The University of Jordan
Faculty of Engineering and Technology
Department of Computer Engineering

Object-Oriented Problem Solving: CPE 342

Write the following methods in your class:

1. A method named *getRandomLetter that takes a boolean* parameter. If the parameter is *true*, it must return a character that represents an uppercase letter that is selected randomly. If the parameter is *false*, it must return a character that represents a lowercase letter that is selected randomly.

2. A method named *getRandomNumber* that returns a random integer between 0 and 9 both included (i.e., in the range [0,9]).

3. A method named *repeatString* that takes a *String (s)* and an *integer (n)* as parameters and returns a *String* that contains the *String (s)* repeated *n* times on separate lines.

   For example, if the String "*Welcome to Java!*" and the integer *4* are passed to this method, it must return a *String* that contains the following:
   Welcome to Java!
   Welcome to Java!
   Welcome to Java!
   Welcome to Java!

4. A method named *printMenu* that prints the following message to the console:
   Choose what do you want to add to your string:
   U: Uppercase Letter.
   L: Lowercase Letter.
   N: Number between 0-9.

   Press F if you want to finish forming your string.

5. Your main method must form a *String* from uppercase letters, lowercase letters, and numbers randomly. This *String* must be formed by continuously taking a character input from the user and performing one of the following accordingly:

a. If the user enters letter "U", a random uppercase letter must be added to the *String* by invoking the *getRandomLetter* method.
b. If the user enters letter "L", a random lowercase letter must be added to the *String* by invoking the *getRandomLetter* method.
c. If the user enters letter "N", a random integer between 0-9 must be added to the *String* by invoking the *getRandomNumber* method.

Your program must invoke the method *printMenu* to prompt the user to enter an operation in each iteration.

Your program must keep on adding characters to the *String* randomly as stated above, until the user enters the letter 'F'.

If the user enters any character other than U, L, N, or F, your program must print the message "*Please enter one of the supported operations!*" and go back to printing the menu and taking an input again.

When the user enters F, the program must ask the user whether he wants to print the formed string repeated as follows:
Do you want to print your string repeated?(Y/N)

- If the user enters N or n, the program must print the *String* once.
- If the user enters Y or y, the program must ask the user to enter the number of times he wants to repeat the string as follows:
  How many times do you want to repeat your string?
  Your program must print the string repeated the number of times entered by the user by invoking the *repeatString* method.