**Object Oriented Programming with Java**

**Lab Practice:2**

1. Write an AreaTester program that constructs a Rectangle object and then computes and prints its area. Use the ***getWidth()*** and ***getHeight()*** methods. 15

Hint: use import ***java.awt.Rectangle;***

**Class AreaTester**

1. Write a program ***HollePrinter*** that switches the letters "e" and "o" in a string. Use the

replace method repeatedly. Demonstrate that the string "Hello, World!" turns into

"Holle, Werld! 15

**Class Holleprinter**

1. What is wrong with the following sequence of statements? 5

*int mystery = 1;*

*mystery = mystery + 1;*

*int mystery = 1 - 2 \* mystery;*

**-> It is wrong because ‘int’ is declared once again.**

1. The Random class implements a random number generator, which produces sequences of numbers that appear to be random. To generate random integers, you construct an object of the Random class, and then apply the ***nextInt*** method. For example, the call ***generator.nextInt(6)*** gives you a random number between 0 and 5. 15

Write a program ***DieSimulator*** that uses the Random class to simulate the cast of a die,

printing a random number between 1 and 6 every time that the program is run.

**Class DieSimulator**

1. Write a Java method to check whether a string is a valid password. 50  
   Password rules:  
   A password must have at least 6 characters.  
   A password consists of only letters and digits.  
   A password must contain at least three digits.

Using the following code below and complete the task.

*import java.util.Scanner;*

*public class Password {*

***(Define……)*** *PASS\_LENGTH = 6;*

*public static void main(String[] args) {*

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

*System.out.print(*

*"1. A password must have at least six characters.\n" +*

*"2. A password consists of only letters and digits.\n"+*

*"3. A password must contain at least three digits \n"+*

*"Input a password (You are agreeing to the above Terms and Conditions.): ");*

*String s = input.nextLine();*

*if (is\_Valid\_Password(s)) {*

*System.out.println("Password is valid: " + s);*

*} else {*

*System.out.println("Not a valid password: " + s);*

*}*

*}*

*………..*

*……….*

………..

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**Class Password**