Mattress Warehouse Inventory Management System:
User Guide

I. Introduction

The Mattress Warehouse Inventory Management System (MWIMS) creates a virtual Warehouse environment system that can be customized with a number of Aisles and Rows to store items created by the user. The software uses the following structure to store items. A Warehouse has a list of Aisles. An Aisle has a list of Rows, which can also be considered "floors" or "levels". And Rows store a list of Items. A functioning warehouse has at least one Aisle and one Row to store items in.
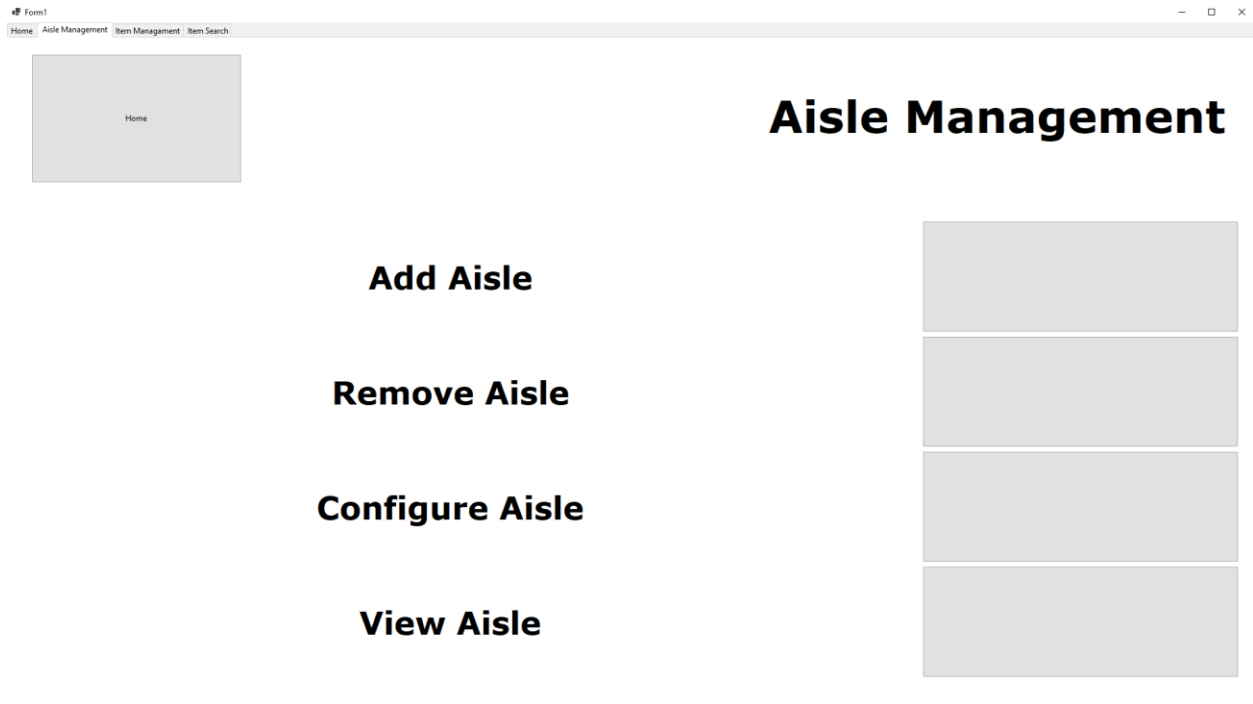
This guide will first explain every component of the software, and afterwards provide a first time use scenario on what to do when using the application for the first time.

