Label Tracker Application

**Requirements:**

* Multi user capabilities
* Able to send xlsx file to user for viewing
* Track user, SN, time, pass/fail, if fail then notes,

**Version 1:**

* Create xlsx that is order number specific
* User log in for session that would require log in/log out
* Simple ui
* Local db to manage companies, admin abilities, boards, track file status, file locations

**Tech Stack:**

* + Python
  + Excel xlsx files
  + Sqlite3
  + Os
  + Sys
  + Re
  + Pyqt5
  + pyinstaller

**File layout:**

* + Application in P:\EMS Testing & Repair\LabelTrackingApplication.exe
  + Database in P:\EMS\_TR\_PATH\label tracking application\logging.db
  + Xlsx files in:

P:\EMS Testing & Repair\clients\<client>\logging\<ordernumberLogging.xlsx

**Application layout:**

Application/

|

|-- main.py

|

|- gui/

| |-- \_\_init\_\_.py

| |-- app.py

| |-- windows.py

| |-- widgets.py

| |-- styles.py

|

|-- managers/

| |-- \_\_init\_\_.py

| |-- xlsx\_manager.py

| |--db\_manager.py

|

|-- utils/

| |-- \_\_init\_\_.py

| |-- config.py

| |-- logger.py  
| |-- validators.py

|

|-- logs/

| |-- app.log

|

|-- tests/

| |-- \_\_init\_\_.py

| |-- test\_db.py

| |-- test\_xlsx.py

| |-- test\_gui.py

|

|--requirements.txt

**Database schema:**

* + Users – username, password, role
    - Admin (permission to create new companies, boards)
    - Standard (permission to create new orders
  + Companies
    - Company id, name, client path
  + Boards
    - Board\_id, company id, board name
  + Files
    - Order number, status, file path, created at, created by

**XLSX schema:**

* + User Id
  + Company Id
  + Board Id
  + Serial Number
  + Pass/Fail (bool)
    - Timestamp pass or fail
  + If Fail then failure explanation
  + If Fail status changed to Pass then fix explanation
    - Timestamp when fail changed to pass

**GUI:**

* + On .exe open:
    - Log in window
    - Main window with company, board and existing (uncompleted) orders drop downs
    - When all drop downs are selected textbox for SN entry, button to select pass/fail status
    - Button to select verify
    - Section to show all data in currently selected xlsx file
    - Button to log out and return to log in window

**Estimated Time:**

* + Project step up (folders, \_\_init\_\_.py, requirements) **0.5-1 hr**
  + Config + logger setup: **2 hr**
  + DB manager with templates from other projects: **2 hr**
  + XLSX manager (skeleton and basic file creation): **1.5 hr**
  + Gui skeleton (log in + main window placeholders): **4-5 hr**
  + Basic Testing scaffolding: **1 hr**
  + Wiring/linking together in main.py: **1 hr**
* **Total Time: 14 hours for skeleton**
  + **Total Time for functional application: 42 hours**
    - Following assumption of minimal AI assistance
    - With AI assistance >20 hours total