

# Meal delivery app with Best route prediction

Team leader: Zeyuan,Zheng Email Address:zzheng26@hawk.iit.edu  
Team member: Luping,Xue Email Address: lxue9@hawk.iit.edu

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## Environment:

- Mysql Database
- JDK 1.7
- Tomcat 7.0.342
- Anaconda
- Jupiter Notebook

## External library:

- json-simple-1.11.jar
- gson-2.3.1.jar

## Deployment:

### 1. Database:

Run QueryForCreatingDatabase.sql to create tables

1. use quickfooddatabase;
- 2.
3. create table Businesses(**id** varchar(120),**alias** varchar(1000),**businessname** varchar(1000),**imageurl** varchar(1000),
4. **isClosed** tinyint(1),**url** varchar(1200),**reviewcount** mediumtext,  
**rating** double, **coordinatelatitude** double, **coordinatelongitude** double,
5. **price** varchar(40),**phone** varchar(40), **displayphone** varchar(40),  
**distance** varchar(1000), **locationaddress1** varchar(1200),  
**locationaddress2** varchar(1200),**locationaddress3** varchar(1200),
6. **locationcity** varchar(45), **locationzipcode** varchar(45),  
**locationcountry** varchar(45), **locationstate** varchar(45),  
**locationdisplayaddress** varchar(120),**Primary key(id)**);
- 7.
- 8.

```
9. Create table CustomerOrders
10.(
11.OrderId integer,
12.userName varchar(40),
13.orderName varchar(40),
14.orderPrice double,
15.nameCardOrder VARCHAR(1200),
16.cardNumber VARCHAR(1200),
17.expireMonth VARCHAR(120),
18.expireYear VARCHAR(120),
19.CCV VARCHAR(120),
20.address VARCHAR(1200),
21.businessId VARCHAR(1200),
22.Primary key(OrderId,userName,orderName)
23.);
24.
25.Create table starter
26.(
27.id varchar(120),
28.starter varchar(120),
29.price double,
30.imageurl varchar(1000)
31.);
32.
33.
34.Create table maincourses
35.(
36.id varchar(120),
37.maincourse varchar(120),
38.price double,
39.imageurl varchar(1000)
40.);
41.
42.Create table dessert
43.(
44.id varchar(120),
45.dessert varchar(120),
46.price double,
47.imageurl varchar(1000)
48.);
49.
50.Create table drink
51.(
52.id varchar(120),
53.drink varchar(120),
54.price double,
```

```
55.imageurl varchar(1000)
56.);
57.
58.Create table categories
59.(
60.id varchar(120),
61.alias varchar(120),
62.title varchar(120)
63.);
64.
65.Create table Registeration
66.(
67.username varchar(120),
68.password varchar(120),
69.repassword varchar(120),
70.emailaddress varchar(120)
71.);
72.
73.Create table transactions
74.(
75.id varchar(120),
76.transactionDes varchar(120)
77.);
78.
79.Create table restaurantmenu
80.(
81.restaurantid varchar(120),
82.starterid varchar(120),
83.maincourseid varchar(120),
84.dessertid varchar(120),
85.drinkid varchar(120)
86.)
```

