Group members:

Corbyn Lee Eaker - Project Leader

James Allen Ramsey

Zain Rife

Links:

Trello Board: https://trello.com/b/bydhUBbx/sdev220-final

GitHub: https://github.com/JamesR367/Sdev220_Final_Project

Communication:

Our group used a discord server as our main mode of communication. We had multiple meetings on Sundays and talked/messaged each other.

Final Project:

This code is a graphical user interface for tracking inventory of hardware products for Spencer Hardware. It allows the user to enter data, such as the category (tools, hardware, or lumber), item, brand, and quantity. The data is then added to lists of items for each category.

The GUI was created using the Tkinter library. It also imports Pandas for dataframes and Excel, os to launch the Excel file, openpyxl to open the Excel file, and sqlite3 for creating a database and cursor object.

The code begins by creating a database and a cursor object, then creating a table.

After this, three classes are defined: Tools, Hardware, and Lumber. Each class has two attributes: brand and quantity for Tools and Hardware, and cut and quantity for Lumber.

The main Tkinter class, App, is then defined. This class creates the GUI and sets its size, title, and icon. It also creates widgets for labels, entry boxes, and buttons. When the user clicks the Add button, the current entry field text is added to the appropriate list (tools, hardware, or lumber) by calling the update_list function. When the user clicks the Clear button, the entry boxes are cleared.

The code also includes a trace to watch for what the option menu item is and updates labels when lumber is the current option, as well as a bind to the Enter key so that when it is pressed, the on_enter function is called, which then calls the add function. Finally, a display label is created to show the user what contents were added when the Add button is pressed.

The minimum requirements of your system are:

Your system must contain a graphical user-friendly interface that interacts with a minimum of three classes.

- The system contains a simple but effective GUI, and the code contains three classes: Tools, Hardware, and Lumber.

Your system must utilize collections such as lists, tuples, arrays, and dictionaries.

- In the App class, three lists are declared in the __init__ method:
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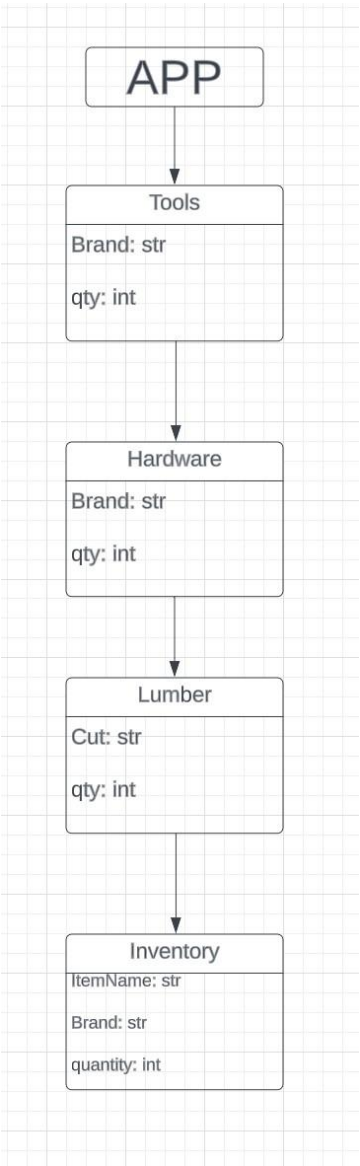
- self.tools_list = []
- self.hardware_list = []
- self.lumber_list = []
- These lists are intended to store instances of the Tools, Hardware, and Lumber classes that are created when the user enters information into the GUI and clicks the "Add" button.

Your system must run with no syntax or runtime errors and produce the correct results.

- The system runs with zero syntax errors and zero runtime errors.

Class Diagram:


APP
Tools
Brand: str
qty: int
Hardware
Brand: str
qty: int
Lumber
Cut: str
qty: int
Inventory
ItemName: str
Brand: str
quantity: int