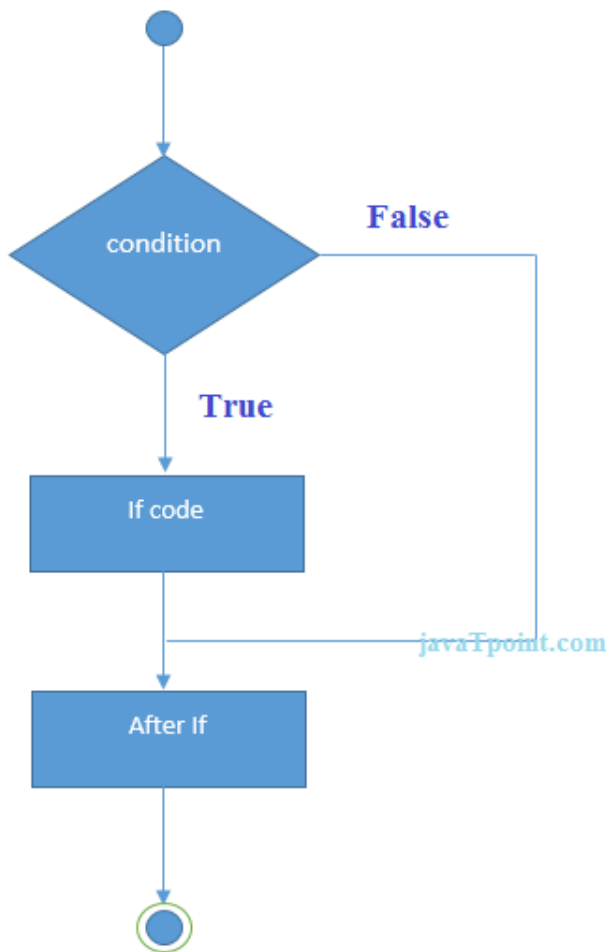# C++ if-else

In C++ programming, if statement is used to test the condition. There are various types of if statements in C++.

- if statement
- if-else statement
- nested if statement
- if-else-if ladder

C++ IF Statement

The C++ if statement tests the condition. It is executed if condition is true.

```
if(condition){
//code to be executed
}
```

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

int main () {
  int num = 10;
        if (num % 2 == 0)
        {
            cout<<"It is even number";
        }
    return 0;
}
```
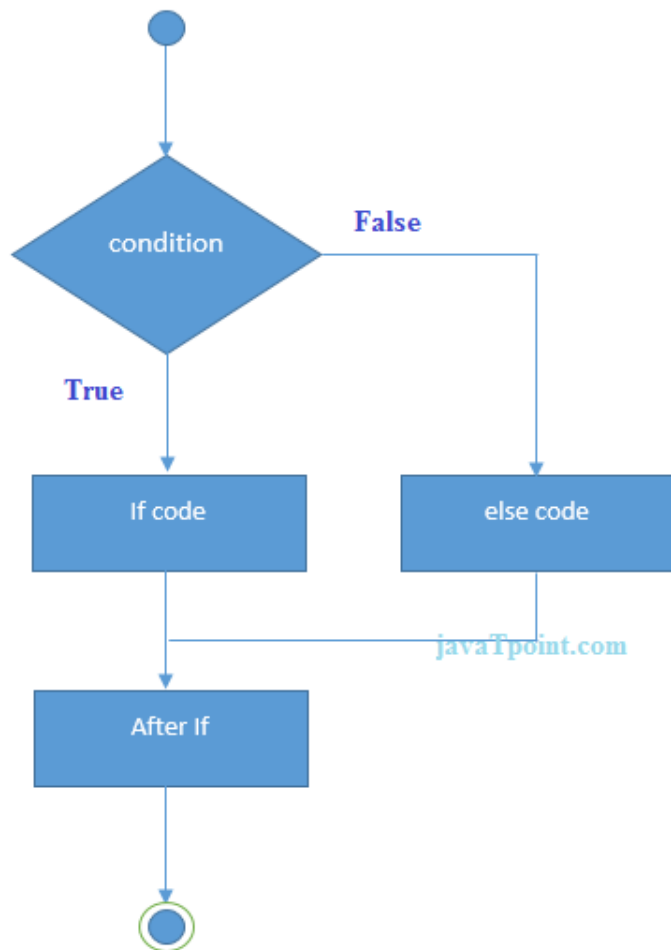
Output:/p>

```
It is even number
```

C++ IF-else Statement

The C++ if-else statement also tests the condition. It executes if block if condition is true otherwise else block is executed.

