COMP 1600 Fall 2025

Lab 4: Check the Password

Due by the end of class

In this assignment you will write a pro-active password checker that checks to make sure that a user entered password meets certain requirements. You must implement a simple program that prompts the user for two `String` values, a password and the same password again for confirmation.

For the purposes of this lab, a legal password must have all of the following properties:

- Length of at least 8 characters
- Starts with a lower case letter
- Ends with a numerical digit
- Is exactly equal to the repetition of the password typed for confirmation

Specification

Create a project called `Lab4`. Add a class called `Password`.

Complete your program to prompt the user to enter a password and a confirmation as explained above. If the password is shorter than 8 characters, print `Password is too short!` Otherwise, if the password does not start with a lower case letter, print `Password must start with a lower case letter!` Otherwise, if the password does not end with a digit, print `Password must end with a digit!` Otherwise, if the password does not match the confirmation, print `Passwords do not match!` Finally, if all the conditions are satisfied, print `Password is valid!`

To get the length of the password, you will have to use the `length()` method on the `String` object. To get the first and last characters of the password, you'll have to use the `charAt()` method. A lower case letter will be between `'a'` and `'z'`. A digit will be between `'0'` and `'9'`. Remember that the character values for numerical digits are not the same as the values of the numbers themselves. You will also need to use the `equals()` method to compare the two `String` values. One of the trickier problems with this lab is that you want to test for the **negation** of the conditions given above.

Below are several sample cases. The last example is a valid password, but the remainder are not. Try to match the sample output as closely as possible. User input is shown in green. Note that the passwords will be visible, not masked by dots, stars, asterisks, or similar. Making a program mask input is beyond the scope of this class. Note also that you should not test your program with passwords that contain a space since spaces will interfere with the operation of `Scanner` input.

Short Password

```
Enter a password: dang
Enter it again:   dang
Password is too short!
```

Starts Wrong

```
Enter a password: Zoomzoom9
Enter it again:   Zoomzoom9
Password must start with a lower case letter!
```

Ends Wrong

```
Enter a password: tellmeaboutit
Enter it again:   tellmeaboutit
Password must end with a digit!
```

Doesn't Match

```
Enter a password: rasputin99
Enter it again:   rasputan99
Passwords do not match!
```

Valid Password

```
Enter a password: wombat42
Enter it again:   wombat42
Password is valid!
```

Turn In

Turn in your code by uploading `Password.java` from the `Lab4\src` folder wherever you created your project to **Brightspace**. **Do not** upload the entire project. I only want the `Password.java` file.

All work must be done individually. Never look at someone else's code. Please refer to the course policies if you have any questions about academic integrity. If you have trouble with the assignment, I am always available for assistance.