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# Pool - carpooling app

SW Engineering CSC648-848-05 Fall 2023

## Milestone 3 | 11/02/2023

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## History Table

Milestone	Date
M3V1	11/02/23
M2V2	11/02/23
M2V1	10/12/23
M1V2	10/8/23
M1V1	9/21/23

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## 1. Data Definitions

User: browsing capabilities only, doesn't require an account

Account: can be created by user, required for drivers and passengers

Driver: user with an account, registers vehicles and submits trips

Passenger: user with an account, must be ID verified, requests rides in many trips

Profile: associated with a user who has an account, visible to drivers and passengers within a common pool, and after a trip for a limited time

Crew: a common group of people who pool together

Car: registered to one driver, associated with many pools

Pool: created by a driver, can have passengers, can be converted into a crew

Ratings: for drivers and passengers to rate each other

Ride request: how passengers request to be admitted into a pool

Payment: preferred methods of payment which allow passengers and drivers to exchange compensation for pool services off platform

Notifications: the way through which users are notified of updates pertaining to on-platform actions they have taken

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## 2. Reprioritized Functional Requirements

### Priority 1

#### 1. User

- 1.1 A user shall create an account
- 1.2 A user shall register as a driver
- 1.3 A user shall register as a passenger
- 1.4 A user shall sign in
- 1.5 A user shall log out

#### 2. Profile

- 2.1 A profile shall belong to a passenger
- 2.2 A profile shall belong to a driver
- 2.3 A profile shall contain user details
- 2.4 A profile shall be viewed by the user it is associated with

#### 3. Driver

- 3.1 A driver shall be Fastrak verified
- 3.2 A driver shall create zero or many pools
- 3.3 A driver shall have zero or many crews
- 3.4 A driver shall have a driver's license
- 3.5 A driver shall view the pools they posted
- 3.6 A driver shall view the crews they are a member of
- 3.7 A driver shall leave the crews they are a member of

#### 4. Passenger

- 4.1 A passenger shall join many pools
- 4.2 A passenger shall have many crews
- 4.3 A passenger shall view the pools they have joined
- 4.4 A passenger shall view the crews they are a member of
- 4.5 A passenger shall leave the crews they are a member of
- 4.6 A passenger shall leave the pools they are a member of

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## 5. Crew

- 5.1 A crew shall be created by one user
- 5.2 A crew shall have a description
- 5.3 A crew shall have members

## 6. Pool

- 6.1 A pool shall have a description
- 6.2 A pool shall have a start time.
- 6.3 A pool shall have passengers.
- 6.4 A pool shall have one driver
- 6.5 A pool shall have a start location
- 6.6 A pool shall have an end location
- 6.7 A pool shall be deleted by its driver

## **Priority 2**

### 1. User

- 1.1. A user shall be able to view their passenger ratings received
- 1.2. A user shall be able to view their driver ratings received
- 1.3. A user shall be able to view their passenger feedbacks received
- 1.4. A user shall be able to view their driver feedbacks received

### 2. Profile

- 2.1. A profile shall contain payment details
- 2.2. A profile shall display the average rating
- 2.3. A profile shall display ride history

### 3. Driver

- 3.1. A driver shall have ratings
- 3.2. A driver shall send ride requests for their pool(s)

### 4. Passenger

- 4.1. A passenger shall have ratings
- 4.2. A passenger shall send invites for crews.

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5. Crew

- 5.1. A crew creator shall be able to remove users from their crew
- 5.2. A crew invite shall be accepted
- 5.3. A crew invite shall be declined

6. Pool

- 6.1. A pool shall have an occurrence rate.
- 6.2. A pool shall have a total distance in miles
- 6.3. A pool shall have an estimated trip duration
- 6.4. A pool shall have ride requests.

7. Ratings

- 7.1. A rating shall have a numerical value of 1-5
- 7.2. A rating for a driver shall be provided by a passenger belonging to a common pool
- 7.3. A rating for a passenger shall be provided by a driver belonging to a common pool
- 7.4. A rating for a car shall be provided by a passenger belonging to a common pool

8. Ride Requests

- 8.1. A ride request shall have seats
- 8.2. A ride request shall contain the description associated with the requesting Crew
- 8.3. A ride request shall contain a clickable name of the profile associated with the requesting Passenger(s) or Crew
- 8.4. A ride request shall contain the description associated with the requesting Crew
- 8.5. A ride request shall have zero or one pickup location(s)
- 8.6. A ride request shall have zero or one dropoff location(s)
- 8.7. A ride request shall be made by passengers
- 8.8. A ride request shall be made for a Crew
- 8.9. A ride request shall be made for a Pool

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8.10. A ride request shall be accepted

