Intro To C++

Coding - Same

- Many things are the same in C++ as in C...

- Semicolons / brackets / return 0;
- Variable declarations (int, char, float, char[], etc...)
- Functions
  - Declared above main() and defined below
- Loops

Coding - Different

- File ending: end with **.cpp** instead of .c

- Compiling uses **g++** instead of gcc:

:g++ -Wall file.cpp -o file

Coding - Different

- #include <iostream>

- No more <stdio.h> → everything is in iostream
  - Supports the same procedures (printing to the screen, reading input, File IO)

Coding - Different

- Namespaces
  - REQUIRED in all C++ code
  - Prevents variables from being in two or more *scopes* at once
  - Will get more into this...
  - ...but for now, ALWAYS put...

>> using namespace std;

- ...before main()

Coding - Different

- In C:

```
int main(void) {
```

- In C++:
  - No void!

```
int main() {
```

Coding - Different

- No more printf() or scanf()!
- Use:
  - cout
  - cin

Coding - Different: cout

- **cout** takes the place of printf()
  - Written using chevrons (<<) to direct output to the screen

```
cout << “Hello World” << endl;

int num1 = 42

cout << “Num 1 is: “ << num1 << endl;
```

Coding - Different: cout

- **cin** takes the place of scanf()
  - Uses opposite chevrons (>>) to direct input into a variable

```
cout << “Enter a number” << endl;

cin >> num1;
```

First C++ Program(s)!

- Draw a box of *’s (or any other character)
  - The length & width should be scanned in by the user

- Challenge: Make a random character a ‘X’ (research how to use the rand() function in C++)