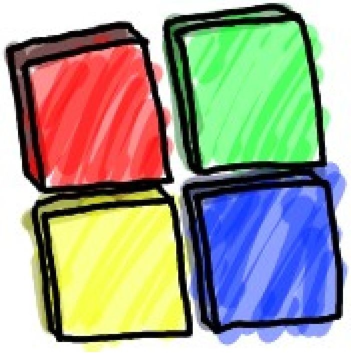
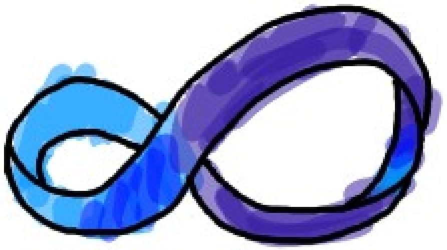
Getting Set Up

Integrated Development Environments





Written by Rachel J. Morris, last updated 2015-01-14

Integrated Development Environments

We are going to start out by using an IDE to write our C++ code, even though using an IDE isn't ***required*** to write a C++ program...

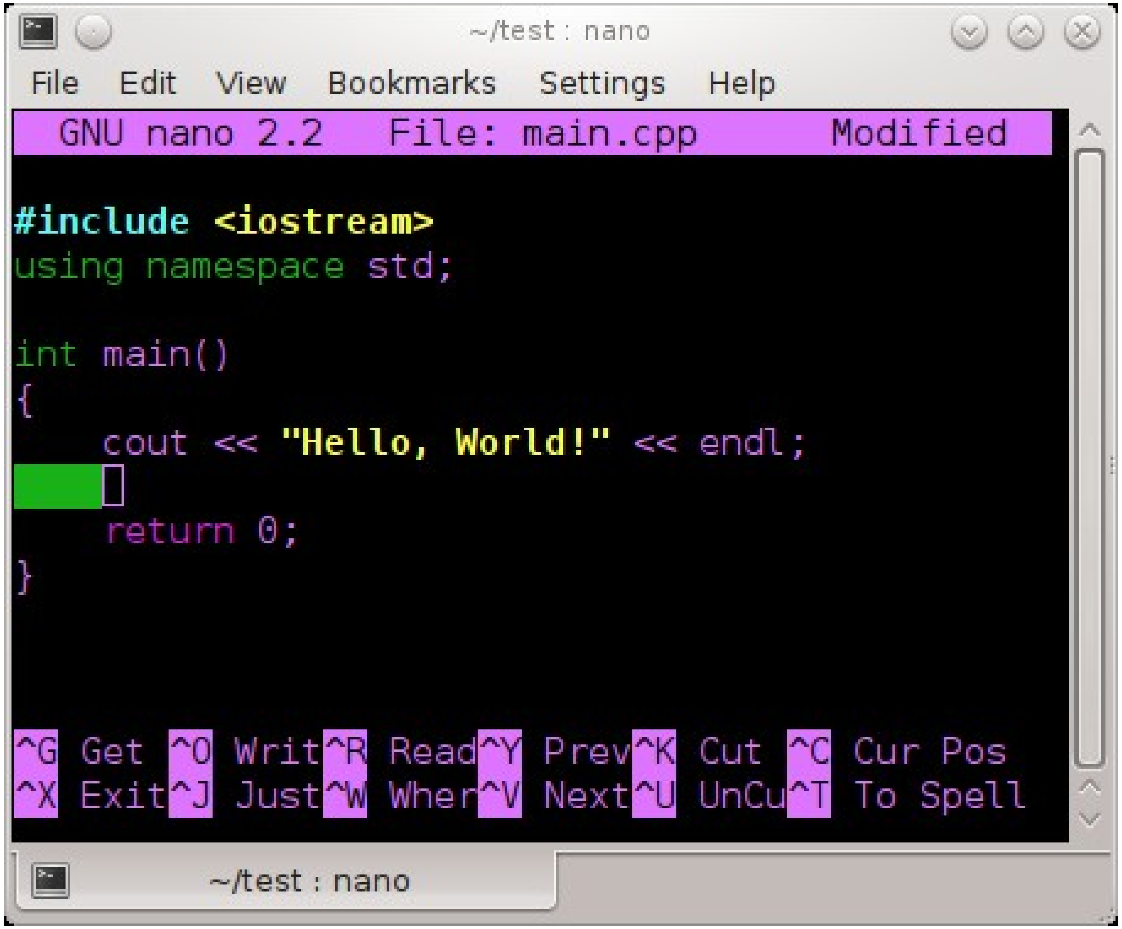
Integrated Development Environments

You could write a program with a normal text editor

(think: Notepad, but don't use Notepad – it is terrible.)

and then build your program with a **compiler**

(this builds it into an executable file.)