8.11. A ride request shall be declined

9. Notifications

9.1. Notifications may be triggered by many actions.

**Priority 3**

1. User

1.1. A user shall have an emergency contact

1.2. A user shall be able to file a report ticket

1.3. A user shall be able to chat with support

1.4. A user shall be able to report any feedbacks

1.5. A user shall be able to delete their account

2. Driver

2.1. A driver shall have one or more cars

3. Car

3.1. A car shall be associated with a driver

3.2. A car shall be registered

3.3. A car shall have ratings

4. Profile

4.1. A profile shall display total distance traveled

4.2. A profile shall display total environmental impact

4.3. A profile shall display total number of crews with membership

5. Pool

5.1. A pool shall have a car

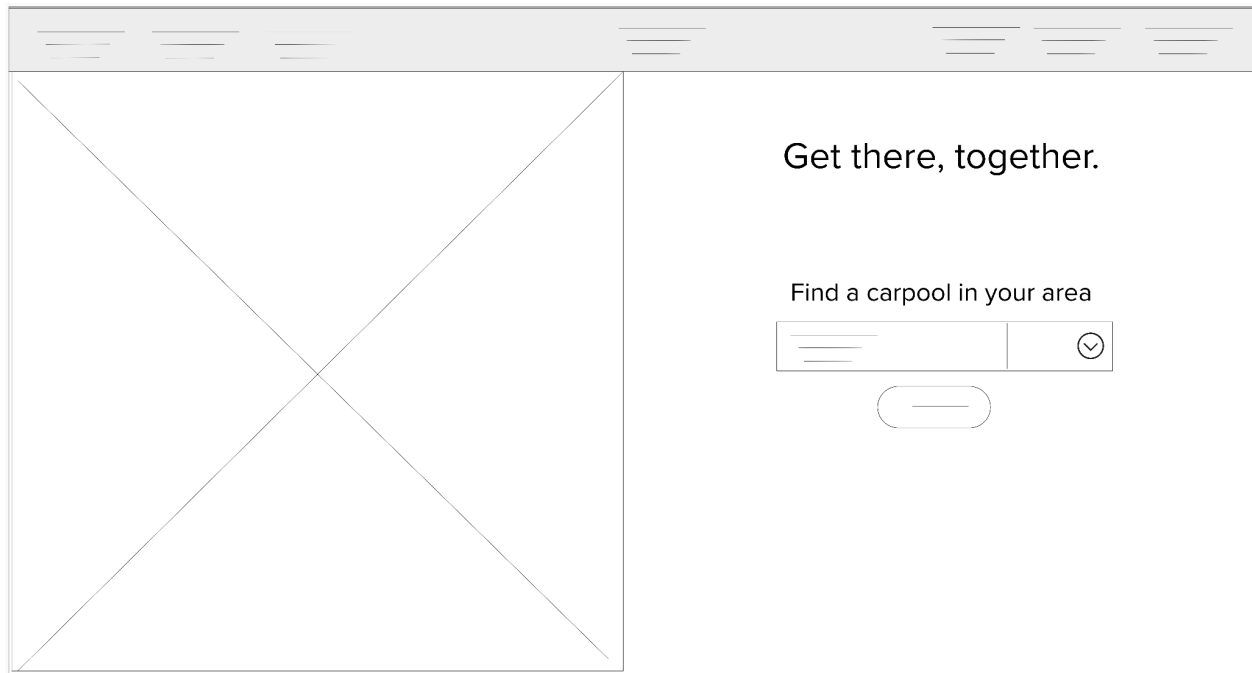
5.2. A pool shall be one-time or recurring.

6. Notifications

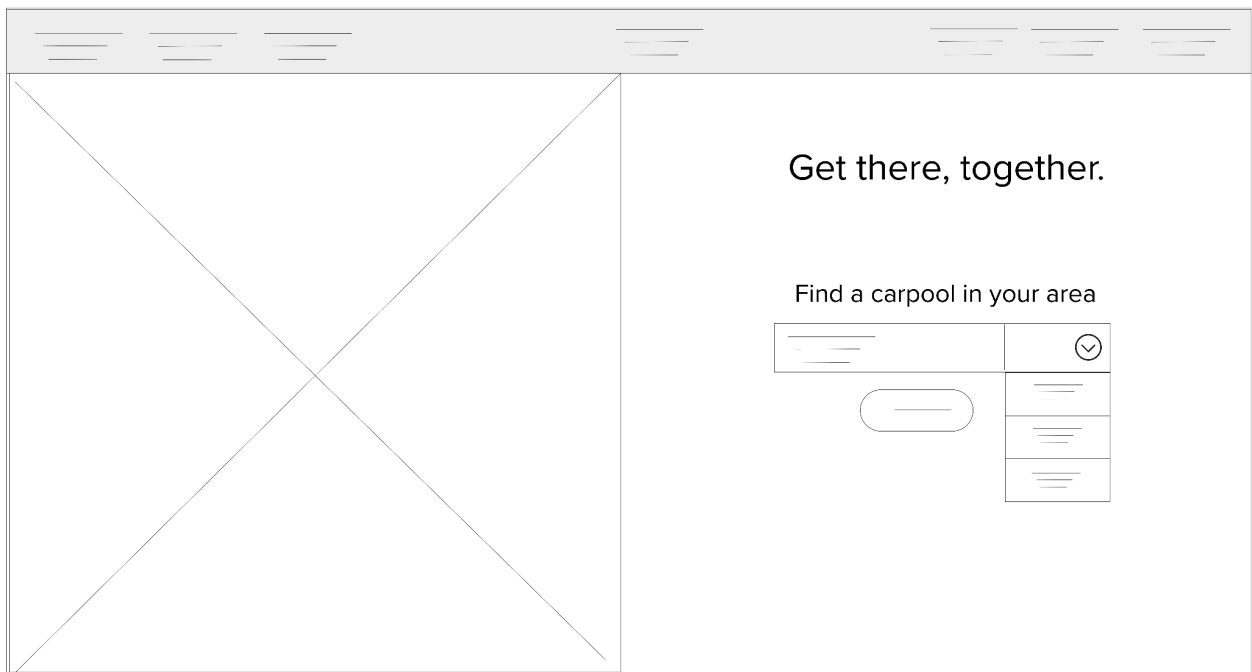
6.1. Notifications may be toggled on or off per account.

### 3. Wireframes

#### Home page



#### Home page with pulldown



## Home page with search results

Wireframe of a home page with search results. The page is divided into two main sections. The left section is a large placeholder area marked with a large 'X'. The right section contains the following elements:

- A header bar with three horizontal lines on the left and three horizontal lines on the right.
- The text "Get there, together." in a bold font.
- The text "Find a carpool in your area" below the main heading.
- A search bar with a text input field and a button with a checkmark icon.
- A rounded rectangular button below the search bar.
- A list of two carpool results, each represented by a rectangular box containing a text input field and a rounded rectangular button.

## Sign up

Wireframe of a sign up page. The page is divided into two main sections. The left section contains the following elements:

- A header bar with three horizontal lines on the left and three horizontal lines on the right.
- A square icon with an 'X' inside, representing a missing image.
- The text "Sign up" below the icon.
- A form with four text input fields arranged in two rows: two single-line inputs on top and two multi-line inputs below.
- A checkbox and a text input field below the form.
- A large rounded rectangular button at the bottom.

The right section is a large placeholder area marked with a large 'X'.



## Sign up as a driver

A wireframe of a web form titled "Sign up" with a placeholder icon. The form is located on the left side of a two-column layout, while the right column is a large placeholder. The form includes:

- Two short input fields for first and last names.
- Three stacked input fields for address.
- A checkbox with a label.
- A long input field for a phone number.
- Another checkbox with a label.
- A rounded button for submission.


## Sign in

A wireframe of a web form titled "Sign In" with a placeholder icon. The form is located on the right side of a two-column layout, while the left column is a large placeholder. The form includes:

- Two stacked input fields for email and password.
- A rounded button for submission.

## View driver profile

Tanya



Driver Profile

**Name:**


**Phone:**

**Email:**

**FasTrak Verified?** ☐

## View passenger profile

Tanya



Passenger Profile

**Name:**

**Phone:**

**Email:**

Post a pool

[illegible]

Post a pool - pool name

[illegible]

## Post a pool - pool name (filled)

A screenshot of a web form titled "Post a pool - pool name (filled)". The form has a light gray header bar with several horizontal lines representing input fields. The main content area is white. In the center, there is a vertical stack of elements: a horizontal line, a small horizontal line, and a list of five items, each preceded by a plus icon in a circle. The items are "SF Commute", "Start Location", "End Location", "Date & Time", and "Privacy Settings".

## Post a pool - start location

A screenshot of the same web form, but now the "Start Location" option is selected and expanded. A mouse cursor is pointing at the plus icon next to "Start Location". Below this option, there is a form for entering location details: a "Street Address" field, a "City" field, and two smaller fields for "State" and "Zip Code". Below these fields is a rounded rectangular button with a horizontal line. The other options in the list ("SF Commute", "End Location", "Date & Time", and "Privacy Settings") remain visible below the expanded section.

## Post a pool - start location (filled)

A screenshot of a web form titled "Post a pool - start location (filled)". The form has a light gray header bar with several horizontal lines representing input fields. The main content area is white. In the center, there is a list of items, each preceded by a plus icon in a circle. The items are: "SF Commute", "21 Broadway", "Oakland, CA", "End Location", "Date & Time", and "Privacy Settings". The "End Location" item is highlighted with a light gray background.

- + SF Commute
- + 21 Broadway  
Oakland, CA
- + End Location
- + Date & Time
- + Privacy Settings

## Post a pool - end location

A screenshot of the same web form, but now the "End Location" item is expanded. A mouse cursor is pointing at the plus icon next to "End Location". Below the plus icon, there is a form with four input fields: "Street Address", "City", "State", and "Zip Code". The "State" and "Zip Code" fields are grouped together. Below these fields is a rounded rectangular button. The other items in the list remain the same.

- + SF Commute
- + 21 Broadway  
Oakland, CA
- + End Location
  - Street Address
  - City
  - State | Zip Code
  - [Button]
- + Date & Time
- + Privacy Settings

Post a pool - end location (filled)

Post a pool - date/time picker

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[illegible]

- + SF Commute
- + 21 Broadway  
Oakland, CA
- + 9 Sansome St.  
San Francisco, CA
- + 6/10/23 10 AM
- + Make your pool available to the public or to members of a crew
  - ☒ Public
  - ☐ Private

Post a pool - privacy settings *public selected* (filled)

A screenshot of a web form for posting a pool. The form has a light gray header with navigation links. The main content area is white. On the right side, there is a list of items with a plus icon in a circle to the left of each item. The items are: "SF Commute", "21 Broadway", "Oakland, CA", "9 Sansome St.", "San Francisco, CA", "6/10/23 10 AM", and "Public Pool". Below the list, there is a rounded rectangular button with a plus icon and a mouse cursor pointing at it.

