Lab Number:	1
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Roll No :	29

Title:

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

- Implement using C++
- 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: Understand object oriented programming concepts and implement using C++ and JAVA

Theory:

Difference between procedural and object oriented language
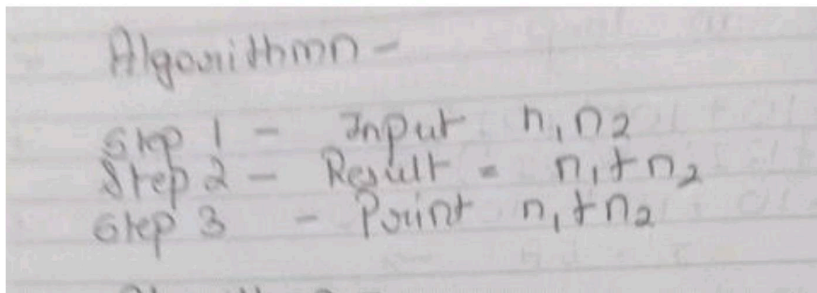
Application of object orientation

Brief introduction to C++ and Java

JAVA PROGRAMS

- **TO ADD TWO NUMBERS**

ALGORITHM:


```
Algorithmn -
Step 1 - Input n1, n2
Step 2 - Result = n1 + n2
Step 3 - Point n1 + n2
```

PROGRAM:

```java
//To Add Two Numbers

public class Main
{
        public static void main(String[] args)
        {   int x
        = 15;
            int y
        =16;
```

```
        int sum = x + y ;
                System.out.println("x + y =" +sum);

        }


}
```

OUTPUT:

Number 1 = 15 Number 2 = 16

Addition of both numbers is:

- **PRINT NUMBERS ENTERED**

BY USER ALGORITHM:

Algorithmn -

Step 1 - Input n_1, n_2
Step 2 - Print nolumber n_1, n_2
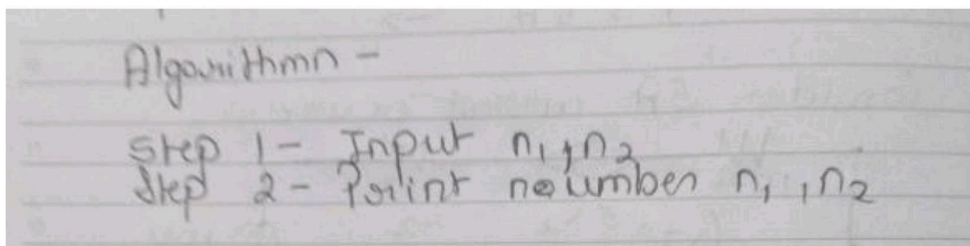
PROGRAM:

Import java.util.Scanner;

```java
Public class Lab1 {

Public static void main(String[] args)

Scanner sc = new Scanner(System.in); // Create a Scanner
object

 /* System.out.println("Enter username");

  String userName = sc.nextLine(); // Read user input

  System.out.println("Username is: " + userName); // Output user
  input

  Int n1,n2,temp;

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

  N1=sc.nextInt();
```

```java
System.out.println("Enter second number");

N2=sc.nextInt();

}

}
```

OUTPUT:

```
Enter first number
15
Enter second number
16
```
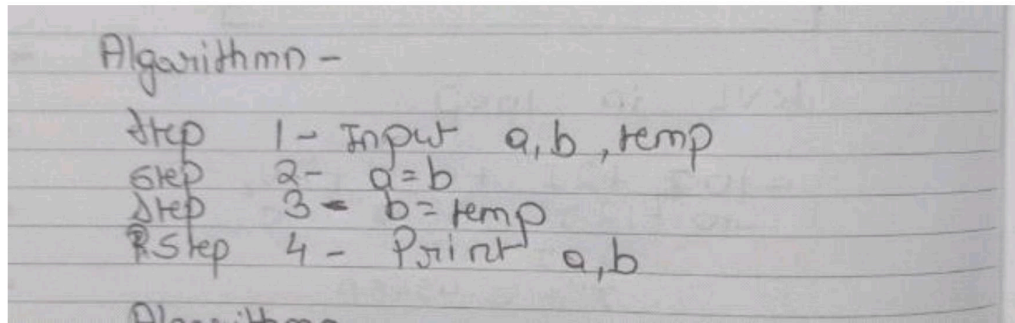
• **To SWAP TWO NUMBERS:**

Algorithmn:

Algorithmn –

Step 1 – Input a, b, temp
Step 2 – a = b
Step 3 – b = temp
Step 4 – Print a, b

PROGRAM:

```java
//to swap two numbers
public class Main
{ public static void main(String[] args)
    { int n1 = 15, n2 = 16;

    System.out.println("Before swapping");
    System.out.println("First number = " + n1);
System.out.println("Second number = " + n2);

    n1 = n1 - n2;
n2 = n1 + n2;
n1 = n2 - n1;
```
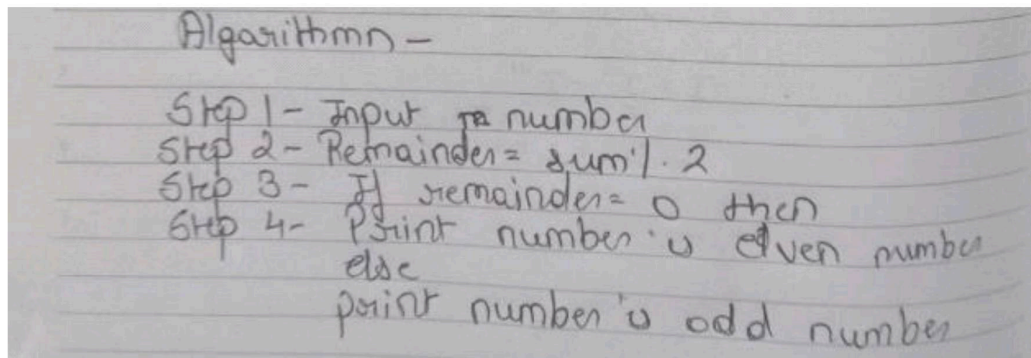
```java
    System.out.println("After
swapping"); System.out.println("First
number = " + n1);

    System.out.println("Second number = " + n2);


    }
}
```

OUTPUT:

SWAPPING After swapping Number 1 = 16 Number 2

15

• **TO CHECK WHETHER NUMBER IS**

EVEN OR ODD ALGORITHM:

Algorithm -

Step 1- Input a number
Step 2- Remainder = num / 2
Step 3- If remainder = 0 then
Step 4- Print number is even number
else
print number is odd number

PROGRAM:

//to check whether no is even or

odd. public class Main

{ public static void main(String[] args)

{

// Declare the integer

variable int num = 22;

// If condition to check if the remainder is

zero if (num % 2 == 0)

{

// If remainder is zero then this number is even

System.out.println("Entered Number is Even");

}

else

```java
    {

            // If remainder is not zero then this number is
            // odd
            System.out.println("Entered Number is Odd");
        }


    }
}
```

OUTPUT:

```
EVEN/ODD


22 is Even
```