**CPPDay1**

**#include <iostream>**

Lines beginning with a hash sign (#) are directives read and interpreted by what is known as the preprocessor. They are special lines interpreted before the compilation of the program itself begins. In this case, the directive #include <iostream>, instructs the preprocessor to include a section of standard C++ code, known as header iostream, that allows to perform standard input and output operations, such as writing the output of this program (Hello World) to the screen.

int main ()

This line initiates the declaration of a function. Essentially, a function is a group of code statements which are given a name: in this case, this gives the name "main" to the group of code statements that follow.

The function named main is a special function in all C++ programs; it is the function called when the program is run. The execution of all C++ programs begins with the main function, regardless of where the function is actually located within the code.

First, std::cout, which identifies the standard character output device (usually, this is the computer screen). Second, the insertion operator (<<), which indicates that what follows is inserted into std::cout. Finally, a sentence within quotes ("Hello world!"), is the content inserted into the standard output.

Notice that the statement ends with a semicolon (;).

**Using namespace std**

If you have seen C++ code before, you may have seen cout being used instead of std::cout. Both name the same object: the first one uses its unqualified name (cout), while the second qualifies it directly within the namespace std (as std::cout).

cout is part of the standard library, and all the elements in the standard C++ library are declared within what is called a namespace: the namespace std.

**Program can be written as**

int main ()

{

std::cout << " Hello World!";

}

**Or can be written as**

int main () { std::cout << "Hello World!"; }

**Comments**

As noted above, comments do not affect the operation of the program; however, they provide an important tool to document directly within the source code what the program does and how it operates.

C++ supports two ways of commenting code:

// line comment

/\* block comment \*/

Program 1

#include <iostream>

int main() {

std::cout << "Welcome to C++!\n";

return 0;

}

Program 2

#include <iostream>

int main() {

std::cout << "Welcome to C++!\n";

std::cout << "Coding is fun"<<std::endl;

std::cout << "We hope u enjoy the journey"<<std::endl;

return 0;

}

Program 3

#include <iostream>

using namespace std;

int main()

{

int a; //decleration of variable

int b;

cin >>a >>b;

cout <<"sum="<<a+b<<endl;

cout <<"Diff="<<a-b<<endl;

cout <<"Product="<<a\*b<<endl;

cout <<"Quotient="<<a/b<<endl;

cout <<"remainder="<<a%b<<endl;

return 0;

}

Program 4

#include <iostream>

using namespace std;

int main()

{

int a,b;

cin >>a>>b;

cout <<&a <<endl;

cout <<&b <<endl;

a=a+10;

cout <<a<<endl;

b=b-2;

cout <<b<<endl;

cout <<&a <<endl;

cout <<&b <<endl;

}

#include <iostream> // enables program to perform input and output

using std::cout; // program uses cout

using std::cin; // program uses cin

using std::endl; // program uses endl

// function main begins program execution

int main() {

int number1=0; // first integer to compare (initialized to 0)

int number2=0; // second integer to compare (initialized to 0)

cout << "Enter two integers to compare: "; // prompt user for data

cin >> number1 >> number2; // read two integers from user

if (number1 == number2) {

cout << number1 << " == " << number2 << endl;

}

if (number1 != number2) {

cout << number1 << " != " << number2 << endl;

}

if (number1 < number2) {

cout << number1 << " < " << number2 << endl;

}

if (number1 > number2) {

cout << number1 << " > " << number2 << endl;

}

if (number1 <= number2) {

cout << number1 << " <= " << number2 << endl;

}

if (number1 >= number2) {

cout << number1 << " >= " << number2 << endl;

}

} // end function main