Photo Catalog Application

Computing unit - 1 system

Implementation Tech
- Linux (Baseline)
- Windows and Mac if enough time
- Python (3.12)

3rd party components:
- GUI component: PyQT6 (6.9.1)
- Database: SQLite (3.50.4)

Components:

Component	Responsibilities	Interacts with
GUI Manager	Manages the application shell and coordinates between high-level gui components	PyQT6, GUI Components, Dialog, Views, Photo Importer, Catalog Database
PyQT6 (GUI)	Provides user interface for interaction with the system	GUI Manager, GUI Components, Dialog, Views
SQLite (Database)	Provides persistent data storage	Catalog Database
GUI Components	Reusable, self-contained UI building blocks to be used by the GUI Manager	GUI Manager, PyQT6
Dialog	Pop-up windows that are used for user input, configuration, or displaying brief information.	GUI Manager, PyQT6
Views	Tabs content to be used by the GUI Manager.	GUI Manager, PyQT6
Photo Importer	Adds photos to the catalog. Allows for importing folders which will include all images in all subdirectories too.	GUI Manager, Catalog Database
Catalog Database	Database manager for the app. Provides all CRUD operations for photo metadata (Photo info, Albums, Tags).	GUI Manager, SQLite

Data design:

Image metadata
- Name
- Tags
- File path (to the actual image)

Catalog file system structure
- Directory name
- Subdirectories
- Catalog images

Communication Pathways: