

Basics of C++

1.1 Summary

C++ has `for`, `while` and `do for` loops, `if` and `switch` for conditionals. We will use `char` for characters, `int` for integers, and `double` for floating-point numbers. (The latter come in alternative sizes.) There is also `bool` for boolean. The language is case-sensitive.

C++ is an extension of C. So the simplest program just has a `main` function. The program is compiled with `g++` which produces an executable `a.out`, which is run from the current directory.

The standard output is accessed by `cout`. The standard input is accessed by `cin`. These require inclusion of `iostream` library.

1.2 Sample program: `adder.cpp`

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

int main()
{
    int num1, num2;
    cout << "Enter two numbers: ";
    cin >> num1 >> num2;

    int sum = num1 + num2;
    cout << "The sum of " << num1 << " and " << num2
        << " is " << sum << endl;

    return 0;
}
```