WOULD YOU RATHER...

Speed Round

Activity Instructions

We are going to ask you some questions about intercity travel. Imagine that you are going from **Austin** to **Dallas**.

Raise your hand if you prefer the **first** option over the second!

READY, SET, GO

Would You Rather...

travel in a car or a bus?

Would You Rather...

travel with a student

travel with strangers

Would You Rather...

Get dropped at your own destination or at a bus stop?

UNIVroom

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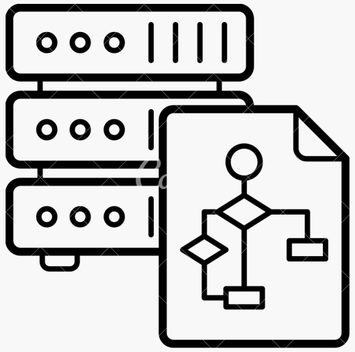
Outline

Idea

ERD

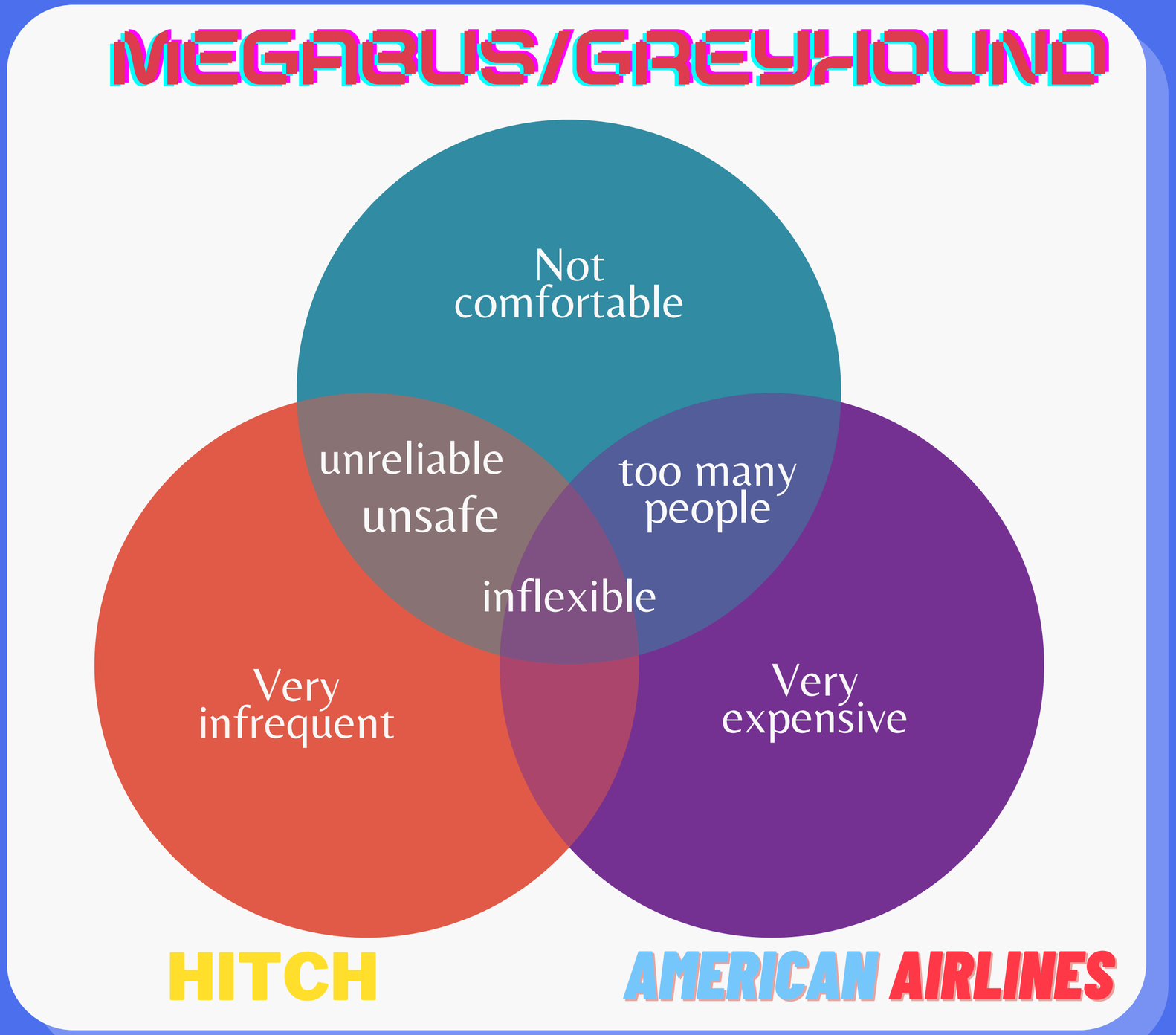


ETL

Beyond Relational

Beyond Database

Cons of current ways to travel intercity



We want to..

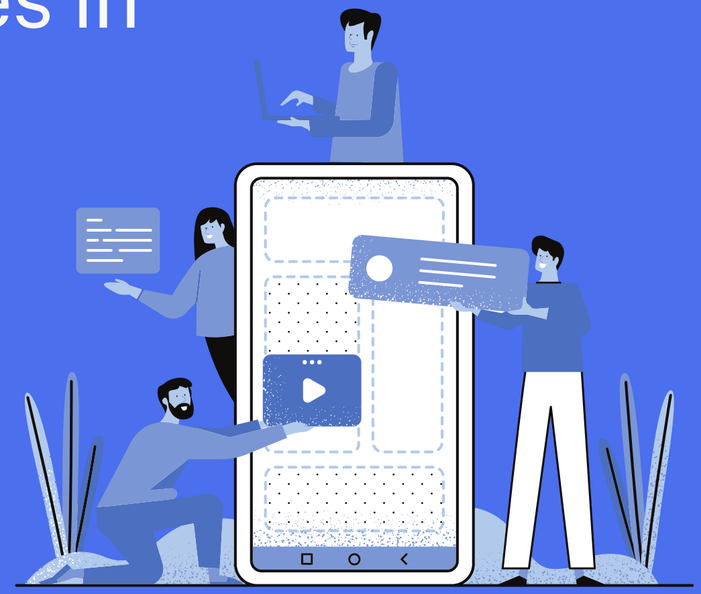
Give college students a way to travel intercity with:

- Increased comfort
- Increased safety
- Increased flexibility

How?

Thousands of students at the University of Texas are in-state students.

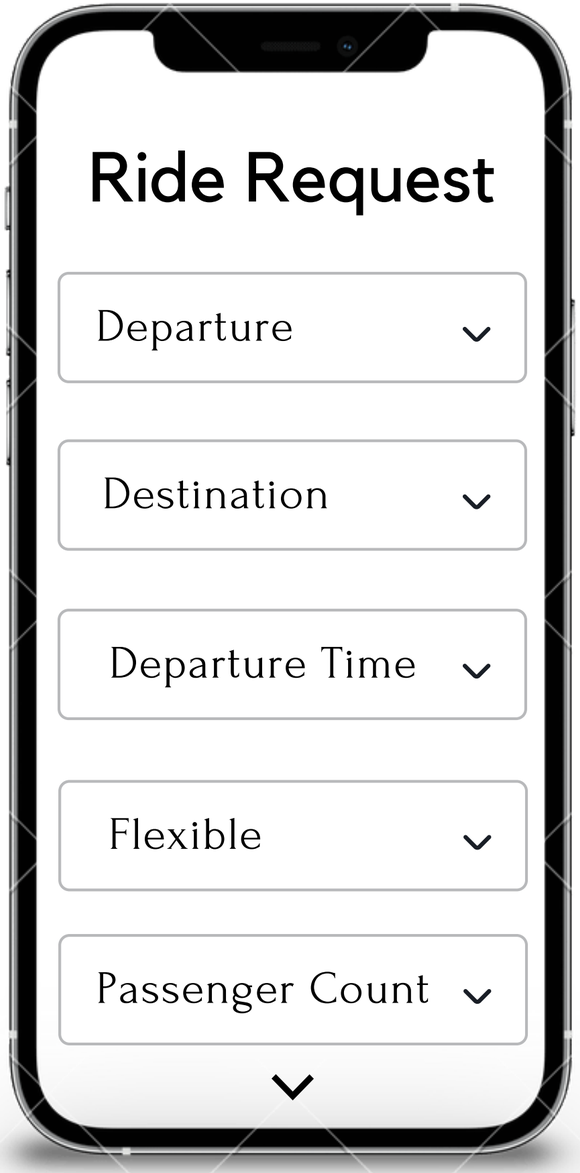
Hundreds travel back home to different cities in Texas every weekend



