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**Class:** CMSC204 – 32461 **Instructor:** Farnaz Eivazi **Date:** 02/03/2021  
**Assignment: Project 1 (Password Checker) –Learning Experience and Program Run Screenshots**

**Learning Experience:**

This project helped me to understand how to use, handle and test exceptions in methods. Creating custom exception classes and use them in respective method was helpful for me to understand how methods are being thrown. Additionally, testing exceptions was also a new learning.

The design document and provided Javadoc helped me to get an initial grasp of the project. I created all the exception classes and extended them to “Runtime Exception” parent class. At first, I added my own custom messages, but soon I realized that the public tests expect some specific message language, I then take a second look on the project description document and realized the messages are provided I the document so I used them.

For the Utility class, for each password requirement method, initially I was handling exception and testing them in my own Driver class (a simple class with a main method) to make sure it’s working, although they methods were working, adding them in the *isValidPassword* method caused the public tests to fail. I then learned that I don’t have to handle the exceptions in the methods themselves as it was taken care in the public tests as well as the JavaFX driver class.

Although I was familiar with using regex, I learned extra other things such as checking for special characters. I was trying a lot to use regex to check for more than 2 sequence of the same character, but regex was not working correctly, it was working for any repetition of the character in the password. I then used loop to go through the password characters one by one and compare the first char with the following 2 chars and if all are the same, it means the password is not valid. Otherwise it’s valid.

Working on the method which checks for list of the passwords was challenging for me, I was using the *isValidPassword* method inside that in a try block but having hard time to get the exceptions and add it to the same list next to each invalid password. I had to make sure I do correct order for the catch blocks. It first somehow giving me infinite loop. I finally had to add if the password is invalid in the try block, then using catch blocks for every exception and add the get the messages.

**Test Cases:**

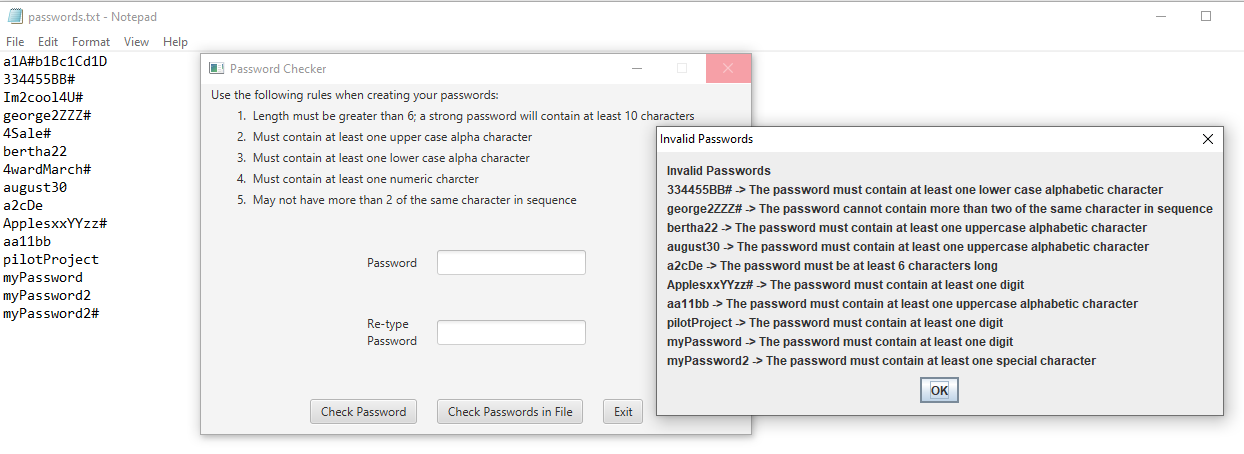
|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test # | Test Description | Test Date (Input) | Expected Results | Pass/ Fail |
| 1 | Verify Valid Password Appears | Password: G00gl3.c0m Re-Type : G00gl3.c0m | Message: Password is Valid | **Pass** |
| 2 | Verify if a file with passwords are selected using “Check Passwords in File”, correct error message appears for each password which is invalid | Passwords.txt | Message: Error message next to each invalid password and valid message should not be shown | **Pass** |
| 3 | Verify if password is less than 6 Characters, length error is displayed | Password: Goog Re-Type : Goog | Message:  The password must be at least 6 Chars long | **Pass** |
| 4 | Verify if a Password of 7 characters (which met all requirements) is entered, the weak password message is displayed | Password: G00gl3# Re-Type : G00gl3# | Message:  Password is OK but weak | **Pass** |
| 5 | Verify if a password doesn’t have upper case letter, the error message about missing uppercase letter is appeared | Password: g00gl3# Re-Type : g00gl3# | Message:  The password must contain at least one upper case alphabetic… | **Pass** |
| 6 | Verify if a password doesn’t have lower case alphabet, the error message appear that the password should have at least one lower case | Password: @G00GL3# Re-Type : @G00GL3# | Message:  The password must contain at least one lower case alphabetic character | **Pass** |
| 7 | Verify if password doesn’t have a number digit in it, it throw error message | Password: @Google.com Re-Type: @Google.com | Message: The password must contain at least one digit | **Pass** |
| 8 | Verify if a password doesn’t have special character, it display the error message the password should at least have on special character | Password: Google123 Re-Type: Google123 | Message: The password must contain at least one special character | **Pass** |
| 9 | Verify if a password contain more then 2 repetition of same character in a sequence error message is displayed | Password: Gooog1e# Re-Type: Gooog1e#  Password: Goog1e#333 Re-Type: Goog1e#333 | Message:  The password cannot contain more than two of the same character in sequence | **Pass** |
| 10 | Verify if the password and retype password entries not the same, error message is displayed | Password: @Google.com1 Re-Type: @Google.con1 | Message: The passwords do not match | **Pass** |

**Test 1 Screenshot:**

**A screenshot of a social media post

Description automatically generated**

**Test 2 Screenshot:**



**Test 3 Screenshot:**

A screenshot of a social media post

Description automatically generated

**Test 4 Screenshot:  
A screenshot of a social media post

Description automatically generated**

**Test 5 Screenshot:**

**A screenshot of a social media post

Description automatically generated**

**Test 6 Screenshot**

**A screenshot of a cell phone

Description automatically generated**

**Test 7 Screenshot:  
A screenshot of a social media post

Description automatically generated**

**Test 8 Screenshot:**

**A screenshot of a cell phone

Description automatically generated**

**Test 9 Screenshots:**

A screenshot of a social media post

Description automatically generated **A screenshot of a computer

Description automatically generated**

**Test 10 Screenshot:  
A screenshot of a social media post

Description automatically generated**