CSC3170 Course Project

1st Jose Andreas 2nd Zijie Xu 3rd Qichen Zhao 4th Yue Wang 5th Rui Yang 6th Yanxi Chen

***Abstract*—Our option choice is: Option 1. Our branch choice is: Branch 1. The difficulty level is: Normal. Our group is going to choose these functionalities: Register the package information that is released by some consumer; Allow the consumer to appoint some plant for some package manually. Our group gonna pick additional ones as follow:Geometrical Constraint.**

I. Program Design

We break the project into three parts. First, we draw the ER diagram and the relation schema. Second, we construct the database according to the relation schema. Third, we construct the website. The main component of the project is in the document flaskProject. The sql program firm will construct the database and the python program app will construct the website. Besides, the sql program dataGeneration can insert random data into the database.

II. Historical Progress

- Draw the ER diagram and the relational schema
- Construct the database
- Generate random data
- Construct the website

III. Functionality Implementation

A. Database

The database is constructed using sql language according to the relational schema.

For example, the entity locations will be created like Fig.1.

```
create table locations(
    LOCATION_ID varchar(30),
    LOCATION_X numeric(7,2),
    LOCATION_Y numeric(7,2),

    primary key(LOCATION_ID)

);
```

After genarating random data, the data will be inserted into the database like Fig.2.

```
INSERT INTO locations (LOCATION_ID, LOCATION_X, LOCATION_Y)
VALUES ('A', 5, 5),
       ('B', 15, 5),
       ('C', 5, 15),
       ('D', 15, 15),
       ('E', 8, 2),
       ('F', 12, 2),
       ('G', 8, 18),
       ('H', 12, 18),
       ('I', 3, 10),
       ('J', 17, 10);
```

B. Website

Introduction:

This website is for consumers to buy chips. It can be composed to 2 parts. The first part asks for the consumer's information. The other is information about chip.

Procedure:

1. Consumers should assign their names, phone number and address firstly. Once they change their address, the program would produce names of companies which produce chips in the next part.

2. Consumer can choose companies' names and number of chips in the second part of form.

3. After all, consumers click the submit button to input data in database.

Function Implementation:

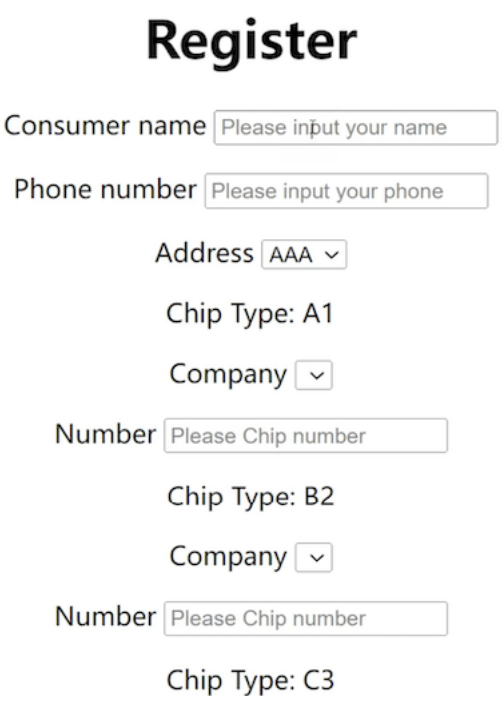
1. We use the function addeventlistener() to check if the address has changed. Once the address is changed, the program will ask for the value of new address and push names of nearby companies into value list. Every value in the list will be imported to different options then append to each company select lists.

2. Code part: App.py: This code imports pymysql and flask to realize its function. It contains a function called index. This function is used to connect with index.html and chip.html. This function first connects the local database(firm), then uses post to get the data from index.html. This code is running on http://127.0.0.1:5000. To connect with this code, we use the form function and let its action equals http://127.0.0.1:5000 in the index.html file. Then, it uses pymysql to store data in the table. When the function finish, return chip.html.

The website will be like Fig.3.

IV. Contribution

1. ER Diagram and Relation Schema: Wang Yue and Xu Zijie
2. Database: Chen Yanxi and Jose Andreas
3. Generate Random data: Zhao Qichen



4. Website: Wang Yue and Xu Zijie
5. Report: Wang Yue and Xu Zijie(the website part), Yang Rui(other part and integration)
6. Presentation: Zhao Qichen, Chen Yanxi and Jose Andreas