Post a pool - privacy settings *when one or more crews are available*

A screenshot of a web form for posting a pool. The form has a light gray header with navigation links. The main content area is white. On the right side, there is a list of items with a plus icon in a circle to the left of each item. The items are: "SF Commute", "21 Broadway", "Oakland, CA", "9 Sansome St.", "San Francisco, CA", "6/10/23 10 AM", and "Make your pool available to the public or to members of a crew". Below the list, there are two radio buttons: "Public" and "Private". The "Private" radio button is selected, and a mouse cursor is pointing at it. Below the radio buttons, there is a rounded rectangular button with a plus icon.



## Post a pool - privacy settings *when more than one crew is available*

The screenshot shows a web form for posting a pool. At the top, there is a header bar with several horizontal lines representing navigation or search options. Below the header, the form contains a list of details: "SF Commute", "21 Broadway", "Oakland, CA", "9 Sansome St.", "San Francisco, CA", and "6/10/23 10 AM". Each item is preceded by a small circular icon with a plus sign. Below these details, there is a section for privacy settings with the text "Make your pool available to the public or to members of a crew". Under this text are two radio buttons: "Public" (unselected) and "Private" (selected). Below the radio buttons is a dropdown menu labeled "Select a crew" with a checkmark icon. The dropdown menu is open, showing two options: "Work crew" and "Soccer crew". At the bottom of the form is a large, empty rounded rectangular button.

## Post a pool - privacy settings *crew selected (filled)*

The screenshot shows the same web form as above, but with the "Share with Soccer Crew" option selected. The details list remains the same. The privacy settings section now shows the "Public" radio button selected and the "Private" radio button unselected. The "Share with Soccer Crew" option is now visible, preceded by a small circular icon with a plus sign. Below this option is a large, empty rounded rectangular button with a cursor icon pointing to it.

## View pools as a driver

**My Pools**

**Driver: Fernando**

Delete Pool

**Driver: Sally**

Delete Pool

**Available Pools**

**Driver: Efe**

Leave Pool

**Past Pools**

**Driver: Jerome**  
**Passenger: Carlos**  
**Passenger: Gloria**

Create Crew

## View pools as a passenger - create crew

My Pools

### Available Pools

Driver: Fernando

Leave Pool

Driver: Sally

Leave Pool

Driver: Efe

Join Pool

### Past Pools

Driver: Jerome

Create Crew

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## View pools as passenger - crew created

My Pools

Available Pools

Driver: Fernando

Leave Pool

Driver: Sally

Leave Pool

Driver: Efe

Join Pool

Past Pools

Driver: Jerome

Crew Created!

## View crews

**My Crews**

**My Crews**

**Coworker Crew**  
Driver: Fernando  
Passenger: Dev  
Passenger: Lulu  
[Leave Crew](#)

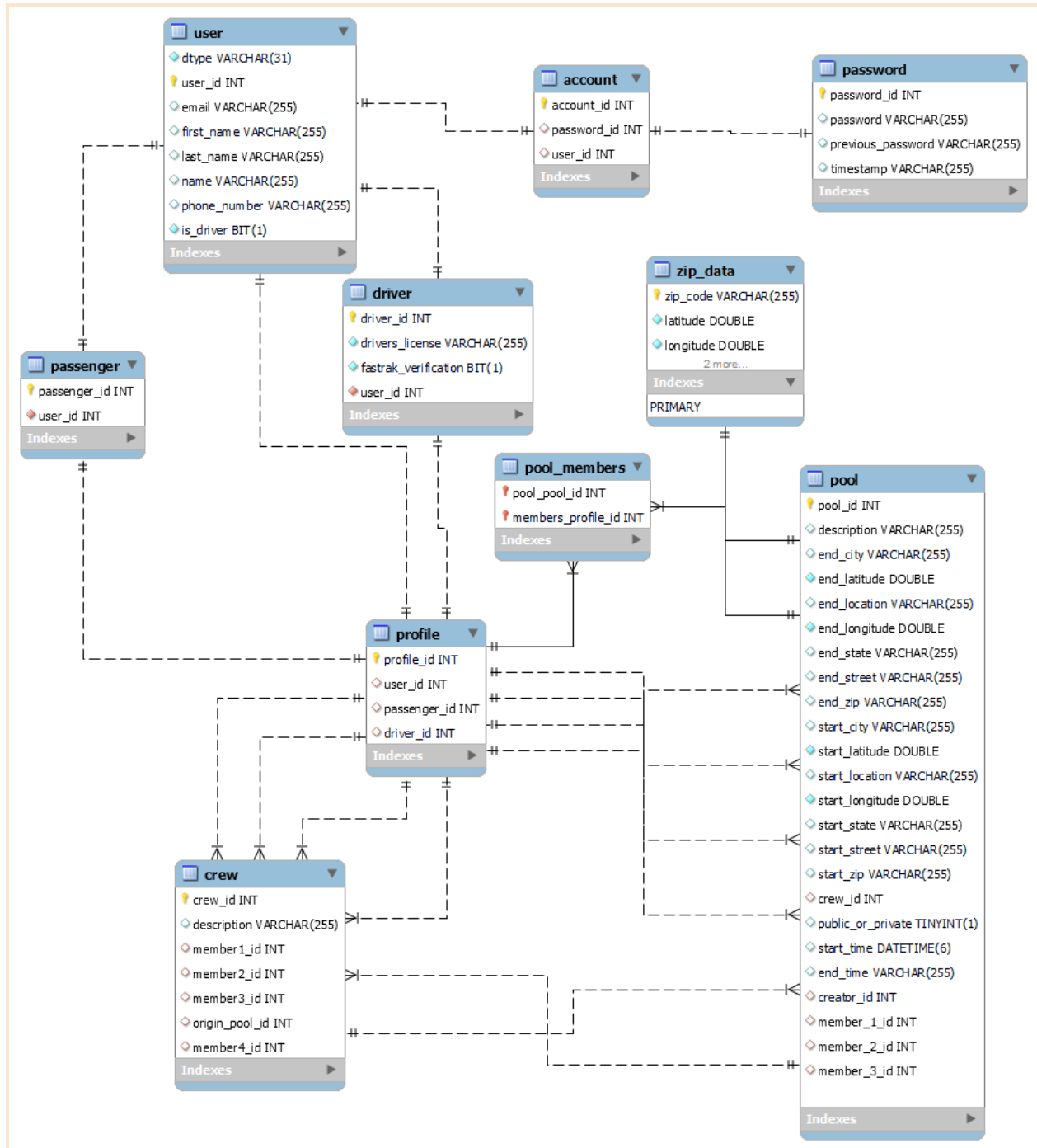
**Soccer Crew**  
Driver: Chai  
Passenger: Shreya  
Passenger: Sam  
[Leave Crew](#)

