CS 141
Lab 02: First C++ Program
Odin How-To Guide

http://web2.clarkson.edu/class/cs141/submit_howto.html
Objective

• Basic Ideas about Compiler
• Be familiar with g++ command
• Write and compile your first C++ program
Compile a program

Hello World!

Your program

Translate

010100110
100101010

Binary Code

Executable

Link

Common System Library
Language and Compiler

- C++ Language is an ISO Standard
  - https://isocpp.org/std/the-standard
  - C++ 03  C++ 11  C++ 14
- Please note that the standard is not intended to teach how to use C++.
  Rather, it is an international treaty – a formal, legal, and sometimes mind-numbingly detailed technical document intended primarily for people writing C++ compilers and standard library implementations.
- C++ Compiler is a software written by someone
  - Open Source vs. Commercial
  - Fully comply with the standard vs. not
Compiler on Different OS

• Compiler is the tool that convert Program to Executables
• Linux
  – GNU Compiler Collection (GCC)
• Windows
  – Visual Studio
  – MinGW (Windows version of GCC)
• Mac
  – Xcode (Comes with GCC)
Use G++ to compile C++ program

- G++ is GCC’s compiler for C++ language
- g++ [options] file...
  - Be aware of the case
  - g++ --help to see available options
- g++ sample.cpp –o sample
  - What happens if you don’t add –o ?
Task 1: Play with g++

• Download the following files and compile them with g++
  – www.clarkson.edu/class/cs141/lab2/test1.cpp
  – www.clarkson.edu/class/cs141/lab2/test2.cpp
  – www.clarkson.edu/class/cs141/lab2/test3.cpp
  – Command Example: g++ test1.cpp –o test1
  – Each of the above files will give you an error message

• Record all error messages into one text file named text.txt and upload it to Odin folder: /home/students
Task 2: What is your name?

- You are required to write a program and upload your source code to Odin.
  - Template:
    - www.clarkson.edu/class/cs141/lab2/task2_t.cpp
- Objective:
  - This program should output your id and your full name in two separated lines.
- Upload to Odin:
  - /home/students /<yourid>/lab2/
Task 3: Echo

- You should write a program that waits for user to input a number
- Your program will output this number and quit
- Upload your work to Odin:
  - /home/students/<yourid>/lab2/
- Template
  - www.clarkson.edu/class/cs141/lab2/task3_t.cpp
- Altogether you should have 3 files in your /home/students/<yourid>/lab2/
  - test.txt
  - task2_t.cpp
  - task3_t.cpp
Task 2: Example Output
My ID is gurajas
My Full Name is Supraja Gurajala

Task 3: Example Output
3
Your input: 3