



# Conditions in C++

C++ Programming



# Conditions



| Condition | Example                                                             | Explanation                                                  |
|-----------|---------------------------------------------------------------------|--------------------------------------------------------------|
| if        | if ( marks > 60 )                                                   | if we want a particular block to execute, on some condition. |
| else      | else<br>( no condition )                                            | if we want another block to execute, if first ( if ) fails.  |
| else if   | else if ( marks > 45 )                                              | if we want to apply more conditions.                         |
| switch    | case : 5<br>cout << "Excellent";<br><br>case : 4<br>cout << "Good"; | When we have absolute, values.                               |

# if - condition

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

```
int main() // Program execution begins
```

```
{ int marks;
```

```
  cout << "Enter your marks ";
```

```
  cin >> marks;
```

```
  if ( marks >= 60 )
```

```
    { cout << "You are pass"; }
```

```
  return 0;
```

```
}
```

User Input

Checking Condition

# if else - condition

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

int main() // Program execution begins
{ int marks;
  cout << "Enter your marks ";
  cin >> marks;

  if ( marks >= 60 )
    { cout << "You are pass"; }
  else
    { cout << "You are fail"; }
  return 0;
}
```

User Input

Checking Condition

if - if condition fails

*Default*

# Program

Write a program, to input student marks and check whether student is pass or fail

.

# else if - condition

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

```
int main() // Program execution begins
```

```
{ int marks;
```

```
  cout << "Enter your marks ";
```

```
  cin >> marks;
```

```
  if ( marks >= 60 && marks <=100 )
```

```
    { cout << "You are pass "; }
```

```
  else if ( marks >= 0 && marks < 60 )
```

```
    { cout << "You are fail "; }
```

```
  else
```

```
    { cout << "Invalid input"; }
```

```
  return 0;
```

```
}
```

User Input

Checking Condition

Another Condition

if - if condition fails

*Default*

# Program

Write a program, to input student marks and check whether student is pass or fail. ( with `else if` )

# Switch

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

int main() // Program execution begins
{ int day;
  cout << "Enter a no. b/w ( 1 - 7 ) ";
  cin >> day;
  switch ( day )
  { case 1:
    cout << "Monday";
    case 2:
    cout << "Tuesday";
    case 3:
    cout << "Wednesday";
    case 4:
    cout << "Thrusday";
    case 5:
    cout << "Friday";
    case 6:
    cout << "Saturday";
    case 7:
    cout << "Sunday";
  }
  return 0;
}
```

Switch Expression

Checking Conditions



# Program

Write a program, to input number and display day name respectively.

# Break



Break is use to **jump** out of **block**.

{

**Block**

}

# Switch + Break

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

int main() // Program execution begins
{ int day;
  cout << "Enter a no. b/w ( 1 - 7 ) ";
  cin >> day;
  switch ( day )
  { case 1:
      cout << "Monday";
      break;

    case 2:
      cout << "Tuesday";
      break;

    case 3:
      cout << "Wednesday";
      break;

    case 4:
      cout << "Thrusday";
      break;

    case 5:
      cout << "Friday";
      break;

    case 6:
      cout << "Saturday";
      break;

    case 7:
      cout << "Sunday";
      break;

  }
  return 0;
}
```

Switch Expresssion

Checking Conditions  
with **break**

# Default in switch



Used when **non of condition** is matched then, **default is executed**.

Used to **handle invalid inputs**.

# Switch + break + default

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

int main() // Program execution begins
{ int day;
  cout << "Enter a no. b/w ( 1 - 7 ) ";
  cin >> day;
  switch ( day )
  { case 1:
      cout << "Monday";
      break;

    case 2:
      cout << "Tuesday";
      break;

    case 3:
      cout << "Wednesday";
      break;

    case 4:
      cout << "Thrusday";
      break;

    case 5:
      cout << "Friday";
      break;

    case 6:
      cout << "Saturday";
      break;

    case 7:
      cout << "Sunday";
      break;

    default :
      cout << "invalid input";
  }
  return 0;
}
```

Switch Expression

Checking Conditions  
with **break**