```
if(condition){
//code if condition is true
}else{
//code if condition is false
}
```

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C++ If-else Example

```cpp
#include <iostream>
using namespace std;
int main () {
  int num = 11;
        if (num % 2 == 0)
        {
            cout<<"It is even number";
        }
        else
        {
            cout<<"It is odd number";
        }
    return 0;
}
```

Output:

⇧ SCROLL TO TOP

It is odd number

C++ If-else Example: with input from user

```cpp
#include <iostream>
using namespace std;
int main () {
    int num;
    cout<<"Enter a Number: ";
    cin>>num;
        if (num % 2 == 0)
        {
            cout<<"It is even number"<<endl;
        }
        else
        {
            cout<<"It is odd number"<<endl;
        }
    return 0;
}
```

Output:

```
Enter a number:11
It is odd number
```

Output:

```
Enter a number:12
It is even number
```

C++ IF-else-if ladder Statement

The C++ if-else-if ladder statement executes one condition from multiple statements.
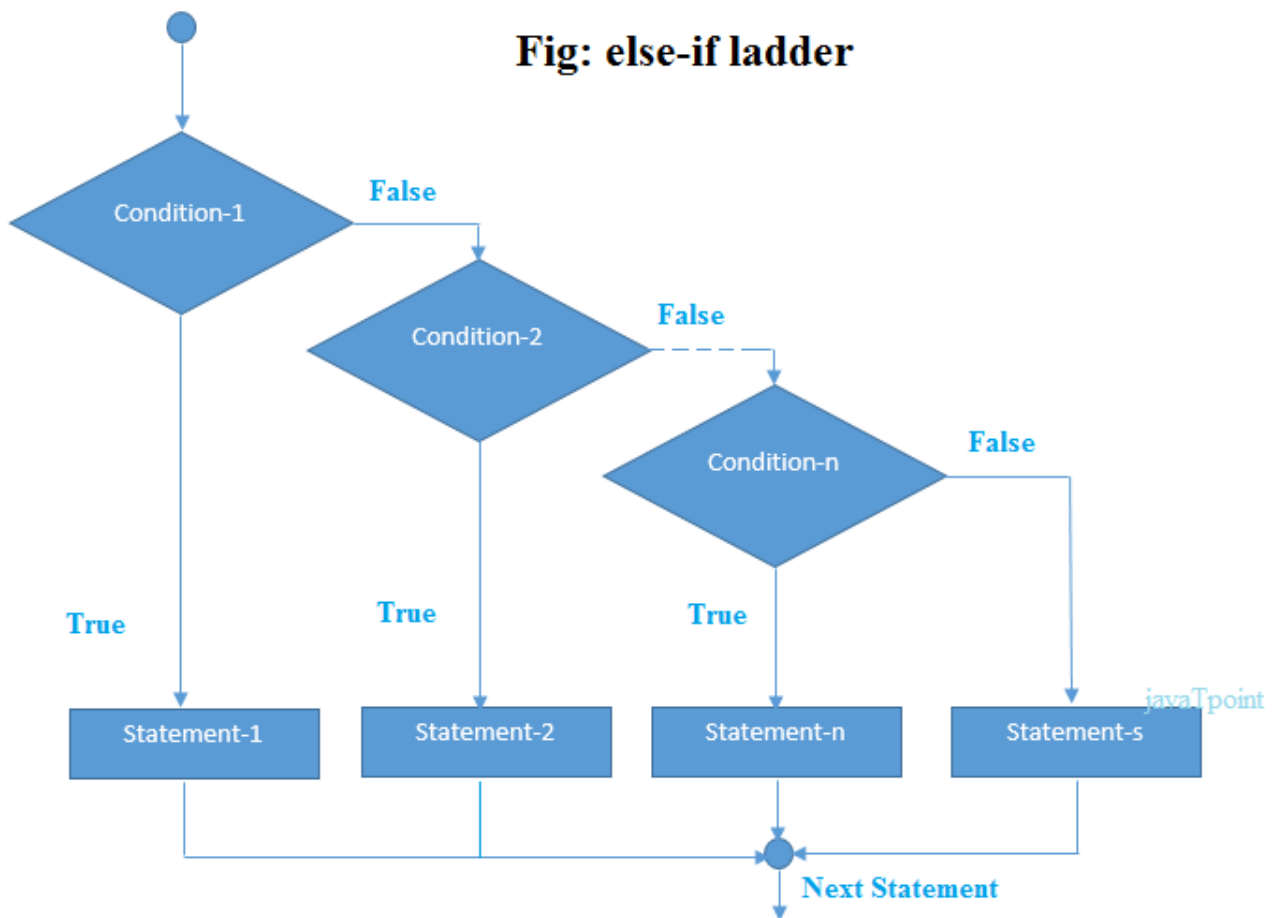
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_ted if condition1 is true

```
}else if(condition2){

//code to be executed if condition2 is true

}

else if(condition3){

//code to be executed if condition3 is true

}

...

else{

//code to be executed if all the conditions are false

}
```

Fig: else-if ladder

C++ If else-if Example

```cpp
#include <iostream>
using namespace std;
int main () {
    int num;
    cout<<"Enter a number to check grade:";
    cin>> num;
```

⇧ SCROLL TO TOP | num >100)

```
        {
            cout<<"wrong number";
        }
        else if(num >= 0 && num < 50){
            cout<<"Fail";
        }
        else if (num >= 50 && num < 60)
        {
            cout<<"D Grade";
        }
        else if (num >= 60 && num < 70)
        {
            cout<<"C Grade";
        }
        else if (num >= 70 && num < 80)
        {
            cout<<"B Grade";
        }
        else if (num >= 80 && num < 90)
        {
            cout<<"A Grade";
        }
        else if (num >= 90 && num <= 100)
        {
            cout<<"A+ Grade";
        }
    }
```

Output:

```
Enter a number to check grade:66
C Grade
```

Output:

```
Enter a number to check grade:-2
wrong number
```

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