

Al Mamoon College
Computer Engineering Department
First-Level
Lecturer of Subject Zainab Majeed
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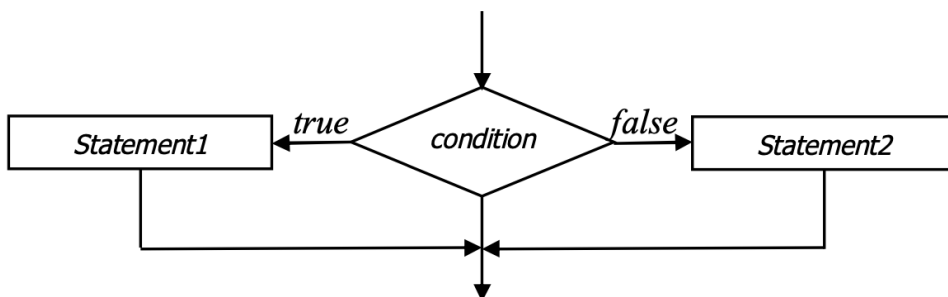
IF Selection
IF-else
Nested-if

IF Selection Statements

Conditional expressions are mainly used for decision making. C++ provides multiple selection structures: **if**, **if/else**

The Single If -else Statement Structure

The IF statement is used to express conditional expression. If the given condition is true then it will execute the statements; otherwise it will execute the optional statements.



In this case, either of the two statements are executed depending upon the value of the expression. Note that there is a semicolon after each of the statement but not after the IF expression. Note that the else statement without braces leads to **confusion** so:

For Exapmle

```
Cin>>value;
```

```
(If value>=0)
```

```
Cout<<"positive";
```

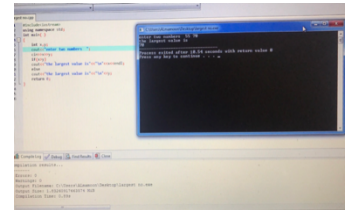
```
Else cout<<"negative";
```

Example1

Write a C++ program to read any two integer numbers and print the largest value of it ?

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

int x,y;
cout<<"enter two numbers
cin>>x>>y;
If(x>y)
cout<<" the largest value is<<x<<endl;
else
cout<<"the largest value is<<y;
return 0;
}
```



Example 2

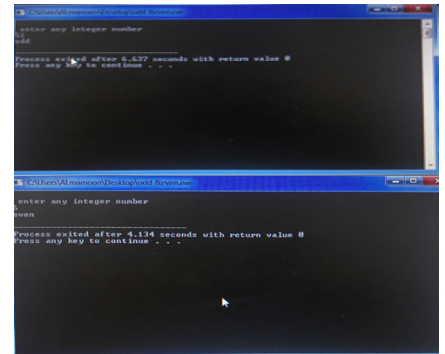
Write a C++ program to read integer number, and check if it's even or odd?

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

```

cout<<"\nenter any integer number " <<endl;
cin>>x;
if(x%2==0)
cout<<"Even"<<endl;
else
cout<<"odd";
return 0;
}

```



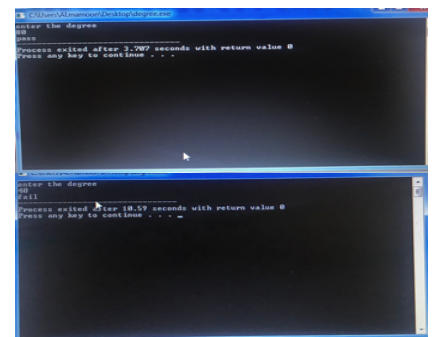
Exapmle 3

Write a C++ program to read a student degree, and check if it's degree greater than or equal to 50, then print pass, otherwise print fail?

```

#include<iostream>
using namespace std;
int main( )
{
int degree;
cout<<"enter the degree"<<endl;
if(degree>=50)
cout<<"pass";

```



```

else
cout<<"fail";
return 0;
}

```

Nested if -else

As the name suggests this statement contains multiple *if-else statements* which are used in multi-way decisions that arise when there are multiple conditions and different actions are required depending upon the conditions. The syntax of *Nested if-else statement* is as follows:

```

If (test-expression1) statement1;
else if (test-expression2) statement2;
else if (test-expression3) statement3;
.
.
.
Else statement;

```

Example 4

Write a C++ program to read a number,
and print the day of the week:

```
#include<iostream>
```

```

using namespace std;

int main()
{
    int num;

    cout<<"enter the number"<<endl;

    cin>>num;

    if(num==1) cout<<"Saturday"<<endl;
    else if(num==2) cout<<"Sunday"<<endl;
    else if(num==3) cout<<"Monday"<<endl;
    else if(num==4) cout<<"Tuesday"<<endl;
    else if(num==5) cout<<"wednesday"<<endl;
    else if(num==6)cout<<"thursay"<<endl;
    else if(num==7) cout<<"firday"<<endl;
    else cout<<"invalid day number";

    return 0;
}

```

