CS1301 Programming Assignment#7

9/30/2016 MyPassword7

Fares

1. Design a class named MyPassword7 as specified in the following UML diagram:

|  |  |
| --- | --- |
| Password7 |  |
| -rule1: boolean  -rule2: boolean  -rule3: boolean  -ps: String | A password must have at least eight characters  A password consists of only letters and digits  A password must contain at least three digits  Password entered |
| +MyPassword7 ()  +verifyPassword7(ps: String):void  -verifyLength():boolean  -verifyValidCharacters():boolean  -verifyNumberOfDigits(): boolean  -printReport():void | No-argument constructor  Receives password, assigns it to the instance variable, and invokes the four supporting methods below.  Returns true/false based on length of password  Returns true/false based on valid/invalid characters  Returns true/false based on number of digits  Prints summary report as specified below |

1. Write a test program named MyPassword7\_Tester that uses five possible passwords entered as command-line arguments. This driver creates an object of the MyPassword7 class and uses its services as specified in the above UML diagram. The driver should have two static methods: main and printHeader. The printHeader method will be invoked from the main method of the driver.
2. Hints:
   1. You may use the String matches method
   2. You may use some of the Character classes methods to check for letters, digits, or both
3. Sample output: (command-line arguments: abc 1% SSSFFFFFFFFFFFFFFF1234 hhh abc123$)

+++++++++++++++++++ Password Report ++++++++++++++++  
 <Your name>  
 CS1301  
 9/30/2016  
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++  
  
Password Entered: abc  
Sorry the password is not valid for the following reason(s)  
 1 Violates rule1: the password does not have at least eight characters  
 2 Violates rule3: the password does not contain at least two digits  
  
Password Entered: 1%

Sorry the password is not valid for the following reason(s)  
 1 Violates rule1: the password does not have at least eight characters  
 2 Violates rule2: the password does not consist of only letters and digits  
 3 Violates rule3: the password does not contain at least two digits  
  
Password Entered: SSSFFFFFFFFFFFFFFF1234  
Congratulations! The password you entered is valid  
  
Password Entered: hhh  
Sorry the password is not valid for the following reason(s)  
 1 Violates rule1: the password does not have at least eight characters  
 2 Violates rule3: the password does not contain at least two digits  
  
Password Entered: abc123$  
Sorry the password is not valid for the following reason(s)  
 1 Violates rule1: the password does not have at least eight characters  
 2 Violates rule2: the password does not consist of only letters and digits

1. Attach (do not turn in any hardcopy) via BlazeView a zipped file named with your last name, for example Smith7. The zipped file should contain items:
   1. MyReport7: A single typed page report with your name, class, date, and program title. The report should include what you learned from the programming assignment, problems faced, skills learned, and your observations.
   2. MyPassword7.java
   3. MyPassword7\_Tester.java
   4. MyOutput7 (sample output)
2. Make sure that your program is well documented, readable, and the output is well labeled and aligned
3. Hints:
   1. You may use the String matches method to check for valid characters
   2. You may use logical operators to check if the three rules are valid