Project Write Up

For this project I utilized SQLite to create a database for a city to use to store and manage its police reports. Users are able to add, edit, or search individual reports, or can view all reports entered in the system. Information associated with each report includes: (1) a case number, (2) officer’s last name, (3) date of report, (4) address of the incident, (5) problem nature, and (6) report status.

The program prompts the user to select “Add”, “Edit”, “Search”, “View All”, or “Quit”. An invalid entry or no entry will result in an error message advising of the invalid entry and the system will again prompt the user to enter the desired action. The program continues until the user enters “Quit”.

To add a report to the database, the user must enter “Add”. The program will then prompt the user to enter all information associated with the report. The case number should be an 8 digit case number between 22000001 and 22999999 (for calendar year 2022). The problem natures include: Accident, Alarm, Assault, Burglary, Damage to Property, Fraud, Harassment, Missing Person, Robbery, Suspicious Activity, Theft, and Traffic Stop. Report statuses include: Submitted, Under Review, Approved, and Complete.

To edit a report in the database, the user must enter “Edit” as the desired action. The program will then prompt the user to enter the case number of the report to be edited. When a valid case number is entered, the program will display all possible pieces of information. All information, except the case number, can be edited. For each piece of information that can be edited, the program asks the user if they want to edit it. If the user enters “Yes”, the program will prompt the user to enter the new information to replace the old. If the user enters “No”, the program will move on to the next item in the list (if any). This continues for all pieces of information for the report.

To search for a specific report in the database, the user must enter “Search” as the desired action. The program will prompt the user for the case number of the report. When a valid case number is entered, the program will display all information associated with that specific report.

To view all reports entered in the database, the user must enter “View All” as the desired action. The program will then display the information for all reports, with each line containing the information for one report (ex. CN: 22123456 NAME: Adams DATE: 20220419 ADDRESS: 123 Main St PROBLEM: Theft STATUS: Complete).

This program requires that SQLite be downloaded and listed as a header (my system required me to include the full path in the header). To download the program, I went to the SQLite website’s download page (<https://www.sqlite.org/download.html>) & clicked the first link under Source Code ([sqlite-amalgamation-3380200.zip](https://www.sqlite.org/2022/sqlite-amalgamation-3380200.zip)). I saved all files in the zip file to the same folder where I saved my code for this program. In order to run this program, I had to compile my program and the SQLite source code and header files at the same time in Command Prompt (gcc –o Project Police\_Reports.c sqlite3.c sqlite3.h).