

DBMS MINI PROJECT

ONLINE CAB BOOKING

Submitted By:

Name : Kushagra Singh

SRN: PES1UG20CS657

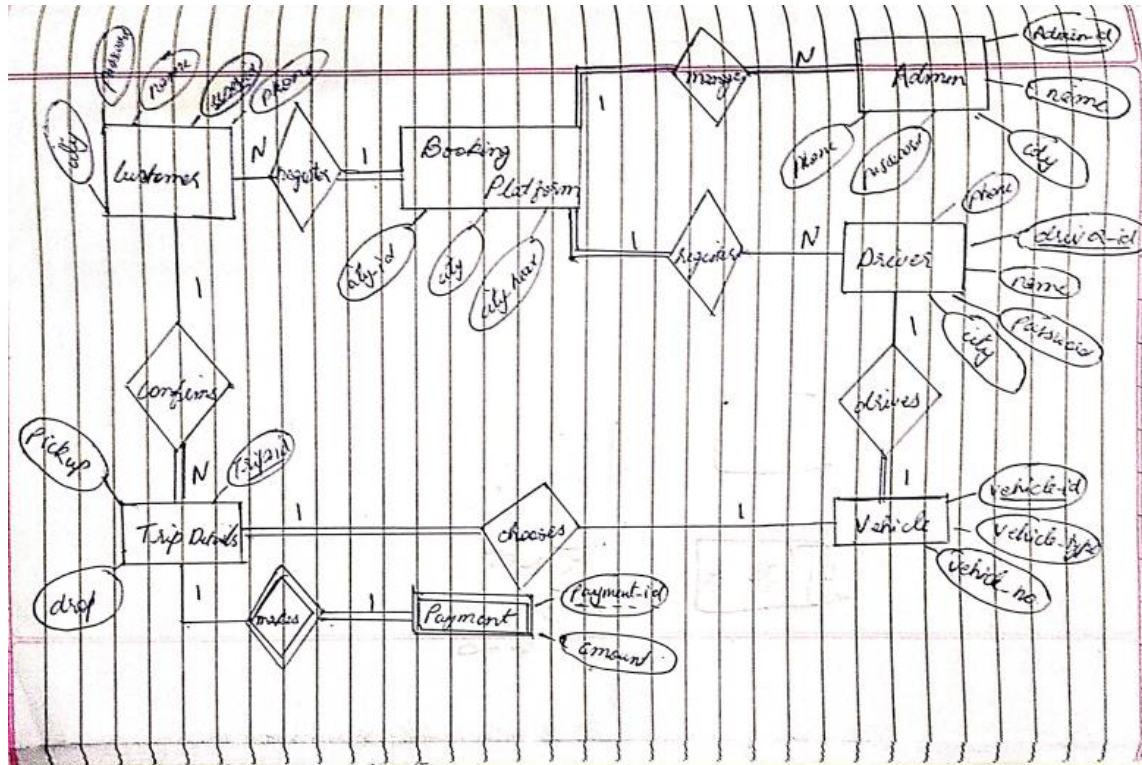
V Semester Section K

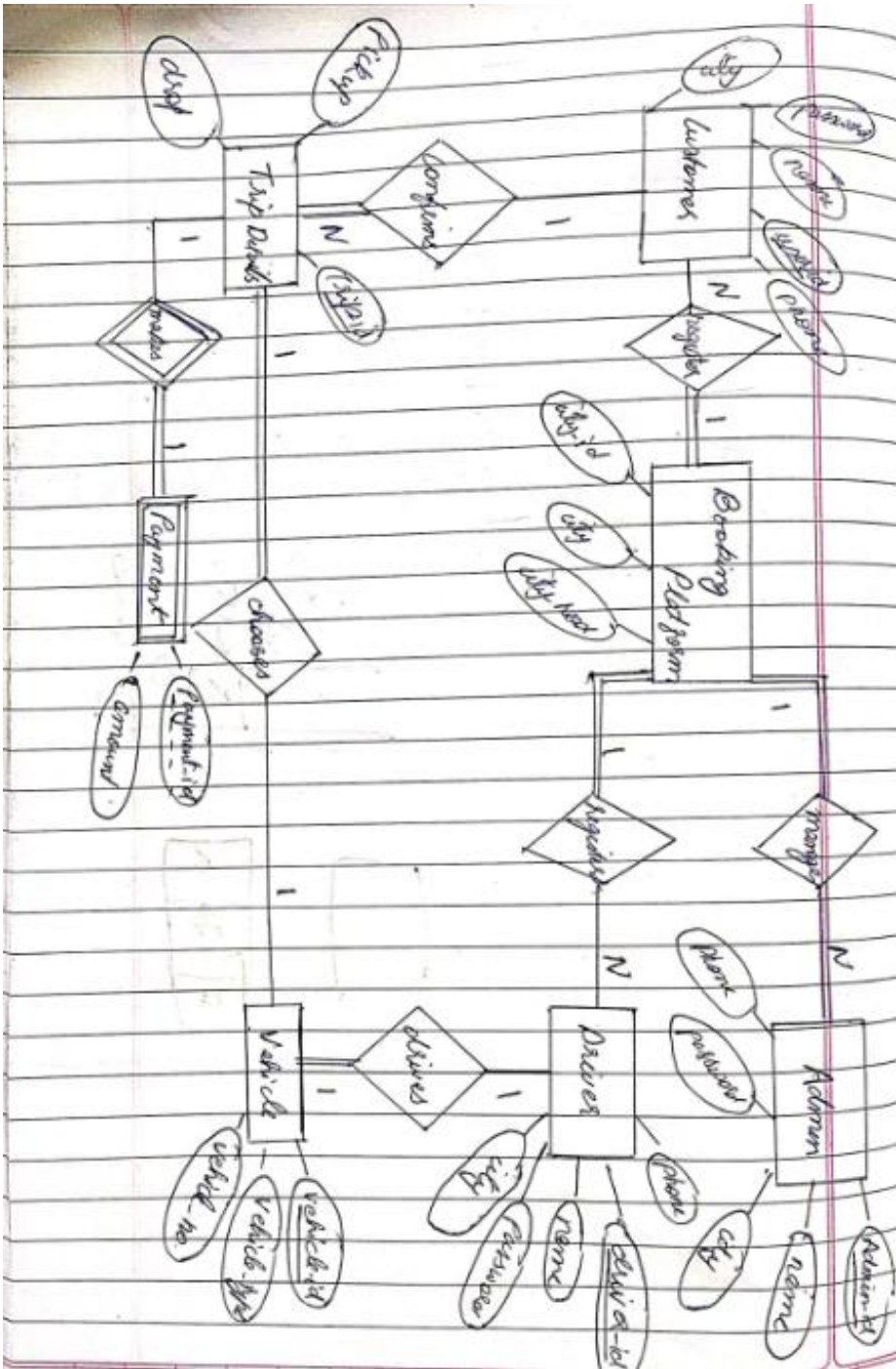
SHORT Description and Scope of the Project

This project tends to emulate at a minor scale the working of the giants like uber and ola in the cab booking domain .It lets the admin,customer and driver register themselves depending on the cities they are residing in.Other important entities in the database encompasses