CMSC 204

Assignment 1 Design

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Psuedo Code

Define custom exception LengthException

Define custom exception NoDigitException

Define custom exception NoUpperAlphaException

Define custom exception NoLowerAlphaException

Define custom exception InvalidSequenceException

Define custom exception WeakPasswordException

Define custom exception UmMatchedException

Define a void method that takes two passwords and compares them

If the first password and second password is equal

Return true

Else

Return false

Declare boolean method isValidPassword with parameter passwordString that throws exceptions

If length of passwordString is less than 6 characters

Throw LengthException

If the passwordString does not contain an uppercase alpha character

Throw NoDigitException

If the passwordString does not contain a lower case alpha character

Throw NoLowerAlphaException

If the passwordString doesn’t contain a numeric character

Throw NoLowerAlphaException

If the passwordString doesn’t contain a special character

Throw NoSpeicialCharacterException

If the passwordString contains more than 2 of the same character in sequence

Throw InvalidSequenceException

Return true

Declare method of type boolean isWeakPassword with String parameter passwordString

If passwordStrring length is greater or equal to 6 and passwordString length is less than 10

Return true

Declare method validPasswords with arraylist parameter passwords and returns arrylist.

Declare new arraylist arraylistOne

For integer i = 0 and i is incremented until the length of passwords

If (!isValidPassword(passwords.get(i)))

Add value of password of element i to arraylistOne

ENDFOR

return the arraylist arraylistOne

TEST TABLE

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test Case #** | **Input** | **Actual Input** | **Expected Output** | **Actual Output** | **Did the test pass?** |
| 1 | abc | abc | Length Exception error | "The password must be at least 6 characters long" | Yes |
| 2 | Ab!26z@ | Ab!26z@ | Password is okay but weak | The password is OK but weak - it contains fewer than 10 characters. | Yes |
| 3 | A16@azvnwq | A16@azvnwq | Password is Valid | “Password is valid” | Yes |
| 4 | AAABBCCDD | AAABBCCDD | NoLowerAlpha exception | The password must contain at least one lower case alphabetic character | YES |
| 5 | AAAbc@##12 | AAAbc@##12 | InvalidSequenceException | The password cannot contain more than two of the same character in sequence | YES |
| 6 | Asdbvaaaaaaa | Asdbvaaaaaaa | NoDigitException | The password must contain at least one digit | Yes |

ScreenShots













