

Lab 2

CS321L Winter 2023, Professor Christopher Diggins

Overview

This lab will explore creating solutions with multiple projects, sharing code between projects, and using visual studio.

Tasks

- A. Create a solution file named Lab2.sln
- B. Add an NUnit test project named: Lab2UnitTests.csproj
- C. Add a class library named: Lab2Common.csproj
- D. Add the following Console projects:
 - a. Lab2Type – outputs the contents of a file to standard-out. If no file is passed on the command-line it just outputs the contents of standard-in.
 - b. Lab2Sort – outputs lines from standard-in, in sorted order to standard-out
 - c. Lab2Find – outputs lines from standard-in that contain the specified string
- E. Add a reference to Lab2Common.csproj from each console project
- F. Place the main implementation code in Lab2Common
- G. Add a reference to Lab2Common.csproj from Lab2UnitTests.csproj
- H. Write some unit tests that test the functionality
- I. Compile and run the tests in Debug mode
- J. Compile and run the tests in Release mode

Each Console Project Should

- If passed “/?” on the command line (as any argument) do nothing except output a short description.
- Outputs to standard-out (e.g., using Console.WriteLine())
- If command line contains a file path open the file as standard input.
- If command line arguments are neither “/?” or a filepath
- If the command line is empty take its input from standard-in (e.g. using Console.ReadLine())
- Perform its task once it gets to the end of the input file or Console.ReadLine() returns null

Submission

Submit a zip file containing the following:

- Solution file, projects, source files, and release mode executables
- Screen shots (.PNG) demonstrating that each program works:
 - With a /? On command line
 - With a file name on command line
 - With input piped from standard input