

Block Diagram

Team: Cyclone Carpool (2-Jabir-5)

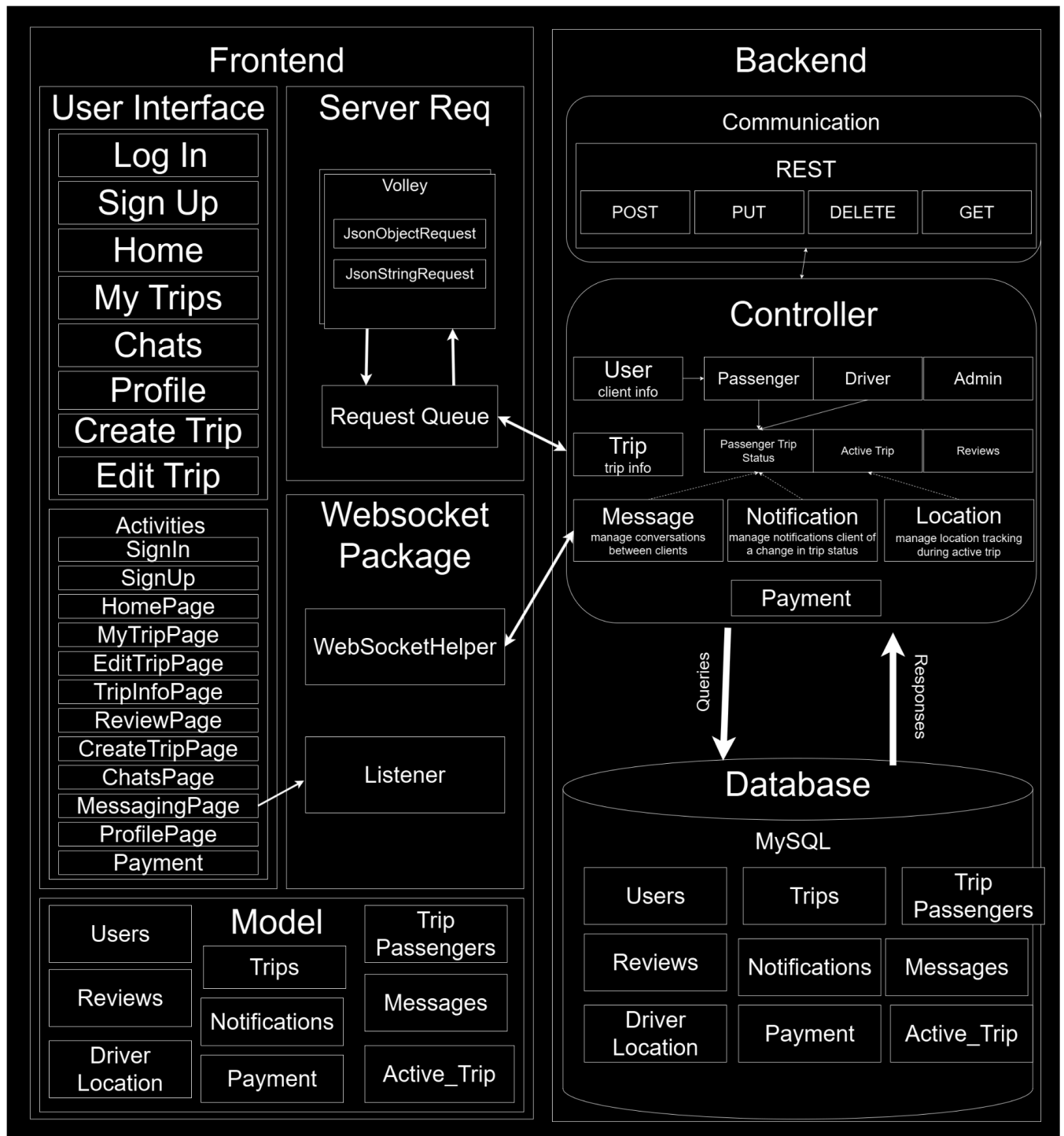
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Android Studio Frontend (Implemented):

