

COMPUTER SCIENCE : C++

C++ Program to Check Whether a character is Vowel or Consonant.

In this example, if...else statement is used to check whether an alphabet entered by the user is a vowel or a constant.

To understand this example, you should have the knowledge of the following [C++ programming](#) topics:

- [C++ if, if...else and Nested if...else](#)

Five alphabets a, e, i, o and u are known as vowels. All other alphabets except these 5 alphabets are known as consonants.

This program assumes that the user will always enter an alphabet.

Check Vowel or a Consonant Manually

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

void main()
{
    char c;
    int isLowercaseVowel, isUppercaseVowel;

    cout << "Enter an alphabet: ";
    cin >> c;

    // evaluates to 1 (true) if c is a lowercase vowel
    isLowercaseVowel = (c == 'a' || c == 'e' || c == 'i' || c == 'o' || c ==
'u');

    // evaluates to 1 (true) if c is an uppercase vowel
    isUppercaseVowel = (c == 'A' || c == 'E' || c == 'I' || c == 'O' || c ==
'U');

    // evaluates to 1 (true) if either isLowercaseVowel or isUppercaseVowel is
true
    if (isLowercaseVowel || isUppercaseVowel)
        cout << c << " is a vowel.";
    else
        cout << c << " is a consonant.";
}
```

Output

```
Enter an alphabet: u
u is a vowel.
```

The character entered by the user is stored in variable `c`.

The `isLowerCaseVowel` evaluates to true if `c` is a lowercase vowel and false for any other character.

Similarly, `isUpperCaseVowel` evaluates to true if `c` is an uppercase vowel and false for any other character.

If both `isLowerCaseVowel` and `isUpperCaseVowel` is true, the character entered is a vowel, if not the character is a consonant.

C++ Program to Find Largest Number Among Three Numbers

In this example, you'll learn to find the largest number among three numbers using `if`, `if else` and nested `if else` statements.

To understand this example, you should have the knowledge of the following [C++ programming](#) topics:

- [C++ if, if...else and Nested if...else](#)

In this program, user is asked to enter three numbers.

Then this program finds out the largest number among three numbers entered by user and displays it with proper message.

This program can be used in more than one way.

Example 1: Find Largest Number Using if Statement

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

void main()
{
    float n1, n2, n3;

    cout << "Enter three numbers: ";
    cin >> n1 >> n2 >> n3;

    if(n1 >= n2 && n1 >= n3)
    {
        cout << "Largest number: " << n1;
    }

    if(n2 >= n1 && n2 >= n3)
    {
        cout << "Largest number: " << n2;
    }

    if(n3 >= n1 && n3 >= n2) {
        cout << "Largest number: " << n3;
    }
}
```

Output

```
Enter three numbers: 2.3
8.3
-4.2
Largest number: 8.3
```

Find Largest Number Using if...else Statement

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

void main()
{
    float n1, n2, n3;

    cout << "Enter three numbers: ";
    cin >> n1 >> n2 >> n3;

    if((n1 >= n2) && (n1 >= n3))
        cout << "Largest number: " << n1;
    else if ((n2 >= n1) && (n2 >= n3))
        cout << "Largest number: " << n2;
    else
        cout << "Largest number: " << n3;
}
```

Output

```
Enter three numbers: 2.3
8.3
-4.2
Largest number: 8.3
```

Find Largest Number Using Nested if...else statement

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

void main()
{
    float n1, n2, n3;

    cout << "Enter three numbers: ";
    cin >> n1 >> n2 >> n3;

    if (n1 >= n2)
    {
        if (n1 >= n3)
            cout << "Largest number: " << n1;
        else
            cout << "Largest number: " << n3;
    }
    else
    {
        if (n2 >= n3)
            cout << "Largest number: " << n2;
        else
            cout << "Largest number: " << n3;
    }

    ;
}
```

Output

```
Enter three numbers: 2.3
8.3
-4.2
Largest number: 8.3
```