

# CMPUT 291 - Mini Project 1 Design Document

## 1 Overview

The following python application is used to connect to an existing SQLite3 database storing enterprise data. The application is run through the terminal, and is operated with simple command line inputs. For informatino on connecting to a database and running the application, see *User Guide*.

Users with valid login credentials will be provided access to various functions to interact, view, and update the data stored in the database. Depedning on their user type (determined by the databes) the functionalities include: *Register a birth*, *Register a marriage*, *Renew a vehicle registration*, *Process a bill of sale*, *Process a payment*, *Get a driver abstract*, *Issue a ticket*, *Find a car owner*. For speceifics on these functions and their operations, see *Software Design*.

### 1.1 User Guide

To launch the application, run the following command from the directory holding the source code:

```
$ python3 db.py
```

To connect to a database, enter the path to the database when prompted (a):

```
Enter path of database: path/to/database.db
```

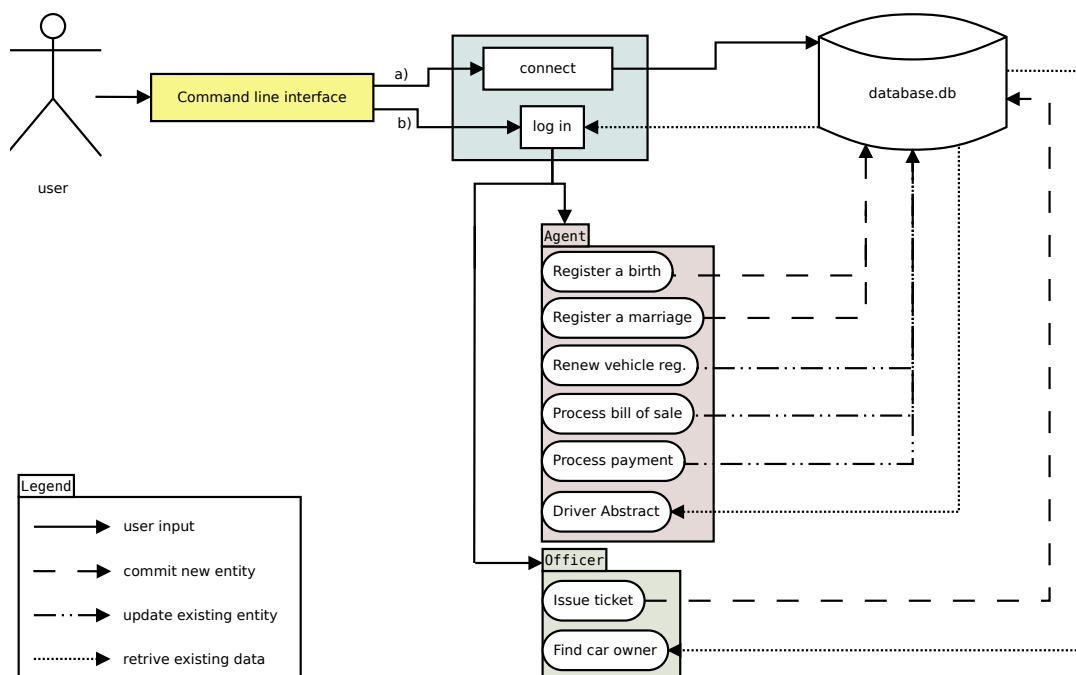
Once the database connection is successfully established, the user will be prompted to enter their username and password (b), for example:

```
Username: admin123
```

```
Password: pwd12345
```

Depending in the user type (agent or officer), numerical options will appear on screen. Enter the number of the task you wish to perform, and follow the on-screen instructions. For further information regarding the options, see *Software Design*

### 1.2 Flow Diagram



## 2 Software Design

- User Menu

After a successful log in, the user is provided a menu with numbered options.

- Register a birth

Registers a new person into *persons* table and a new birth record in *births* table. Prompts user to enter child's first and last name, birth gender, mother's first and last name, father's first and last name, and the child's birth date and birth place. Registration place is automatically set to the user's city, and registration date is set to today's date. Child inherits mother's address and phone number. In the case where the mother or father do not exist in the database, the user has the option to register them, then continue with the birth registration.

- Register a marriage

- Renew a vehicle registration

- Process a bill of sale

- Process a payment

- Get a driver abstract

Prompts user to enter first and last name of a registered person to display their driver abstract. If the name entered is not found, the user has the option to reenter the name, or return to the main menu. The driver abstract consists of: ticket counts for lifetime and last two years, demerit notices and points for lifetime and last two years. The agent has the option to view a detailed ticket history by entering the t/T key. Initially five tickets are displayed in order from most recent to oldest, with an option to display 5 more until the end of the history.

- Issue a ticket

- Find a car owner

## 3 Testing Strategy

The testing strategy discusses your general strategy for testing, with the scenarios being tested, the coverage of your test cases and (if applicable) some statistics on the number of bugs found and the nature of those bugs.

## 4 Group Break-down Strategy

The group work strategy must list the break-down of the work items among partners, both the time spent (an estimate) and the progress made by each partner, and your method of coordination to keep the project on track. The design document should also include a documentation of any decision you have made which is not in the project specification or any coding you have done beyond or different from what is required.