II. Home Form

The MWIMS Home Form presents the user with the following three buttons: Aisle Management button, Item Management button, and Item Search button. Each button leads to a respective page from the Home Form and presents the user with additional choices. Each form tab also has a "Home" button on the top left of the page, which will take the user back to the home tab when pressed.
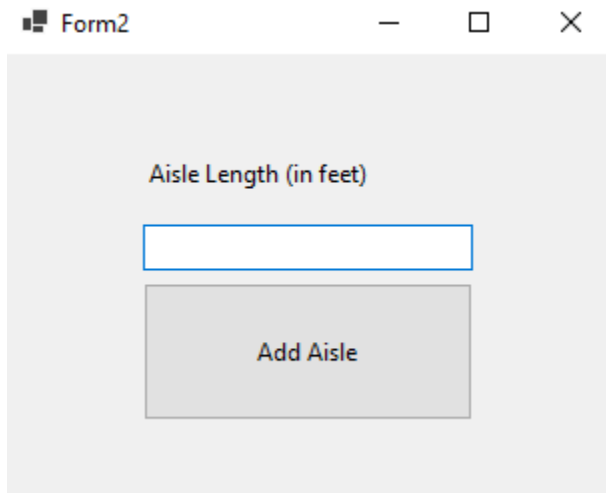
III. Aisle Management Tab

III.1 Add Aisle Form Button – Pressing this button will present the Add Aisle Form, a pop-up window with one input text box, and a button.
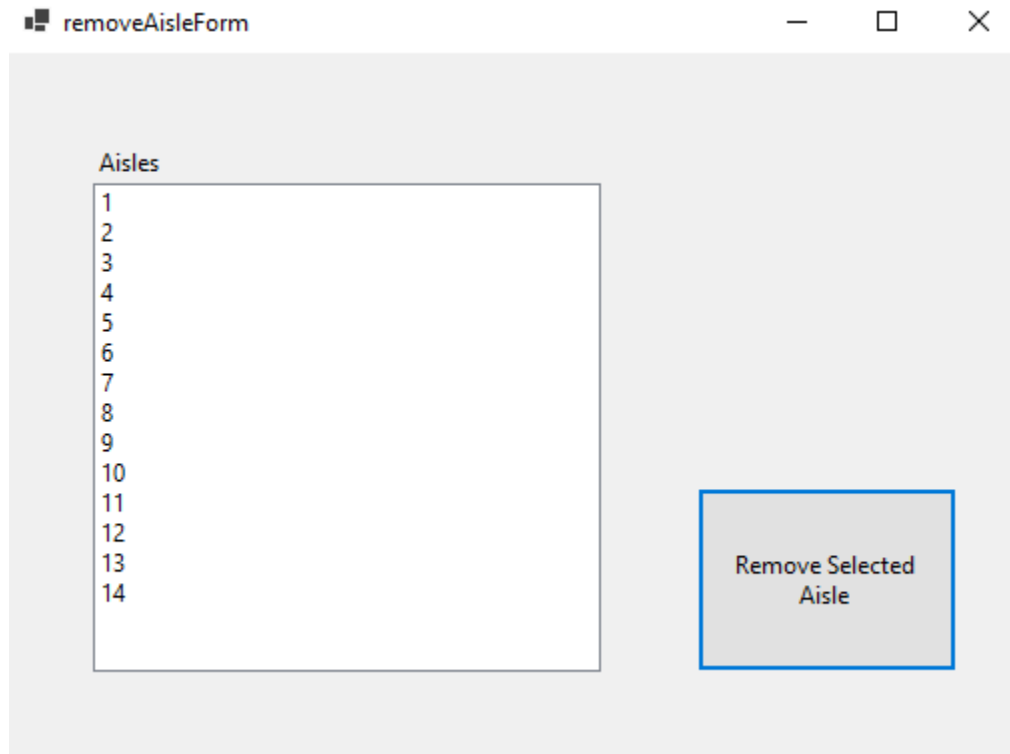

To add an Aisle, insert a numeric whole number for the aisle length in feet, and then press the "Add Aisle" button. Upon the button press, and aisle with the specified length will be created.

III.2 Remove Aisle Form Button – Pressing this button will present the Remove Aisle Form. This form is a pop-up window with a list and a button.

