



## STIA1123 Programming 2

### Exercise: Predefined Classes

1. Write **TWO (2)** different ways to create an object from the String class.

`String word;`

`String word = new String("");`

2. What is the output for the following Java statements?

```
String phr = new String("Big,blue sky");  
System.out.println(phr.substring(phr.indexOf(",") , 7));
```

`,blue`

3. Give your description on the output that will be produced by the execution of the following statements.

```
Random rd = new Random();  
System.out.println(rd.nextInt(41) + 10);
```

`rd` will initialize an integer variable which is between 0 and 41. Then, `rd` will add 10.

4. Write Java code segment that uses class Random to generate two random numbers that are greater than or equal to 0, and less than 100 and store the values into local variables num1 and num2. Then use class Math to determine and display the largest between both values.

`import java.util.Random;`

`Random rd = new Random();`

`int num1 = rd.nextInt(100);`

`int num2 = rd.nextInt(100);`

`System.out.println(Math.max( num1 , num2 ));`

5. Determine the output of the following code segments:

```
String test = "abc";  
test = test + test;  
System.out.println(test);
```

abcabc

```
Random random = new Random();  
double d = Math.round ( 2.5 + random.nextInt(1) );  
System.out.println("The value is " + d);
```

3.0

6. Class Scanner in Java is used to read input from the console. Answer all of the following questions:

a) Write a Java statement to instantiate an object input of class Scanner.

```
Scanner input = new Scanner(System.in);
```

b) By using the object input, read two integer values and assigned to variable x and y.

```
int x = input.nextInt();
```

```
int y = input.nextInt();
```

c) By using an appropriate method from class Math, display the value of  $X^Y$ .

```
double pow = Math.sqrt( x , y );
```

7. Given below are the statements that declare and create two String objects

```
String text1 = "School of Computing";  
String text2 = "College of Arts and Sciences";  
String text3 = "UUM Sintok";
```

a. Write a Java statement to display the total length of the text1, text2 and text3.

```
System.out.println(text1.length() + text2.length() + text3.length() );
```

- b.** By using the variables of text1 and text2. Write a Java statement to display as output **“College of Arts and Computing”**.

```
System.out.println(text2.substring( 0 , 20 ) + text1.substring( 11 , 18);
```