

# OBJECT ORIENTED PROGRAMMING WITH C++

ASSIGNMENT WORK-2 DATE: 30th December 2023

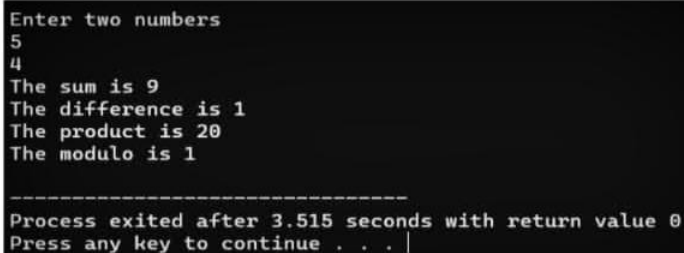
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1. Write a program to read in two integers and perform the following operations on them: addition, subtraction, multiplication, division, and modulo.

Program:

```
#include<iostream>
using namespace std;
int main(){
int x,y;
cout<<"Enter two numbers"<<endl;
cin>>x;
cin>>y;
int sum=x+y;
int diff=x-y;
int mul=x*y;
int div=x%y;
cout<<"The sum is "<<sum<<endl;
    cout<<"The difference is "<<diff<<endl;
cout<<"The product is "<<mul<<endl;
cout<<"The modulo is "<<div<<endl;
return 0;
}
```

Output:



```
Enter two numbers
5
4
The sum is 9
The difference is 1
The product is 20
The modulo is 1

-----
Process exited after 3.515 seconds with return value 0
Press any key to continue . . . |
```

## 6. Program to check the character is a vowel or consonant


Program:

```
#include<cctype>
#include<iostream>
using namespace std;
int main(){
    char x;
    cout<<"Enter the character"<<endl;
    cin>>x;
    char y=tolower(x);
        if(y=='a' || y=='e' || y=='i' || y=='o' || y=='u'){
    cout<<"It is a vowel";
    }
    else{
        cout<<"It is a consonant";

    }

}
```

Output:

A screenshot of a terminal window showing the output of the program. The text is as follows:

```
Enter the character
a
It is a vowel
-----
Process exited after 3.516 seconds with return value 0
Press any key to continue . . . |
```

## 7. Program to check the number is positive, negative or zero

Program:

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

        cout<<"Enter the number";

    cin>>x;
```

Enter the number-5

Negative number

-----

Process exited after 4.526 seconds with return value 0

Press any key to continue . . . |

8. Program to determine which number is greater among two integers

Program:

```
#include<iostream>
using namespace std;
int main(){
int x,y;
cout<<"Enter the two numbers"<<endl;
cin>>x;
cin>>y;
if(x>y){
cout<<"First number is greater";
}
else{
cout<<"Second number is greater";
}
}
```

Output:

Enter the number

5.3

The nearest higher number is 6

The nearest lower number is 5

-----  
Process exited after 3.072 seconds with return value 0

Press any key to continue . . . |

Enter the numbers

5

6

Before swapping x = 5 y = 6

After swapping, x = 6 y = 5

-----

Process exited after 8.663 seconds with return value 0

Press any key to continue . . . |

Largest among

three numbers using ternary conditional operator

Program:

```
#include<iostream>
```

```
using namespace std;
```

```
int main(){
```

```
int x,y,z,l;
```

```
cout<<"Enter the three numbers"<<endl;
```

```
cin>>x;
```

```
cin>>y;
```

```
cin>>z;
```

```
l=x;
```

```
if(y>l){
```

```
l=y;
```

```
}
```

```
if(z>l){
```

```
l=z;
```

```
}
```

```
cout<<"The greatest of three numbers is "<<l;
```

```
}
```

Output:

Printing numbers 1 to 10

1

2

3

4

5

6

7

8

9

10

-----

```
Enter the two numbers
6
3
They are not equal
-----
Process exited after 3.357 seconds with return value 0
Press any key to continue . . . |
```

Program to  
check the integer is divisible by 3 or not using ternary conditional operator

Program:

