Task 1:Simple Calculator Application

Objective: To Create a basic calculator applicaton in Java.

Functionality: The program that it can capable to perform basic operations like addition,subtraction,multiplication,Division.

Description:

- In Java, Scanner is a class in java.util package used for obtaining the input of the primitive types like int, double, etc. and strings.
- Using the Scanner class in Java is the easiest way to read input in a Java program, though not very efficient if you want an input method for scenarios where time is a constraint like in competitive programming.
- The **switch statement** is a multi-way branch statement. In simple words, the Java switch statement executes one statement from multiple conditions.
- It is like an if-else-if ladder statement. It provides an easy way to dispatch execution to different parts of code based on the value of the expression.
- Basically, the expression can be a byte, short, char, or int primitive data types. It basically tests the equality of variables against multiple values.

Program Code:

```
// Java program for simple calculator

import java.io.*;

import java.lang.*;

import java.lang.Math;

import java.util.Scanner;

// Driver class

public class BasicCalculator {

        // main function

        public static void main(String[] args)

        {

                // Stores two numbers

                double num1, num2;


                // Take input from the user

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

```
System.out.println("Enter the numbers:");
// Take the inputs
num1 = sc.nextDouble();
num2 = sc.nextDouble();
System.out.println("Enter the operator (+,-,*,/):");
char op = sc.next().charAt(0);
double o = 0;
switch (op) {
// case to add two numbers
case '+':
        o = num1 + num2;
        break;
// case to subtract two numbers
case '-':
        o = num1 - num2;
        break;
// case to multiply two numbers
case '*':
        o = num1 * num2;
        break;
// case to divide two numbers
case '/':
        o = num1 / num2;
        break;
default:
        System.out.println("You enter wrong input");
}
System.out.println("The final result:");
System.out.println();
// print the final result
```

```
                System.out.println(num1 + " " + op + " " + num2
                                                + " = " + o);
        }
}
```

Output:

```
Enter the numbers:
3
8
Enter the operator (+,-,*,/)
*
The final result:
3.0 * 8.0 = 24.0
```