Team Number: S19
Team Members: Akshay Goradia, Sina Siddiqi, Bruce Lin

1. Uber

Uber is an extremely successful network of everyday people turned taxi drivers. Founded in San Francisco in 2009, Uber is present in hundreds of cities across the globe and is valued at over $50 million. While it dominates its market, competitors such as Lyft and Gett have slowly been gaining market share. The overarching mission of Uber is to connect riders and drivers to make cities more accessible, as well as provide income to otherwise idle people.

2.

Driver - A user that owns a car and drives riders around on trips. After a trip is done, a driver charges the rider, leaves a rating of the rider, and can file a complaint should he/she feel necessary against the rider.

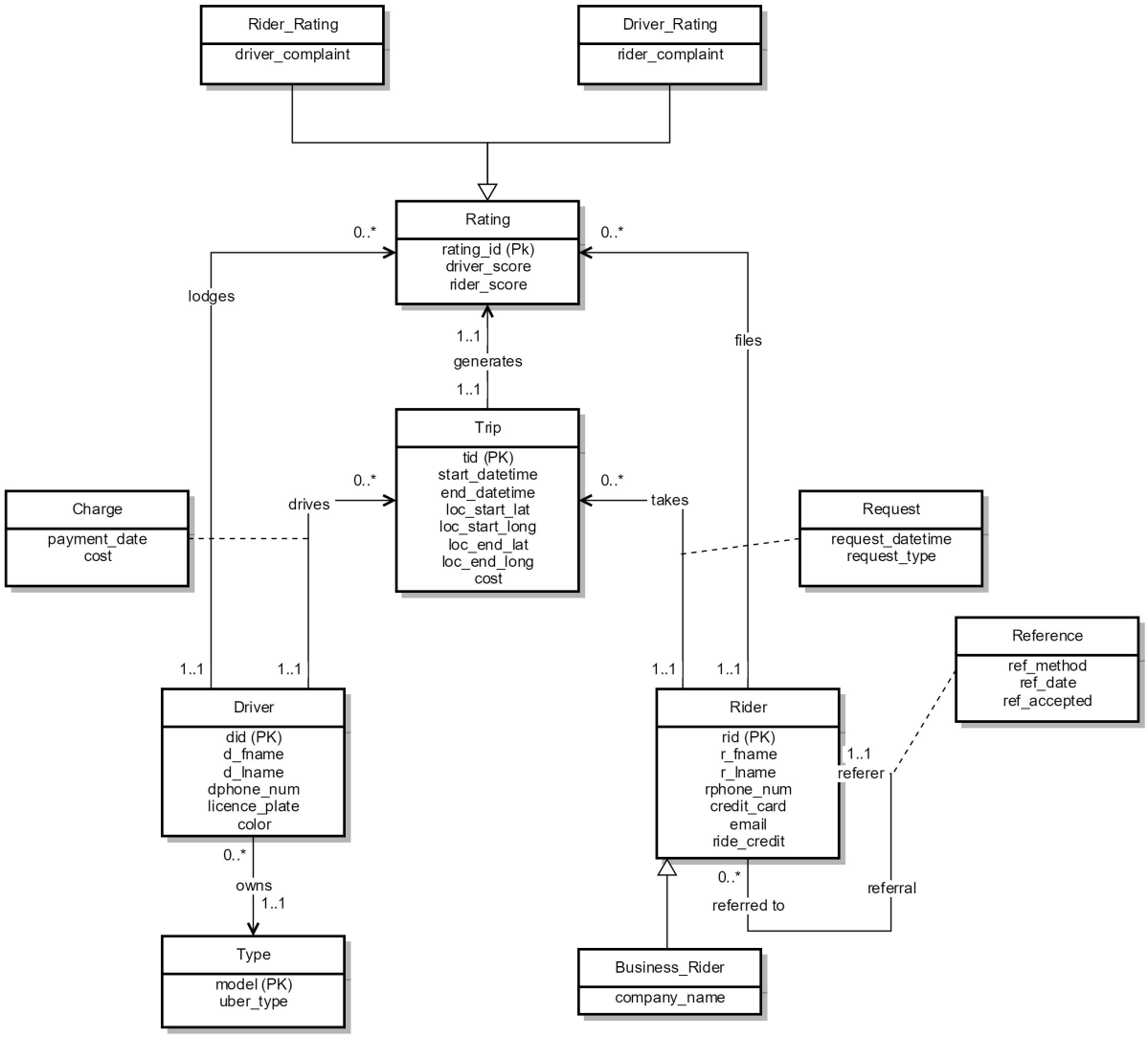
Rider - A user that takes trips driven by drivers. After a trip is done, a rider pays the driver for the trip, leaves a rating of the driver, and can file a complaint should he/she feel necessary against the driver.

