Ahsanullah University of Science and Technology (AUST)
Department of Computer Science and Engineering

Project Proposal

Course No.: CSE4126

Course Title: Distributed Database Systems Lab

Submitted To

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Boober

A ride-sharing platform where users can request rides. Currently, only 2 cities are being operated on: Dhaka and Comilla.

Features:

1. Passengers can request rides nearby
2. Passengers can view the driver's past history and profile
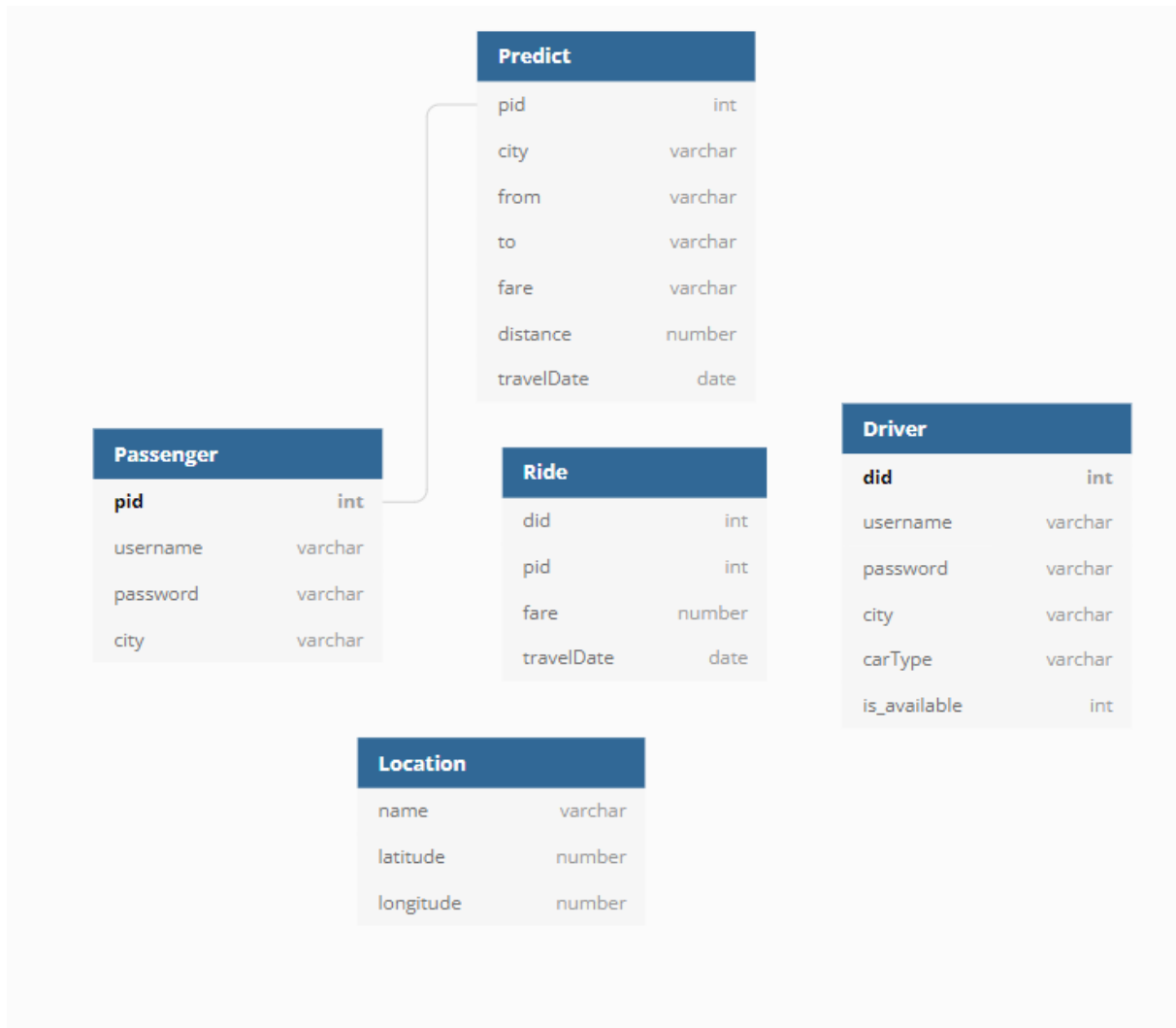3. Passengers get an estimated fare for the trip

Specifications

Oracle SQL+ will be used to create a seamless distributed database management

system.

Database Schema

The database schema can be found at the following link:

https://dbdiagram.io/d/6161adb7940c4c4eec8d20e4

Predict

pid	int
city	varchar
from	varchar
to	varchar
fare	varchar
distance	number
travelDate	date

Passenger

pid	int
username	varchar
password	varchar
city	varchar

Ride

did	int
pid	int
fare	number
travelDate	date

Driver

did	int
username	varchar
password	varchar
city	varchar
carType	varchar
is_available	int

Location

name	varchar
latitude	number
longitude	number

Need for Distributed Database

As a ride-sharing platform, there will be several cities in a country under consideration. Thousands of requests will be coming per hour from different locations in different cities. Using a centralized database will put a huge load on the server and the user queries will be slowed down.

This brings the concept of a distributed database into place. Each city will have their own local databases. Data of Passengers or Drivers registering for their particular city will be put into their local databases, along with all location information.

When a driver or a passenger travels to another city, the data will be fetched from that respective city thus reducing the load on the servers and providing efficient queries.