CSC 340: Project 2
Implementing csc340_vector Class
Due Date: Monday, April 2nd 2018 @ 8pm PDT

You will be implementing your own version of std::vector called csc340_vector. All the files you need are included in this tgz. In particular, you should **only edit the file *csc340_vector.h*** (the other files should not be changed). There are comments detailing what the methods should do – read those carefully to ensure you handle all the possible cases.

A Makefile and testing program are included as well, and should be executed to verify your program compiles using standard Linux g++ tools and functions correctly. You are free to use any IDE you prefer, but you must ensure that your program compiles and runs in a modern Linux environment using g++ and C++11 (as that is the system I will be using to grade the project).

To run the Makefile version on Linux, you just execute the following commands:

```
$ make
$ ./csc340_vector_test
```

The first command will compile your code and make an executable and the second command runs a simple test harness to validate your code. Those tests will be what I run to grade your project, in addition to manually looking at your code for proper style and memory management, so make sure all the tests are passing before submitting.

This project should be done individually and without sharing your solution with other students.

You should **not** use std::vector (or any other C++ STL container), but rather you are creating your own to act like std::vector (leveraging dynamic arrays for the storage). In fact, there should be **no `#include` statements** within csc340_vector.h. Additionally, to simplify things, your csc340_vector class only needs to handle primitive data types (int, double, etc.) rather than full classes with construction semantics.

Additionally, part of the grading criteria for this project will be style and commenting, so make sure to follow a consistent coding style to make the code more readable.

Make sure to fill in your ID details in the comment at the top of *csc340_vector.h*, and submit only that file via iLearn prior to the project deadline. I will not be accepting late submissions, so ensure you get it submitted before the deadline.