# CS 161 Intro to CS I

Finish Loops/Begin C++ Strings





- Assignment 2 demoed this week!
- Study sessions Tues, Wed, Thur.



# How do we read a string of chars?

 User-defined type in string library #include <string>

 Declare/Create type string mssg;

Read with cin or getline

```
cin >> mssg; //get a word
getline(cin,mssg); //get a line of txt
```







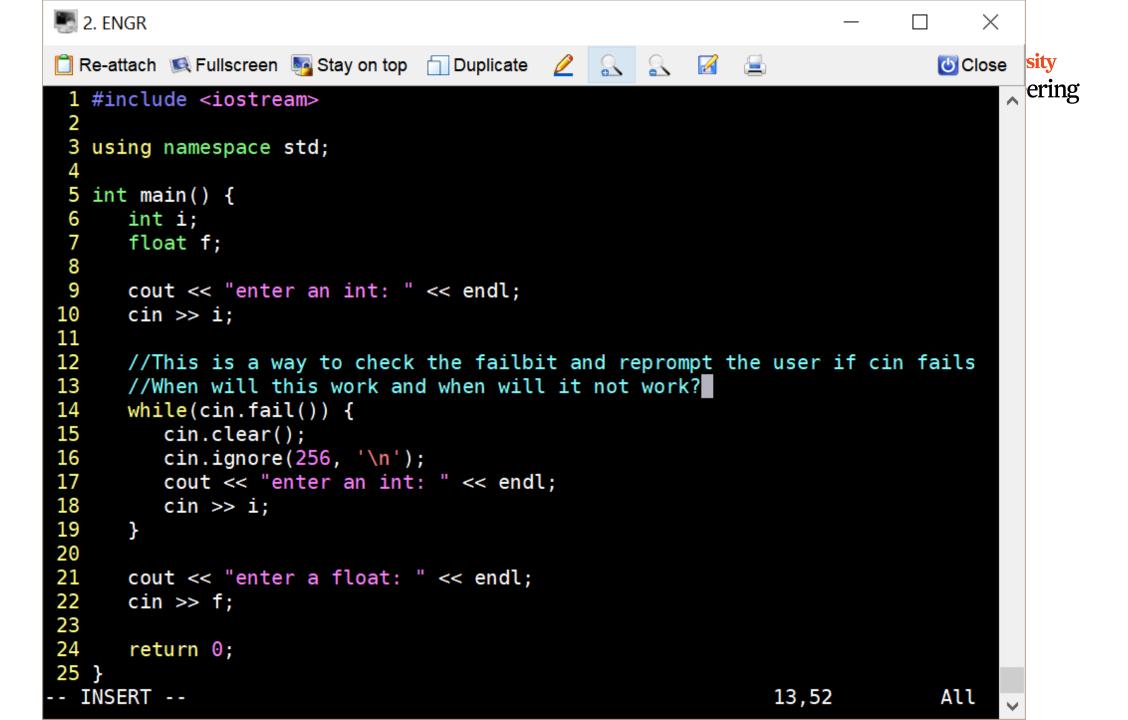


- What does cin do when reading...
  - Int/Floats
  - Strings

What does getline do?







### Solution...



#### **Intro to Functions Demo...**



### **Programming Errors**



- Syntax errors
  - Misuse of C++ language
  - How are they caught?
- Logic errors
  - Doesn't perform task correctly (aka. bugs)
  - How are they caught?
- Runtime errors
  - Stops your program from running
  - How are they caught?





- Missing main function
- Use of identifier not declared
- Misspelled Words
- Forget a Semicolon
- Forget Required Keyword
- Missing quote, curly brace, and parenthesis
- Use of single quotes instead of double

# **Logic Error Examples**



- Poorly written programs
  - Add instead of subtract (incorrect operation)
  - Using last two digits for date
  - Same error message for different errors
  - Program that never ends
  - Add one to the largest integer (could be syntax)





- Segmentation fault or Core dump
  - Read a file that doesn't exist
  - Go outside of memory bounds
  - Run out of memory
  - Divide by variable that is zero

### **Debugging Errors**



- Syntax:
  - READ compiler errors (pay attention to line #)
  - Use google to search for error
- Logic/Runtime
  - Use std::cout to find where the code is breaking
    - Print variable values
    - Print indicator messages
  - Trace through the code
  - Comment out code