

Iceland Inventory Demonstrator

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Introduction

This project was developed from a specification provided by Iceland as part of a technology test forwarded to me. The resulting application project follows.

Overview

The supplied solution provides a Windows Forms application into which an XML table of inventory items can be loaded and processed as per Iceland's specification, and the corresponding results displayed.

The business functionality is provided by a number of self contained classes designed for use by any compatible technology for a front end, console application or a passive batch process. In this instance Windows Forms has been used for the front end.

The solution was developed using Visual Studio 2019.

The kit consists of a Visual Studio solution consisting of the following projects

Inventory Report

This is the startup project for the application.
A Windows Forms project providing a front end to the classes.

Inventory Management

The main functionality classes, separated by Business logic and a Data layer.

Inventory Tests

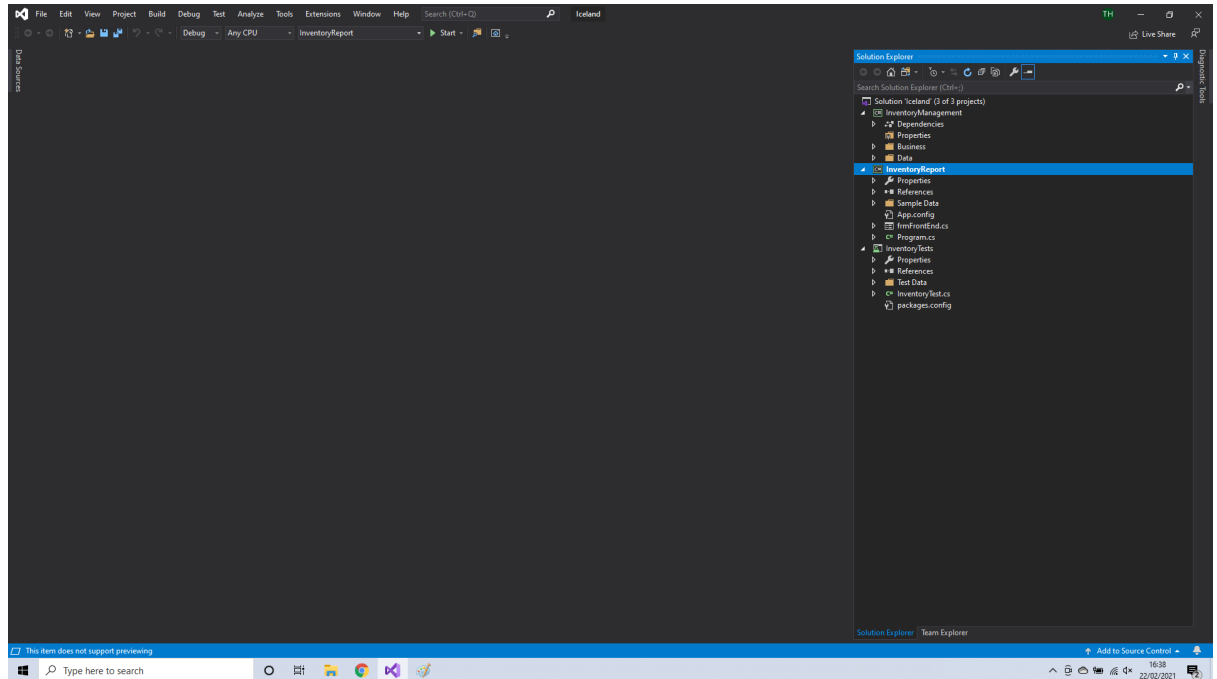
Unit tests for the classes in Inventory Management.

Instructions for use

For the purposes of demonstration and reviewing the code I recommend the project is loaded and executed through the Visual Studio IDE as follows.

