

**Computer Science or Information Technology**

Instructor: **Dawei Li, Ph.D.**

Day, Month, Year

Day

CSIT 501

Department of CSIT

Assessment

Module-3

Hidalgo, Rafael

Exercise 3.1

Write statements that convert and print the lower case letters in the String computer to upper case letters.

String phrase = "Change is inevitable";

String mutation = phrase.toUpperCase();

System.***out***.println(mutation);

String

Exercise 3.3

Declare a String variable named str and initialize it to contain the same characters as a String object called name, except in all uppercase characters.

String str;

String name = “**this** is my string”;

str = name.toUpperCase();

Exercise 3.5

What output is produced by the following code fragment?

String str1, str2, str3;

str1 = "She sells sea shells in sea";

str2 = "shore"

str3 = str1.concat(str2);

System.out.println (str3.chatAt(5));

After “shore” the semi colon is missing. This will lead to an error message.

Also on the final line of code, it states str3.chatAt(5). This will lead to an error message because of the typo at str3.chatAt(5) which instead should be written as str3.charAt(5). With all of the errors fixed, the output should be “e”.

Exercise 3.7

Assuming that a Random object has been created called generator, what is the range of the result of each of the following expressions?

a. generator.nextInt(20) Range: 0 to 19

b. generator.nextInt(8) + 1 Range: 1 to 8

c. generator.nextInt(12) + 2 Range: 2 to 13

d. generator.nextInt(35) + 10 Range: 10 to 44

e. generator.nextInt(100) – 50 Range : -50 to 49

Exercise 3.8

Write code to declare and instantiate an object of the Random class (call the object reference variable rand). Then write a list of expressions using the nextInt method that generates random numbers in the following specified ranges, including the endpoints. Use the version of the nextInt method that accepts a single integer parameter.

a. 0 to 10

Random generator = **new** Random();

**int** num;

num = generator.nextInt(11);

b. 0 to 400

Random generator = **new** Random();

**int** num;

num = generator.nextInt(401);

c. 1 to 10

Random generator = **new** Random();

**int** num;

num = generator.nextInt(10) + 1;

d. 1 to 400

Random generator = **new** Random();

**int** num;

num = generator.nextInt(400) + 1;

e. 25 to 50

Random generator = **new** Random();

**int** num;

num = generator.nextInt(26) + 25;

f. -10 to 15

Random generator = **new** Random();

**int** num;

num = generator.nextInt(26) - 10;

Exercise 3.11

Write code statements to create a DecimalFormat object that will round a formatted value to four decimal places. Then write a statement that uses that object to print the value of result, properly formatted.

**float** number;

Scanner scan = **new** Scanner(System.***in***);

System.***out***.print("Enter a float with more than 4 decimal places");

number = scan.nextFloat();

// Round the output to four decimal places

DecimalFormat fmt = **new** DecimalFormat("0.####");

System.***out***.println("The rounded number is: " + fmt.format(number));