**Tom Crews**  
Driver: Sal  
Passenger: Destiny  
Passenger: Calvin  
[Leave Crew](#)

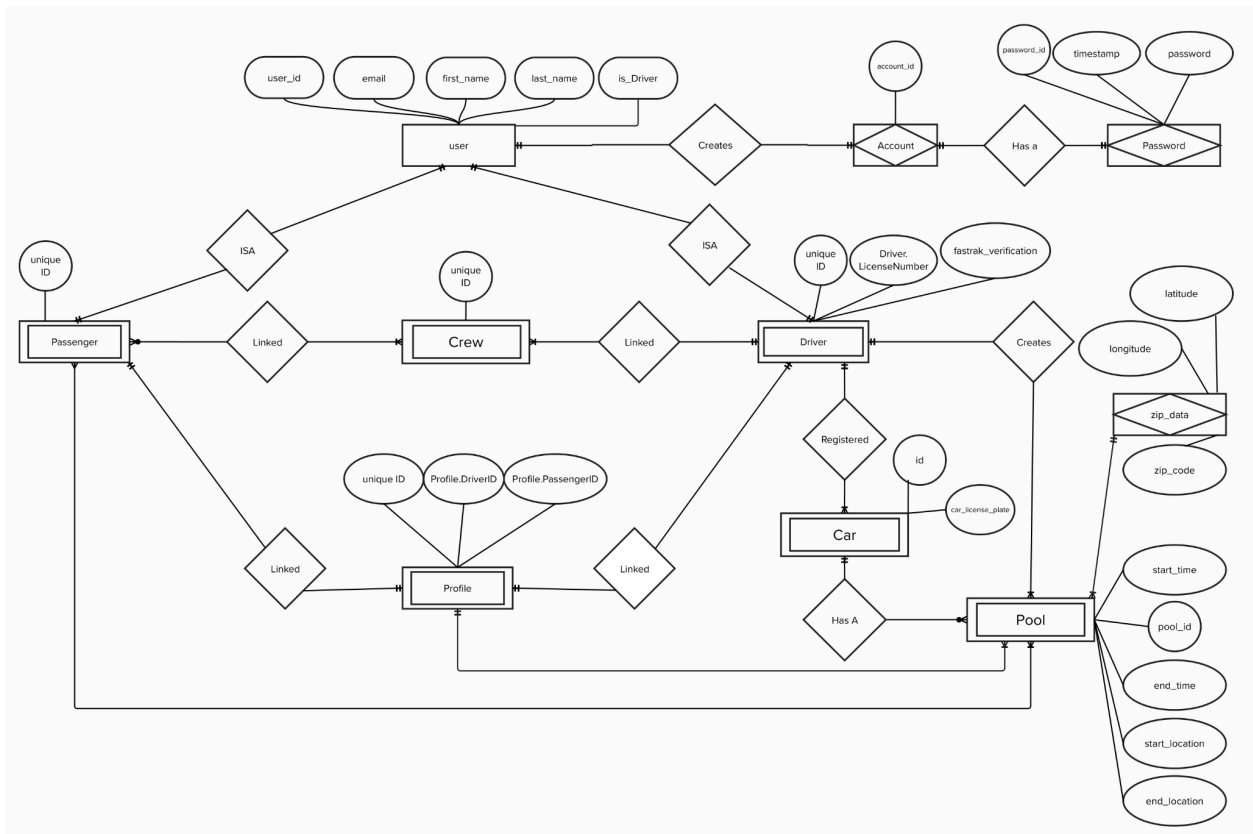
**Airport Crew**  
Driver: Laquisha  
Passenger: Hector  
Passenger: Mei  
[Leave Crew](#)