To remove an Aisle, select an aisle from the list on the left and press the "Remove Selected Aisle" button. The selected Aisle will be removed and deleted.

III.3 Configure Aisle Form Button – Pressing this button will present the configure form pop-up window. This window consists of a list of aisles, and input textbox, two buttons, and a list of rows.

The configure aisle form window allows a user to add or remove Rows from an Aisle. To add a
Row, select an Aisle from the Aisles list and enter a numeric input in the Row Height textbox.
Pressing the "Add Row" button will create a row with the specified height in inches in the
selected Aisle. To remove a Row, select an Aisle, and then select the Row you'd like to remove.
Pressing the "Remove Row" button will remove the selected Row from the selected Aisle.

III.4 View Aisle Form Button – Pressing this button present the View Aisle form pop-up
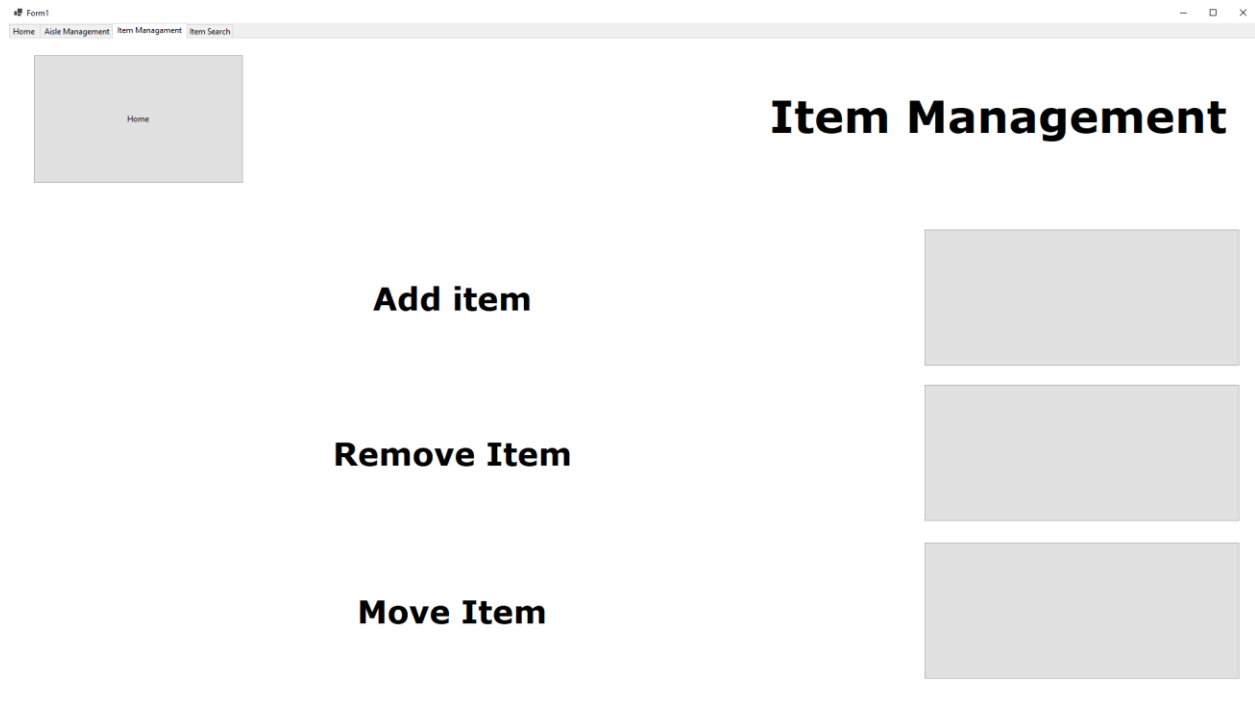window. This window consists of a list of Aisles and a list of Items.

Selecting an Aisle from the list on the left will display all items in that Aisle.

