

Uğur Yılmaz

1. Development Environment

- Microsoft Visual Studio 2013 Ultimate
- .NET Framework 4.5
- Microsoft.VisualStudio.QualityTools.UnitTestingFramework
- Moq

2. Program Logic

FileOperations and GraphOperations are separated and derived from different interfaces.

I used `FileSystemWatcher` class to detect changes on our input data file. The program reads data file and creates an image file of bar chart. Also, I manipulated console application window via using `kernel32.dll` and `interop` properties to show image file as output. You can see that at screenshots(*4) section in the report.

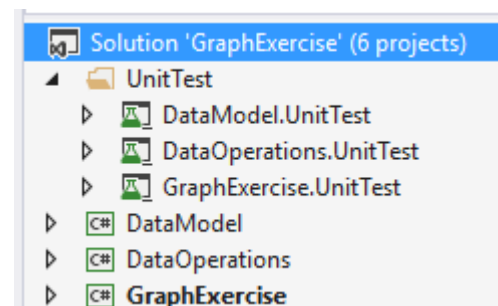
On the other hand, I wrote unit tests for all assemblies because of TDD implementation.

Note: I could use `nunit` and `Mock` to improve my unittests, however this was a small project and visual studio unittest framework and Moq has enough capabilities.

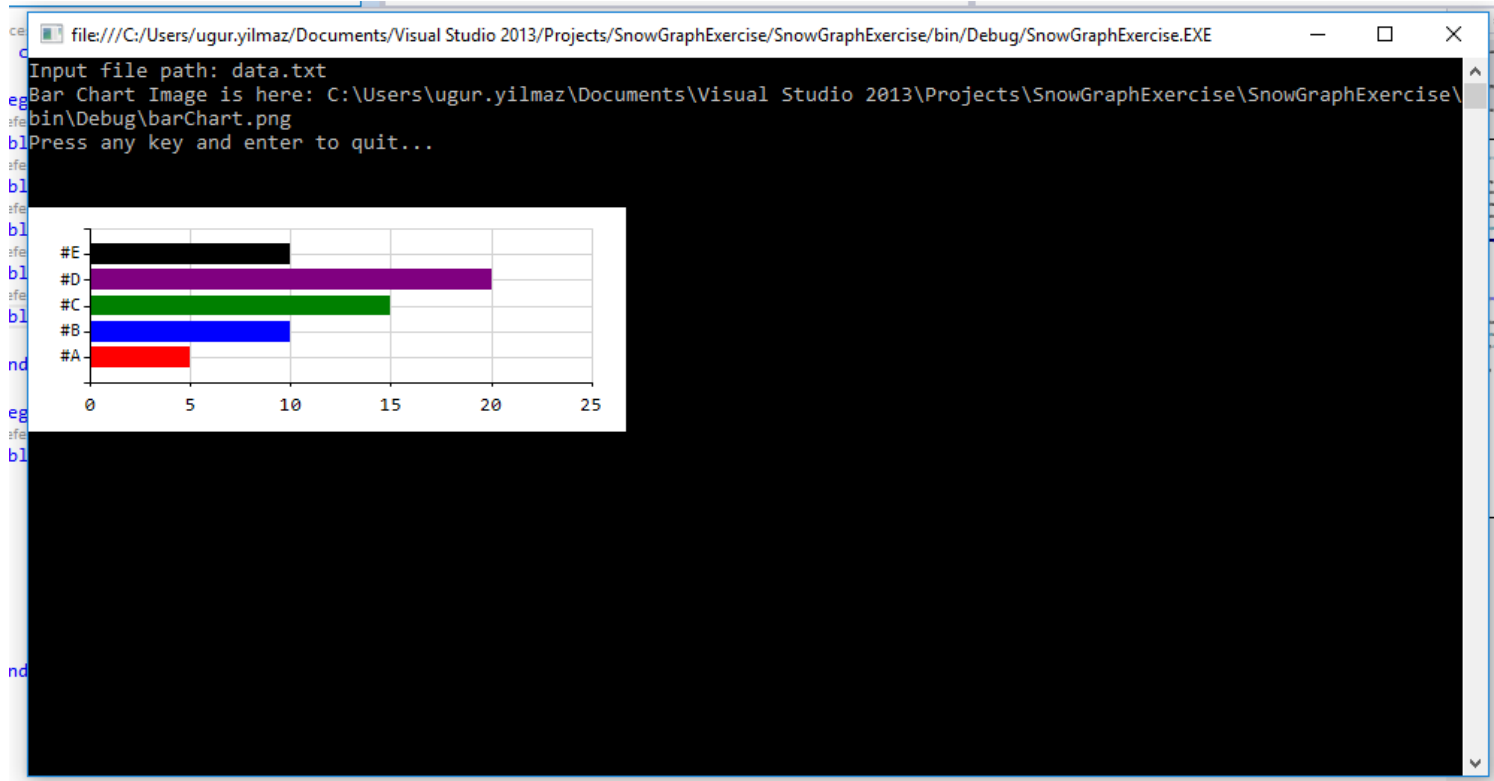
I used `Console.ReadLine` to keep program open and detect for changes of data file. For the improvement; if this would be a real project, Windows service or an ETL would be a better call to check changes of data file, infinitely.

3. Project Files and Interfaces

- GraphExercise
- DataOperations
 - o IDataOperations
 - o IGraphOperations
- DataModel
 - o IDataFile
 - o IGraphItem
- GraphExercise.UnitTest
- DataOperations.UnitTest
- DataModel.UnitTest



4. Screenshots



Passed Tests (13)		
✓ DataFileDirectoryIsCorrect		< 1 ms
✓ DataFileFullPathIsCorrect		5 ms
✓ DataFileNamesCorrect		< 1 ms
✓ DrawGraphAsImagesWorking		83 ms
✓ GraphIsNullOrEmptyAtTheMoment		< 1 ms
✓ GraphItemColorsCorrect		< 1 ms
✓ GraphItemNamesCorrect		< 1 ms
✓ GraphItemValuesCorrect		< 1 ms
✓ GraphItemValuesNotConvertibleAndWePutZero		< 1 ms
✓ PopulateValues		690 ms
✓ RunMain		739 ms
✓ RunMainInvalidFile		< 1 ms
✓ VisualizeChartsWorking		74 ms

Code Coverage Results				
ugur.yilmaz_UGURYILMAZ 2016-11-12 17_4: [Icons]				
Hierarchy	Not Covered (Blocks)	Not Covered (% Blocks)	Covered (Blocks)	Covered (% Blocks)
ugur.yilmaz_UGURYILMAZ 2016-...	20	%4,69	406	%95,31
└─ datamodel.dll	2	%9,09	20	%90,91
└─ datamodel.unittest.dll	2	%4,76	40	%95,24
└─ dataoperations.dll	5	%3,79	127	%96,21
└─ dataoperations.unittest.dll	8	%4,79	159	%95,21
└─ graphexercise.exe	3	%8,33	33	%91,67
└─ graphexercise.unittest.dll	0	%0,00	27	%100,00

Thank You!