## **Functional Requirements**

- The system shall display a list of vehicles in a table showing ID, Type, Make, Model, Price, and Status.
- The system shall allow dealers to add, update, transfer, rent, or delete vehicles using buttons in the app after you select a vehicle.
- The system shall allow vehicles to be rented and returned.
- The system shall block sports cars from being rented and show a warning if someone tries.
- The system shall support transferring vehicles between dealerships and update both inventories correctly.
- The system shall allow adding new dealership locations and selecting them from a dropdown menu.
- The system shall load vehicle data from an XML file and allow saving data in JSON format.
- The system shall automatically save changes after each action.
- The system shall load saved data from a local file when the app starts.
- The system shall provide a search bar for quickly finding vehicles by ID, make, or model.
- The system shall allow each vehicle entry to include an image for easier identification.

The system shall include a filter dropdown to view vehicles by status (Available, Rented) and type (SUV, Sports Car). • The system shall show an error message and continue running if a malformed XML file is loaded. The system shall show confirmation messages after actions like delete or transfer, and warnings for invalid actions. The system shall include an "About" menu that explains what the app does. The system shall offer a simple interface with clear buttons and tooltips for easy use. Non-Functional Requirements The system shall complete main actions (such as add, delete, or rent) within one second. The system shall automatically save data and restore it when the app is reopened. The system shall be compatible with both macOS and Windows systems running Java 21. • The system shall validate files before loading to prevent broken

or invalid data from being

processed.

The system shall ensure vehicle
data remains accurate when renting
or transferring between dealerships.