```
#include<iostream>
#include<string>
using namespace std;
int main(){
int x;
string result;
cout<<"Enter the number"<<endl;
cin>>x;
result=(x%3==0) ? "Divisible by three" : "Not divisible by three";
cout<<result;

}
```

Output:

```
Enter the number
9
Divisible by three
-----
Process exited after 2.084 seconds with return value 0
Press any key to continue . . . |
```

```
}
```

Output:

```
Enter the number
5
The factorial is 120
-----
Process exited after 2.349 seconds with return value 0
Press any key to continue . . . |
```



Enter the two numbers

6

3

They are not equal

-----

Process exited after 3.357 seconds with return value 0

Press any key to continue . . . |

Program to

check the integer is divisible by 3 or not using ternary conditional operator

Program:

```
#include<iostream>
```

```
#include<string>
```

```
using namespace std;
```

```
int main(){
```

```
int x;
```

```
string result;
```

```
cout<<"Enter the number"<<endl;
```

```
cin>>x;
```

```
result=(x%3==0) ? "Divisible by three" : "Not divisible by three";
```

```
cout<<result;
```

```
}
```

Output:

## 6. Program to check the character is a vowel or consonant

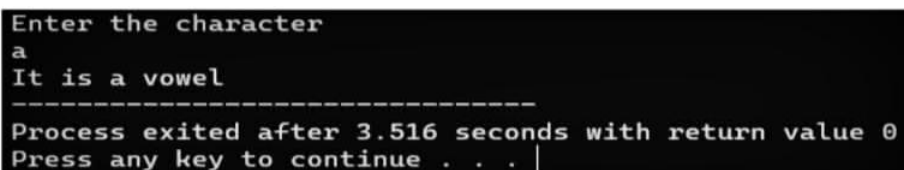
Program:

```
#include<cctype>
#include<iostream>
using namespace std;
int main(){
    char x;
    cout<<"Enter the character"<<endl;
    cin>>x;
    char y=tolower(x);
        if(y=='a' || y=='e' || y=='i' || y=='o' || y=='u'){
    cout<<"It is a vowel";
    }
    else{
        cout<<"It is a consonant";

    }

}
```

Output:

A screenshot of a terminal window with a black background and white text. The text shows the program's execution: it prompts 'Enter the character', the user enters 'a', and the program outputs 'It is a vowel'. Below this, a separator line of dashes is shown, followed by the system message 'Process exited after 3.516 seconds with return value 0' and the prompt 'Press any key to continue . . . |' where a cursor is visible.

```
Enter the character
a
It is a vowel
-----
Process exited after 3.516 seconds with return value 0
Press any key to continue . . . |
```

## 7. Program to check the number is positive, negative or zero

Program:

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

        cout<<"Enter the number";

    cin>>x;
```

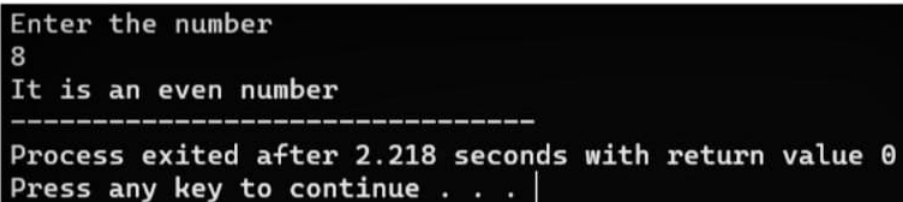
## 2. Program to determine the integer is odd or even

Program:

```
#include<iostream>
using namespace std;
int main(){
    int n;
    cout<<"Enter the number "<<endl;
    cin>>n;
    if(n%2==0){
        cout<<"It is an even number";

    }
    else{
        cout<<"It is an odd number";
    }
}
```

Output:

A screenshot of a terminal window showing the output of the program. The text is as follows:

```
Enter the number
8
It is an even number
-----
Process exited after 2.218 seconds with return value 0
Press any key to continue . . . |
```

## 3. Program to compute the average of three integers

Program:

```
#include<iostream>
using namespace std;
int main(){
    int x,y,z;
    cout<<"Enter three numbers"<<endl;
    cin>>x;
    cin>>y;
    cin>>z;
```