**Exp.No:2. Implementation of a Calculator in Java to Understand Variables, Operators and Decision making statements in Java**

**Source Code:**

**import** java.util.Scanner;

**public** **class** Calculator {

**private** **double** first\_no; **private** **double** second\_no;

**public** **void** getFirstNo(){

System.***out***.println("Enter the first number");

Scanner in=**new** Scanner(System.***in***); first\_no=in.nextDouble();

}

**public** **void** getSecondNo(){

System.***out***.println("Enter the second number"); Scanner in=**new** Scanner(System.***in***); second\_no=in.nextDouble();

}

**public** **double** addition(){

**return**(first\_no+second\_no);

}

**public** **double** substract(){ **return**(first\_no-second\_no);

}

**public** **double** multiply(){ **return**(first\_no\*second\_no);

}

**public** **double** division(){ **return**(first\_no/second\_no);

}

**public** **int** factorial(**int** n){ **int** fact=1;

**for**(**int** i=1;i<=n;i++)

fact=fact\*i; **return** fact;

}

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

Calculator obj=**new** Calculator();

obj.getFirstNo();

obj.getSecondNo();

Scanner in=**new** Scanner(System.***in***); **int** choice;

**do**{

System.***out***.println(" 1.Addition\n 2.Substaction\n 3.Multiplication\n 4.Division\n 5.Factorial");

System.***out***.println("Enter the choice");

**int** ch=in.nextInt();

**switch**(ch){

**case** 1: System.***out***.println("Result is :" + obj.addition()); **break**;

**case** 2: System.***out***.println("Result is :" + obj.substract()); **break**;

**case** 3: System.***out***.println("Result is :" + obj.multiply()); **break**;

**case** 4: System.***out***.println("Result is :" + obj.division()); **break**;

**case** 5:

}

System.***out***.println("Enter the no :"); **int** no=in.nextInt();

System.***out***.println("Result is :" + obj.factorial(no)); **break**;

//System.out.println("Do U want to continue 1 or 0?");

//choice=in.nextInt();

}**while**(choice<6);

}

}

**Exp.No:3. Implementation of a Java Program to Learn Classes and Objects in Java.**

**Source Code:**

**package** Exp3; **class** Rectangle {

**private** **double** width; **private** **double** length; **private** **double** area; **private** String colour;

Rectangle(**double** l, **double** w, String c) {

length = l; width = w;

colour = **new** String(c);

}

**double** getLength() {

**return** length;

}

**double** getWidth() {

**return** width;

}

String getColour() {

**return** colour;

}

**double** findArea() {

area = length \* width; **return** (area);

}

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

// **TODO** Auto-generated method stub

Rectangle r1= **new** Rectangle(10,20,"Red");

Rectangle r2=**new** Rectangle(15,20,"Red");

**if**(r1.findArea()==r2.findArea()&& r1.getColour().equals(r2.getColour()))

System.***out***.println("Matching Rectangles");

**else**

System.***out***.println("Non-Matching Rectangles");

}}