

**Don Bosco Institute of Technology, Kurla(W)**  
**Department of Electronics and Tele-Communication Engineering**  
**ECL304 - Skill Lab: C++ and Java Programming**  
**Sem III**  
**2021-22**

<b>Lab Number:</b>	<b>1</b>
<b>Student Name:</b>	<b>Rohit Gupta</b>
<b>Roll No :</b>	<b>30</b>

**Title:**

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

1.1 Implement using C++

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:**

<b>ECL304.1</b>	<i>Understand object-oriented programming concepts and implement using C++ and Java</i>
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**Theory:**

**Difference between procedural and object oriented language**

**Application of object orientation**

**Brief introduction to C++ and Java**

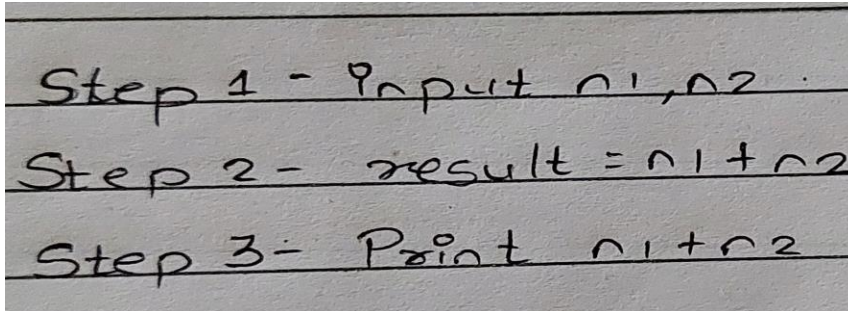
<b>Algorithm :</b>	
<b>Program:</b>	
<b>Input given:</b>	
<b>Output Screenshot:</b>	

**Faculty: Ms. Deepali Kayande**

## C++ PROGRAMS

### 1. TO ADD TWO NUMBERS

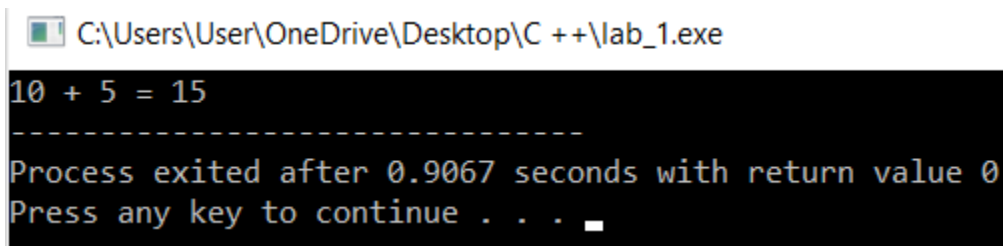
#### ALGORITHM:



#### PROGRAM:

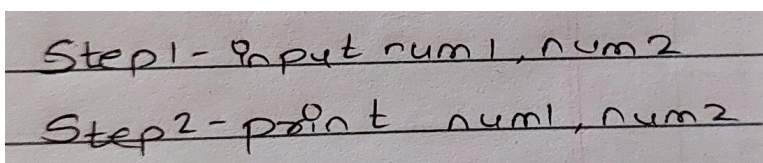
```
//To Add Two Numbers
#include<iostream>
using namespace std;
int main()
{
    int n1,n2,result;
    n1=10;
    n2=5;
    result=n1+n2;
    cout << n1 << " + " << n2 << " = " << result;
    return 0;
}
```

