

LAB EXAM 5

Section 2

Mar. 22, 2016

In this lab assignment, you are going to write a program that checks if a given password is strong or not, for pre-defined strength requirements.

Firstly your program should display following prompt:

```
"Enter a new password: "
```

When you enter a new password, the program checks if it is strong or not for pre-defined security requirements. Strength requirements are:

- The length must be between **6 to 10** characters,
- It must contain at least **one** digit,
- It must contain at least **one** uppercase letter.

If the password does not meet these requirements, your program will warn the user about the missing requirement, and continue to ask for a suitable password, if the password meets all the requirements the program inform user and ends.

Please refer to the sample run for details:

Sample run:

```
Enter a new password: 1905
A password must have at least 6 and at most 10 characters.
Enter a new password: ankara1
A password must have at least 1 upper case character.
Enter a new password: Ankara
A password must have at least 1 digit.
Enter a new password: Ankara6
OK. that's a strong password.
```

You should implement two classes named 'Password' and 'TestPassword'.

In Password class, you should include an instance variable named password. The class should contain methods named 'public boolean

`checkLength ()`’, `public boolean checkUpperCase()` and `public boolean checkDigit()`’, each of which checks a strength requirement and returns true if the corresponding requirement is met by the string in the instance variable.

In `TestPassword` class, your program should create an instance of the `Password` class. Then, it should get a string from the user and set the instance variable of the `Password` object to the string given by the user. The program should invoke the check methods of the `Password` class on that password object. If the password does not satisfy any of the requirements, the user should be informed about the problem and asked to enter a new string. If the password is strong, the program should exit with an informative message.

Note that this is an exam. You are not allowed to communicate with any person other than your teaching assistant. Those who do not obey this rule will be subject to disciplinary investigation. You can use only the features (techniques, classes, methods and statements) that are covered in the class. After finishing your work, select your folder (e.g. `Lab05`), then right click and select “Send to” option. Click “Compressed (zipped) folder”. Rename your zip file as “`Lab05_Surname_Name`”. Note that, your file type is “zip”, namely your file name will not be “`Lab05_Surname_Name.zip`”. Upload your zip file to Unilica. Note that you must upload your file before 16:40; you cannot upload your file after that time.