# CSCE -608 Database Systems - Fall 2016 Aditya Emani - 524002563

# Report on Course Project #1 - Carpool

## Topic: Design and implementation of a Carpool System between US Cities

This project (Carpool) is designed to enable users Carpool between major US cities. Any user travelling between two locations can post ride-seeking passengers. There is a feature to cancel the post in case of emergency. Passengers can look for available rides between locations and book. There is a feature for the passenger to cancel booked ride. No payment gateways are integrated in this project.

Front End: HTML/CSS

Server Side: PHP (Hypertext Preprocessor)

Backend: MySQL

Server: <a href="https://www.000webhost.com">https://www.000webhost.com</a>

Website: https://carpool.000webhostapp.com/login.php

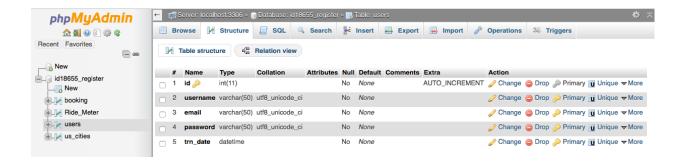
## Database Schema: Database is designed with the help of MySQL

The database for this application is designed using MySQL. The name of the database is: **id18655\_prasaadem**. It consists of 4 tables namely users, Ride\_Meter, us\_cities, booking.

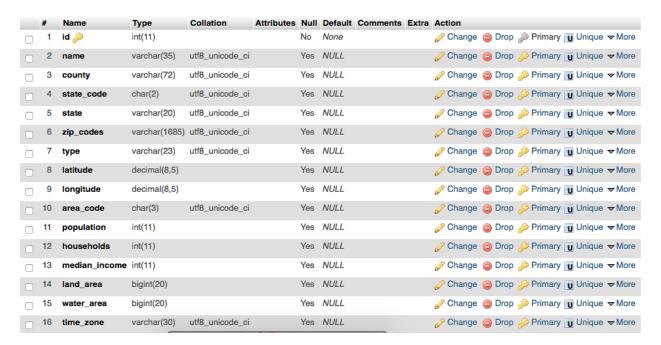
The tuples for table us\_cities is collected from the data set obtained form this website <a href="https://www.uscitieslist.org">https://www.uscitieslist.org</a>. All other information in the rest of tables is not real.

#### Table Structure:

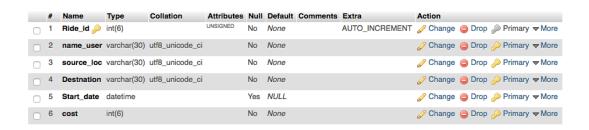
Users: The users table is used to store key user information such as the user name, email address, user Id and password. The structure of users table is as follows:



us\_cities: This table has all the information about the popular cities in the United States. The structure of this table is as follows:



Ride\_Meter: This table is used to store the information of all the available rides. Any ride posted by user is saved into this table. The structure of this table is as follows.



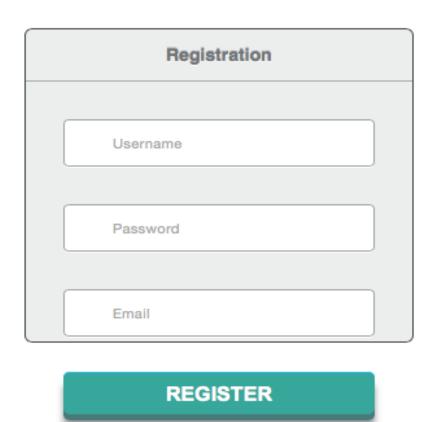
bookings: This table has just two columns in it. It stores the Ride\_id from the previous table and the name of the user. When a passenger books a ride, all the information about his booking is stored in this table. The structure of this table is as below:



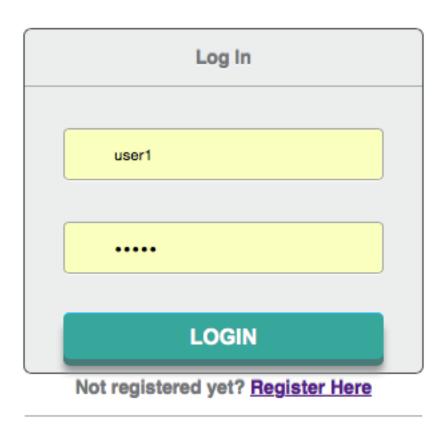
## Components: Registration, Login, Session, Post/Cancel Ride - Book/Cancel Ride

There are 5 major components in this project.