Uber Corporate - A user from the corporate office of Uber who is interested in deeper analysis of its current system, assessing it for efficiency, trends and customer service.

As a…	**I want…**	**So that…**
Rider	use my ride credit pay for a trip	I can take advantage of the Uber rewards program
Rider	see a list of destinations of all my trips	I can look up my Uber travel history at any time
Rider	see the average rating of my next driver	I can anticipate my interaction with him/her
Driver	see all the complaints filed against my rider	I can anticipate my interaction with him/her
Driver	see how much money I have made through Uber every day I worked	I can keep track of my income
Driver	see the name of the rider I need to pick up and where he/she is located	I know who my rider is and can get to them as quick as possible
Uber Corporate	update a rider'strip cost to $0 and give them $20 of rider credit	I can properly respond to a rider's valid complaint by compensating him/her
Uber Corporate	know how many referrals a rider has made	he/she can be given $20 in ride credit for each referral
Uber Corporate	see the names of all drivers that drive an UberXL	so I can see if the company needs to recruit more UberXL's
Uber Corporate	know the average time it takes for an uber to pick up his/her rider	I can identify inefficiencies

indicates complex queries*

3.


Rider_Rating
driver_complaint
Driver_Rating
rider_complaint
Rating
rating_id (Pk)
driver_score
rider_score
0..*
0..*
lodges
files
1..1
generates
1..1
Trip
tid (PK)
start_datetime
end_datetime
loc_start_lat
loc_start_long
loc_end_lat
loc_end_long
cost
0..*
drives
0..*
takes
Charge
payment_date
cost
Request
request_datetime
request_type
Reference
ref_method
ref_date
ref_accepted
1..1
1..1
1..1
1..1
Driver
did (PK)
d_fname
d_lname
dphone_num
licence_plate
color
Rider
rid (PK)
r_fname
r_lname
rphone_num
credit_card
email
ride_credit
1..1
referer
0..*
owns
1..1
0..*
referred to
referral
Type
model (PK)
uber_type
Business_Rider
company_name

4.

Driver (did, d_fname, d_lname, license_plate, color, dphone_num)
Type (model, uber_type)
Owns (did, model)
Trip (tid, start_datetime, end_datetime, cost, loc_start_lat, loc_start_long, loc_end_lat, loc_end_long)
Generates (tid, rating_id)
Has (tdid, tid)
Drives (tid, did, payment_date, cost)
Rider (rid, r_fname, r_lname, rphone_num, credit_card, email, ride_credit)
Business_Rider (rid, company_name)
Takes (tid, rid, request_datetime, request_type)
Rating (rating_id, driver_score, rider_score)
Lodges (rating_id, did)
Files (rating_id, rid)
Driver_Rating (rating_id, rider_complaint)
Rider_Rating (rating_id, driver_complaint)
Referral (referrer, recipient, ref_date, ref_method)

5.

The relation “Trip” has a functional dependency between **cost** and **time_start, time_end, loc_start_lat, loc_start_long, loc_end_lat,** and **loc_end_long**). This currently satisfies 3NF.

6.

Driver (did, model, d_fname, d_lname, license_plate, color, dphone_num)
Type (model, uber_type)
Trip (tid, did, rid, tdid, start_date, payment_date, cost)
Trip_Details (tdid, start_datetime, end_datetime, loc_start_lat, loc_start_long, loc_end_lat, loc_end_long, request_datetime, request_type)
Rider (rid, r_fname, r_lname, rphone_num, credit_card, email, ride_credit, referrer, ref_date, ref_method)
Business_Rider (rid, company_name)
Rating (rating_id, did, rid, tid, driver_score, rider_score)
Driver_Rating (rating_id, rider_complaint)
Rider_Rating (rating_id, driver_complaint)