## 4. High level database architecture and organization

### Entity Establishment Relationship Diagram (EER)

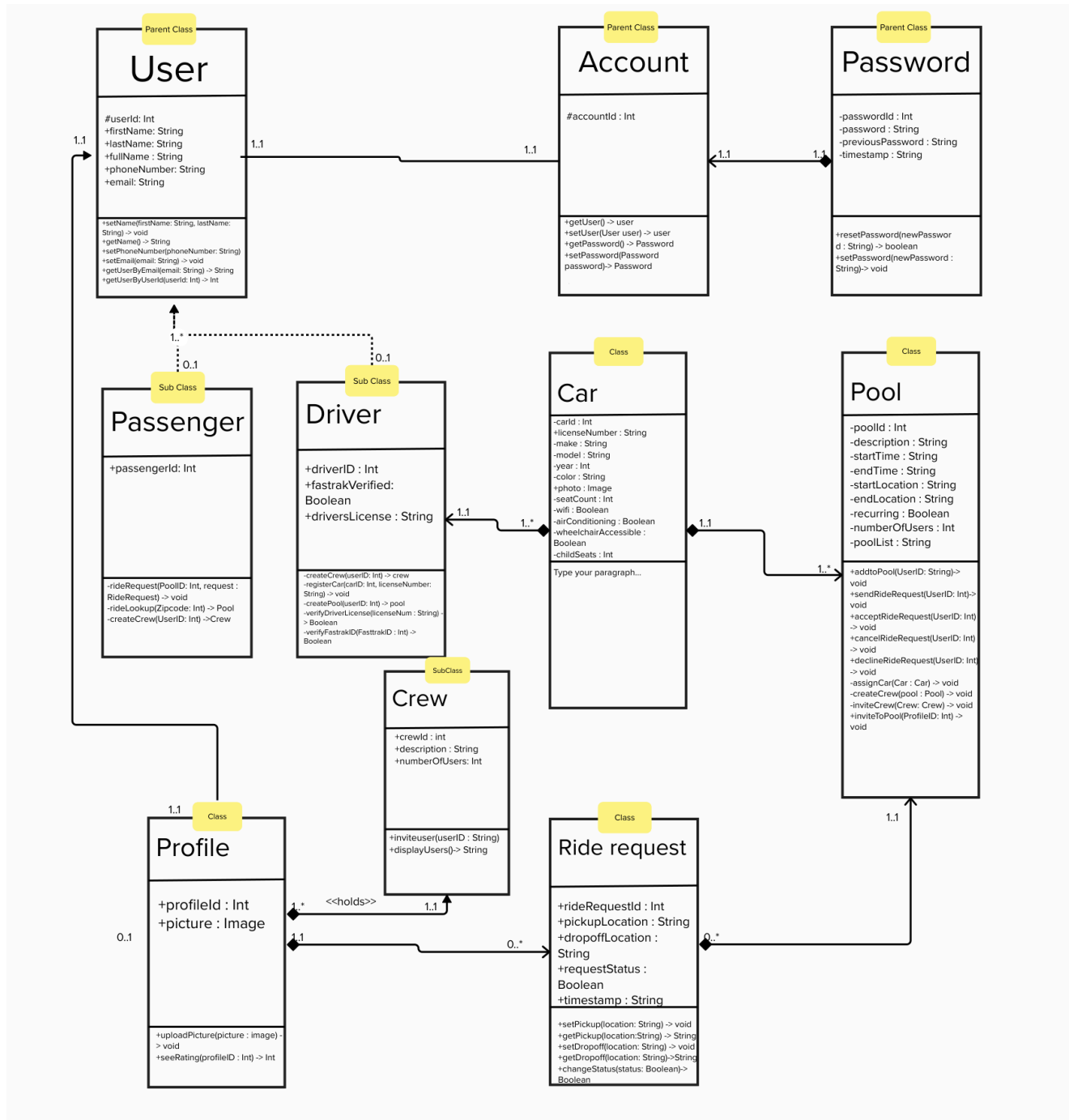


## Entity Relationship Diagram (ERD)



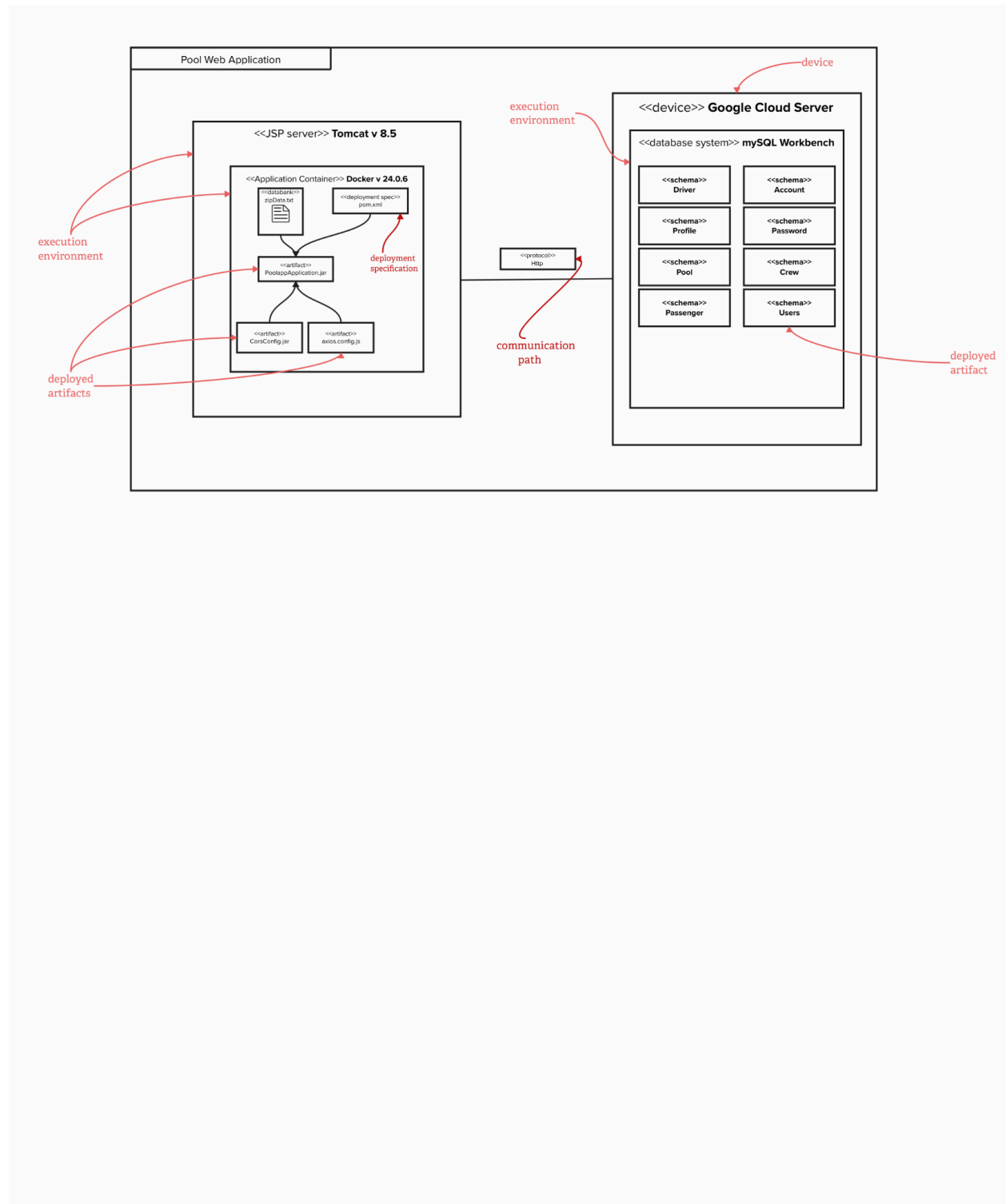
## 5. High Level Diagrams

### UML Diagram

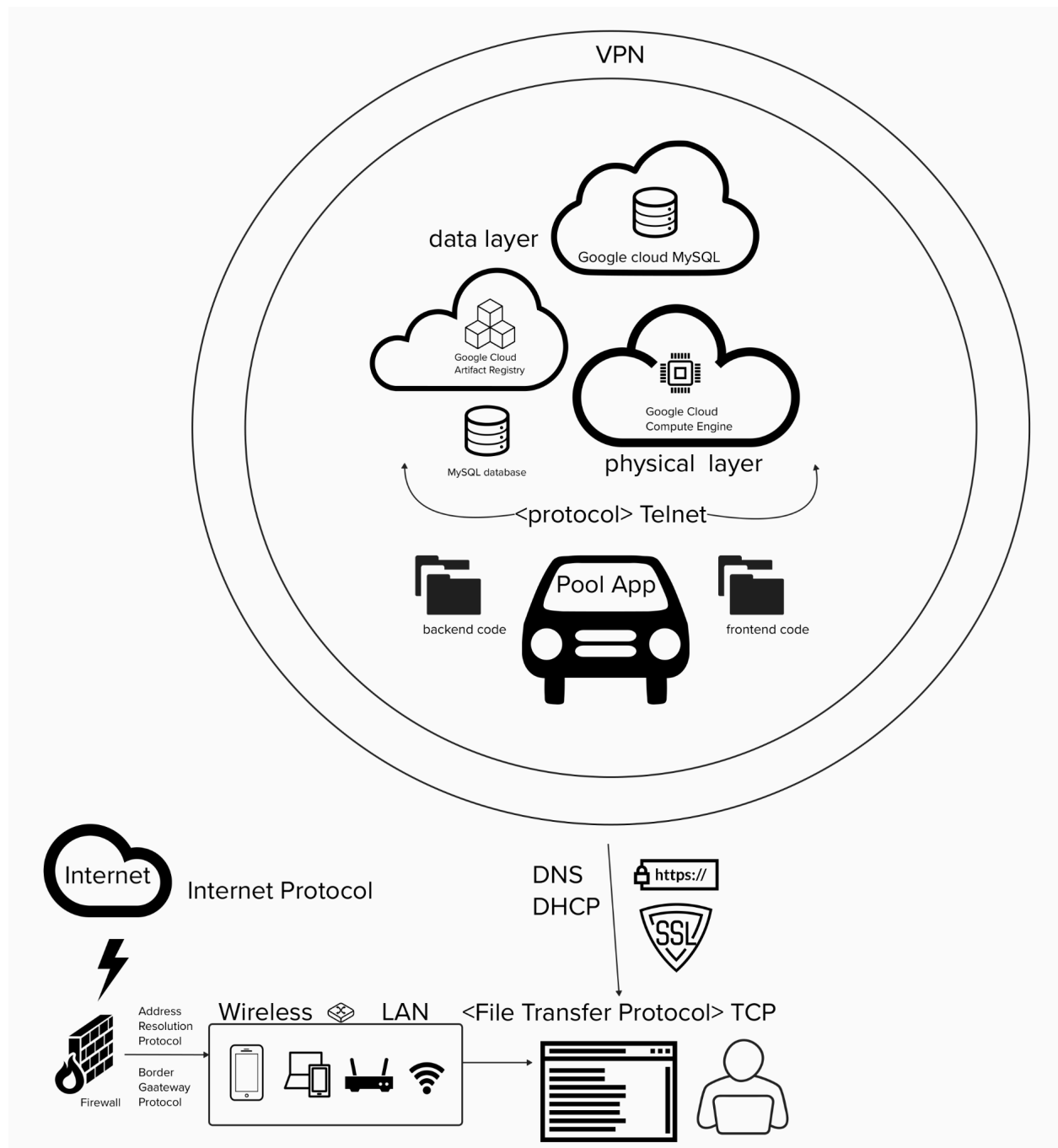




## Deployment Diagram



## Network Diagram



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## 6. List of Contributions

### Team Contribution Scores

- Isiah: 10
- Jonathan: 10
- Kendrick: 8
- Kristian: 10
- Phillip: 10
- Xuan: 9

### Prioritized Functional Requirements

- ☒ Isiah: verbal contribution to full reprioritization during two collaborative sessions with full team
- ☒ Jonathan: verbal contribution to full reprioritization during two collaborative sessions with full team
- ☒ Kendrick: verbal contribution to full reprioritization during two collaborative sessions with full team
- ☒ Kristian: verbal contribution to full reprioritization during two collaborative sessions with full team
- ☒ Phillip: verbal contribution to full reprioritization during two collaborative sessions with full team
- ☒ Xuan: verbal contribution to full reprioritization during two collaborative sessions with full team
- ☒ Zoe: facilitated two collaborative sessions with full team

### Wireframes

- ☒ Isiah: Home page with pulldown open, Home page with search results
