Better Boulder Busses

Group 7

Group Members

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What is Better Boulder Busses

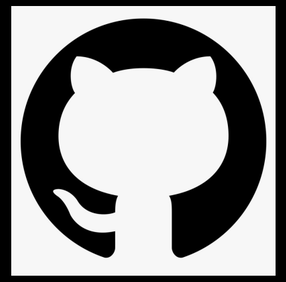
BBB is:

THE solution for Bus Transit in Boulder

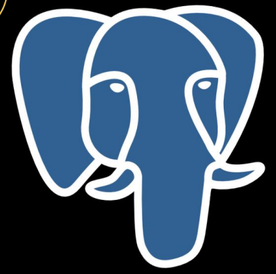
What we do different:

- Application is entirely *free*
  - All Routes visible at all times
  - Completely Open Source
- Operates on both Mobile and Computers
- Our target audience is a frequent public transportation user who would like up to date information regarding their routes.

Tools Used



Github/Github Project Board
5 Stars



PostgreSQL
2.5 Stars

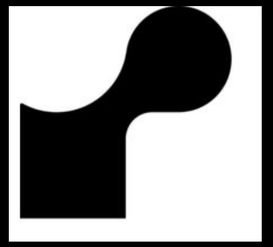
HTML/CSS/Handlebars
3 Stars

NodeJS
4 Stars

Mocha and Chai
3 Stars

Docker
4.5 Stars

Mapbox API
5 Stars



Render
2 Stars

Methodologies Used

Agile
2/5

Peer Review
4/5

Pair Programming
5/5

- Used GitHub projects to track sprints, epics, and story points
  - We would assign a Project Board manager every week so the responsibilities would be fairly delegated
- We would meet bi weekly mainly on zoom in order to plan the week's sprint
- In regards to pair programming we would consistently stay after our lab section time to collaborate on pain points in our development process
  - This helped us finish many of our projects configuration issues
    - ie docker compose, .env differences, advice on styling etc

Challenges

Calculating Bus Location

- Creating bus tracking algorithm
- Having bus times be accurate to location
- Turning the Longitude and Latitude into an actual icon on mapbox

Importing GTFS Data

- Continued Issues throughout the project
- Displaying Routes, Timing, Live Bus Tracking

Sidebar

- Display Issues
- Scroll Bar Inconsistencies
- Mobile vs. Webpage Implementation
- Display Issues

User Locating

- Centering map on user functionality in relation to Route

FUTURE SCOPE

Enhancements

Using RTD API

Although our current estimates are relatively accurate, an edge case we can not account for is an unexpected delay or deviation. For example, if there is an accident on one of the routes the bus tables will not accurately reflect the total time it will take to get to the next destination.

1st Priority

Search by Destination

Allowing the user to search by destination will help the users who are not already familiar with the bus routes and their general destinations. However the algorithm needed in order to determine which route best to take (especially if there were multiple routes needed) would be too complicated.

2nd Priority

Favoriting Routes

Our “power users” who consistently travel via public transit have a consistent commute, and they would therefore heavily benefit from having a simple list of routes which they frequent. This would be a relatively simple addition that would be worth around 3 story points.

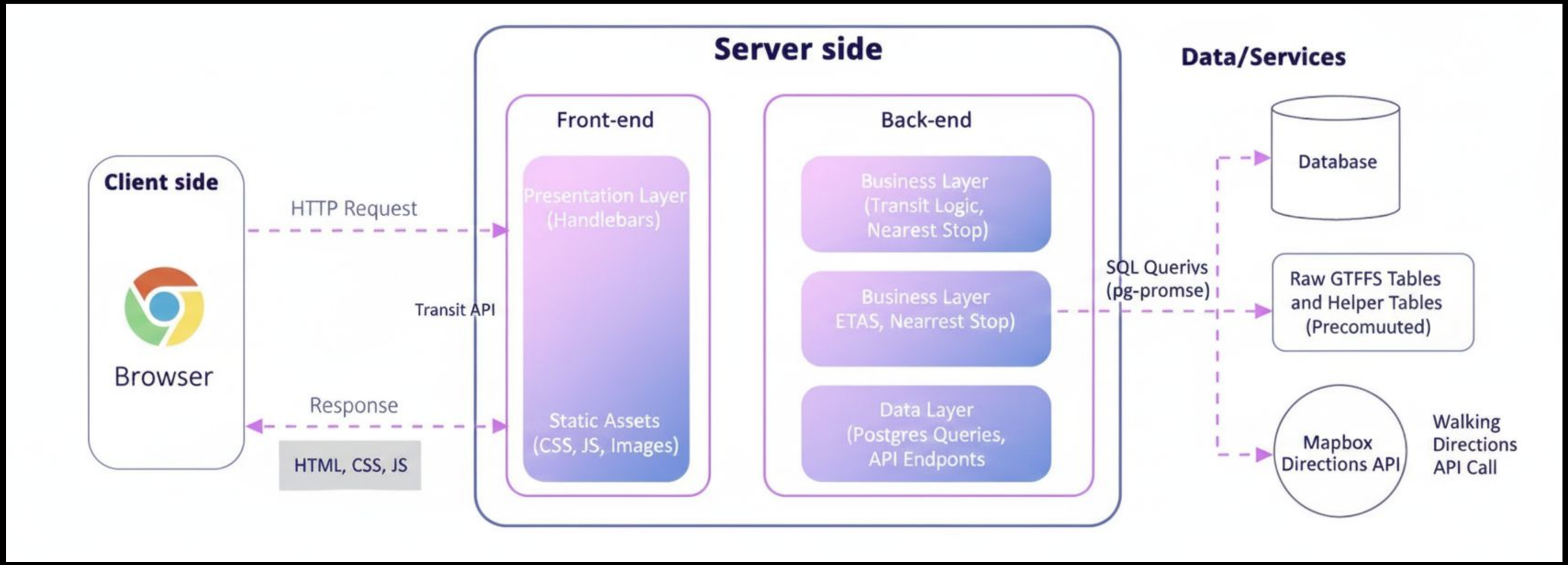
3rd Priority

Different User Types

As different user classes inherently exist, we would better be able to personalize their experience to the features and benefits which they expect. For instance, a student user may be able to see which routes they are able to take for free. This would be a more difficult task as we would need to source and verify pricing data as well as different.

4th Priority

Architecture Diagram



Project Demonstration

QUESTIONS??