~/test : nano
File Edit View Bookmarks Settings Help
GNU nano 2.2 File: main.cpp Modified

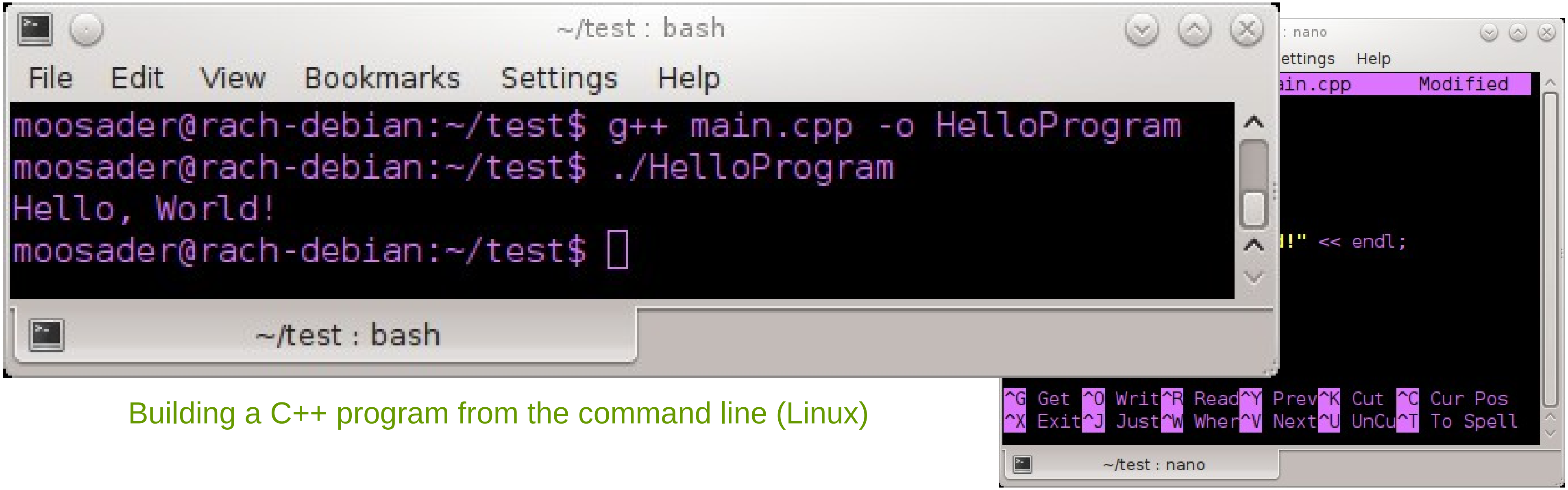
```
#include <iostream>
using namespace std;

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

^G Get ^O Writ ^R Read ^Y Prev ^K Cut ^C Cur Pos
^X Exit ^J Just ^W Wher ^V Next ^U UnCu ^T To Spell
~/test : nano

A small C++ program written in **nano**,
A Linux command line text editor.

Integrated Development Environments



```
moosader@rach-debian:~/test$ g++ main.cpp -o HelloProgram
moosader@rach-debian:~/test$ ./HelloProgram
Hello, World!
moosader@rach-debian:~/test$ 
```

```
ain.cpp          Modified

!" << endl;