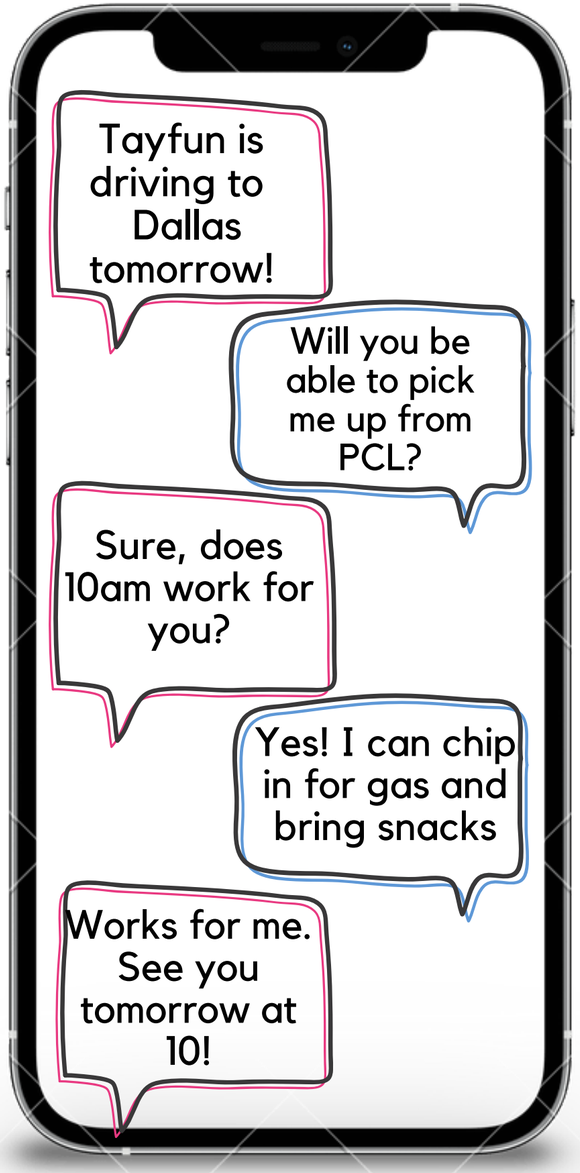
How about an app that....

- Provides an easy to use platform for potential drivers and passengers

- Elimination of hustle to figure out the timing, prices, pick-up and drop locations


Ride Request
Departure
Destination
Departure Time
Flexible
Passenger Count


Thank you for confirming your ride!
To make changes please directly contact the driver through chat.
Cancel Ride


Tayfun is driving to Dallas tomorrow!
Will you be able to pick me up from PCL?
Sure, does 10am work for you?
Yes! I can chip in for gas and bring snacks
Works for me. See you tomorrow at 10!

Transaction Management

1. Request to Ride
2. Passenger to Driver Payment
3. Company Revenue

Entities and Attributes

Student
Personal information and ratings (both passenger and driver)

Car
Car information

Payment Info
Credit card information to pay app fees

Driver Request
Information for a driver putting in a request to get passengers

Passenger Request
Information for a passenger putting in a request to get a ride

Matched Ride
Information about the full length of the ride where driver has been matched