## 2. Jupiter NoteBook

### 1. Upload searchRestaurantUpdate.ipynb

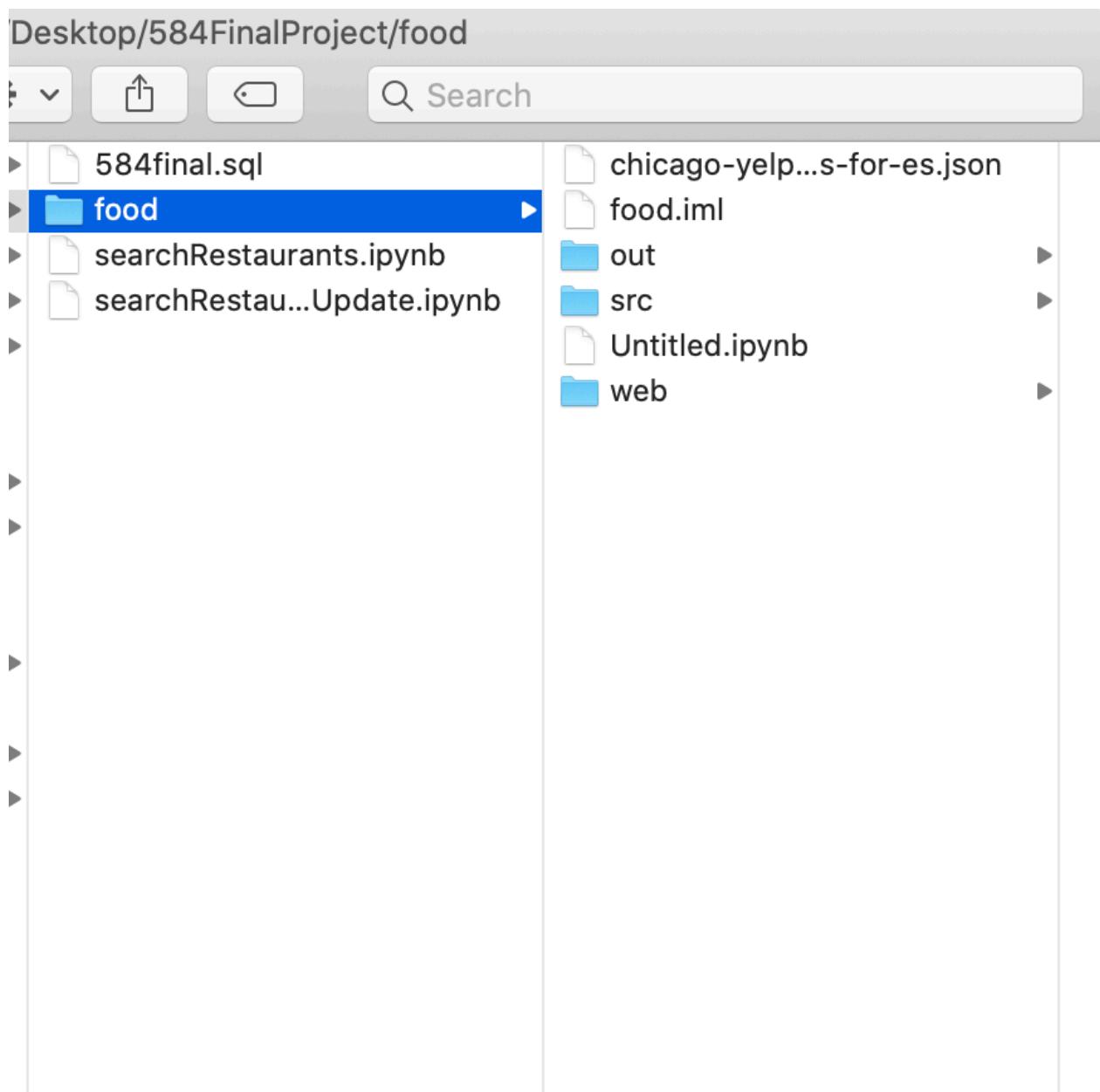
```
1. from pprint import pprint
2. yelp_api =
    YelpAPI('m3wTJA76DZqAox7RC6l5vZ1KLqS1j0iso39vhcCLFF84
        4bf04DpPxbCwIPr2MpFGc-
        _e93bIC1vCCHHBH1d23SOkww4EzRpaBCwgSSNDWvTFR-
        S25vye4vLvqIK8XXYx')
3.
4. import time
5. import json
6.
7. df_business_reviews = pd.DataFrame()
8. list_business_reviews_documents = []
9. data = {}
10. data['restaurants'] = []
11. while True:
12.     for x in range(20):
13.         response =
            yelp_api.search_query(categories='Restaurants',
14.                               location='Chicago
                Loop, West Town, Near West Side Chicago, Near North
                Side Chicago, Near South Side Chicago, chicago, il',
15.                               sort_by='rating',
            limit=50, offset=x*50)
16.         df_business_reviews =
            df_business_reviews.append(pd.DataFrame(response['bu
                sinesses']))
17.
18.         for review in response['businesses']:
19.             data['restaurants'].append(review)
20.         with open('chicago-yelp-reviews-for-es.json',
            'w') as outfile:
21.             json.dump(data, outfile)
22.         print('Going to sleep for 3 minutes now ...')
```

```
23.     time.sleep(180)
24.     continue
25.
26.Going to sleep for 3 minutes now ...
27.Going to sleep for 3 minutes now ...
28 pprint(response[ 'businesses' ])
```

```
{'restaurants': [{}{'alias': 'ninis-deli-chicago',
  'categories': [{}{'alias': 'sandwiches', 'title': 'Sandwiches'},
    {}{'alias': 'empanadas', 'title': 'Empanadas'},
    {}{'alias': 'coffee', 'title': 'Coffee & Tea'}],
  'coordinates': {'latitude': 41.89235, 'longitude': -87.66198},
  'display_phone': '(312) 243-9822',
  'distance': 2829.1321390636003,
  'id': 'F2NBch93KPaQdM_x0Fs2VQ',
  'image_url': 'https://s3-media3.fl.yelpcdn.com/bphoto/7Rep6irkZlDHGdx580X9vw/o.jpg',
  'is_closed': False,
  'location': {'address1': '543 N Noble St',
    'address2': '',
    'address3': '',
    'city': 'Chicago',
    'country': 'US',
    'display_address': ['543 N Noble St',
      'Chicago, IL 60642'],
    'state': 'IL',
    'zip_code': '60642'},
```