SignUp

- Create an account and generate a page with the following elements
 - EditText: password1Input
 - EditText: password2Input
 - EditText: emailInput
 - EditText: firstNameInput
 - EditText: lastNameInput
 - Spinner: roleSpinner
 - Button: btnConfirmSignUp
- After the user clicked "Sign Up" they code will check everything matches with the passwords and emails and then sends a POST request to the server

SignIn

- SignIn page generates a page with the following elements
 - EditText: signin_emailInput
 - EditText: signin_passwordInput
 - Button: btnConfirmSignIn
- After the user clicks btnConfirmSignIn we send a POST request to the server to request access to the account if approved we go to the Home Page

Home Fragment

- Home Page has following elements
 - Search, Filter, Trip Item, and Navbar
- When in home page we send a GET request to the server to retrieve all the trip items to then list them on the screen. Each Trip item has a trip info button and message button.

MyTrips Fragment

- My Trip page has the following elements
 - Navbar, edit trip button, trip item, and trip list
- When in my trip page we send a GET request to the server to retrieve all the my trip items to then list them on the screen. Each Trip item has a edit button on it which send the user to the edit page.

CreateTrip Fragment

- Create Trip has the following elements
 - Start location, end location, time, date, price, seats available, smoking boolean, and round trip boolean.
 - Submit button
- After the user clicks the Submit button then everything is sent to the server as a POST request to input it into the database and then the user is sent to the home page

Edit Trip

- Edit Trip has the following elements
 - Start location, end location, time, date, price, seats available, smoking boolean, and round trip boolean.
 - Edit button
- After the user clicks the Edit button then everything is sent to the server as a PUT request to input it into the database and then the user is sent to the home page

Edit Profile

- Edit Profile has the following elements
 - EditText name, EditText email
 - Edit Button
 - Delete Button
- After the user clicks the Edit button then a prompt is shown to confirm and then everything is sent to the server as a PUT request to input it into the database. If the user clicked the delete button then they delete their profile.

Profile Fragment

- Profile has following elements
 - Name, Email, Photo
 - Edit Button
- When use is in profile page they can see all their info and then click edit profile if they would like to edit their profile.

Chats Fragment

- Chats page has the following elements
 - Navbar, Chat Item, Chats list, Recent Chat message
 - Chat Button
- When the use enters the chats page we call a GET request to the backend to request all messages the user has ever sent in any chats to find what chats they are apart of and also what is the most recent message of that chat that was sent. Then we populate the chat list and each chat item where if a user clicks the chat button it sends them into the messaging page of that chat.

Messaging

- Messaging page has the following elements
 - Message Item, Nav Bar, Message Input, Time, Date, Message Text
 - Submit Message Button
- When the user enters the messaging page for the current chat the websocket helper pulls the history of the chat and then populates the chat messaging with all the info needed in each thing. The user can then type in the message input and click the submit arrow to then send the message into the websocket to the other users. The websocket handler aka the helper helps with all of this.

Backend

Communication

The backend uses request mappings to update the database based on information sent to the given mapping url.

- Get: Request specific information, typically used for getting user or trip information for a specific user from the database.
- Post: Send information for an item to be added to the DB. Mostly used for creating accounts (sign up), creating trips, etc.
- Put: Sends information to edit a specific item in the database, like editing trip information.
- Delete: Send the id of a specific item to be deleted from the database.

Controllers

The controllers contain the mapping endpoints for communication between frontend and the database.

- User: Contains the mappings above, contains one-to-one relationships. Users have attributes like name, email, password, driver status, etc.

- Trip: Contains mappings above, and contains many-to-many relationships. Many users can have/be on many trips.
- Payment: Contains the mappings above, and contains one-to-one relationships. One user has to make a single payment for a specific trip.
- Message: Contains one-to-one, many-to-many and one-to-many relationships. Their can be direct messaging, messages from one user to many users (group chat), and their can be many messages in a group chat.
- Location: Contains a many-to-one relationship for driver location to a specific driver.

