Lab 1

COEN 79

TA Information

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  - Email:
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  - Office Hours:
    - Thursday 1pm - 2pm
    - Friday 1pm - 2pm
    - Email me if you are coming
    - Email me to setup an appointment at a different time

Overview

1. Count the number of alphanumeric characters and non-alphanumeric characters
    a. Spaces (‘ ‘) should not be counted
2. Display the following pattern using C++ string and setw()
3. Read words from a file and convert to uppercase
    a. Ignore punctuation
    b. Consider words with length at least 10 characters

Compile and Run C++

- Compile
  - g++ Cplusplus.cpp
    - This will generate ‘a.out’ runnable file
  - g++ Cplusplus.cpp -o myFile
- Run
  - ./a.out
  - ./myCode
  - ./myCode One Two Three
    - Passing command line arguments ‘One’, ‘Two’, ‘Three’

iostream

- cout
  - Printing text on the screen
  - cout<<”hello world\n”;
- cin
  - Getting character or 1 word input from user
  - cin>>variable;
- getline
  - Getting string input from user
  - getline(cin, variable);

setw

- Sets the number of characters to be used when the item is printed
- cout<<setw(20)<<”hello world”;

Some In-built functions

- getline()
  - Get string input
- isalnum()
  - Check whether the character is alphanumeric
- isalpha()
  - Check whether the character is alphabetic
- toupper()
  - Return the uppercase value of a character

fstream

- To read inputs from an external file
- ifstream in_file;
  - Input stream class to operate on files.
- in_file.open(filename);
  - Opens the file identified by argument filename
- Run your code
  - ./myCode myFile.txt
  - myFile.txt is passed as a command line argument

First Steps

- Go to **COEN79L Camino** Page, then under **Files->Lab Projects->Lab 1**
- Open Terminal/ XCode
- Create a new directory in Terminal (**mkdir ~/COEN79**)
- Enter COEN79 directory (**cd ~/COEN79**)
- Create C++ file using vi (**vi lab1.cpp**):
  - **lab1.cpp** - Your main file that includes all logic
- Write Code
  - Test each working segment you write. **DON'T WAIT TO TEST AT THE END**
- Compile your code (**g++ lab1.cpp**) or (**g++ lab1.cpp -o lab1**)
  - Will report syntax errors if there are any
- Execute your code (**./a.out**) or (**./lab1**)

Grading

- 10 points - Attendance
- 90 points - Projects
  - 20 points - commenting and style
  - 70 points - correctness