^G Get  ^O Writ^R Read^Y Prev^K Cut  ^C Cur Pos
^X Exit^J Just^W Wher^V Next^U UnCu^T To Spell
```

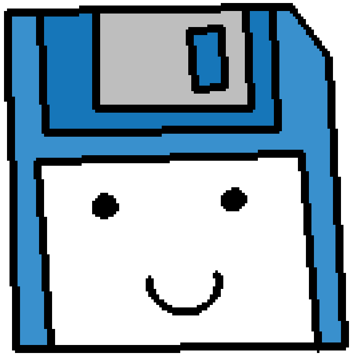
Building a C++ program from the command line (Linux)

This could be useful if you're on a machine that doesn't have a Graphical User Interface

(But, that's another class!)

Integrated Development Environments

An IDE is an
Integrated Development Environment



Generally, it is a **fancy text editor** (with syntax highlighting!)**,** **debugging tools**, and it usually has the **build/compile** option available from within the program, so you don't have to compile externally.

Integrated Development Environments

IDE != Compiler!

Note that the IDE is not the compiler!

The compiler is a separate piece, and many IDEs let you use any compiler you want.

Generally, it ***should not matter**** which compiler you use for writing C++ programs – C++ is a standardized language.

* But different compilers may support different features.

Names of some compilers...

CL (Used in Visual Studio)

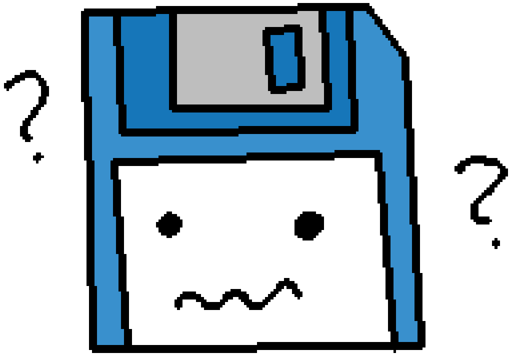
gcc, g++ (For Linux)

mingw (Win version of gcc)

Clang

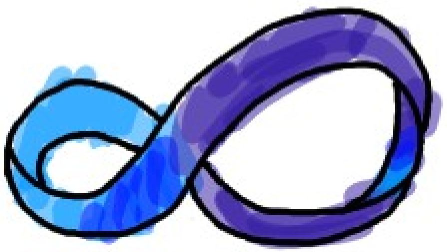
Borland

So what should I download?



IDEs for your computer

The school has
Visual Studio
available on its computers,
but what if you want to work
on your own machine?



IDEs for your computer

Visual Studio Community

https://www.visualstudio.com/en-us/products/visual-studio-express-vs.aspx

- Only for Windows

Visual Studio Community is the free version of visual studio, meant for “individual developers, open source projects, academic research, education, and small professional teams.”

(So, basically, don't run your gigantic corporation with VS Community)

IDEs for your computer

Code::Blocks

http://codeblocks.org/

For Windows, Linux, and OSX

Code::Blocks is an open source IDE, available on multiple platforms. You can use multiple compilers with it.

If you want something more light-weight than Visual Studio, this is what I would recommend!

Note: If you're running it on Windows you should download the version with mingw
(Downloads > Binaries > codeblocks-13.12mingw-setup.exe)

IDEs for your computer

XCode

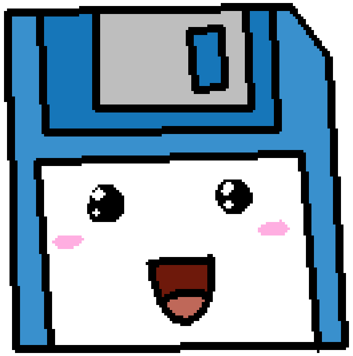
https://developer.apple.com/xcode/

Only for OSX

XCode is Apple's IDE for using their languages (Obj-C, Swift),
but also supports languages like C++.

Got one?

Let's try it out!



How to get started in

Visual Studio

Code::Blocks

Visual Studio

Code::Blocks