**2. Run all cells then you will get a file named “chicago-yelp-reviews-for-es.json”**

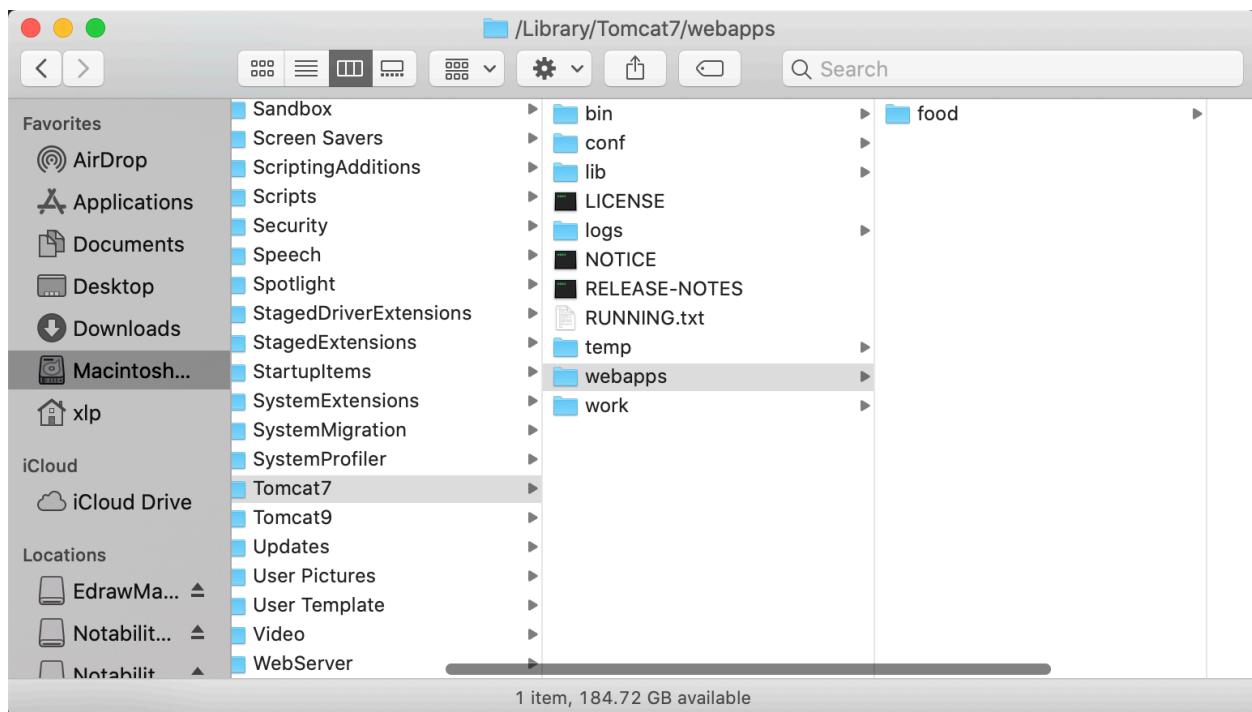
3. Drag “chicago-yelp-reviews-for-es.json” into project folder.



