# CST8130 – Data Structures

# Assignment <#1> – Test Plan

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## <Main Menu Options>

| Description of Test | Input Values | Output / Result | Pass/Fail |
| --- | --- | --- | --- |
| * 1. Valid Options | 1,2,3,4,5 | Resulting feature will be as described in the following tables | Pass |
| * 1. Invalid input | Any integer value other than valid options | Error message is displayed, user is informed that They must enter a value from 1-5 and then menu is displayed | Pass |
| * 1. Invalid input | Any character A-z | Error message is displayed, user is informed that They must enter a value from 1-5 and then menu is displayed | Pass |
| * 1. Invalid input | Special characters | Error message is displayed, user is informed that They must enter a value from 1-5 and then menu is displayed | Pass |
| * 1. Invalid input | Whitespace | Will not be entered white space will be ignored until characters are entered | Pass |

## <Test on Empty Data>

| Description of Test | Input Values | Output / Result | Pass/Fail |
| --- | --- | --- | --- |
| 1. Initialize array | 1 | Array initialized and then item is added | Pass |
| 1. Display stock data | 2 | User is told there is no inventory | Pass |
| 1. Buy items | 3 | User is told there is no inventory | Pass |
| 1. Sell items | 4 | User is told there is no inventory | Pass |
| 1. Search for item | 5 | User is told there is no inventory | Pass |
| 1. Save inventory | 6 | User is told there is no inventory | Pass |
| 1. Read inventory | 7 | Inventory object is initialized ask user is asked for file name | Pass |
| 1. exit | 8 | Exits program | Pass |

## <Adding Items to Inventory >

| Description of Test | Input Values | Output / Result | Pass/Fail |
| --- | --- | --- | --- |
| 1. Add item to inventory | 1 | User is prompted to enter f, v, or p to create a item | Pass |
| 1. Add items to inventory (invalid input) | 1, followed by anything other than f, v, p | User is prompted to enter f, v, or p to create a item | Pass |
| 1. Add items to inventory (valid input) | 1, followed by f, v, p | User is prompted to enter an item code | Pass |

## <Add Item – Enter code for the Item>

| Description of Test | Input Values | Output / Result | Pass/Fail |
| --- | --- | --- | --- |
| 1. Valid input | Any positive integer | Input is accepted and user is prompted to enter a name for the product | Pass |
| 1. Invalid input | Anything other than a positive integer | Error message is displayed and user is asked to reenter code | Pass |
| 1. Invalid input | Matching value | Error code displated and return to main menu | pass |

## <Add Item – Enter name for Item>

| Description of Test | Input Values | Output / Result | Pass/Fail |
| --- | --- | --- | --- |
| 1. Valid input | Enter anything | User is prompted to enter quantity for the item | Pass |

## <Add Item – Enter Quantity for Item>

| Description of Test | Input Values | Output / Result | Pass/Fail |
| --- | --- | --- | --- |
| 1. Valid input | Positive integer | User is prompted to enter cost for the item | Pass |
| 1. Invalid input | Anything other than a positive integer | Error message is display and user is prompted to enter a positive integer | Pass |

## <Add Item – Enter Cost for Item>

| Description of Test | Input Values | Output / Result | Pass/Fail |
| --- | --- | --- | --- |
| a.Valid input | Positive value | User is prompted to enter sales price for the item | Pass |
| b.Invalid input | Anything other than a positive value | Error message is display and user is prompted to enter a positive integer | Pass |

## <Add Item – Enter Sales price for Item>

| Description of Test | Input Values | Output / Result | Pass/Fail |
| --- | --- | --- | --- |
| 1. Valid input | Positive value | User is prompted to enter orchard supplier, farm name or size of jar for the item depending on the object selected to created | Pass |
| 1. Invalid input | Anything other than a positive value | Error message is display and user is prompted to enter a positive integer | Pass |

## <Add Item – Enter Orchard Supplier Name for Item>

| Description of Test | Input Values | Output / Result | Pass/Fail |
| --- | --- | --- | --- |
| a.Valid input | Enter anything | Item is created. User is brought back to main menu | Pass |

## <Add Item – Enter Farm name for Item>

| Description of Test | Input Values | Output / Result | Pass/Fail |
| --- | --- | --- | --- |
| a.Valid input | Enter anything | User is prompted to enter quantity for the item | Pass |

## <Add Item – Enter Jar Size for Item>

| Description of Test | Input Values | Output / Result | Pass/Fail |
| --- | --- | --- | --- |
| 1. Valid input | Enter positive int | Item is created. User is brought back to main menu | Pass |
| 1. Invalid input | Anything other than positive int value | Error message is displayed and user is prompted to re enter value | pass |

## <Display Item>

| Description of Test | Input Values | Output / Result | Pass/Fail |
| --- | --- | --- | --- |
| 1. Valid input | 2 | Inventory will be displayed in order | Pass |

## <Buy Item – Enter valid item code>

| Description of Test | Input Values | Output / Result | Pass/Fail |
| --- | --- | --- | --- |
| 1. Invalid input | Anything other than a itemcode that matches item code in inventory | Error message and then menu comes back | Pass |
| 1. Valid input | Item code enter matches that of item code inventory | User is prompted to enter a valid quantity | Pass |

## <Sell Item – Enter valid item code>

| Description of Test | Input Values | Output / Result | Pass/Fail |
| --- | --- | --- | --- |
| 1. Invalid input | Anything other than a itemcode that matches item code in inventory | Error message and then menu comes back | Pass |
| 1. Valid input | Item code enter matches that of item code inventory | User is prompted to enter a valid quantity | Pass |

## <Buy Item– Enter Quantity for Item>

| Description of Test | Input Values | Output / Result | Pass/Fail |
| --- | --- | --- | --- |
| 1. Valid input | Positive integer | The value inputted will be added to the stock | Pass |
| 1. Invalid input | Anything other than a positive integer | Error message is display and user is prompted to enter a positive integer | Pass |

## <Sell Item– Enter Quantity for Item>

| Description of Test | Input Values | Output / Result | Pass/Fail |
| --- | --- | --- | --- |
| 1. Valid input | Positive integer | The value inputted will be subtracted from the stock | Pass |
| 1. Invalid input | Anything other than a positive integer | Error message is display and user is prompted to enter a positive integer | Pass |
| 1. Valid input but larger than stock | Positive integer | User is told that value is greater than stock and that amount cannot be sold. Main menu showing | Pass |

## <Search for Item >

| Description of Test | Input Values | Output / Result | Pass/Fail |
| --- | --- | --- | --- |
| 1. Valid input | Valid item code | Object with that item code will be displayed | Pass |
| 1. Invalid input | Anything other than a positive integer | Error message is display and user is prompted to enter a positive integer | Pass |
| 1. Valid input but item code doesn’t exist | Positive integer | User is told that the item code doesn’t exist | Pass |

## <Save file >

| Description of Test | Input Values | Output / Result | Pass/Fail |
| --- | --- | --- | --- |
| 1. Valid input | User is prompted to enter a file name | A file will be created and all inventory information will be saved in it | Pass |

## <Read File>

| Description of Test | Input Values | Output / Result | Pass/Fail |
| --- | --- | --- | --- |
| 1. Valid input | Correct file name that exists in directory | Objects will be created using user information | Pass |
| 1. Invalid input | Invalid file name that doesn’t exist in the directory | User is informed that the file doesn’t exist and is prompted to the main menu | Pass |
| 1. Valid input | File is in directory but there is an error or a match itemCode | Objects will be created until there is an error the object that contains the error will be deleted. The readFile method will stop running and user will be prompted there is an error and is sent to the main menu | Pass |