Lab Number:	2
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Roll No :	41

Title:

To Add Two Numbers, Print Number Entered by User, Swap Two Numbers, Check Whether Number is Even or Odd

1.2 Implement using Java

Learning Objective:

- Students will be able to write C++ and java program for simple arithmetic operations and take input from user.

Learning Outcome:

- Ability to execute a simple C++ and Java program with and without any inputs to the program.
- Understanding the constructs in C++ and Java.

Course Outcome:

ECL304.1	Understand object-oriented programming concepts and implement using C++ and Java

Theory:

Difference between procedural and object oriented language

Procedural Programming:

Procedural Programming can be defined as a programming model which is derived from structured programming, based upon the concept of calling procedure. Procedures, also known as routines, subroutines or functions, simply consist of a series of computational steps to be carried out. During a program's execution, any given procedure might be called at any point, including by other procedures or itself.

Object Oriented Programming:

Object oriented programming can be defined as a programming model which is based upon the concept of objects. Objects contain data in the form of attributes and code in the form of methods. In object oriented programming, computer programs are

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designed using the concept of objects that interact with real world. Object oriented programming languages are various but the most popular ones are class-based, meaning that objects are instances of classes, which also determine their types.

Application of object orientation

OOP can also be used in manufacturing and design applications, as it allows people to reduce the effort involved. For instance, it can be used while designing blueprints and flowcharts. OOP makes it possible for the designers and engineers to produce these flowcharts and blueprints accurately.
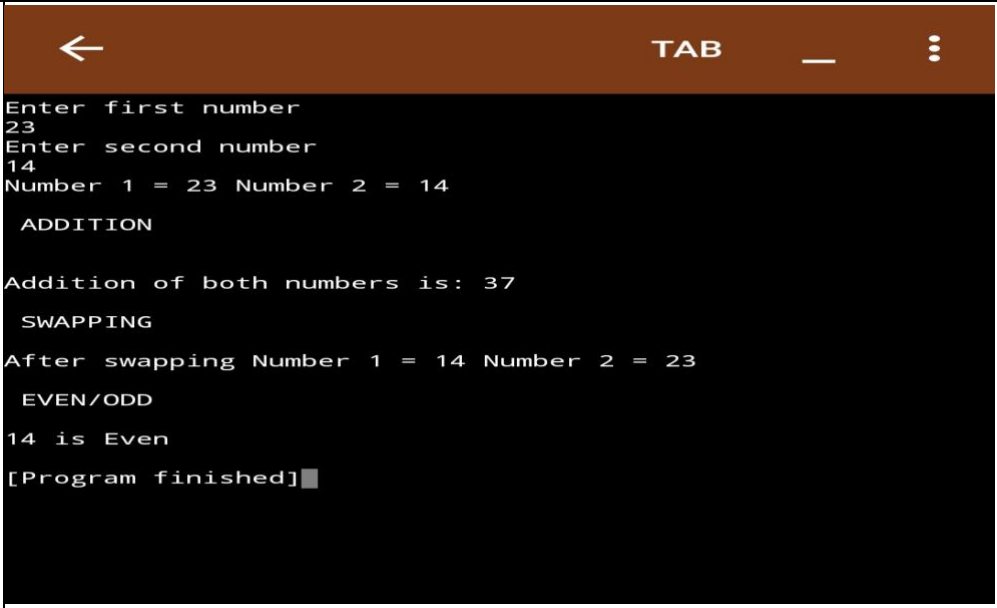
Brief introduction to Java

Java is a class-based, object-oriented programming language and is designed to have as few implementation dependencies as possible. A general-purpose programming language made for developers to write once run anywhere that is compiled Java code can run on all platforms that support Java

Algorithm:	**Step 1:START**
	Step 2:Declare variables n1,n2,temp as integer
	Step 3:Read two numbers n1 and n2
	Step 4:Print n1 and n2
	n1+n2
	Print addition of n1+n2
	Step 5:Temp=n1
	n1=n2
	n2=temp
	Print n1 and n2
	Step 6:Remainder=n1%2
	If remainder==0
	Print"Even"
	Else
	Print"Odd"

	Step 7:STOP
Program:	*import java.util.Scanner;*
	public class Lab1 {
	public static void main(String[] args) {
	Scanner sc = new Scanner(System.in);
	int n1,n2,temp;
	System.out.println("Enter first number");
	n1=sc.nextInt();
	System.out.println("Enter second number");
	n2=sc.nextInt();
	System.out.println("Number 1 = "+n1+" Number 2 = "+n2);
	System.out.println("\n ADDITION\n");
	System.out.println("\nAddition of both numbers is: " +(n1+n2));
	System.out.println("\n SWAPPING\n");
	temp=n1;
	n1=n2;
	n2=temp;
	System.out.println("After swapping Number 1 = "+n1+" Number 2 = "+n2);
	System.out.println("\n EVEN/ODD\n");
	if(n1%2==0)
	System.out.println(n1+" is Even");
	else
	System.out.println(n1+" is Odd");

	} *}*
Input given:	**23** **14**
Output Screenshot:	← TAB ⎯ ⋮ Enter first number 23 Enter second number 14 Number 1 = 23 Number 2 = 14 ADDITION Addition of both numbers is: 37 SWAPPING After swapping Number 1 = 14 Number 2 = 23 EVEN/ODD 14 is Even [Program finished]▉

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