

Lab Number:	1
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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

C++ PROGRAMS

- TO ADD TWO**

NUMBERS

ALGORITHM:

Algorithm -

Step 1 - Input: n_1, n_2

Step 2 - Result = $n_1 + n_2$

Step 3 - Print $n_1 + n_2$

PROGRAM:

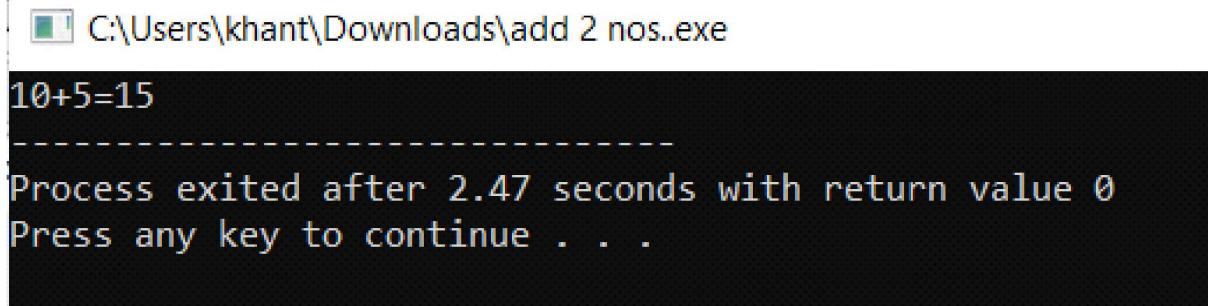
```
//To Add Two
```

```
Numbers
```

```
#include<iost  
ream> using  
namespace  
std;
```

```
int main()
{
    int n1, n2,
        result;
    n1=10;
    n2=5;
    result=n1+n2;
    cout << n1 <<"+" << n2 <<
    "=" << result; return 0;
}
```

OUTPUT SCREENSHOT:



The screenshot shows a terminal window with the following text:
C:\Users\khant\Downloads\add 2 nos..exe
10+5=15

Process exited after 2.47 seconds with return value 0
Press any key to continue . . .

• TO PRINT NUMBERS

ENTERED BY USER

ALGORITHM:

Algorithm -

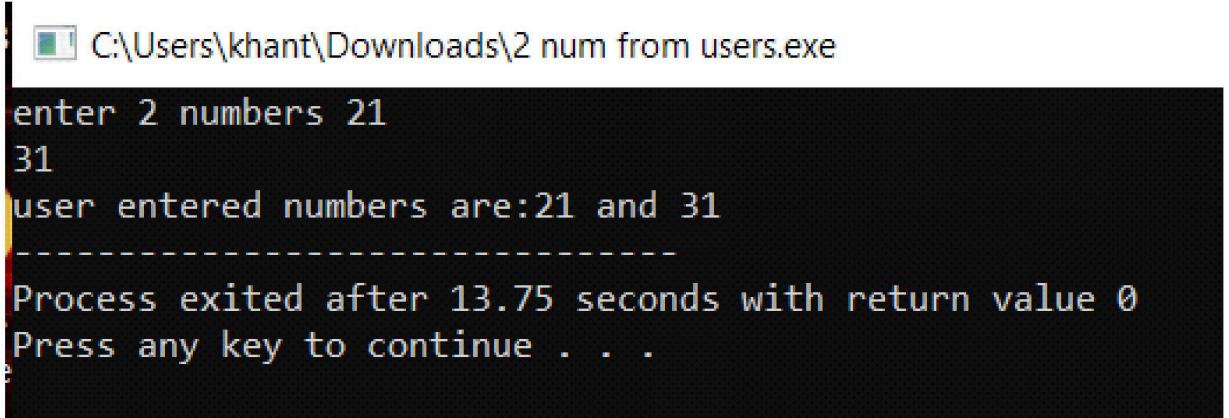
Step 1 - Input n_1, n_2

Step 2 - Print numbers n_1, n_2

PROGRAM:

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

OUTPUT SCREENSHOT:



```
C:\Users\khant\Downloads\2 num from users.exe
enter 2 numbers 21
31
user entered numbers are:21 and 31
-----
Process exited after 13.75 seconds with return value 0
Press any key to continue . . .
```

• TO SWAP TWO

NUMBERS

ALGORITHM:

