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| Course Name : | CST 8130 – Data Structure |
| Description : | Assignment 02 – Test Plan |
| Professor Name: | Dr. James Mwangi. |

1. Display of Main Menu.

| Sr. No. | Description of Test | Input Values | Expected Output | Actual Output | Results |
|---------|---------------------------------------|-----------------|--|--|---------|
| 1. | Valid Inputs | 1,2,3,4,5,6,7,8 | The code progress without error, 8 exits the program | The code progress without error, 8 exits the program | Pass |
| 2. | Invalid Inputs - digits | -1, -100, 100 | The console should print error message | The console prints an error of invalid message | Pass |
| 3. | Invalid Inputs – alpha characters | A, a | The console should print error message | The console prints an error of invalid message | Pass |
| 4. | Invalid Inputs - Symbols | @, \$ | The console should print error message | The console prints an error of invalid message | Pass |
| 5. | Invalid Inputs – white space and tabs | Space, Tab | The console should print error message | The console prints an error of invalid message | Pass |

2. Add Item to Inventory – Choice for new Instance (fruits , vegetables, preserves)

| Sr. No. | Description of Test | Input Values | Expected Output | Actual Output | Results |
|---------|---------------------------------------|----------------------|--|--|---------|
| 1. | Valid Inputs | f, F, p, P, v, V | The code progress without error | The code progress without error | Pass |
| 2. | Invalid Inputs - digits | 1, 2, 3, -4, -5, 100 | The console should print error message | The console prints an error of invalid message | Pass |
| 3. | Invalid Inputs – alpha characters | A, a | The console should print error message | The console prints an error of invalid message | Pass |
| 4. | Invalid Inputs - Symbols | @, \$ | The console should print error message | The console prints an error of invalid message | Pass |
| 5. | Invalid Inputs – white space and tabs | Space, Tab | The console should print error message | The console prints an error of invalid message | Pass |

3. Choice for Add Item Option.

| Sr. No. | Description of Test | Input Values | Expected Output | Actual Output | Results |
|---------|---|------------------------------|---|--|---------|
| 1. | Enter the item code (invalid inputs) | A, @, <space>, <tab> etc. | An error message should be displayed awaiting another user's input. | The console prints an error of invalid message | Pass |
| 2. | Enter the item code (valid inputs) | 4011 | Value entered successfully and code progress onwards. | The code progress without error | Pass |
| 3. | Enter the item name | Banana | Value entered successfully and code progress onwards. | The code progress without error | Pass |
| 4. | Enter the quantity for item (invalid inputs) | A, @, -1, <space>, <tab> etc | An error message should be displayed awaiting another user's input. | The console prints an error of invalid message | Pass |
| 5. | Enter the quantity for item (valid inputs) | 20 | Value entered successfully and code progress onwards. | The code progress without error | Pass |
| 6. | Enter the cost for item (invalid inputs) | A, @, -1, <space>, <tab> etc | An error message should be displayed awaiting another user's input. | The console prints an error of invalid message | Pass |
| 7. | Enter the cost for item (valid inputs) | 2.25 | Value entered successfully and code progress onwards. | The code progress without error | Pass |
| 8. | Enter the sales price for item (invalid inputs) | A, @, -1, <space>, <tab> etc | An error message should be displayed awaiting another user's input. | The console prints an error of invalid message | Pass |
| 9. | Enter the sales price for item (valid inputs) | 7.75 | Value entered successfully and code progress onwards. | The code progress without error | Pass |

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|-----|---|------------------------------|---|--|------|
| 10. | Enter the name of orchard supplier. (For fruit class) | Banana's Leaves | Value entered successfully and code progress onwards. | The code progress without error | Pass |
| 11. | Enter the name of farm's supplier. (For vegetable class) | Mac Donald's Farm | Value entered successfully and code progress onwards. | The code progress without error | Pass |
| 12. | Enter the size of jars in ml. (For Preserves, Invalid Inputs) | A, @, -1, <space>, <tab> etc | An error message should be displayed awaiting another user's input. | The console prints an error of invalid message | Pass |
| 13. | Enter the size of jars in ml. (For Preserves, valid Inputs) | 200 | Value entered successfully and code progress onwards. | The code progress without error | Pass |

4. Choice to Display the Inventory Contents.

| Sr. No. | Description of Test | Input Values | Expected Output | Actual Output | Results |
|---------|----------------------------------|--------------|--|--|---------|
| 1. | When the inventory is empty. | 2 | Display an empty inventory: Inventory: | Display an empty inventory: Inventory: | Pass |
| 2. | When the inventory is not empty. | 2 | <p>Outputs in one of the following formats: Item: <code> <name> <quantity> price: \$<price> cost: \$<cost> orchard supplier: <orchard></p> <p>Item: <code> <name> <quantity> price: \$<price> cost: \$<cost> farm supplier: <farm></p> <p>Item: <code> <name> <quantity> price: \$<price> cost: \$<cost> size: <size in mL>mL</p> | <p>Outputs in one of the following formats: Item: <code> <name> <quantity> price: \$<price> cost: \$<cost> orchard supplier: <orchard></p> <p>Item: <code> <name> <quantity> price: \$<price> cost: \$<cost> farm supplier: <farm></p> <p>Item: <code> <name> <quantity> price: \$<price> cost: \$<cost> size: <size in mL>mL</p> | Pass |

