Lab Number:	1
Student Name:	UMER SHAIKH
Roll No :	44

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 program

Learning Objective:

- Students will be able to write java programs for simple arithmetic operations and take input from users.

Learning Outcome:

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

Course Outcome:

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

Theory:

Difference between procedural and object oriented language

A procedural programming language consists of a set of procedure calls and a set of code for each procedure. On the other hand, object oriented languages are based on entities known as objects. Procedural language: Simple, easy implementation of compilers and interpreters Object oriented language: Improved software development productivity due to modularity, extensibility and reusability .

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Application of object orientation :

Main application areas of OOP are: User interface design such as windows, menu. Real Time Systems. Simulation and Modelling. Object oriented databases. AI and Expert System. Neural Networks and parallel programming. Decision support and office automation systems

Brief introduction to JAVA

Java is an Object Oriented language. Object oriented programming is a way of organizing programs as collection of objects, each of which represents an instance of a class. Java is considered as one of simple language because it does not have complex features like Operator overloading,Multiple inheritance, pointers and Explicit memory allocation.

Algorithm :	STEP 1: start
	STEP 2 : define two numbers n1 and n2
	STEP 3:input number 1 , n1
	input number 2 , n2
	STEP 4 : addition of two numbers n1 and n2
	STEP 5 : swapping of two numbers n1 and n2
	STEP 6 :odd or even
	STEP 7 : end
Program:	https://github.com/umershaikh17/Skill-lab-with-oopm.git
Input given:	number 1 : 15
	number 2 : 21

Output Screenshot:

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Main.java

Output

```java
1
2  // lab 1 44 umer shaikh
3  import java.util.Scanner;
4  public class Lab1 {
5      public static void main(String[] args) {
6          Scanner sc = new Scanner(System.in);
7          /* System.out.println("Enter username");
8          String userName = sc.nextLine();
9          System.out.println("Username is: " + userName);
10         */
11         int n1,n2,temp;
12         System.out.println("Enter first number");
13         n1=sc.nextInt();
14         System.out.println("Enter second number");
15         n2=sc.nextInt();
16         System.out.println("Number 1 = "+n1+" Number 2 = "+n2);
17         System.out.println("\n ADDITION\n");
18         System.out.println("\nAddition of both numbers is: " +(n1+n2));
19         System.out.println("\n SWAPPING\n");
20         temp=n1;
21         n1=n2;
22         n2=temp;
23         System.out.println("After swapping Number 1 = "+n1+" Number 2 = "+n2);
24         System.out.println("\n EVEN/ODD\n");
25         if(n1%2==0)
26             System.out.println(n1+" is Even");
27         else
28             System.out.println(n1+" is Odd");
29     }
```

```
java -cp /tmp/wfIaFyCkZX Lab1
Enter first number
15
Enter second number
21
Number 1 = 15 Number 2 = 21
ADDITION

Addition of both numbers is: 36
SWAPPING

After swapping Number 1 = 21 Number 2 = 15EVEN/ODD

21 is Odd
```

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