## 4. Edit Connection of DB, and compile

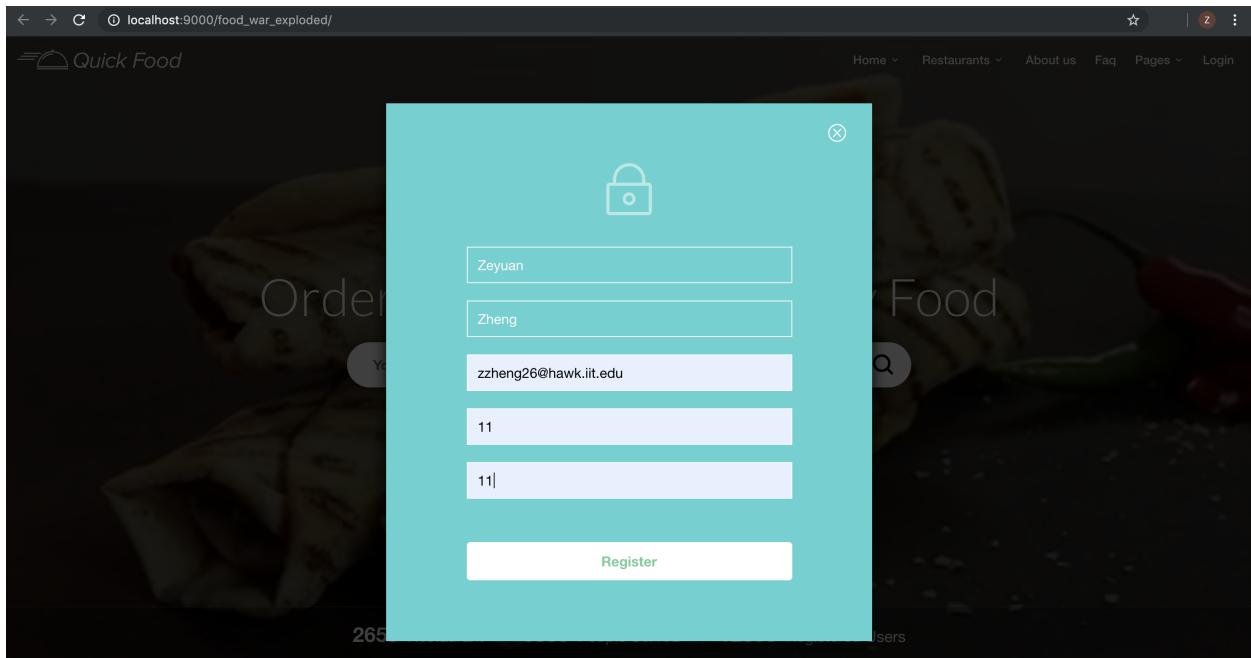
```
1. public class MySqlDataStoreUtilities {  
2.  
3.     public static Connection conn;  
4.     static String message;  
5.     private static Statement statement;  
6.     private static ResultSet resultSet;  
7.     private static String url = "jdbc:mysql://localhost:3306/  
quickfooddatabase?userTimezone=true&serverTimezone=UTC";  
8.     private static String username = "root", pass =  
"5991308Zheng";  
9.  
10.    public static String getConnection() {  
11.        try {  
12.            Class.forName("com.mysql.jdbc.Driver");  
13.            conn = DriverManager.getConnection(url, username,  
pass);  
14.            message = "Successfull";  
15.            return message;  
16.        } catch (SQLException e) {  
17.            message = "unsuccessful";  
18.            return message;  
19.        } catch (Exception e) {  
20.            message = e.getMessage();  
21.            return message;  
22.        }  
23.    }
```

## 5. Then ,drag project folder (food ) into Tomcat



## 6. Start Tomcat.

## 7. Open the homepage of QuickFood website and register a user.



## 8. Check the Register table.

The screenshot shows the Oracle SQL Developer interface. The left sidebar displays the schema structure for the 'quickfooddatabase'. The 'Tables' section is expanded, showing the 'Registration' table. The main pane displays the results of a query:

```
1 • SELECT * FROM quickfooddatabase.Registration;
```

username	password	repassword	emailaddress
Leo,null	5991308Zheng	5991308Zheng	zzheng26@hawk.iit.edu
ice,null	1234	1234	zzheng26@hawk.iit.edu
123,null	1234	1234	zzheng26@hawk.iit.edu
1111,null	11	11	zzheng26@hawk.iit.edu
12,34	22	22	zzheng26@hawk.iit.edu
Leo.Zheng	5991308Zheng	5991308Zheng	zzheng26@hawk.iit.edu
Kevin.Chen	123	123	zzheng26@hawk.iit.edu
Zeyuan.Zheng	11	11	zzheng26@hawk.iit.edu

Below the table, the 'Object Info' tab is selected, showing the table definition:

```
Table: Registration
```

Columns:

- username varchar(40)
- password varchar(40)
- repASSWORD varchar(40)
- emailaddress varchar(40)

Object Info Session

Query Completed

## 9. Login.

The screenshot shows a web browser displaying the 'Quick Food' login page. The URL is 'localhost:9000/food\_war\_exploded/HomePage'. The page features a large background image of food items like spring rolls and a chili pepper. A modal dialog box is centered on the screen, prompting for login information:

