Test that length is at least 8 char long.
    a. Provide that message states "Password is too short"
    a. Run and test.
    b. Take a screen shot of output and put in print screen 6.
    c. Stop the run.

12. Make sure that no one can put admin or Admin for role
    i Provide a message that states "invalid role".
    ii Run and test.
    iii Take a screen shot of output and put in print screen 7
    iv Stop the run.

13. Once all the code for checking password, username, and role is done.
    i Add a new user using your FOLID, with a proper password, and a role (not admin)
    ii Run the code again and enter as Admin. Take a print screen showing all users. Should be Admin and one with your FOLID.
    iii Take a screen shot and put it in print screen 8.

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14. Add additional rule(s) for password
    a) Must contain lower and upper letters
    b) Must contain numbers
    c) Take a screen shot and put it in print screen 9.

Process		Marks
Create User name as a variable , use in LAB		1
Screen Shot 1	Header Info to be added to .py file, add variable above	2
5) Screen Shot 2	Table exists, User added	1
7a)Screen Shot 3	User interaction in Lab04_logic.py	1
7b)Screen Shot 4	Table exists, show user name, password	2
10)screen shot 5	Test Username duplication	3
11)screen shot 6	Password too short	3
12)screen shot 7	Invalid Role	3
13)screen shot 8	Add new user, check password, username etc.	3
14)screen shot 9	Extra Code to check additional password rules	3
Final Upload	Marks will be deleted if process not followed in naming etc.	3
	Total	**25**

FINAL UPLOAD:

Lab is graded out of 25 points for 2.5% of your final grade.

- Submitting files in zip format will result in 0.
- Don't forget to submit the code.

Submit: You need to all edited files to **Lab 4 Modules**

- ***If modified:*** `Password.py, extra_code.py, connect_DB1.py, user_interaction.py, using_login_package.py`
  - ***(initials)LAB04_logic.py e.g hbh_lab4.logic.py***
  - ***PowerPoint file e.g. hbh_lab04.pptx (template to use week4_lab_template.pptx***

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