Design document of project 1 of cmput 291

A. User guide

This time our group use python as the project language since python can connect with SQLite easily.

First login to the lab machine and use python command to open the project code file and database file (like python project1.py project1.db).

After that you can see That mean you connect with database successfully.

Then input the username and password. Both username and password are case sensitive so be careful, if you forget the username and password you can exit at any time.

Every username has their own type, only type "a" and type "o" can login to the system with the right password.

When you login with type "a" username, you can follow the menu to do 6 operations and exit the system if you want.

When you login with type "o" username, quite similar to the "a" type but there only 3 operation you can do including exit.

B. Detail design

Def main-check user type and let user jump to 2 biggest part of program: agent part and officer part

Def login, Def validateUser- main login function

Def agentTurn- main menu of agent user.

Def findPerson- the function used to check if the people already exist in the database.

Def addPerson- the function user to add person into persons table in database, always use after findPerson function.

Def checkDigit, checkName, checkLength, checkAlpha- series function to check the format of input information(from user) to pre-constructed table. Since some data are exported from database directly, they don't need to check the format because we assume the illegal format or type data can not exist in the database :).

Def checkBirthDate- the function used to format the date data input by user and do the validation base on leap year and normal year.

Def officeTurn- main menu of office user.

Rest of user def function are the implication of 8 system functionalities (6 for agent, 2 for officer).

C. Test Strategies

For first 3 functions of agent user, first we test the function with the normal data with all the normal data and get a good response. But when we test the much complex data like input baby name as A-1-a, we find something wrong with our function. Then we add those check function into the main application function to be the filter. After that, all good.

For last 3 functions of agent user,

We test the process the payment, process a bill of sale and get a driver abstract. In this test functions, the most bug is check error, we usually cannot check whether input data same as the database data. And also have some loop question that cause some test break or just pass. But finally, we finished it.

For 2 functions of officer user, we test the owner of car, maybe there are several owners or one car, the car has a unique vin but the owner is different in different years. So we check the number of cars we get repeat number of vin,so the total number is wrong. But we add "distinct" and now it is good.

D. Group work strategies

We build the program structure together. First 3 part of agent user assign to qzhao3, last 3 part of agent user assign to xudong9 and 2 parts of officer user assign to chuhao.