CS-405-10861-M01 Secure Coding 2024 C-3

4-2 Milestone: Unit Testing

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**Initial Results:**

By reviewing the code and running the file, I better understood the test file provided. When placed alongside the guide for the Google test, the results provided a comprehensive view of what I was working toward in the assignment prompts. The screen captures below demonstrate the initial results from the debug console and the test explorer, further enhancing the clarity of my understanding.

A screenshot of a computer program

Description automatically generated

A screenshot of a computer

Description automatically generated

**Approach Details:**

The approach is outlined within the TODO lines in the test file and the assignment prompts. After creating the Google test project in Visual Studio, the test would not run. The “run test” selection was grayed out everywhere. After some searching, I discovered it was necessary to configure the remote test environment before use. Once this was done, I could run all tests and obtain the results defined in the initial results section. Reviewing the results next to the sample code helped me understand what tests were passing, failing, and the type of outcome. I kept the precompiled headers and commented out the “always fail” tests to ensure my results would all pass. I verified the logic for each test and then added criteria and logic for the final two tests. I selected pop\_back as it is a convenient way to remove the last element from a container and swap because it is often required to exchange elements between different containers. In addition to the usefulness of these commands when dealing with collections, the results are easy to verify with unit testing. Please see the final outputs from testing on the next page.

**Console & Test Explorer Outputs:**

**A screenshot of a computer

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**A screenshot of a computer

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