IV. Item Management Tab

Home | Aisle Management | Item Management | Item Search

Home

Item Management

Add item

Remove Item

Move Item

IV.1 Add Item Form Button – Pressing this button presents the Add Item Form pop-window.

addItemForm   —   □   ✕

| Add from Existing Item | | | | | | Add New Item | |

ID	Name	Manufacturer	Aisle	Row
4758	Sleepy's Hush Pillow Top King	Sealy	1	2
4758	Sleepy's Hush Pillow Top King	Sealy	1	2
4758	Sleepy's Hush Pillow Top King	Sealy	1	2
4758	Sleepy's Hush Pillow Top King	Sealy	1	2
4758	Sleepy's Hush Pillow Top King	Sealy	1	2
4758	Sleepy's Hush Pillow Top King	Sealy	1	2
4758	Sleepy's Hush Pillow Top King	Sealy	1	2
4758	Sleepy's Hush Pillow Top King	Sealy	1	2
4758	Sleepy's Hush Pillow Top King	Sealy	1	2
7845	Head Up 50 Queen	MFM	2	4
7845	Head Up 50 Queen	MFM	2	4
7845	Head Up 50 Queen	MFM	2	4
7845	Head Up 50 Queen	MFM	2	4

Item Type
○ Mattress
○ Foundation

Item Type
○ Base
○ Accessory

ID
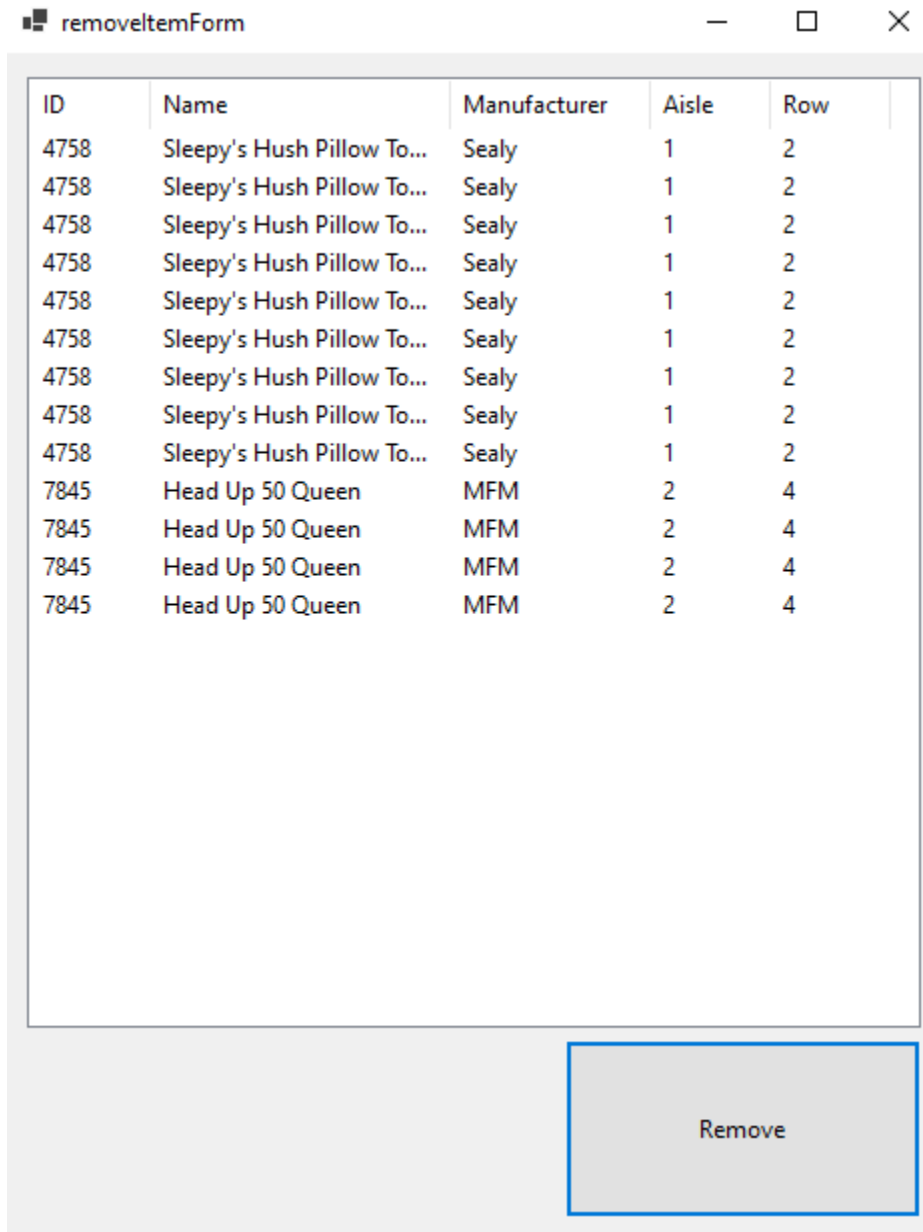
Name

Manufacturer

Size
Twin
TwinXL
Full
Queen
King

Width (in inches)

Location
Aisle   Row

Quantity
0   Add Item

ID

Name

Manufacturer

Pallet Height (in inches)

Pallet Size
Half TwinXL
TwinXL
Queen
King

Location
Aisle   Row

Quantity
0   Add Item

Location
Aisle   Row   Quantity
0   Add Item

There are two options to add an item. The first option is to select an item from the list on the left, input the number of an Aisle and number of a Row, select a quantity amount, and press the "Add Item" button. This will create one or more items exactly as the item that was selected, saving the user time from manually entering all item attributes to add more quantities of an item that already exists.

On the right side of the form window, a new item can be created. This side of the window is split into two segments, one for Mattress and Foundation type Items, and the other for Base and Accessory type Items. To create an item of either type, select one of the radio buttons under "Item Type", then fill out the input text boxes with the relevant information, including to select a "Size" or Pallet Size" from the lists. Similar to creating an item from the existing items list, input an Aisle and Row number, select a quantity number, and click the respective "Add Item" button to add one or more items.