#### OUTPUT SCREENSHOT:



### 2. TO PRINT NUMBERS ENTERED BY USER

#### ALGORITHM:




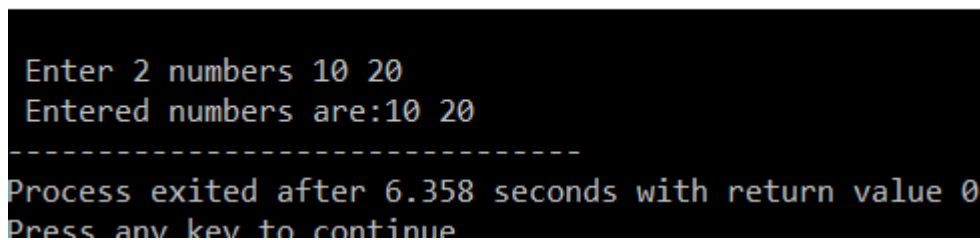
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**PROGRAM:**

```
// Print Number Entered by User
#include<iostream>
using namespace std;
int main()
{
    int num1,num2;
        cout<<"\n Enter 2 numbers";
        cin>>num1>>num2;
        cout<< " Entered numbers are:" << num1<< " " << num2;
        return 0;
}
```

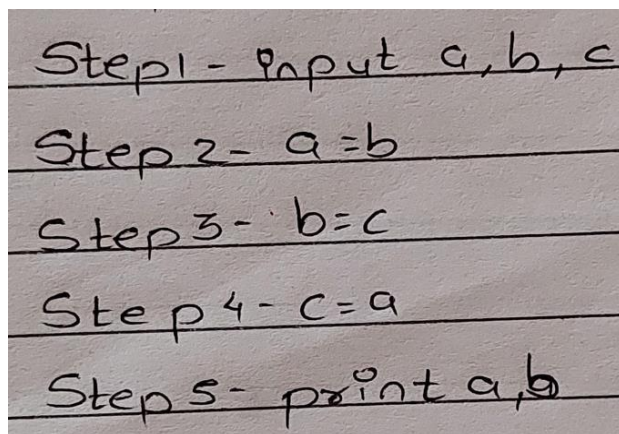
**OUTPUT SCREENSHOT:**

 C:\Users\User\OneDrive\Desktop\C ++\lab\_1.exe



**3. TO SWAP TWO NUMBERS**

**ALGORITHM:**



**PROGRAM:**

```
//Swap Two Numbers

#include<iostream>
using namespace std;
int main()
{
```

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```
int a,b,c;

cout<<"\n Enter two no to swap:";

cin>>a>>b;

c=a;

a=b;

b=c;


cout<<"\n Swapping the numbers: \n";

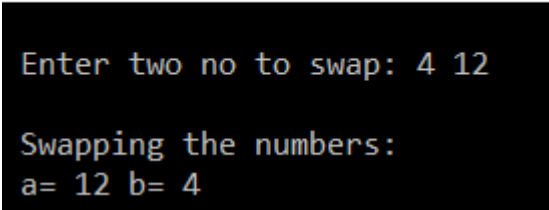
cout<<" a= "<<a<<" b= "<<b;

return 0;

}
```

**OUTPUT SCREENSHOT:**

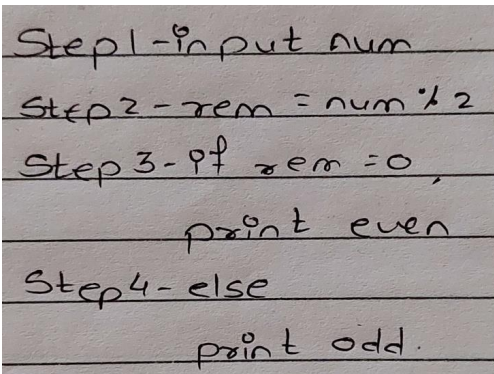
 C:\Users\User\OneDrive\Desktop\C .



```
Enter two no to swap: 4 12

Swapping the numbers:
a= 12 b= 4
```

**4. TO CHECK WHETHER NUMBER IS EVEN OR ODD  
ALGORITHM:**



```
Step 1 - input num
Step 2 - rem = num % 2
Step 3 - if rem == 0,
           print even
Step 4 - else
           print odd.
```

**PROGRAM:**

```
//To check whether no is even or odd

#include<iostream>
using namespace std;
```

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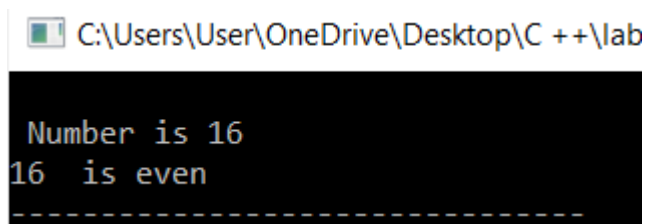
```
int main()
{
    int num=5;

    cout<<"\n Numberis";

    cin>>num;

    if ( num % 2 == 0)
        cout<<num<<" is even";
    else
        cout<<num<<" is odd";
}
```

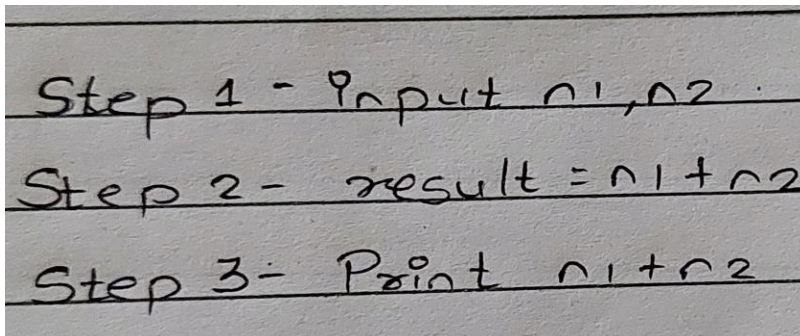
**OUTPUT SCREENSHOT:**



## JAVA PROGRAMS

### 1. TO ADD TWO NUMBERS

**ALGORITHM:**



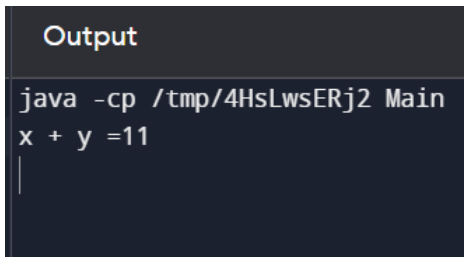
**PROGRAM:**

```
//To Add Two Numbers
public class Main{
    public static void main(String[] args){
```

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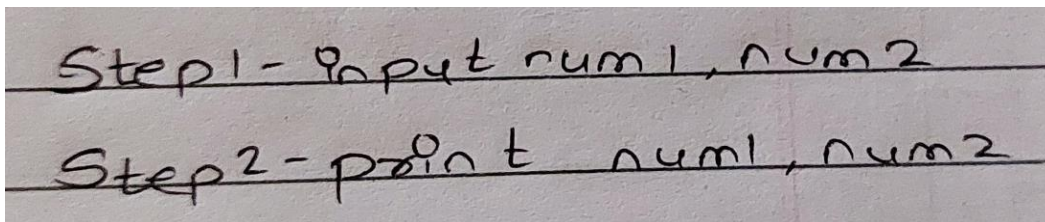
```
int x = 5;
int y = 6;
int sum = x + y ;
System.out.println("x + y =" +sum);
}
}
```

**OUTPUT:**



```
Output
java -cp /tmp/4HsLwsERj2 Main
x + y =11
|
```

**2. TO PRINT NUMBERS ENTERED BY USER**  
**ALGORITHM:**



Step 1 - Input num1, num2

Step 2 - print num1, num2

**PROGRAM:**

```
import java.util.Scanner;

