Contact List - A Database Interface Graphical App

CS6360 - Database Design Project

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Technical Requirements

- Language: Python v3.9.5
- Python Packages: `pip install -r requirements.txt`
- Database: SQLite v3.36.0
- GUI Framework: PyQT5
- OS Compatibility: *nix (MacOSX/Linux)
- Miscellaneous:
  - `pipreqs` to generate requirements file without extraneous specs
  - `pandoc` for using `document_gen.sh`
- `NOTE: Find detailed docs in ./docs`

Setup

- Setup a Python 3.9.5+ environment
- Install requirements file
- Create folder `src/generated_views`
- Change the interpreter path in `build.sh` to your local environment.
- Change the database paths in `src/config.py` to your local database location & csv file location.
- Run `build.sh` using `bash build.sh`
  - Builds the python files for UI files in `./ui` and stores them in `src/generated_views` if run within a virtual environment with `pyuic5` available, else skips this step.
  - Runs `python3 create_db.py` to create the database
  - Runs `define_text_search.sql` to create a virtual table using FTS5, a module which affords full text-search capabilities in SQLite DBs.
  - Runs `populate_text_search.sql` which populates the text search virtual table with the values already present in the table.
  - Runs `triggers.sql` which adds triggers to all the contact list tables such that any CRUD operation on them is replicated & the text search table index is synchronized.

Application Launch

- Running `main.py` launches the GUI application
- Find GUI instructions in the `Quickstart Guide`