IV.2 Remove Item Form Button – Pressing this button will present the Remove Item form pop-up window. This form consists of a list of items, and a button.

To remove an item, select an item from the list above and then click the "Remove" button.

IV.3 Move Item Form Button – Pressing this button will present the Move Item form pop-up window. This window consists of a list of items, two input text boxes, and one button.

To move an item, first select the item from the list of items on the left. On the right, insert a new Aisle and Row number and then press the "Move" button.

V. Item Search Tab

VI. First Time User Guide

The first time the application is used, you should create at least one Aisle and one Row for that Aisle before creating any Items. First, press the Aisle Configuration button and then click Add Aisle. Create and Aisle and then close the window. Proceed to press the Aisle Configuration button and create one Row for your Aisle. Now you are free to create and place items on the first Row of the first Aisle.

VII. Software Limitations

Due to time constraints and limited expertise during development, the MWIMS has a few features lacking or limited.

1. Data loading – Currently, all data such as created Aisles, Rows, and Items are serialized and saved under the directory MWIMS_Capstone\bin\Debug\net5.0-windows\warehouse.xml. While data is able to be saved, it is unable to be loaded and reused in the program's current state.

2. Error handling – If the program user does something unexpectedly, the program currently does not have any safety measures or error handling measurements in place to prevent the abrupt crash of the program. For example, if a numeric whole number is expected to be inputted but a word is instead used, the program will not handle this error correctly and crash.

3. Currently, an item may with a height greater than a row height be added, and the combined with of items may be greater than the length of the aisle they are in. This is not an intended behavior of the program.

4. The Item Search feature in the Item Search Form Tab has not been implemented.