Algorithm -

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

PROGRAM:

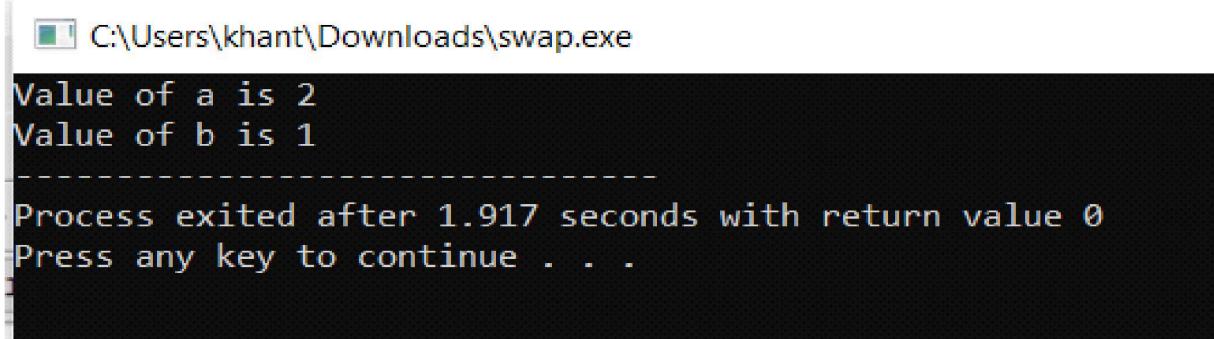
```
//Swap Two
```

```
Numbers
```

```
#include
```

```
<iostream >
using
namespace
std; int main()
{
    int a = 1, b =
2, temp;
temp = a;
a = b;
b = temp;
cout << "Value of a is
" <<a<<endl; cout <<
"Value of b is " <<b;
return 0;
}
```

OUTPUT SCREENSHOT:



```
C:\Users\khant\Downloads\swap.exe
Value of a is 2
Value of b is 1
-----
Process exited after 1.917 seconds with return value 0
Press any key to continue . . .
```

**• TO CHECK WHETHER NUMBER IS
EVEN OR ODD ALGORITHM:**

Algorithm -

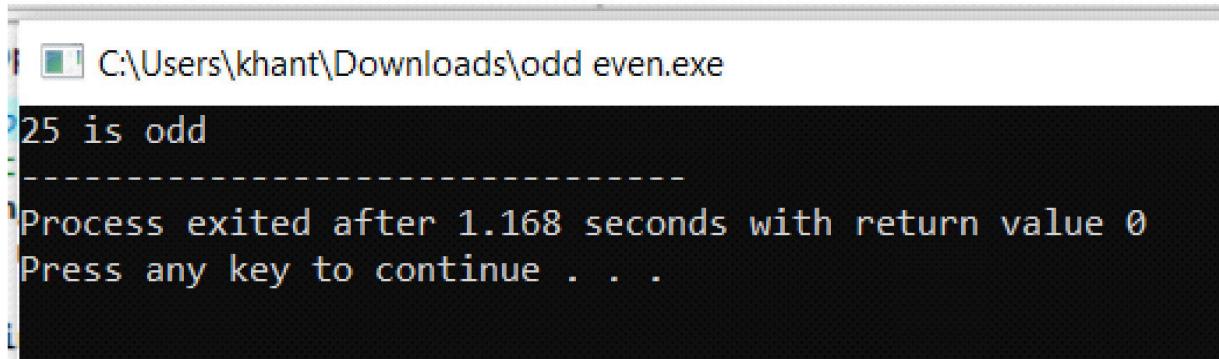
Step 1 - Input a number
Step 2 - Remainder = num % 2
Step 3 - If remainder = 0 then
Step 4 - Print number 'u' even number
else
 print number 'u' odd number

PROGRAM:

```
//to check whether no  
is even or odd #include  
<iostream>  
using  
namespace  
std; int  
main()  
{  
  
int num =  
25; if(num  
% 2 == 0)
```

```
cout<<num<<
" is even";
else
cout<<num<<
" is odd";
return 0;
}
```

OUTPUT SCREENSHOT:



A screenshot of a terminal window titled "C:\Users\khant\Downloads\odd even.exe". The window displays the following text:
25 is odd

Process exited after 1.168 seconds with return value 0
Press any key to continue . . .