Order

Quick Food

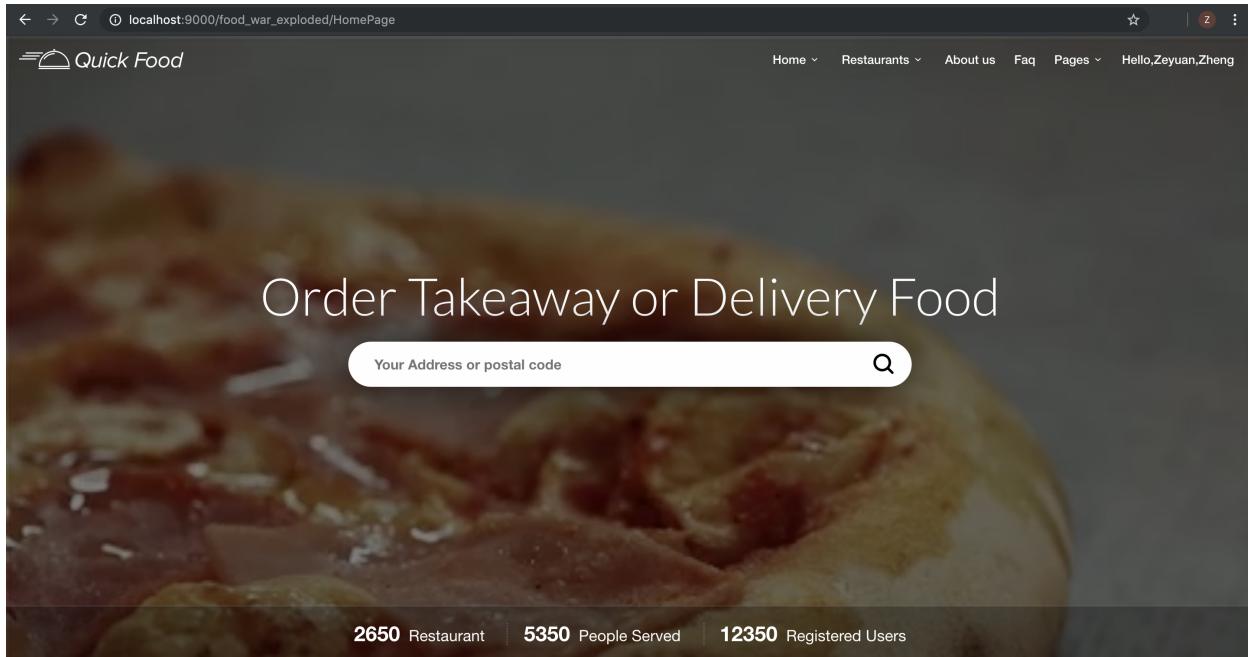
Home | Restaurants | About us | Faq | Pages | Login