- ☒ Jonathan: Home page, Home page with pulldown open
- ☒ Kendrick: Signup
- ☒ Phillip: Login

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- ☒ Zoe: Signup as driver, View passengerpProfile, View driver profile, Pool creation, Create crew, View pools, View crews

## High Level Database Architecture and Organization



- ☒ Isiah: Worked collaboratively deployment diagram on a team call using Mural
- ☒ Jonathan: Worked collaboratively deployment diagram on a team call using Mural, created EER
- ☒ Kendrick: Worked collaboratively deployment diagram on a team call using Mural

## Frontend Implementation


- ☒ Isiah:
  - [View Profile](#)
- ☒ Kendrick
  - [Add phone number to account creation screen](#)
  - [View Crews](#)
- ☒ Xuan
  - [Driver registration](#)
  - [Pool creation](#)
  - [Join pool](#)
  - [Create a crew](#)
  - [View Pools](#)
  - [User can switch from logged in to logged out state](#)
  - [Show "Select" in search pulldown by default](#)
  - [Add search button to home page](#)
  - [Update default values in create pool input fields](#)
  - [Shift search bar up to make room for results](#)

## Backend Implementation

- ☒ Jonathan:
  - [Passenger becomes pool member on "join pool"](#)
  - [Create passenger class](#)
  - [Create passenger endpoint and implement method](#)

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- [Create profile endpoint and implement method](#)
