Lab Assignment Number 1
CS1140

Name :

For each of the following programs your task will be as follows:

- Enter the program **exactly** as shown.
- Make sure that the IDE does not indicate any errors.
- Compile and execute.
- If your program does not run correctly, verify that the code you typed matches the code given. Correct any discrepancies.
- If the program still does not execute properly, read the error messages and **attempt** to correct your program.

Part One

Enter the following program: Save as Hello1.java

```
/*
    Hello1-- A simple program demonstrating printing to the console window
*/

public class Hello1 {

public static void main(String[] args)  {

    System.out.println("Hello, World");
    System.out.println();
    System.out.println("We are done!");

  }   // end method main

}     // end class Hello1
```

For Part 2 to Part 4 below, repeat the steps you used to complete Part 1.

Part Two

Enter the following program: **Save as Hello2.java**

```
/*
  A simple program demonstrating console printing and numeric output and
  also simple integer numeric variable declaration and assignment.
*/


public class Hello2 {


 public static void main(String[] args) {

 int tmpX;     //reserve space for an integer

 System.out.println("This is Hello2");
 System.out.println();
 System.out.println("There should be blank line above this one");
 System.out.println();

 tmpX = 112;        //I put the number 112 into the variable identifier tmpX

 System.out.println("I can also print numbers : ");
 System.out.println(tmpX);
 System.out.println();

 System.out.println("I can print numbers on the same line : " + tmpx);

 tmpX = 555;      //I can put a new number into tmpx

 System.out.print("A different way to print numbers on the same line ");
 System.out.println(tmpX);

 System.out.println();

 System.out.println("Hope you understand what we just did!");

   }         // end method main

}            // end class Hello2
```

Part Three

Enter the following program: **Save as Hello3.java**

```
/*
   Hello3-- Demonstrating simple input and arithmetic manipulation of integers
*/


import java.util.Scanner;

public class Hello3 {
   public static void main( String args[] )  {

   // creates a Scanner object to obtain input from console window
      Scanner input = new Scanner( System.in );

      int a;    //reserve space for integers
      int b;
      int sum, difference, product;

   System.out.println("This is Hello3");

   //get input data from the user
   System.out.print( "Enter a whole number: " );  //prompt user for an action
   a = input.nextInt();                           //read what the user enters

   System.out.print( "Enter another number: " ); // prompt user for an action
   b = input.nextInt();                           //read what the user enters

   //print out what the user entered
   System.out.println();
   System.out.println( "The first number is : " + a);
   System.out.println( "The second number is: " + b);
   System.out.println();


   // compute the sum, difference and product
   sum = a + b;
   difference = a - b;
   product = a * b;

   //print out the results of some simple computations

   System.out.println( "Sum of the two numbers is        : " + sum));
   System.out.println( "Difference of the two numbers is : " + difference);
   System.out.println( "Product of the two numbers is.   : " + product);


   }         // end method main

}            // end class Hello3
```

Part Four … **Save as Hello4.java**

Now that you have typed in several programs you should have enough knowledge/information to write a program that will perform the following task:

- Print out to console that this program will compute area and perimeter of a rectangle (see example below).
- ask the user for the **length** of the rectangle, don't forget to declare **length** as a variable of type **int**.
- ask the user for the **width** of the rectangle, don't forget to declare **width** as a variable of type **int**.
- print out the **area** of the rectangle **which is simply** the product of length by width. Don't forget to declare **area** as a variable of type int.
- print out the **perimeter** of the rectangle **which is simply** the product of length plus width multiplied by 2. Don't forget to declare **perimeter** as a variable of type int.

Example run of your program should look as follows:

```
This program will compute the area and perimeter of rectangles

Please enter the rectangle width   : 6
Please enter the rectangle length  : 4

The area of your rectangle is      : 24
The perimeter of your rectangle is : 20
```