TUTORIAL BASIC

- INPUT AND OUTPUT STATEMENT

JOptionPane2.java

```
import javax.swing.JOptionPane;
public class  JOptionPane2
{
        public static void main (String args[])
        {
                int num1,num2,total;
                String input;

                input = JOptionPane.showInputDialog("Enter a number 1: ");
                num1 = Integer.parseInt(input);

                input = JOptionPane.showInputDialog("Enter a number 2: ");
                num2 = Integer.parseInt(input);

                total = num1 + num2;

                JOptionPane.showMessageDialog(null, num1 + " + "  + num2
                        + " = " + total );
        }
}
```

scanner**.java**

```
import java.util.Scanner;
public class scanner
{
        public static void main(String args[])
        {
                int num1, num2, total;

                Scanner insert = new Scanner(System.in);

                System.out.print("Enter number 1: ");
                num1 = insert.nextInt();
                System.out.print("Enter a number 2: ");
                num2 = insert.nextInt();
                total = num1 + num2;
      System.out.println(num1 + " + " + num2 + " = " + total);
        }
}
```

TUTORIAL (method)

a. BMI calculator (without method)

```
import java.util.Scanner;
import java.lang.Math;
import java.text.*;

public class Bmi
{
   public static void main(String args[])
   {
         // declare object of the type Scanner to input data
      Scanner keyboard = new Scanner(System.in);
      keyboard.useDelimiter ("\n");  //space in string

      int age;
      double weight,bmi;
      float height;
      char gender;
      String name,status;

      System.out.print("Name:");
      name = keyboard.next();                    // input data of type String

      System.out.print("Gender[m/f]:");
      gender = keyboard.next().charAt(0);        //input data of type char

      System.out.print("Age:");
      age = keyboard.nextInt();                  //input data of type integer

      System.out.print("weight(kg):");
      weight = keyboard.nextDouble();              //input data of type real number
      System.out.print("height(m):");
      height = keyboard.nextFloat();

      bmi= weight / Math.pow(height,2);

      if(bmi<18.5)
        status="underweight";
      else if(bmi<24.9)
        status="normal";
      else if(bmi<29.9)
        status="overweight";
      else
        status="obese";

      DecimalFormat df = new DecimalFormat("0.00");          // format double
      System.out.println("Bmi:"+ df.format(bmi) +"(" +status+ ")");

    }
```

a. BMI calculator (with method)

```
import java.util.Scanner;
import java.lang.Math;
import java.text.*;

public class BmiFunc
{
   public static void main(String args[])
   {
      int age;
      double weight,valBmi;
      float height;
      char gender;
      String name;
      Scanner keyboard = new Scanner(System.in);
      System.out.print("Name:");
      name = keyboard.next();        // input data of type String

      System.out.print("Gender[m/f]:");
      gender = keyboard.next().charAt(0); //input data of type char

      System.out.print("Age:");
      age = keyboard.nextInt();          //input data of type integer

      System.out.print("weight(kg):");
      weight = keyboard.nextDouble();       //input data of type real number
      System.out.print("height(m):");
      height = keyboard.nextFloat();

      valBmi=calcBMI(weight,height);       // method call

      DecimalFormat df = new DecimalFormat("0.00");      // format double
      System.out.println("Bmi:"+ df.format(valBmi) +"(" +statBMI(valBmi)+ ")");
   }

   public static double calcBMI(double w, double h)
   {
     return w / Math.pow(h,2);
   }

   public static String statBMI(double bmi)
   { String status;
    if(bmi<18.5)
       status="underweight";
     else if(bmi<24.9)
       status="normal";
     else if(bmi<29.9)
       status="overweight";
     else
       status="obese";
     return status;
    }
}
```

b. The String class example.

```
public class TestStringClass
{
  public static void main (String [] args)
  {
        String alphabet = "ABCDEFGHIJKLMNOPQRSTUVWXYZ";
        String s1= “one”;
        String s2= “ONE”;
        char a='O';
        System.out.println("This string is: " + alphabet);
        System.out.println("Its length is: " + alphabet.length());
        System.out.println("The character at index 4 is: " + alphabet.charAt(4));
        System.out.println("The index of the character Z is :" + alphabet.indexOf('Z'));
        System.out.println("The substring(1,3): " + alphabet.substring(1,3));
        System.out.println("Its lowercase version is: " + alphabet.toLowerCase());

        if (s1.equals(“one”))
           System.out.println("equals : Case Sensitive”);

        if (s1.equalsIgnoreCase(s2))
           System.out.println("equalsIgnoreCase : Case Insensitive”);

        if (a=='O')
            System.out.println("Comparison using char");

        if (a==s2.charAt(0))
           System.out.println("Comparison using char");

  }
}
```

Array:

a) Without method

```
import java.util.Scanner;

public class exercArray
{
   public static void main(String args[])
   {
      double [ ] no = new double[2];
      char [ ] label = {'A','B'};
      double average,total=0;

      Scanner keyboard = new Scanner(System.in);

      for(int i=0;i<no.length ;i++)
      {
         System.out.print("Number " + label[i] + " :");
         no[i]=keyboard.nextDouble();

         total +=no[i];
      }
         average=total/no.length;

      System.out.println("Total :"+ total);
      System.out.print("Average :"+ average);

   }
}
```

b) Create program using array using method
   calculateTotal()
   calculateAverage()