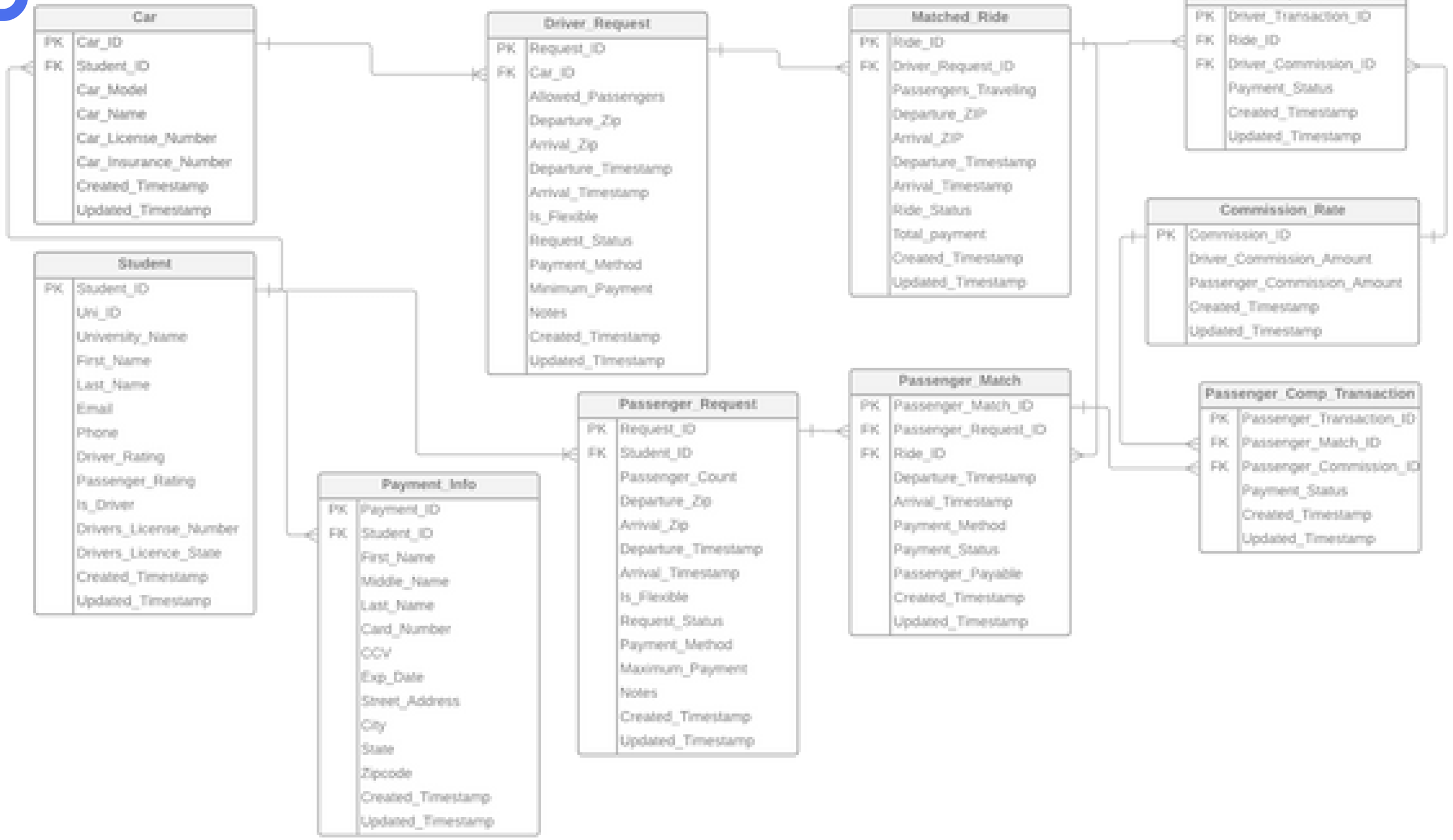
Passenger Match
Information on each passenger for specific matched ride