Register

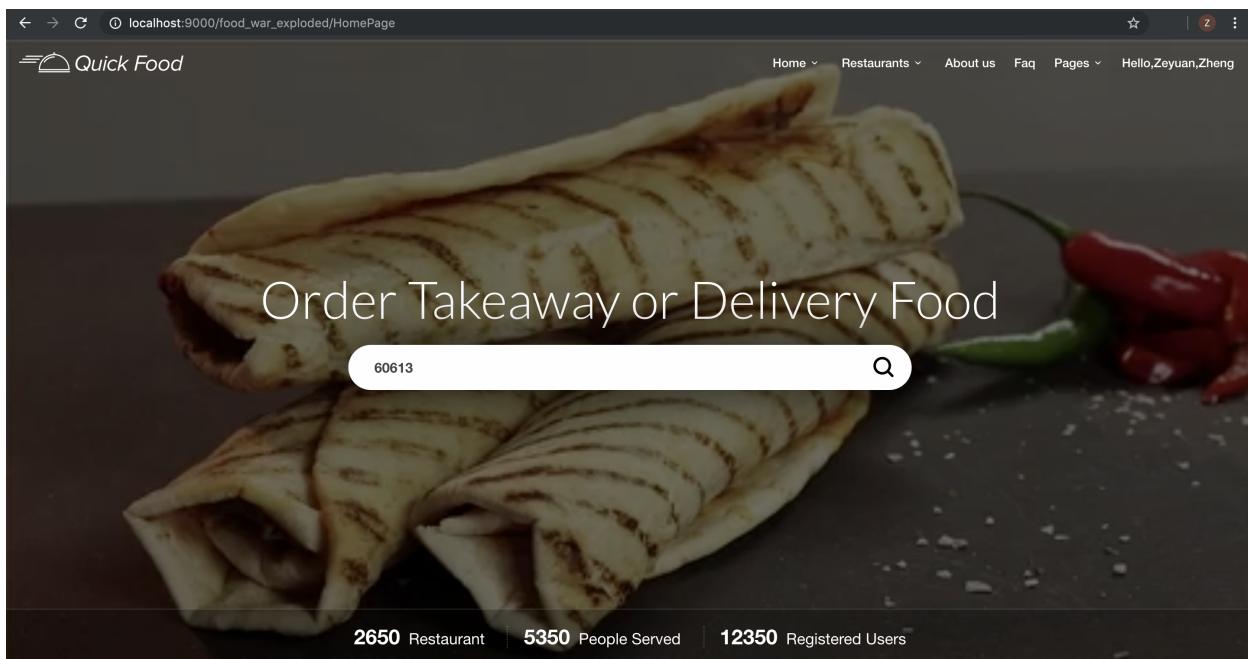
Submit

2650 Restaurant | 5350 People Served | 12350 Registered Users

## 10. Login success.



## 11. Input zip-code to search related restaurants.



## 11.display searching answers.

localhost:9000/food\_war\_exploded/ListPageForAjax?searchInput=60613

Quick Food

Home | Restaurants | About us | Faq | Pages | Hello,Zeyuan,Zheng

36 results searched

Home > Category > Page active | Search

**Tank it Easy** ★★★★☆ (39 reviews)  
Aquariums/Pet Stores/Aquarium Services  
3700 N Ashland Ave,Chicago, IL 60613 **opening** View Menu

**Blue Sky Bakery & Cafe** ★★★★☆ (126 reviews)  
Bakeries/Cafes  
3720 N Lincoln Ave,Chicago, IL 60613 **opening** View Menu

## 11.view into restaurant's order page.

localhost:9000/food\_war\_exploded/OrderPageForAjax?restaurantId=1

Quick Food

Home | Restaurants | About us | Faq | Pages | Hello,Kevin,Chen

1400 X 470

**Tank it Easy** ★★★★☆ (Read 39 reviews)  
3700 N Ashland Ave, Chicago, IL 60613 - **Delivery charge:** \$10, free over \$15.

Home > Category > Page active | Search

BACK TO SEARCH

**Menu**

**STARTERS**

Item	Price	Order
0. Royal Fajitas	\$ 5.7	<span style="color: pink;">+</span>
1. Chicken Enchilada Wraps		<span style="color: pink;">-</span>

**Your order**

Delivery	Take Away
Subtotal	\$56
Delivery fee	\$10
<b>TOTAL</b>	<b>\$66</b>

Starters (4) >  
Main Courses (5) >  
Desserts (4) >  
Drinks (4) >

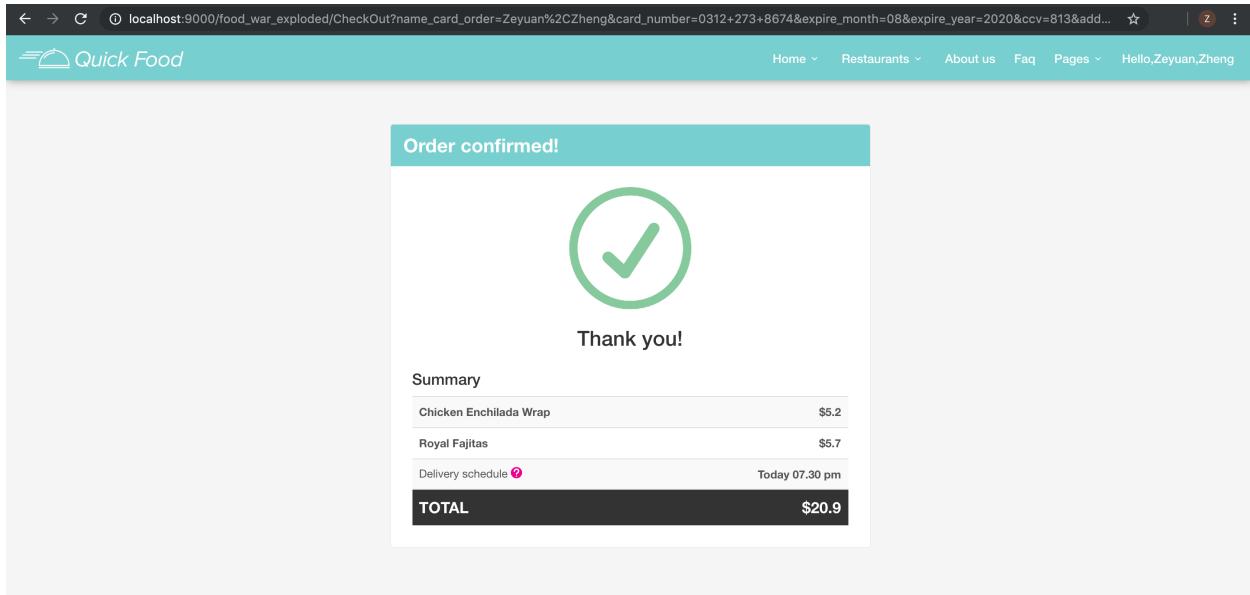
## 12.select meals and click on order now.

