CS 111 - Homework 7

Deadline

11:59 pm on **Friday, October 25, 2024**

Purpose

To get more comfortable and familiar with C++ simple expressions and basic data types, and to practice again compiling and running another (provided) C++ program in the CS50 IDE at https://cs50.dev/.

How to submit

You complete **Problems 1, 2, and 3** on the course Canvas site (short-answer questions on C++ simple expressions and basic data types), so that you can see if you are on the right track.

Then, you will submit your work for **Problem 4**, in your files `111hw7.cpp` and `111hw7-out.txt`, on the course Canvas site.

Important notes

* If you did not complete the Week 8 Lab Exercise, follow the link "Week 8 Lab Exercise" on the course Canvas site, under Modules, in the Lab Exercises section, for instructions on getting a GitHub account, which is used as part of the CS50 IDE setup.

Problem 1 - 20 points

Problem 1 is correctly answering the "HW 7 - Problem 1 - Short-answer questions on C++ simple expressions and basic data types - getting started" on the course Canvas site.

Problem 2 - 32 points

Problem 2 is correctly answering the "HW 7 - Problem 2 - Short-answer questions giving the types for C++ simple expressions - multiple-choice" on the course Canvas site.

Problem 3 - 32 points

Problem 3 is correctly answering the "HW 7 - Problem 3 - Short-answer questions giving the types for C++ simple expressions - short-answer" on the course Canvas site.

Problem 4 - 16 points

Practice, again, compiling and running a provided program that you modify slightly in the CS50 IDE, as you did in the Week 8 Lab Exercise.

* Open the CS50 IDE: https://cs50.dev/

   – You probably will **not** have to log in again -- but if you are asked to, sign in with your GitHub login.

* There is a file `111hw7.cpp` posted along with this handout.

   – COPY its contents into a file in the CS50 IDE, and name that file `111hw7.cpp`.

   – EDIT your `111hw7.cpp` to contain YOUR NAME in the comment in the beginning (about line 14), and to contain YOUR NAME in the `cout` statement on about line 71,

     and **SAVE** your file (File menu -> Save, or type Control-S (Windows) or Command-S (Mac))

- READ through it -- we'll be talking about the syntax for declaring C++ named constants and functions this week, and you can see some examples here.

    - OPTIONAL: IF you would like, you can add additional `cout` statements at the end of the `main` function to try out printing the values of different expressions to standard output.

- RIGHT-CLICK on the file's name **`111hw7.cpp`** on the left-hand-side,

    SCROLL down, and select **"Open in Integrated Terminal"** -- this opens a Terminal whose current folder IS the folder with your file **`111hw7.cpp`**

- To **COMPILE** your program, IN the Terminal, enter:

    `g++ 111hw7.cpp -o 111hw7`

- IF you have no compiler errors, then to **RUN** your program, IN the Terminal, enter:

    `./111hw7`

    (there are NO BLANKS here!)

- When you are satisfied with your program's output, go to the next step.

• In the Terminal, you can **redirect** the output of a command to a file by following that command with:

> *desired_file_name*

- So, create an example output from running your program to submit to Canvas by running the following command in the CS50 IDE Terminal (open in the folder with your program in it!):

    `./111hw7 > 111hw7-out.txt`

• RIGHT-CLICK again on the file's name **`111hw7.cpp`** on the left-hand side,

SCROLL down, and select **"Download"** to download a copy of your **`111hw7.cpp`** to the local or Google drive folder of your choice.

Also download a copy of your file **`111hw7-out.txt`** the same way.

- Now **SUBMIT** your downloaded files **`111hw7.cpp`** and **`111hw7-out.txt`** to Canvas as your Homework 7 - Problem 4 submissions.