Driver Compensation
Includes driver compensation to application

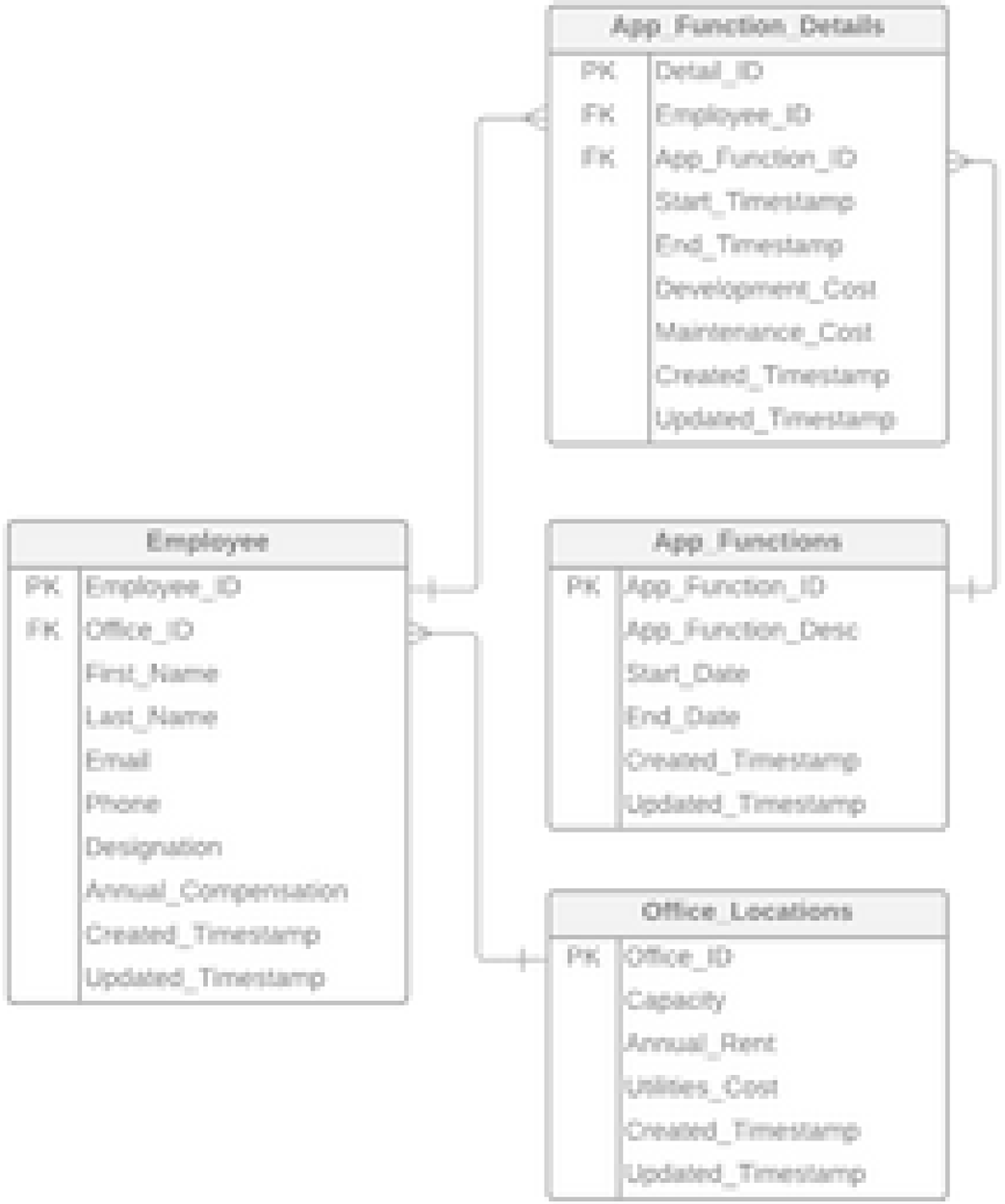
Passenger Compensation
Includes passenger compensation to application

Commission Rate
Rate of commission for each driver and passenger, specific on trip