Opening solution

1. Navigate to the installed folder.
2. Double click Iceland.sln. The IDE loads the solution with its three projects.

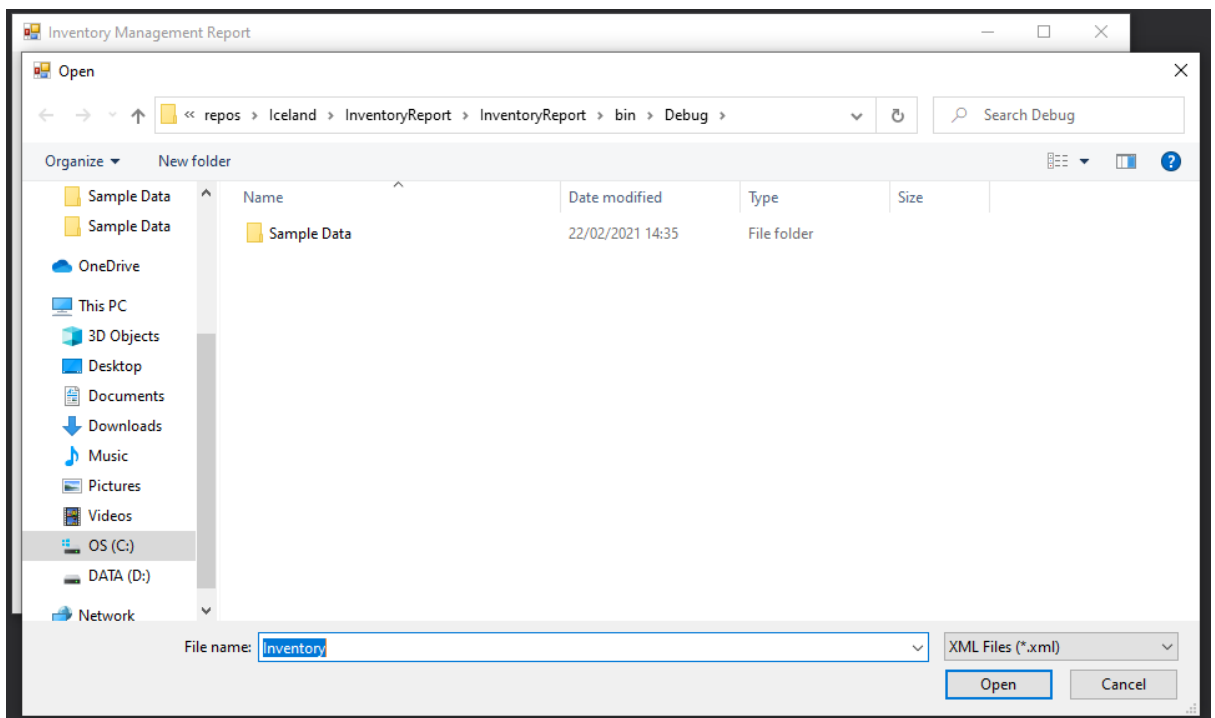


Executing solution

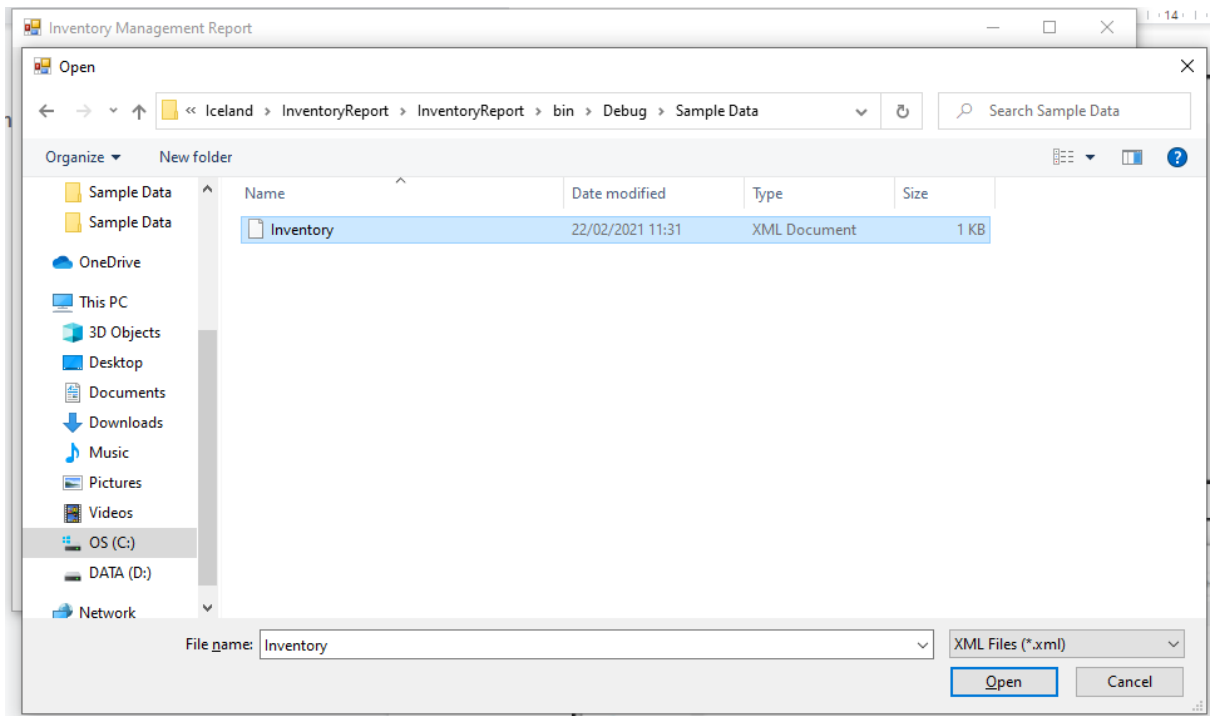
Press <F5> to run from the IDE. The following form appears



Click on File, an open dialogue appears.



The folder Sample Data is provided with a copy of the test data from the specification.



Double click Inventory. The application processes the input Inventory and displays two grids.

Inventory Management Report

File

C:\Users\al264\source\repos\Iceland\InventoryReport\InventoryReport\bin\Debug\Sampl

Output

	name	sellIn	quality
▶	Aged Brie	1	1
	Christmas Crackers	-1	2
	Christmas Crackers	9	2
	Soap	2	2
	Frozen Item	-1	55
	Frozen Item	2	2
	INVALID ITEM	2	2
	Fresh Item	2	2
	Fresh Item	-1	5

	outName	outSellIn	outquality
▶	Aged Brie	0	2
	Christmas Crackers	-2	0
	Christmas Crackers	8	4
	Soap	2	2
	Frozen Item	-2	50
	Frozen Item	1	1
	NO SUCH ITEM		
	Fresh Item	1	0
	Fresh Item	-2	1

The left grid is the input as read from Inventory.xml. The right is the resulting output from processing as per the specification.

Code Review

I suggest the class ReportData in the Inventory Management.BusinessRules as a starting point..

Unit Testing

Unit tests are loaded as part of the complete solution as supplied in the project Inventory Tests. This project also contains its own copy of Inventory.xml used in the tests themselves. Note this file is supplied separately from the sample provided in the project Inventory Report.

The unit tests may be executed within the Visual Studio IDE as follows.

1. From the installation folder double click Iceland.sln.
2. From the menu bar, Click on Test.
3. Press CTRL R,V to execute the unit tests. The test output appears as follows.

