Homework 1

Due 23 January 2022, 11:59pm

**Name**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_

**What to submit**:

* For text response:

Create a pdf file that shows all your answer for problems that requires text response. Upload this file to Gradescope.

* For programming:

For each programming question, run `make submission` to generate a zip file and upload it into Canvas.

**Questions**:

1. (text response) Carrano CH 1 Exercise 2 (copied below)

Graphical user interface, text, application

Description automatically generated

You answer.

1. (text response) Carrano CH 1 Exercise 9 (copied below)

Graphical user interface, text, application, email

Description automatically generated

Your answer.

1. (programming) Create an implementation of `Bag` class.

Read the slides for definition of methods in `Bag` class. Use the provided starter code – if you followed the instructions in hw0 to access the starter code, the starter code for this assignment is in the hw01 directory. The bag interface is defined in bag.hpp and the implementation should be added to bag.tpp. **Do not change the names of any of the pre-defined methods.** The file bag\_tests.cpp has the skeleton of a test case. You also need to write as many test cases as you can to thoroughly test and check your class implementation.

Run the following in the terminal from the hw01/bag directory:

* cmake .
* make
* ./bag-tests

The files are designed to build and run out of the box. But there is no class implementation, so if you tried to write an actual test, it should fail. So, you need to implement the class. Each time you modify your code, run make, then run the tests (the last two commands above).

When you have completed the assignment, run the following to generate a zip file hw1\_bag.zip that you will submit via Canvas:

* make submission

or

* cmake --build . --target submission