CS 160
CS Orientation

More C++
What is needed in a C++ program?

/* Program Name: hello.cpp
Description: prints hello world */

#include <iostream>  //include the io library
using namespace std;

int main() {
    cout << "Hello World" << endl;
    return 0;
}
Primitive Types

• int, bool, char, float, double, long, short

• What does this mean?

strongly typed!!!
Let’s learn to read…

• Library to retrieve sizes: #include <climits>

• http://cplusplus.com

• What happens if someone enters a number too large or you add to a number causing it to be larger than max?
Different Errors

- Syntax
- Logic
- Run time

- use of lang incorrectly (grammar/mispelling)

```c
int func ...

return 'a'
```
Common Mistakes

- Missing the semicolons
- Missing the curly braces
- Forgetting to have a main
- Use `>>` for cout and `<<` for cin
- Use single quotes for strings
- Forget to initialize variable before you use it
- Overflow
- Divide by zero
```cpp
#include <iostream>
#include <climits>

using namespace std;

int main(){
    int i,x;

    cout << "Largest signed int: " << INT_MAX << endl;

    cout << "Give me a denom: ";
    cin >> x;

    // You have to prevent the divide by zero...
    if(x != 0) {
        i=INT_MAX/x;
    }
    else {
        cout << "You can't have a denom that is zero!" << endl;
    }

    cout << "1 plus largest signed int " << INT_MAX+1 << endl;
    return 0;
}
```