

Include Headers

#include <headername>	
#include <iostream>	Several standard stream objects
#include <string>	std::basic_string class template
#include <math>	Behaves as if each name from <cmath> is placed in global namespace, except for names of mathematical special functions
#include <fstream>	std::basic_fstream, std::basic_ifstream, std::basic_ofstream class templates and several typedefs
#include <cctype>	Behaves as if each name from <cctype> is placed in global namespace

Namespace

using namespace std;

Data Types

int	integer type (-32768 to 32767)
char	single character type
float	Floating-point types (single precision)
double	Floating-point types (double precision)
bool	true or false
void	type with an empty set of values

Comments

//Single line
/*Multiple lines*/

Pointers

int *ptr;	Pointer definition
ptr = &var1;	ptr set to address of var1
var2 = *ptr;	set var2 to value of var1

Arithmetic Operators

+, -, *, /	Addition, subtraction, multiplication, division
%	Modulus (rest of division)
++	Add 1 to variable (example: i++)
--	Subtract 1 to variable (example: i--)
+=, -=, *=, /=	Add/subtract/multiply/divide a value from the variable (example: i+=2; is equal to i=i+2;)

Relational Operators

<	Less than
<=	Less or Equal than
>	Greater than
>=	Greater or Equal than
==	Equal than
!=	Not Equal than

Logical Operators

 	OR
&&	AND
!	NOT

If Else

```
if (condition) {
    \\Do something
} else if (condition) {
    \\Do something
} else {
    \\Do something
}
```

condition must be a condition that return a boolean value true or false
else/else if blocks are optional

Switch

```
switch (variable) {
case constant1:
    \\Do something
break;
case constant2:
    \\Do something
break;
default:
    \\Do something
break;
}
```

default is optional

While Loop

```
while (condition) {
    \\Do something
}
```

Loop as long as the condition is true, when it becomes false it exits



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Do-While Loop

```
do {  
    \\Do something  
} while (condition);
```

Loop as long as the *condition* is *true*, when it becomes *false* it exits

For Loop

```
for (initialize, condition, update) {  
    \\Do something  
}  
  
example:  
for (int i=0; i<10; i++) {  
    \\Do something  
}
```

Loop as long as the *condition* is *true*, when it becomes *false* it exits



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