



# C# PROGRAMMING PROJECT - PART B DEVELOPER DOCUMENTATION

SUBMISSION 1

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## Introduction

The contents of this document will provide a general overview of the functions of this application and how the application performs those functions.

## Overview

The WoodStocks Stock Count Software is a simple Windows Forms Application which loads data from a comma delimited csv file and displays the contents on screen in a data table, allowing the user to change data fields, add new items and reorder the visual sorting order for each item.

The application uses StreamReader to retrieve data from the file line by line. Each line that comes in gets separated into its component fields and those fields are used to make the line into an object of type "item". Each item is added to a List of Items, and that list is then passed into the Data Grid View which then displays the Item List for the user.

The application utilises Language Integrated Query (LINQ) for re-ordering the list depending on the selected field.

Saving to file casts the current information from the Data Grid View into a List of Items, which is then iterated over and used by StreamWriter to write line by line, the data fields for each item.

Each code block in the source code has been commented for clarity.

## Classes and Code Blocks

The application is separated into two projects (excluding tests). A data layer and a user interface (UI) layer.

**Contained in the UI Layer (WSSC.UI) the WoodStocks Stock Counter.cs file contains code for:**

- Binding to and displaying the Data Grid View
- Calling for validation from outside methods
- Construction of Data Repository objects
- Message Boxes for user confirmation and error handling
- Calls to external methods for List sorting
- Event handling for Data Grid View
- Calls to external methods for saving

**Contained in the Data Layer (WSSC.DL) the DataRepository.cs class contains code for:**

- The default directory path
- Class constructors
- Stream Writer to write to file
- Stream Reader to read from file
- Message Boxes and Try Catch for error handling
- LINQ methods for data sorting
- Methods for Item creation and List<Item> creation

**Contained in the Data Layer (WSSC.DL) the Item.cs class contains code for:**

- Properties
- String override

**Contained in the Data Layer (WSSC.DL) the Validator.cs class contains code for:**

- Data validation

## Further Details

Upon loading, the software populates the Data Table with data from C:/StockFile/stocklist.csv (as per the requirement) however because this path is hardcoded into the software it may potentially pose a problem in the future if the user wishes to keep the stock list in a different location.