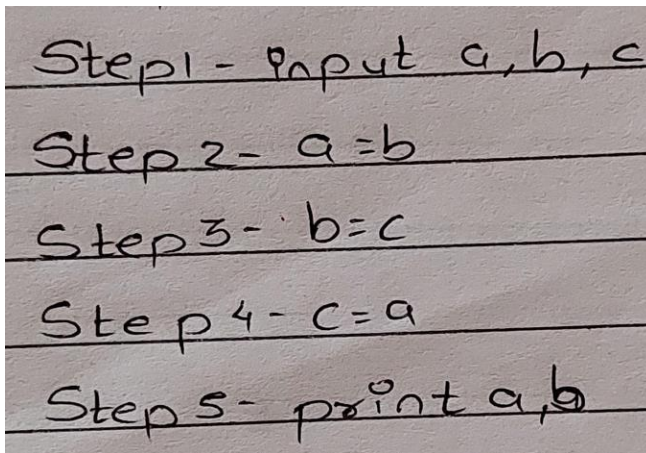
public class Lab1 {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        int n1, n2, temp;
        System.out.println("Enter first number");
        n1 = sc.nextInt();
        System.out.println("Enter second number");
        n2 = sc.nextInt();
        System.out.println("Numbers are " + n1 + " " + n2);
    }
}
```

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**OUTPUT:**

```
Output
java -cp /tmp/4HsLwsERj2 Lab1
Enter first number
4
Enter second number
3
Numbers are 4 3
```

**3. TO SWAP TWO NUMBERS**  
**ALGORITHM:**



Step 1 - Input a, b, c  
Step 2 - a = b  
Step 3 - b = c  
Step 4 - c = a  
Step 5 - print a, b

**PROGRAM:**

```
//to swap two numbers
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("\n SWAPPING\n");
        temp = n1;
```



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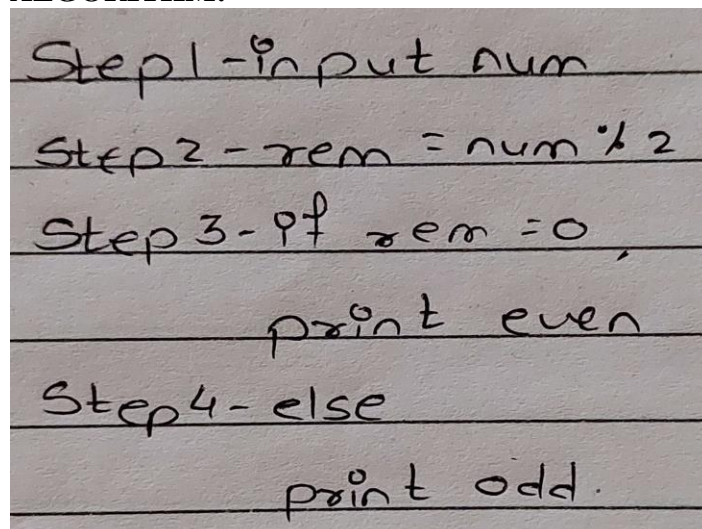
```
n1=n2;
n2=temp;
System.out.println("After swapping Number 1 = "+n1+" Number 2 = "+n2);
}
}
```

**OUTPUT:**

```
Output
java -cp /tmp/4HsLwsERj2 Lab1
Enter first number4
Enter second number5
SWAPPING

After swapping Number 1 = 5 Number 2 = 4
```

**4. TO CHECK WHETHER NUMBER IS EVEN OR ODD**  
**ALGORITHM:**



Step 1 - input num  
Step 2 - rem = num % 2  
Step 3 - If rem = 0,  
          print even  
Step 4 - else  
          print odd.

**PROGRAM:**

```
//to check whether no is even or odd.
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 a number:");
n1=sc.nextInt();
System.out.println("\n EVEN/ODD\n");
```



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```
if(n1%2==0)
System.out.println(n1+" is Even");
else
System.out.println(n1+" is Odd");
}
}
```

**OUTPUT:**

```
Output
java -cp /tmp/4HsLwsERj2 Lab1
Enter a number:11
EVEN/ODD

11 is Odd|
```