

# Project intro

















## Dependencies

- Qt Framework + PySide6: For running Qt applications on Python
- QWebEngineView: For viewing HTML pages (Ul core).
- JavaScript functions: for onClick. events and QWebEngineView JS code invoking
- Windows Management Instrumention: For collecting Windows OS data.
- SQLite: For storing data in laptops.db.

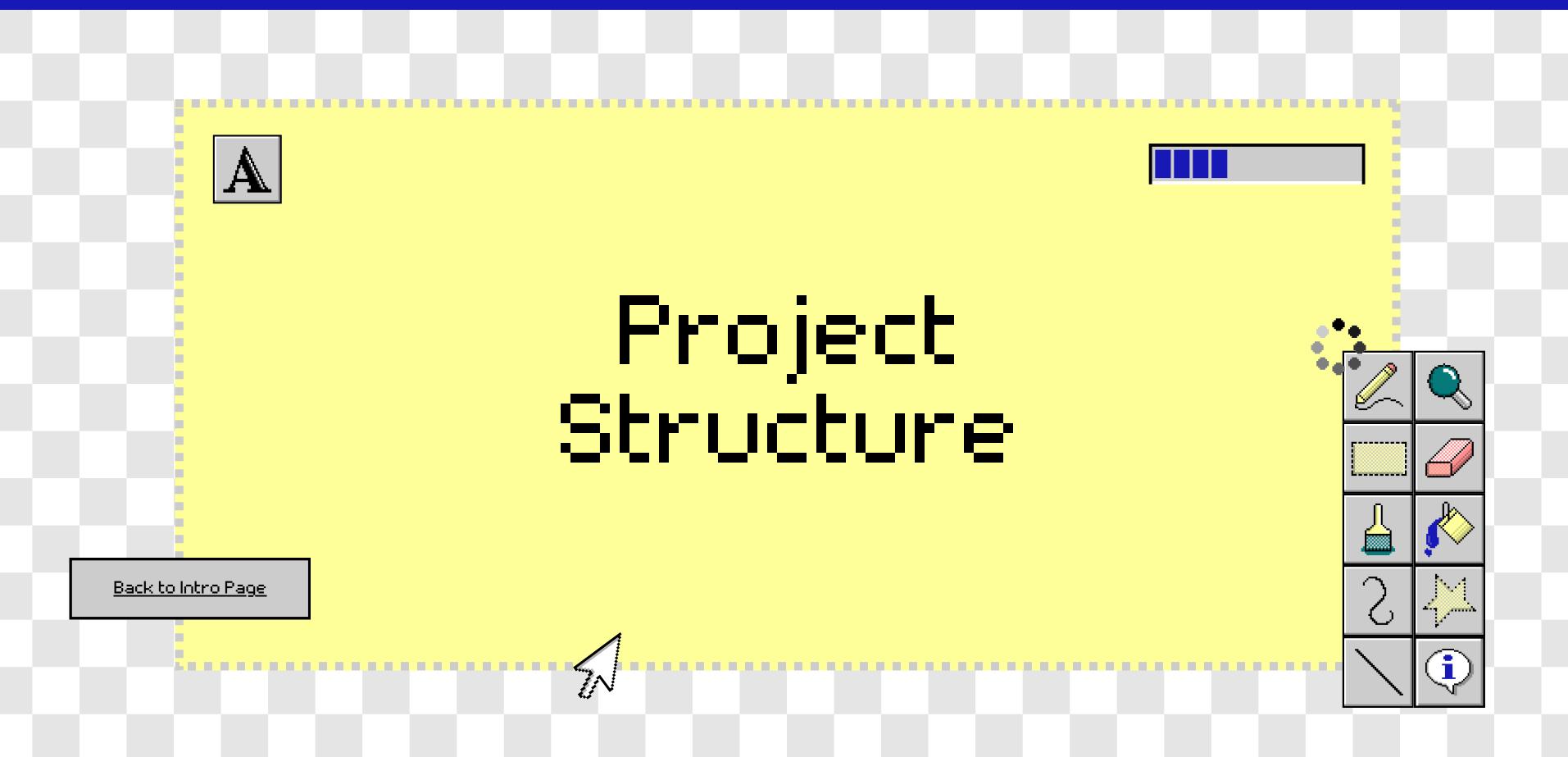












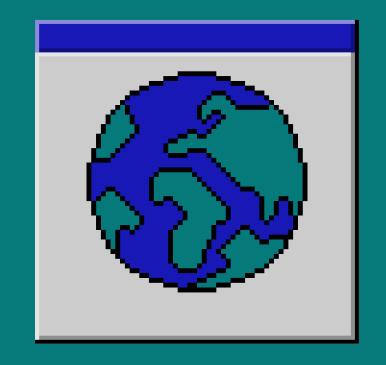
## Project structure





#### Qt Widgets (PySide6)

Qt Framework UI files, mainly
QMainWindow. UI files are stored
in .UI files and initiated by
QUiLoader or UI initialization
script



#### HTML files

The core UI interface for L.S.S, running using QWebEngineView. HTML files contains style data and JS scripts for displaying modal dialogs and connecting to localhost:8050



