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and allows code to be reused, lowering development costs.

C++ is portable and can be used to develop applications that can be adapted to multiple platforms.

Difference between C and C++

C++ was developed as an extension of C, and both languages have almost the same syntax.

The main difference between C and C++ is that C++ support classes and objects, while c does not.

C++ Get Started :

To start using C++, you need main two things :

- A text editor, like Notepad, to write C++ code.

- A compiler, like GCC, to translate the C++ code into a language that the computer will understand.

C++ Syntax :

Example ⟶

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

int main () {
    cout << " Hello World!";
    return 0;
}
```

C++ Output :

Example ⟶

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

int main ()
{
    cout << " Hello World!";
    return 0;
}
```

practice Example ⟶

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

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```
int main ()
{
  cout << "Hello World!";
  cout << " I am learning C++";
  return 0;
}
```

C++ Comments :

Comments can be used to explain C++ code, and to make it more readable. It can also be used to prevent execution when testing alternative code. Comments can be singled-lined or Multi-lined.

Single-line Comments :

single-line comments start with two forward slashes (//).

Any text between // and the end of the line is ignored by the compiler.

This example uses a single-line comment before a line of code:

Example⌐

```
// This is a comment
cout << " Hello World!";
```

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Multi-line Comments :

Multi-line comments start with /* and ends with */.

Any text between /* and */ will be ignored by the compiler.

Example :

```
/* The code below will print the words
Hello World!
to the screen, and it is amazing
*/
cout << "Hello World!";
```

C++ Variables :

Variables are containers for storing data values.

In C++, there are different types of variables for example :

- int → stores integers (whole numbers), without decimals, such as 123 or -123

- double → stores Floating point numbers, with decimals, such as 19.99 or -19.99

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- char → Stores single characters, such as 'a' or 'B'. char values are surrounded by single quotes.

- String → Stores text, such as "Hello World!". String values are surrounded by double quotes.

- bool → Stores values with two states: true or false.

① <u>Declaring variables</u>:

To create a variables, specify the type and assign it a value:

Syntax →

type variableName = value;

Example →

create a variable called myNum of type int and assign it the value 15:

```
int myNum = 15;
cout << myNum;
```