Registration: A new user should register him to log in to the application. The registration screen helps user with the registration process. Any user can register with a user name, password and email address. The user password is saved into the database after encryption. The registration screen is as below:

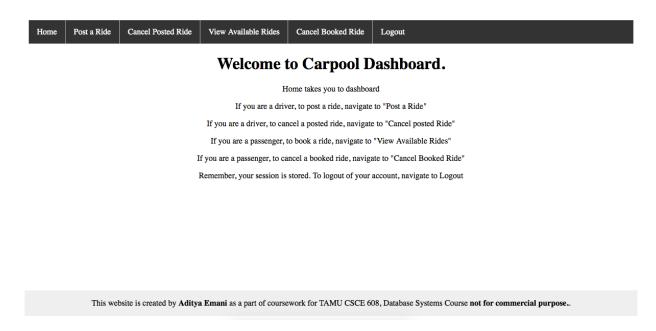


Login: After the registration, the user can login to the application through the login screen with his username and password. The login screen is as below:

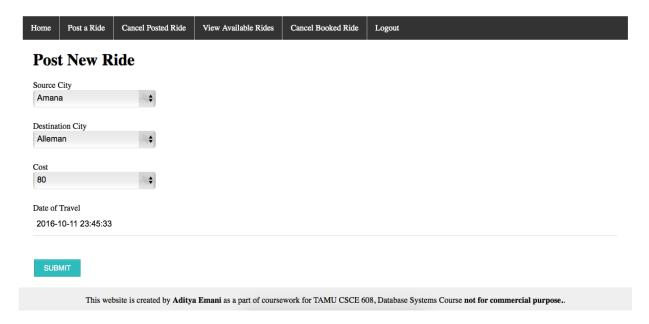


Session: The session of the user is maintained until he logs out of the application. This way the user doesn't have to log in every time he loads a page.

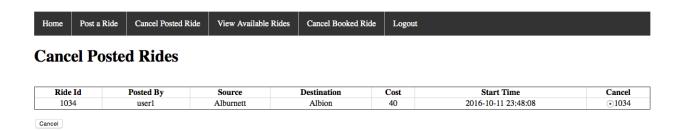
Once the user is logged in, he will be redirected to the home page. User can navigate from home page to his dashboard. The dashboard has all the instructions on how to access every feature of the application. A dashboard in this application looks like below:



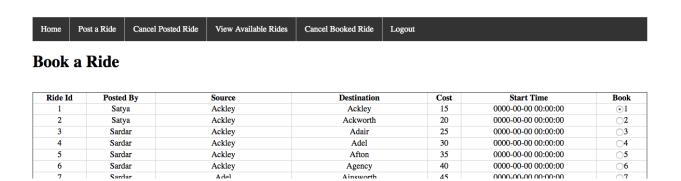
Post/Cancel Ride: A user can post a ride through the below page.



A user can cancel a posted ride through the below page. He can select the radio button corresponding to the ride he wants to cancel from the right and at the bottom of the page, click the button cancel. If a user cancels a posted ride, all the bookings of passengers who booked his ride get cancelled.



Book Ride: A user can book a ride through the below page. All the rides posted by users are displayed in this page. User can select the radio button corresponding to the ride he wants to book from the right and at the bottom of the page, click the button Book.



Cancel Ride: A user can cancel a ride through the below page. He can select the radio button corresponding to the ride he wants to cancel from the right and at the bottom of the page, click the button cancel.

## **Challenges:**

- 1. One of the major challenges I faced in creating this project is in writing the SQL queries along with PHP to obtain information from database. Stackoverflow answered most of the questions.
- 2. Loading data obtained from PHP and SQL into a html table. The table has to be dynamic and php script solved the problem.
- 3. Previously, I assigned, for the booking or cancel a ride, every row of table a button. It then got difficult to identify which button was pressed as PHP references a button call by its name and the table is dynamic in size. So every button must have a separate function. So I replaced the buttons from each row with a radio button. As we know that all the radio buttons in a form have the same name and different values, it fixed the problem.

## References:

- 1. The url for the web project is:
  - https://carpool.000webhostapp.com/login.php
- 2. Server is hosted in: <a href="https://www.000webhost.com">https://www.000webhost.com</a>
- 3. Database and server code is hosted in : https://databases-auth.000webhost.com/index.php
- 4. http://stackoverflow.com for the dynamic height of HTML Table
- 5. us\_cities dataset from <a href="https://www.uscitieslist.org">https://www.uscitieslist.org</a>
- 6. HTML & CSS queries from http://www.w3schools.com