vehicle,trip and payment.The net profit generated for the company by each trip is stored in the form of views.

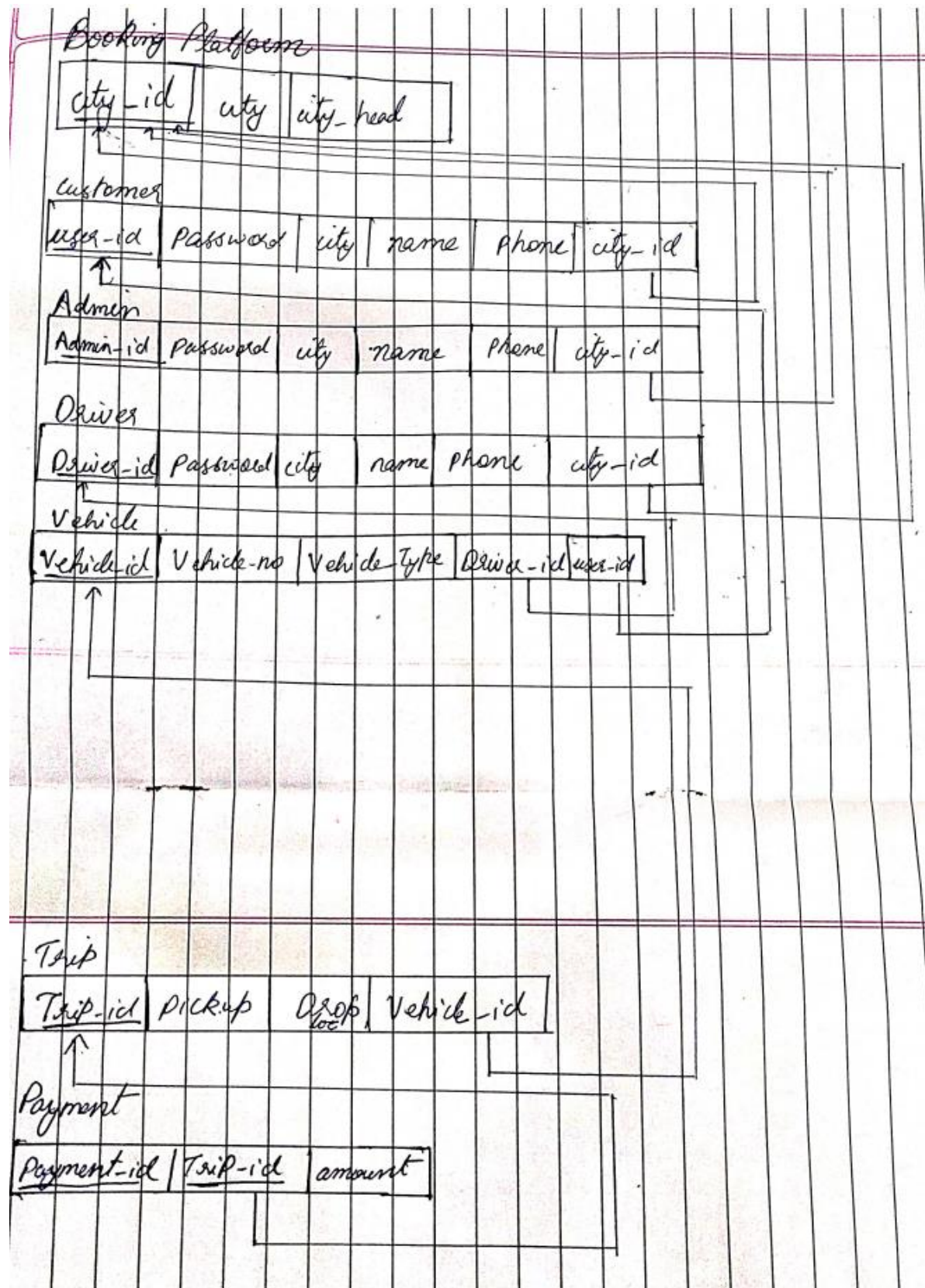
The project also delivers an engaging frontend with respect to the customer.Through the frontend developed using streamlit and mysql-connector we can resgister a customer,view various attributes of the customer,update the password of a customer,delete a customer and also execute numerous queries and receive the results without navigating to the mysql backend.