5. Choice for Buying the Items.

| Sr. No. | Description of Test | Input Values | Expected Output | Actual Output | Results |
|---------|---|-----------------------------------|---|---|---------|
| 1. | When the item code does not exist in the inventory. | 3 | An error message is displayed awaiting a valid user's input | An error message is displayed awaiting a valid user's input | Pass |
| 2. | When the code is found in the inventory. | 3 | Value is entered successfully, and the program progresses to ask the input for quantity | Value is entered successfully, and the program progresses to ask the input for quantity | Pass |
| 3. | Enter the quantity (Invalid Inputs) | \$, a, b, -1, -2 <space>,<tab> | An error message is displayed awaiting a valid user's input | An error message is displayed awaiting a valid user's input | Pass |
| 4. | Enter the quantity (Valid Inputs) | 100 | Value entered successfully and code progress onwards. | Value entered successfully and code progress onwards. | Pass |

6. Choice for Selling the Items.

| Sr. No. | Description of Test | Input Values | Expected Output | Actual Output | Results |
|---------|---|-----------------------------------|---|---|---------|
| 1. | When the item code does not exist in the inventory. | 4 | An error message is displayed awaiting a valid user's input | An error message is displayed awaiting a valid user's input | Pass |
| 2. | When the code is found in the inventory. | 4 | Value is entered successfully, and the program progresses to ask the input for quantity | Value is entered successfully, and the program progresses to ask the input for quantity | Pass |
| 3. | Enter the quantity (Invalid Inputs) | \$, a, b, -1, -2 <space>,<tab> | An error message is displayed awaiting a valid user's input | An error message is displayed awaiting a valid user's input | Pass |

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|----|--|-----|---|---|------|
| 4. | Enter the quantity (Invalid Inputs) { greater than present in the inventory } | 100 | An error message is displayed awaiting a valid user's input | An error message is displayed awaiting a valid user's input | Pass |
| 5. | Enter the quantity (Valid Inputs) | 10 | Value entered successfully and code progress onwards. | Value entered successfully and code progress onwards. | Pass |

7. Choice for Search for the Item.

| Sr. No. | Description of Test | Input Values | Expected Output | Actual Output | Results |
|---------|---|--------------|--|--|---------|
| 1. | When the item code does not exist in the inventory. | 5 | An error message is displayed stating "code doesn't not find in the inventory." | An error message is displayed stating "code doesn't not find in the inventory." | Pass |
| 2. | When the item code exists in the inventory. | 5 | <p>Outputs in one of the following formats: Item: <code> <name> <quantity> price: \$<price> cost: \$<cost> orchard supplier: <orchard></p> <p>Item: <code> <name> <quantity> price: \$<price> cost: \$<cost> farm supplier: <farm></p> <p>Item: <code> <name> <quantity> price: \$<price> cost: \$<cost> size: <size in mL>mL</p> | <p>Outputs in one of the following formats: Item: <code> <name> <quantity> price: \$<price> cost: \$<cost> orchard supplier: <orchard></p> <p>Item: <code> <name> <quantity> price: \$<price> cost: \$<cost> farm supplier: <farm></p> <p>Item: <code> <name> <quantity> price: \$<price> cost: \$<cost> size: <size in mL>mL</p> | Pass |

8. Saving Array List Elements to a File.

| Sr. No. | Description of Test | Input Values | Expected Output | Actual Output | Results |
|---------|---|---------------|---|---|---------|
| 1. | Enter the file name to save to (Successful) | Inventory.txt | No display to console, but creates an inventory.txt file (if doesn't exists prior) or updates the pre-existing inventory.txt file | No display to console, but creates an inventory.txt file (if doesn't exists prior) or updates the pre-existing inventory.txt file | Pass |
| 2. | Enter the file name to save to (Not - successful) | Inventory.txt | Error message is displayed stating – “Item code already exists Error Encountered while reading the file, aborting...” | Error message is displayed stating – “Item code already exists Error Encountered while reading the file, aborting...” | Pass |

9. Read from the File to the Array List.

| Sr. No. | Description of Test | Input Values | Expected Output | Actual Output | Results |
|---------|---|----------------|--|--|---------|
| 1. | Enter the file name to read from (Successful) | Inventory2.txt | No display to console, but adds the elements from file to array List, displays it when “display inventory” option is chosen. | No display to console, but adds the elements from file to array List, displays it when “display inventory” option is chosen. | Pass |
| 2. | Enter the file name to read from (Not – Successful) | Inventory2.txt | Error message is being displayed stating – “File Not Found, ignoring...” | Error message is being displayed stating – “File Not Found, ignoring...” | Pass |