**Lumber Sorter User Manual**

**Version:** 1.0  
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**1. Introduction**

Welcome to the Lumber Sorter program! This tool allows users to input a batch number along with lumber dimensions, sorting the data for optimal cutting and stacking.

**Features:**

* Simple data entry for job details.
* Automatic sorting of lumber by type, width, and length.
* Optimized stacking configuration to approach a **48-inch layer width**.
* Saved job details in a .txt file for easy reference and printing.

**2. Installation & Requirements**

**System Requirements:**

* **Operating System:** Windows (recommended)
* **Python Version:** 3.9+
* **Required Libraries:**
* tkinter (built-in for GUI)
* PIL (pip install pillow for image handling)

**Setup Instructions:**

1. Download the program folder.
2. Ensure lumber.ico and img1.png are correctly stored in the same directory as the script.
3. Open a terminal and run:

python LumberSorter.py

**3. Using the Program**

**Startup Screen:**

When launched, the **Lumber Sorter** displays a main menu with the following options:  
✅ **Create New Pick List:** Enter details for a new lumber job.  
✅ **Exit:** Closes the program.

**Entering a Job:**

1. Click **Create New Pick List**.
2. Enter a **Job ID**.
3. Select **Lumber Type** (LVL, LSL, PSL, etc.).
4. Choose **Width** from the dropdown.
5. Input **Length** (Feet, Inches, Sixteenths).
6. Click **Add to List** to register each piece.
7. Click **Complete Job** to finalize the process.

**Sorting & Stacking Optimization:**

* Lumber is sorted automatically based on length and type.
* Non-PSL pieces are stacked to approach **48-inch width layers**.
* The program **generates a text file** with details on the job structure.

**4. Saving & Accessing Job Files**

Completed jobs are stored in .txt format within the program folder:  
**Example File Name Entry:** 12345  
**Example File Name:** Job\_12345.txt

**5. Customization Options**

🔹 **Change UI layout** → Modify grid() parameters.  
🔹 **Edit lumber types** → Adjust the LUMBER\_WIDTHS dictionary.  
🔹 **Change file output format** → Modify save\_to\_txt() function.