#### Python scripts

The backend of localhost server, which runs QMainWindow, initializes localhost:8050 server and handles HttpRequests. Also containing OOP classes for data models















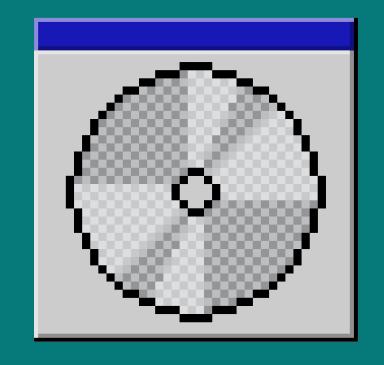
### 00P Classes





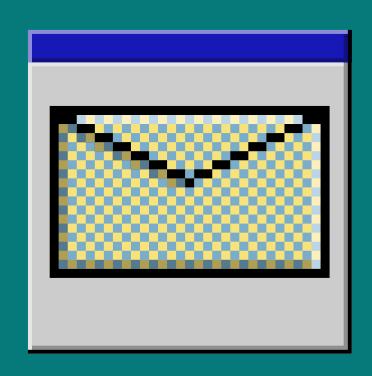
Laptop

Standard properties:
Manufacturer, Model Family,
Model, CPU, Integrated GPU,
Dedicated GPU, RAM, Storage,
Storage type, Drivers



Driver

Standard properties: Name, Version, Release date, Install Command, Package size, Device class



UserDetails

Standard properties: Username, Email



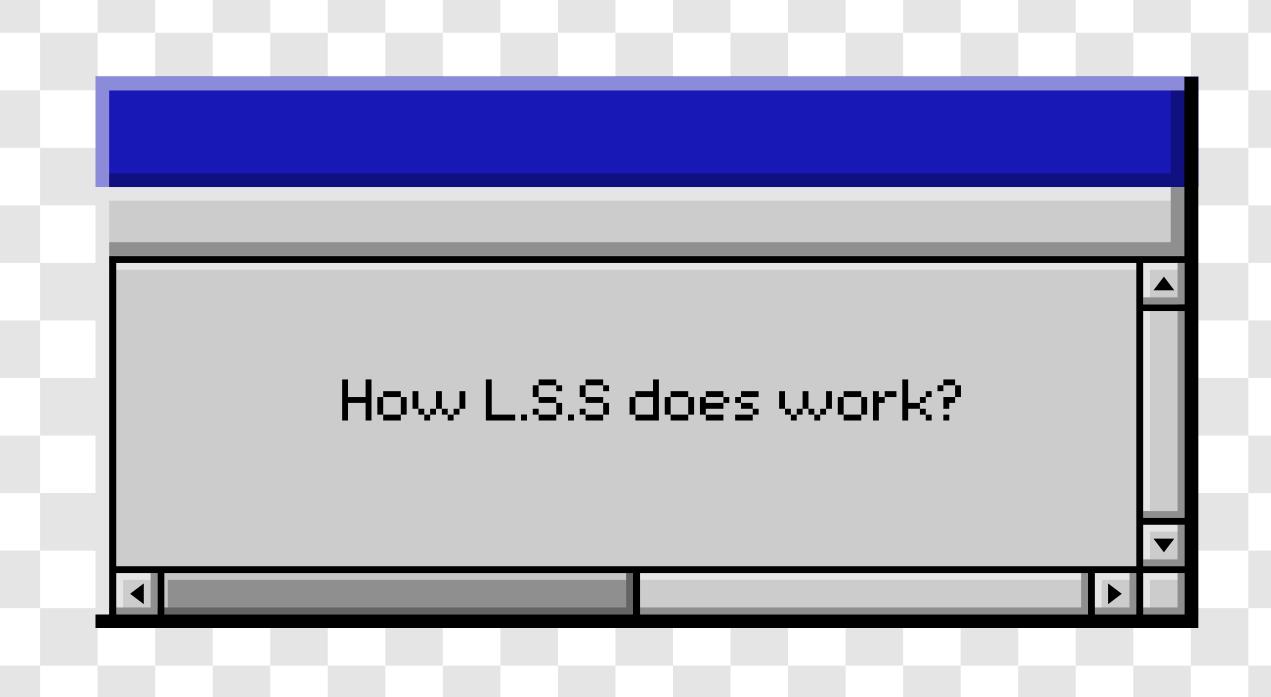












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# Workflow

- mainwindow.py creates new localhost:8050 server instance, when initializing QMainWindow MainWindow instance.
- Allowing to QWebEngineView to navigate to localhost:8050/html/index.html
- Displaying core UI pages.

- On DOM document load,
   QWebEngineView will run JS
   function updatePCSpecs,
   injecting WMI data to index.html.
- Displaying PC specifications
- User can optimize his PC by clicking Optimize PC button, running system commands to clear data, flush DNS, etc

- User can contribute by supplying his PC specs and drivers to be registered in laptops.db (SQLite3)
- When installing drivers, WMI will get PnP device driver data and compare it with laptops.db drivers (Automatic installation), or gathering all drivers for PC to install (Manual Mode)
- Drivers will be installed by executing localhost:8050/drivers/{driver\_name}
   }.exe {arguments}

