

C++ Syntax Summary for CMIS 102

Language Feature	Form	Example(s)
Rest-of-line comment	// ...	// This is a comment
Multi-line comment	/*...*/	/* This is a comment that continues here.*/
Integer constant		0, 3, -5
Float constant		1.23, -4.56
Boolean constant		true, false
Character constant	'_' and escape codes	'A', '\$', '\n'
Identifier	Contains letters, digits, and underscore only; cannot begin with a digit	Cat, myVariable_5
Assignment	<i>variable</i> = <i>expression</i> ;	x = y + (2*z - 6/w);
If	if (<i>logicalExpression</i>) <i>statement1</i>	if (x < y) z = 5;
If...else	if (<i>logicalExpression</i>) <i>statement1</i> else <i>statement2</i>	if (x < y) x = 5; else z = 6;
Switch	switch(<i>expression</i>) { case <i>value1</i> : <i>statements</i> break; ... case <i>valueN</i> : <i>statements</i> break; default: <i>statements</i> break; }	switch (j) { case 1: z = x; break; case 2: z = x*x; break; default: z = 1; break; }
While loop - pretest	while (<i>logicalExpression</i>) <i>statement</i> .	while (n < 137) n = n + 2;
While loop - posttest	do <i>statement</i> while (<i>logicalExpression</i>) ;	do n = n + 2; while (n < 137);
For loop	for (<i>initialStatement</i> ; <i>loopCondition</i> ; <i>updateStatement</i>) <i>statement</i>	for (i = 0; i < 10; i++) x = x + 1;
Output to display	cout << <i>item1</i> << <i>item2</i> << ... << <i>itemN</i> ;	cout << "Volume is " << x << " cubic yards." << endl;
Input from keyboard	cin >> <i>variable1</i> >> <i>variable2</i> >> ... >> <i>variableN</i> ;	cin >> x >> y;
Compound statement	{ <i>statement1</i> <i>statement2</i> ... <i>statementN</i> }	{x = 1; y = 2; if (x < y) {z = 1; w = 2;}}
Array declaration	<i>element-type</i> <i>array-name</i> [<i>array-size</i>];	float myArray[20];

Language Feature	Form	Example(s)
Array element reference	In an expression, or as target of an assignment	myArray[0] = 2*myArray[1] + 3*myArray[2];
Function declaration	<i>return-type</i> <i>function-name</i> (<i>parameter-type-1</i> <i>parameter-name-1</i> , ..., <i>parameter-type-N</i> <i>parameter-name-N</i>) { <i>statements</i> }	int biggerPlusOne(int x, int y) { if (x > y) return x + 1; else return y + 1; }
Function invocation	<i>function-name</i> (<i>actual-parameter-1</i> , ..., <i>actual-parameter-N</i>)	... biggerPlusOne(v, w)...
Return	return <i>value</i> ;	return x + 5;
Include library header	#include < <i>library-name</i> >	#include <iostream>
Include custom header	#include " <i>file-name</i> "	#include "xyz.h"
Program structure	<pre>#include <cstdlib> #include <iostream> // Insert other #include statements // Insert #define statements using namespace std; // Insert any function definitions int main(int argc, char *argv[]) { // Your declarations and executable statements system("PAUSE"); // Needed only for Dev-C++ return EXIT_SUCCESS; }</pre>	

C++ Operators

The operators in each group have equal precedence. Groups are listed in order of decreasing precedence.

Operator Name	Symbol
Increment	++
Decrement	--
Unary minus	-
Unary plus	+
NOT (Boolean op.)	!
Multiplication	*
Division	/
Remainder	%
Addition	+
Subtraction	-

Operator Name	Symbol
Less than	<
Less than or equal	<=
Greater than	>
Greater than or equal	>=
Equals	==
Not equals	!=
AND	&&
OR	