The screenshot shows the 'Quick Food' website interface. On the left, there's a sidebar with categories: Starters (4), Main Courses (5), Desserts (4), and Drinks (4). Below this is a 'Need Help?' section with a 'null' button and operating hours (Monday to Friday 9.00am - 7.30pm). The main area is titled 'Menu' and contains two sections: 'STARTERS' and 'MAIN COURSES'. Under 'STARTERS', there are four items: Royal Fajitas (\$5.7), Chicken Enchilada Wrap (\$5.2), Fajitas (\$6.8), and Mexican Enchiladas (\$9.4), each with an 'Order' button. Under 'MAIN COURSES', there are two items: Minced Beef Double Layer (\$6.3) and Beef Taco (\$8.7), also with 'Order' buttons. To the right, a 'Your order' summary shows 'Royal Fajitas' and 'Chicken Enchilada Wrap' added, with a total of '\$20.90'. A pink 'ORDER NOW' button is at the bottom.

## 13.input delivery address and bank information.

The screenshot shows the 'Quick Food' website interface for payment. It includes fields for 'Delivery time' and 'Secure payment'. Below these is another 'Need Help?' section with the same details as the previous screenshot. The main area is titled 'Payment methods' and lists three options: 'Credit card', 'Pay with paypal', and 'Pay with cash'. To the right, the 'Your order' summary is identical to the previous screenshot, showing a total of '\$20.90'. A pink 'CONFIRM THE ORDER' button is at the bottom.

## 13.confirm the order.



Secure payments with

### About

About us  
FAQ

### Newsletter

Join our newsletter to keep be informed  
about offers and news.

### Settings

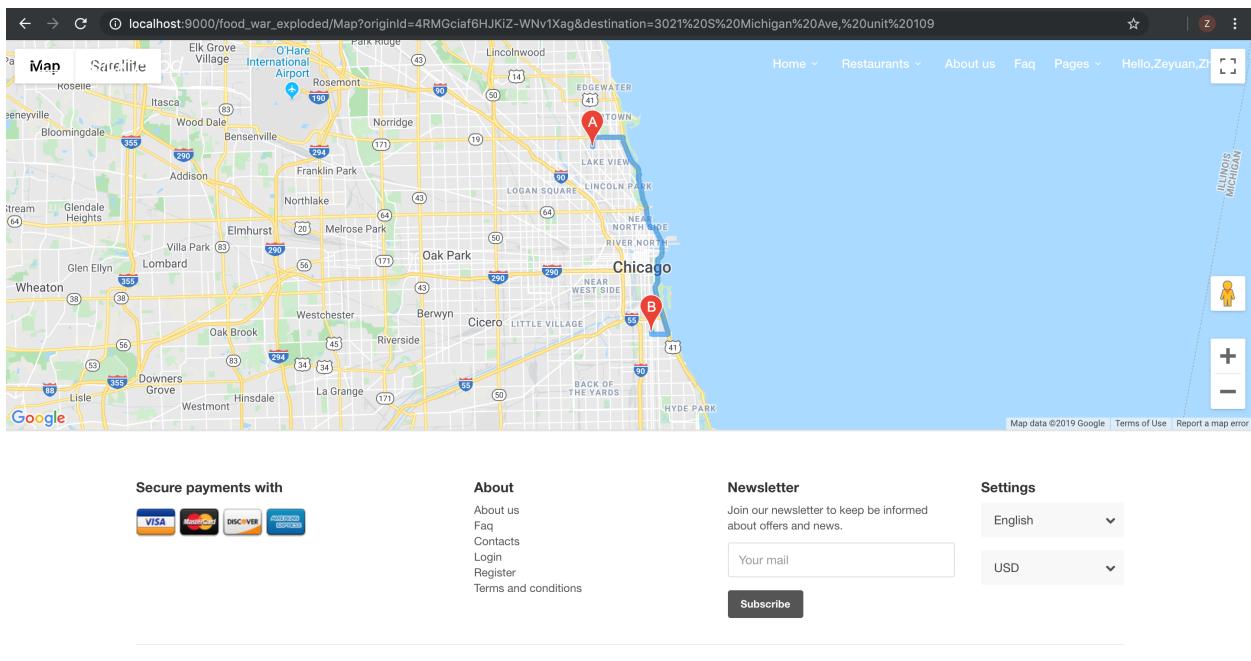
English

## 14.check the order stored in CustomerOrders table.

The screenshot shows a database management interface with a toolbar at the top and a left sidebar for navigating schemas and objects. The main area is a result grid displaying data from the 'CustomerOrders' table. The table structure is as follows:

