

Lab 1

CS321L Winter 2023, Professor Christopher Diggins

Assigned: Tuesday January 24th, 2023

Due: Sunday February 5th, 2023 (anytime before midnight)

Overview

This lab focuses on creating NUnit tests on Visual Studio. If you find a way to recreate the steps using Visual Studio for Mac and another unit test framework (e.g., xUnit) that is acceptable, but it is not recommended.

Tasks

- A) Create an NUnit test project (.NET Framework 6).
- B) In that project create a static test function named “TestLiterals” to print the string representation run-time type of the following expressions. Run the test project from the “test explorer” window.
 - a. “Hello”, 123, 12.34, 1.23f, true, ‘t’, 0xFFul
- C) In the same project and file create a static test function “TestLetters” that loops through all ASCII codes (0 to 127) and print only letters. Use the system function “Char.IsLetter”
- D) Set a breakpoint in the loop of the “TestLetters” function.
 - a. Step through the code.
 - b. On the fifth iteration of the loop (loop index == 4), screen shot the “Locals Window”.

Submission

Submit a zip file containing the following:

- Screen shot of function output of the “TestLiterals()” function – **1 point**
- Screen shot of function output of the “TestLetters()” function – **1 point**
- Screen shot the “Locals Window” on the fifth iteration of the “TestLetters” loop – **1 point**
- C# code file (.cs) containing the “TestLiterals()” and “TestLetters()” function – **1 point**

Resources

- Running Unit Tests with Test Explorer in Visual Studio 2022 - <https://learn.microsoft.com/en-us/visualstudio/test/run-unit-tests-with-test-explorer?view=vs-2022>
- Debugging Unit Tests with Test Explorer in Visual Studio 2022 - <https://learn.microsoft.com/en-us/visualstudio/test/debug-unit-tests-with-test-explorer?view=vs-2022>
- Inspect Variables in the Autos and Locals Windows - <https://learn.microsoft.com/en-us/visualstudio/debugger/autos-and-locals-windows?view=vs-2022>
- Testing Tools for Visual Studio for Mac - <https://learn.microsoft.com/en-us/visualstudio/mac/testing?view=vsmac-2022>
- Data visualizations for Visual Studio for Mac - <https://learn.microsoft.com/en-us/visualstudio/mac/data-visualizations?view=vsmac-2022>