  - [Update pool class to accommodate public vs private pool](#)
  - [Update data type of pool.start\\_time and delete pool.end\\_time](#)
  - [Insert user, pool, and crew data](#)
  - [Clean up profile table and class](#)
  - [Create endpoint to delete user from crew](#)
  - [Create endpoint to add user to crew](#)
  - [Update crew to include a fourth member](#)
  - [Update passenger to remove profileId](#)
  - [Clean up pool table and class](#)
  - [Update profile to remove user\\_type](#)
  -  Kristian:
    - Optimized proximity based search method for pool search
    - Supported frontend and backend teams, ensured both systems were working together throughout the development lifecycle
    - [Update HTTP method returned in backend response](#)
    - [Create endpoint for "View pools"](#)
    - [Create pool endpoint](#)
    - [Update Sign-in endpoint to include profileId in response to frontend](#)
  -  Phillip:
    - [Create driver class](#)
    - [Create crew class](#)
    - [Create profile class](#)
    - [Create driver endpoint and implement method](#)
    - [Create crew endpoint and implement method](#)
    - [Create passenger or driver + profile on user creation](#)
    - [Create endpoint to add user to pool](#)
    - [Create endpoint for pool creation](#)

## Deployment

-  Xuan: with input from Zoe purchased a domain with Google managed DNS and SSL, updated build process, fully owned deployment for delivery