ERD


Car
PK Car_ID
FK Student_ID
Car_Model
Car_Name
Car_License_Number
Car_Insurance_Number
Created_Timestamp
Updated_Timestamp
Student
PK Student_ID
Uni_ID
University_Name
First_Name
Last_Name
Email
Phone
Driver_Rating
Passenger_Rating
Is_Driver
Drivers_License_Number
Drivers_Licence_State
Created_Timestamp
Updated_Timestamp
Payment_Info
PK Payment_ID
FK Student_ID
First_Name
Middle_Name
Last_Name
Card_Number
CCV
Exp_Date
Street_Address
City
State
Zipcode
Created_Timestamp
Updated_Timestamp
Driver_Request
PK Request_ID
FK Car_ID
Allowed_Passengers
Departure_Zip
Arrival_Zip
Departure_Timestamp
Arrival_Timestamp
Is_Flexible
Request_Status
Payment_Method
Minimum_Payment
Notes
Created_Timestamp
Updated_Timestamp
Passenger_Request
PK Request_ID
FK Student_ID
Passenger_Count
Departure_Zip
Arrival_Zip
Departure_Timestamp
Arrival_Timestamp
Is_Flexible
Request_Status
Payment_Method
Maximum_Payment
Notes
Created_Timestamp
Updated_Timestamp
Matched_Ride
PK Ride_ID
FK Driver_Request_ID
Passengers_Traveling
Departure_ZIP
Arrival_ZIP
Departure_Timestamp
Arrival_Timestamp
Ride_Status
Total_payment
Created_Timestamp
Updated_Timestamp
Passenger_Match
PK Passenger_Match_ID
FK Passenger_Request_ID
FK Ride_ID
Departure_Timestamp
Arrival_Timestamp
Payment_Method
Payment_Status
Passenger_Payable
Created_Timestamp
Updated_Timestamp
Driver_Comp_Transaction
PK Driver_Transaction_ID
FK Ride_ID
FK Driver_Commission_ID
Payment_Status
Created_Timestamp
Updated_Timestamp
Commission_Rate
PK Commission_ID
Driver_Commission_Amount
Passenger_Commission_Amount
Created_Timestamp
Updated_Timestamp
Passenger_Comp_Transaction
PK Passenger_Transaction_ID
FK Passenger_Match_ID
FK Passenger_Commission_ID
Payment_Status
Created_Timestamp
Updated_Timestamp

