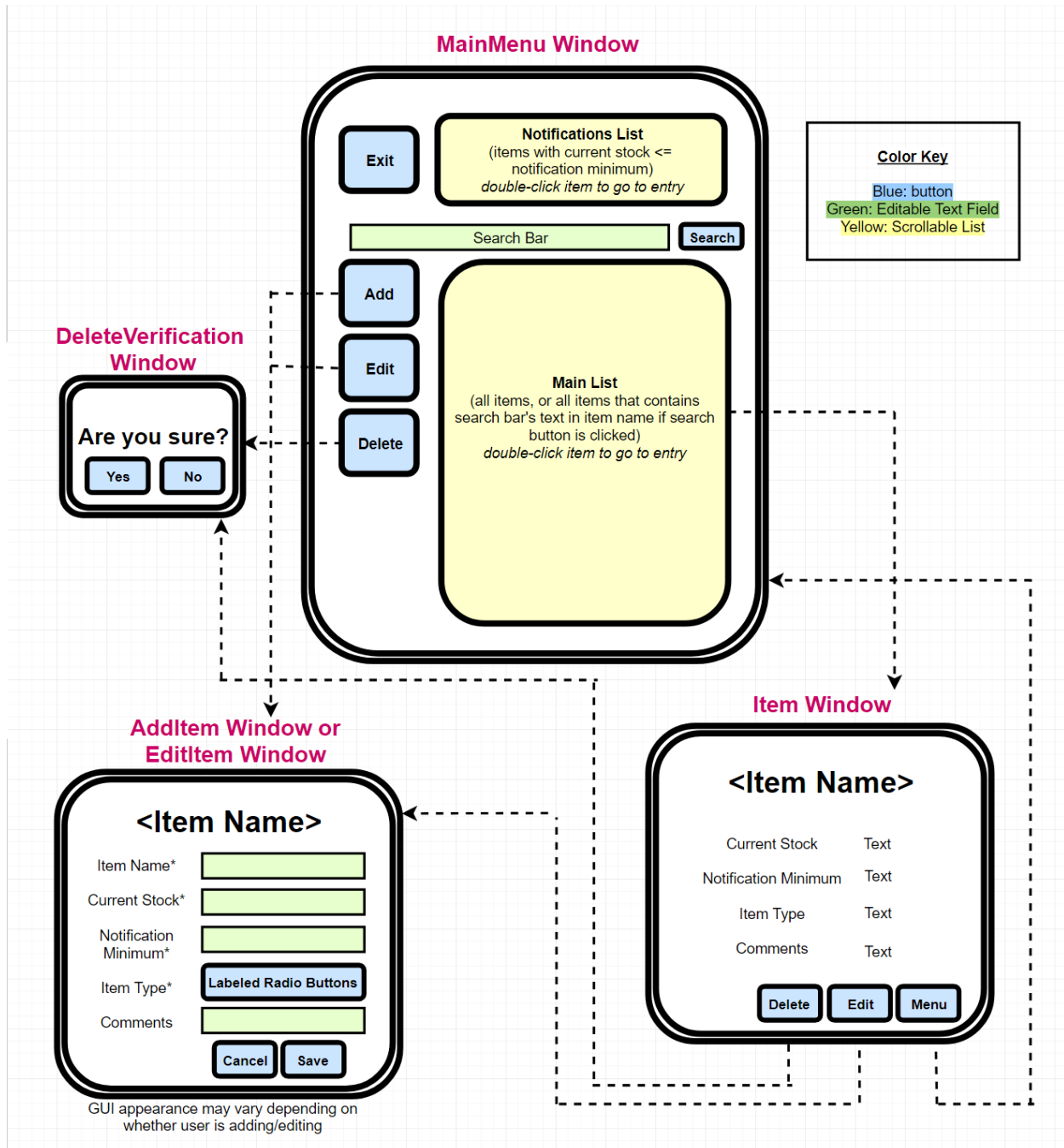


## Design

The flowchart below depicts the program's overall interface that the customer will navigate through.



