CS 3005: Programming in C++

Hello, world!

Introduction

You need to setup your development environment to complete work in this course. This assignment will require you to install the build tools for C++, an appropriate editor, <code>git</code>, and <code>make</code>. You will also be required to create a <code>GitHub</code> account, use it to join the <code>GitHub</code> Classroom for this course, and checkout your <code>GitHub</code> repository.

Assignment

Create a "Hello, world!" program in C++. This function's console output must be "Hello, world!" followed by a newline character. It must also have an exit status of $\boxed{0}$ (zero).

Programming Requirements

Create program-hello/hello.cpp

Functions

• [int main(); Sends the message [Hello, world!] to the standard output stream; Returns value [0] (zero).

Create program-hello/Makefile

This file must contain rules such that any of the following commands will build the hello program:

- make
- make all
- make hello

Create program-hello/.gitignore

The file program-hello/.gitignore needs to store one line of text:

hello

This will prevent the executable program [hello] from being committed to the repository. It is a *derived file*.

Create Makefile

Create a project-level Makefile so that running make or make all (all should be the default target) in the project directory will call make in the program-hello directory. The command to call a different Makefile within make is make -C {NEW_DIRECTORY} {TARGET}]. Since you will create your program-hello Makefile to build the program as the default target, we do not need to specify a target here. Thus your command in your project-level Makefile can be make -C program-hello. This should be called under the default all target.

Additional Documentation

• Tutorial for Make

Grading Instructions

To receive credit for this assignment:

- your code must be pushed to your repository for this class on GitHub
- all acceptance tests must pass
- all programs must build, run, and execute as described in the assignment descriptions.

Extra Challenges (Not Required)

• Create an additional program cs3005 that displays the message "Hello, CS 3005!".

- Create an additional program roses that displays the words to "Ring around the rosie".
 Make your program write Hello, world! in green. Test this against the unit tests. Does it still pass? Why or why not?
 - <u>List of Ansi color escape sequences</u>
 - Type man reset to learn about the reset command to reset your terminal if it has gotten into a bad state from control codes.