OrderId	userName	orderName	orderPrice	nameCardOrder	cardNumber	expireMonth	expireYear	CCV	address	businessId
15	Leo.Zheng	Fajitas	6.8	Zeyuan,Zheng	3122738674	08	2021	813	3021 S Michigan Ave, unit 109	4RMGoaf...
16	Leo.Zheng	Chicken Enchilada Wrap	5.2	Zeyuan,Zheng	312	11	1111	11	3021 S Michigan Ave, unit 109	4RMGoaf...
17	Leo.Zheng	Chicken Enchilada Wrap	5.2	Zeyuan,Zheng	11	11	11	11	3021 S Michigan Ave, unit 109	4RMGoaf...
17	Leo.Zheng	Fajitas	6.8	Zeyuan,Zheng	11	11	11	11	3021 S Michigan Ave, unit 109	4RMGoaf...
18	Leo.Zheng	Chicken Enchilada Wrap	5.2	Zeyuan,Zheng	312	22	1212	813	3021 S Michigan Ave, unit 109	4RMGoaf...
18	Leo.Zheng	Fajitas	6.8	Zeyuan,Zheng	312	22	1212	813	3021 S Michigan Ave, unit 109	4RMGoaf...
19	Leo.Zheng	Fajitas	6.8	Zeyuan,Zheng	312	22	2222	123	3021 S Michigan Ave, unit 109	4RMGoaf...
20	Leo.Zheng	Fajitas	6.8	Zeyuan,Zheng	123	11	11	11	3021 S Michigan Ave, unit 109	4RMGoaf...
21	Leo.Zheng	Chicken Enchilada Wrap	5.2	Zeyuan,Zheng	1	1	1	1	3021 S Michigan Ave, unit 109	4RMGoaf...
22	Leo.Zheng	Fajitas	6.8	Zeyuan,Zheng	12	1	1	1	3021 S Michigan Ave, unit 109	4RMGoaf...
23	Leo.Zheng	Fajitas	6.8	Zeyuan,Zheng	1	1	1	1	3021 S Michigan Ave, unit 109	4RMGoaf...
24	Leo.Zheng	Royal Fajitas	5.7	Zeyuan,Zheng	11	11	11	11	3021 S Michigan Ave, unit 109	4PPM0wx...
25	Leo.Zheng	Chicken Enchilada Wrap	5.2	Zeyuan,Zheng	1	1	1	1	3021 S Michigan Ave, unit 109	4PPM0wx...
26	Leo.Zheng	Chicken Enchilada Wrap	5.2	Zeyuan,Zheng	1	1	1	1	3021 S Michigan Ave, unit 109	4RMGoaf...
27	Leo.Zheng	Royal Fajitas	5.7	Zeyuan,Zheng	1	1	1	1	3021 S Michigan Ave, unit 109	4PPM0wx...
28	Leo.Zheng	Royal Fajitas	5.7	Zeyuan,Zheng	1	1	1	1	3021 S Michigan Ave, unit 109	4RMGoaf...
29	Leo.Zheng	Royal Fajitas	5.7	Zeyuan,Zheng	1	1	1	1	3021 S Michigan Ave, unit 109	4RMGoaf...
30	Leo.Zheng	Royal Fajitas	5.7	Zeyuan,Zheng	1	1	1	1	3021 S Michigan Ave, unit 109	4PPM0wx...
31	Leo.Zheng	Chicken Enchilada Wrap	5.2	Zeyuan,Zheng	1	1	1	1	1	4RMGoaf...
32	Leo.Zheng	Chicken Enchilada Wrap	5.2	Zeyuan,Zheng	1	1	1	1	3041 S Michigan Ave, unit 406	4RMGoaf...
33	Leo.Zheng	Royal Fajitas	5.7	Zeyuan,Zheng	1	1	1	1	3041 S Michigan Ave, unit 406	609elG...
34	Leo.Zheng	Chicken Enchilada Wrap	5.2	Zeyuan,Zheng	0312 273 8674	11	1111	111	3021 S Michigan Ave, unit 109	4RMGoaf...
34	Leo.Zheng	Fajitas	6.8	Zeyuan,Zheng	0312 273 8674	11	1111	111	3021 S Michigan Ave, unit 109	4RMGoaf...
35	Zeyuan.Z...	Royal Fajitas	5.7	Zeyuan,Zheng	0312 273 8674	08	2020	813	3021 S Michigan Ave, unit 109	4RMGoaf...
35	Zeyuan.Z...	Chicken Enchilada Wrap	5.2	Zeyuan,Zheng	0312 273 8674	08	2020	813	3021 S Michigan Ave, unit 109	4RMGoaf...

**14.click on the delivery schedule button to show the best route prediction of the order.**



**137 lines code written in this readme file.**