

# **Cab booking service: FALCON**

## **Scope:**

This web app is useful for everyone who wants to go from one place to another by cab, auto or bike. Everyone goes to their offices, homes, or workplaces every day, and they need to book cabs on a daily basis, even many times a day. And our web app makes this task very easy and simple and better than booking a cab by themselves.

All the drivers can use this web app for finding passengers and can select optimal trips according to their choice. Good drivers can earn a reputation and get more passengers by this web app.

## **Stakeholders:**

People who want to travel somewhere by taxi, people who want to book their travel arrangements in advance, people who want a safer journey with trusted drivers, people who want an option on what type of taxi they want to travel in, etc., are our one of the stakeholders.

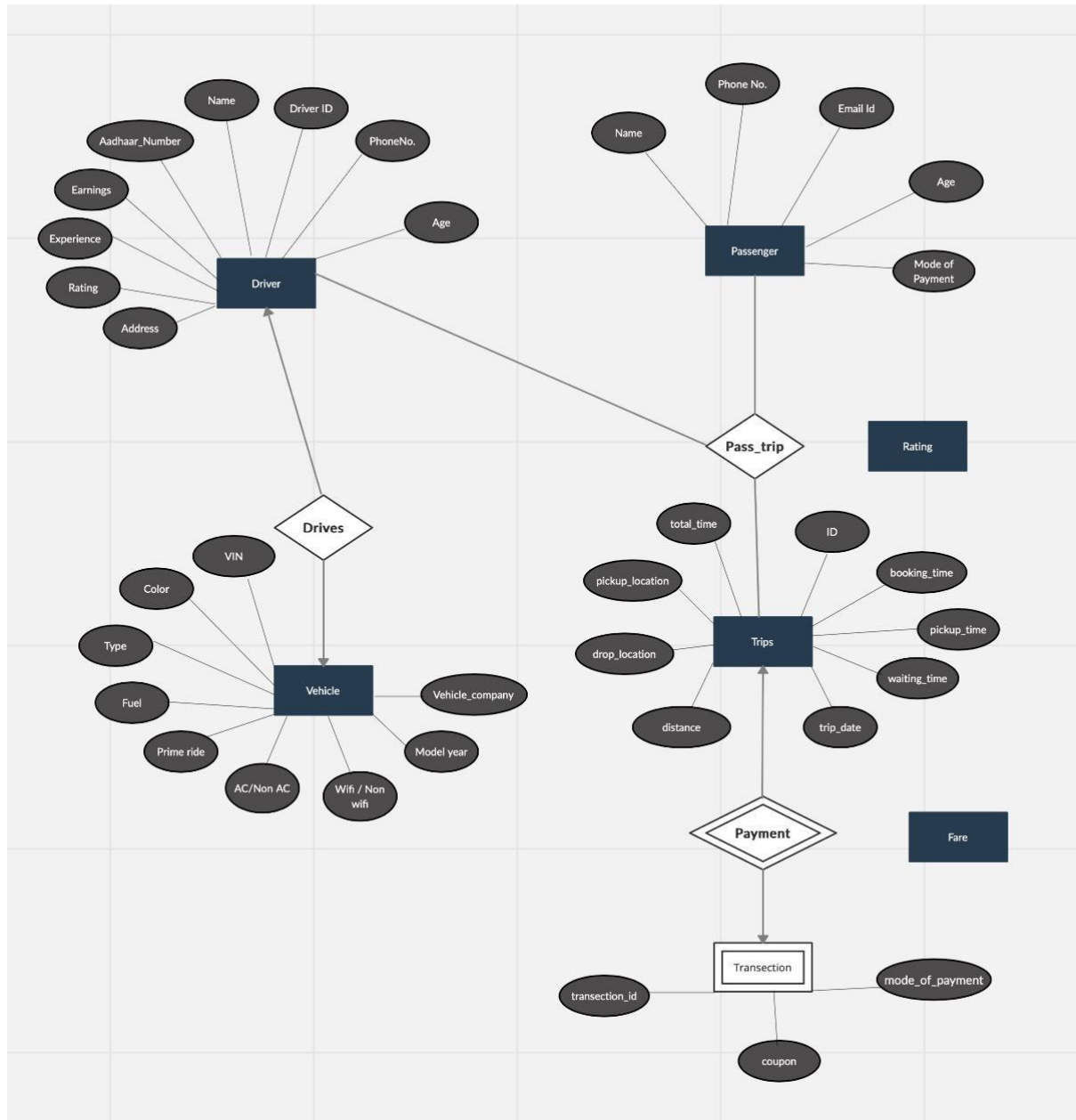
Taxi drivers who want to find more passengers and don't want to negotiate with prices, and want to use the latest technology to help in their day-to-day taxi driving work are our other stakeholders.

## **Entities and Relationships:**

Passengers, Drivers, Trips, Transactions, Vehicles

Pass\_trip, Drives, Payment

## E-R Diagram:



### **Entities:**

Driver (**Driver ID**, Name, Aadhaar\_Number, Earnings, Experience, Rating, Address, Phone\_number, Age)

Trip (**ID**, booking\_time, pickup\_time, waiting\_time, trip\_date, total\_time, pickup\_location, drop\_location, distance)

Route (**Trip.ID**, Pick up Location, Destination location, distance)

Passenger (Name, **phone number**, email\_id, age, mode\_of\_payment)

Transactions (**Transaction id**, coupon, mode\_of\_payment)

Vehicle (**Vin**, Color, Type, Fuel, Prime\_ride ,Ac/Non-Ac, Wifi/Non-wifi, Model\_year, Vehicle\_company)

### **Relationship sets:**

Drivers (**Driver ID**, **Registraion number**)

Pass\_trip (**phone\_number**, **Trip.ID**, **Driver.Driver ID**, Rating)

Payment (**Trip.ID**, **Transections.Transection\_id**, Fare)

### **Weak Entity:**

Transections (**Transection id**, **Trip.Trip ID**, fare, coupon, mode)

Here Transections is a weak entity. Because their existence is dependent on the entity Trip. In this database, if there's a transaction, then there must be a trip. Without trip, the transection doesn't exist.

### **Ternary Relationship:**

Pass\_trip (**phone\_number**, **Trip.ID**, **Driver.Driver ID**, Rating)

Here the relationship Pass\_trip is a ternary relationship. Here only phone\_number of passenger and driver\_id of the driver is not sufficient to accurately describe the semantics of the association, i.e. We can't know anything about the trip, so we also don't know anything about pick up or drop location, the fare of the trip, distance, etc.

### **Participation types:**

In pass\_trips: trips= total; passengers, drivers = partial;

In the pass\_trips relationship, trips have total participation in the relationship. But driver and passengers do not. Because there may be some case when some passengers have only signed up for our cab booking service but haven't had any trip, and same is true for some drivers. But in this relationship, there always will be a trip.

In payment (Trip and Transaction): one to one;

In Drives (Driver and Vehicle): one to one.

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