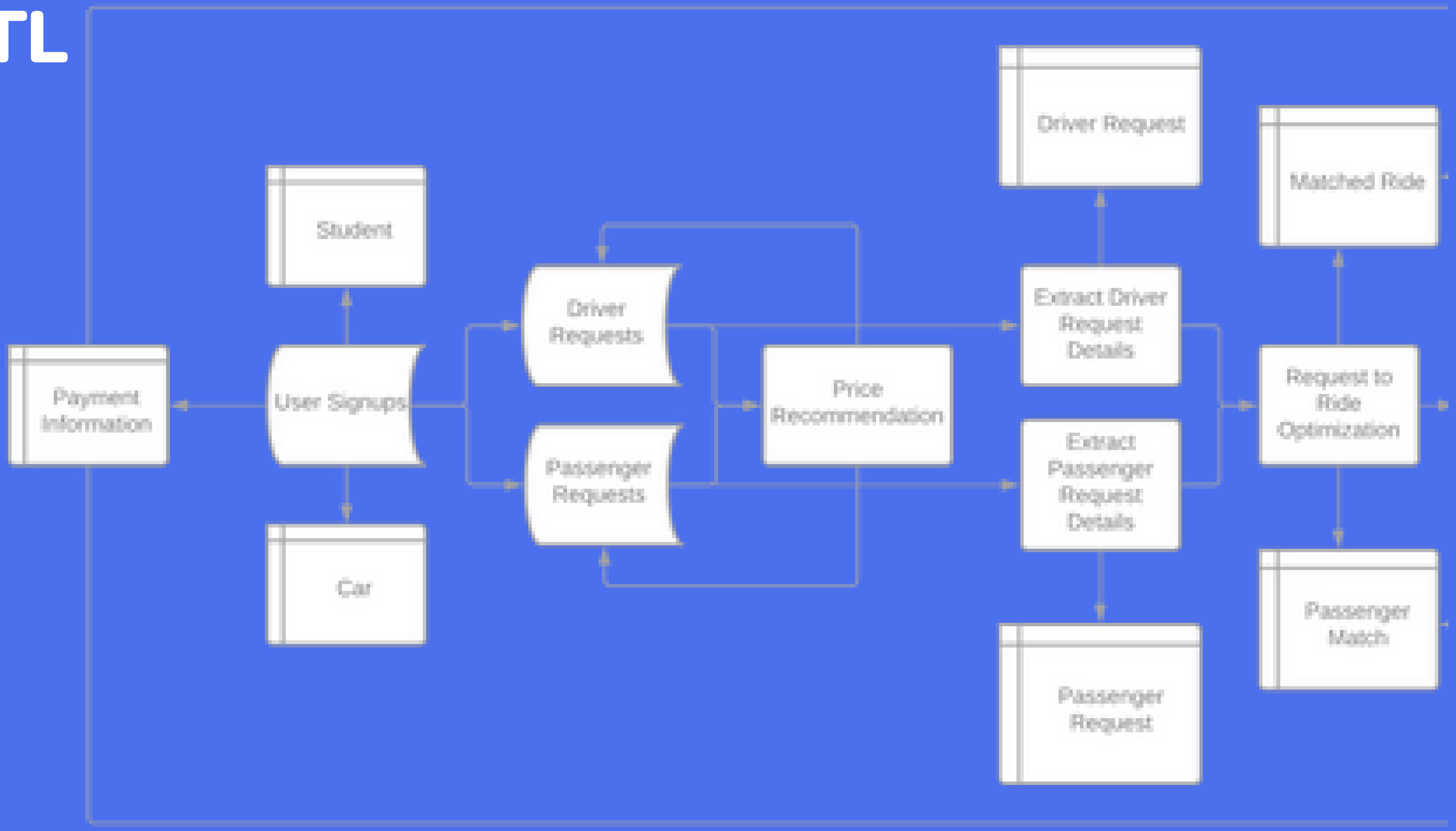
ERD Part 2

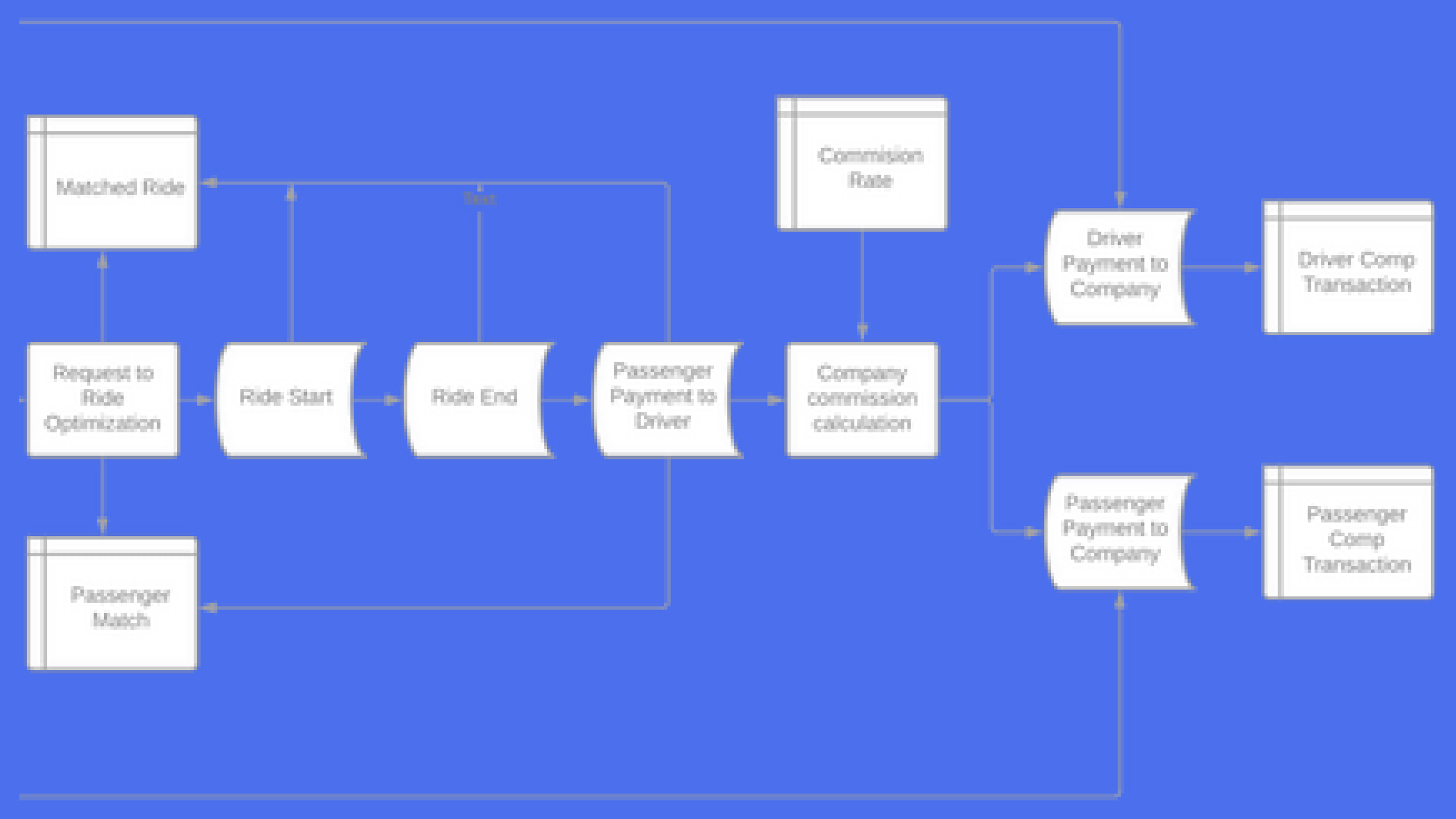

App_Function_Details
PK Detail_ID
FK Employee_ID
FK App_Function_ID
Start_Timestamp
End_Timestamp
Development_Cost
Maintenance_Cost
Created_Timestamp
Updated_Timestamp
Employee
PK Employee_ID
FK Office_ID
First_Name
Last_Name
Email
Phone
Designation
Annual_Compensation
Created_Timestamp
Updated_Timestamp
App_Functions
PK App_Function_ID
App_Function_Desc
Start_Date
End_Date
Created_Timestamp
Updated_Timestamp
Office_Locations
PK Office_ID
Capacity
Annual_Rent
Utilities_Cost
Created_Timestamp
Updated_Timestamp

ETL Design

- User interface - signup and ride requests
- Price recommendation loop - refined passengers' charges
- Ride matching
- Commission calculation and payment to the company

ETL


Student
Payment Information
User Signups
Car
Driver Requests
Passenger Requests
Price Recommendation
Driver Request
Extract Driver Request Details
Extract Passenger Request Details
Passenger Request
Matched Ride
Request to Ride Optimization
Passenger Match


Matched Ride
Text
Commission Rate
Request to Ride Optimization
Ride Start
Ride End
Passenger Payment to Driver
Company commission calculation
Driver Payment to Company
Driver Comp Transaction
Passenger Payment to Company
Passenger Comp Transaction
Passenger Match

Beyond the Relational

- User requests intake forms
- Chat transcripts between driver & passenger
- Gas receipts images

Beyond Database Management

- Optimization for real-time driver and passenger matching
- Text analytics on chat transcripts to identify future improvements
- Image reader for gas receipts to track payment automatically
- Time series forecasting to project company revenue

Critical Thinking (the short version)

MVP (most valuable piece learned):

multiple perspectives lead to an optimized database with varied applications

Looking forward:

allocate more resources to requirement gathering and ideation to design and deliver

What didn't make the cut:

on-update triggers, database integration with ML algorithms

Next steps:

add stored procedures, triggers; host system on cloud (eg: Azure)

AND THAT'S A WRAP!

Thank you for participating and we hope you liked our idea. We will be on AppStore and Google PlayStore soon so keep an eye out! (#hiring)

Questions?