## **Diagram Explanation**

- Main Menu Window
  - The program will first open up to this window.
  - Notification List
    - Displays a scrollable list of items, for which the documented current stock is at or below the specified notification minimum
    - Each row in the list will show item name and item type
    - Items sorted alphabetically by item type, and then alphabetically by item name
    - Double-clicking on an item will close the Main Menu and open up an un-editable Item Window showing item data
  - Main List
    - Displays a scrollable list of all items in database; if search button is clicked, displays a scrollable list of all items in database whose item name contains string typed in search bar text field
    - Each row in the list will show item name and item type
    - Items sorted alphabetically by item type, and then alphabetically by item name
    - Double-clicking on an item will close the Main Menu and open up an un-editable Item Window showing item data
  - Buttons
    - Exit button: closes program
    - Add button: opens editable AddItem window
    - Edit button: opens editable EditItem window if item is selected in either the Main List or Notification List
    - Delete button: opens pop-up DeleteVerification window to verify deletion; will delete item from database and from list if verified; if not, pop-up window will close and no other change occurs
  - Search Bar Text field
    - When search button is clicked, Main List will update to reflect all items whose item name contains the string typed into the search bar text field(ignoring upper and lower case), sorted alphabetically by item type and item name
- Item Window
  - Displays item name at top center
  - Lists current stock, notification minimum, item type, and comments
  - All fields are un-editable labels
  - Buttons
    - Delete: opens pop-up window to verify deletion; will delete item from database and return to Main Menu; if not, pop-up window will close and no change occurs
    - Edit: closes current window and opens EditItem window
    - Menu: closes current window and opens Main Menu window

- EditItem Window or AddItem Window
  - If user is adding new item
    - Window title is “New Item”
    - Labels listed below include item name, current stock, notification minimum, item type, and comments
    - All text fields are initially empty and radio buttons are unselected
  - If user is editing existing item
    - Window title is the item name
    - Labels listed below include item name, current stock, notification minimum, item type, and comments
    - All text fields are already filled with existing data and item type radio button is already selected
  - Error Messages
    - All starred fields are required to be answered, otherwise error message will appear and prompt for retry
    - Current stock and notification minimum must be digits otherwise error message will appear and prompt for retry
    - If an existing item already has same item name *and* item type, error message will appear and prompt for retry
  - Buttons
    - Cancel: closes window and opens Main Menu window; no other change occurs
    - Save: updates related error messages; if no error message is shown, item details are updated in database, window is closed, and Main Menu window is opened

## **Outline Test Plan**

When the program is finished, I will execute the following tests to verify the finished program accomplishes all criteria that my client requested.

<b>Test Criterion</b>	<b>Method for Testing</b>	<b>Successful Output</b>
<ul style="list-style-type: none"><li>• The program should be able to retain inputted data upon re-opening the program after closing the program.</li></ul>	Close the program and open the program. Update and save an item entry. Close the program and re-open the program.	Updated item retains its most recent characteristics.
<ul style="list-style-type: none"><li>• The program should be able to create new entries with valid user input of item name, quantity, type, minimum limit, and comments.</li></ul>	Click the add button to add new item entry. Enter data and click save button.	Error message appears for required fields left empty. Error message appears if invalid data is inputted (must have non-negative integer digit when appropriate). New item appears in Main Menu's Main List when successful, as well as the Notification List if applicable.
<ul style="list-style-type: none"><li>• The program should be able to allow users to edit data of existing item entries with valid input.</li></ul>	Select item in Main Menu's Main List and click edit button. Edit all data fields and click save button. Repeat process, but instead click cancel button.	If save button is clicked, new data is updated in its Item Window and appears in Main Menu's Notification List if applicable. If cancel button is clicked, details in its Item Window has not changed.
<ul style="list-style-type: none"><li>• The program should allow the user to delete an entry if an item is no longer sold.</li></ul>	Select item in Main Menu's Main List and click delete button.	Pop-up window appears to confirm deletion. Agreeing to deletion results in deletion from Main Menu's Main List and Notification List if applicable, while cancelling deletion results in item to remain as is.
<ul style="list-style-type: none"><li>• The program should successfully sort the item entries.</li></ul>	Open to Main Menu window.	Main Menu's Main List is sorted alphabetically by item type, and then alphabetically by item name. Item type appears next to item name in the list. Same format applies for Main Menu's Notification List.
<ul style="list-style-type: none"><li>• The program should be able to search for an item.</li></ul>	Type any string into the search bar text field, including punctuation and digits.	The program allows any typed string. Only items whose item name contains the typed string appears in Main Menu Main List.
<ul style="list-style-type: none"><li>• The program should display a Notifications List on the Main Menu that suggests items that need restocking based on current stock and notification minimum.</li></ul>	Open to main menu window.	The Main Menu's Notification List displays all items whose current stock is at or below its notification minimum. Notification List sorting and format matches the Main List.