**LAB 4**

-Create a folder in My*Documents* and name it *FamilyName ­\_IDnumber*

- Save all your java files in this folder.

- Login to your PC2 by the user name and password provided to you.

- Submit every problem you finish coding via PC2 and continue working on other problems while waiting the submitted problems to be judged.

**Problem 1:**

Write a class GuessingGame that simulates a simple guessing game. Initially, your program should generate a random integer between 1 and 1000 and print the following: "Guess the number between 1 and 1000" (without the quotes). Then, the user is asked to guess the number generated. If the user is correct, the program prints:

"Congratulations" (without the quotes).

Otherwise, if the number entered by the user is less than the generated number you print "Too cold" and when the number is above you print "Too hot". The game does not stop until the user has made a correct guess. Sample program output:

|  |
| --- |
| Guess the number between 1 and 1000  500  Too Cold  750  Too Hot  600  Congratulations |

Solution: <http://www.javaproblems.com/2013/12/creating-guessing-game-in-java.html>

**Problem 2**

Write a class Vowels that reads a one-line statement from the user, then determines and prints how many of each vowel (A/a, E/e, 1/i, 0/o, and U/u) and many non-vowel character appear in the entire statement. You need a separate counter for each vowel and one counter for the non-vowel characters. You need to use the switch statement to determine the vowel characters. A sample output is:

|  |
| --- |
| Please enter a statement: Hello my name is Amer  The number of "A"s (lower and upper case) is: 2  The number of "E"s (lower and upper case) is: 6 ,  The number of "I"s (lower and upper case) is: 1  The number of "0"s (lower and upper case) is: 1  The number of "U"s (lower and upper case) is: 0  The number of non-vowels is: 7 |

Solution: <http://www.javaproblems.com/2013/12/counting-vowels-and-non-vowel.html>

**Problem3:**

Write a program that helps visualize grade distribution in your class. To do so, your program should first ask the user the number of grades he wishes to enter. Then for every entered grade you should count the number As (90 to 100), Bs (80 to 99), Cs (70 to 89), Ds (60 to 69) and Fs (below 60) (using a switch statement). Next, you will print a bar chart of stars where for each letter the number of stars corresponds to the number of grades in that range. For example:

|  |
| --- |
| Please enter the number of grades you wish to view:  8  Please enter the 8 grades:  91  92  81  82  71  72  61  50  The visual grade distribution is:  A:\*\*  B:\*\*  C:\*\*  D:\*  F:\* |

Solution: http://www.javaproblems.com/2013/12/calculating-letter-grades-in-java.html