ER DIAGRAM





RELATIONAL SCHEMA



Creating Database

```
CREATE TABLE IF NOT EXISTS platform(city_id integer not null ,city varchar(20) not null, city_head varchar(20),primary key(city_id))
```

```
CREATE TABLE IF NOT EXISTS customer(user_id varchar(20) not null unique,password varchar(20) not null,city varchar(20) not null,name varchar(20),phone bigint,city_id integer,primary key(user_id),foreign key(city_id) references platform(city_id))
```

```
CREATE TABLE IF NOT EXISTS admin(admin_id varchar(20) not null unique,password varchar(20) not null,city varchar(20) not null,name varchar(20),phone bigint,city_id integer,primary key(admin_id),foreign key(city_id) references platform(city_id))
```

```
CREATE TABLE IF NOT EXISTS driver(driver_id varchar(20) not null unique,password varchar(20) not null,city varchar(20) not null,name varchar(20),phone bigint,city_id integer,primary key(driver_id),foreign key(city_id) references platform(city_id))
```

```
CREATE TABLE IF NOT EXISTS vehicle(vehicle_id varchar(20) not null unique,vehicle_no varchar(20) not null,vehicle_type varchar(20) ,driver_id varchar(20) not null,primary key(vehicle_id),foreign key(driver_id) references driver(driver_id))
```

```
CREATE TABLE IF NOT EXISTS trip(trip_id varchar(20) not null unique,pickup varchar(20) ,droploc varchar(20),vehicle_id varchar(20) not null,user_id varchar(20) not null,primary key(trip_id) ,Foreign key(vehicle_id) references vehicle(vehicle_id),Foreign key(user_id) references customer(user_id))
```

```
CREATE TABLE IF NOT EXISTS payment(payment_id varchar(20) not null unique,trip_id varchar(20) not null unique,amount integer,primary key(payment_id,trip_id),foreign key(trip_id) references trip(trip_id))
```


Populating the Database

```
insert into platform values (1,'Bangalore','harvey'  
,(2,'Chennai','Mike' ),(3,'Delhi','Donna' ),(4,'Mumbai','Jessica' );
```

insert into admin values

```
('evan@gmail.com',3456,'Bangalore','evan',1234567890,1),('steve  
@gmail.com',1234,'Delhi','steve',2345678901,3),('harry@gmail.co  
m',9874,'Mumbai','harry',1234567899,3),('marvel@gmail.com',86  
78,'Chennai','marvel',4321567890,2),('pratt@gmail.com',1249,'Del  
hi','pratt',1276549890,3);
```

insert into customer values

```
('thor@gmail.com',1234,'Bangalore','thor',1234567890,1),('wanda  
@gmail.com',234,'Delhi','wanda',2345678901,3),('robert@gmail.c  
om',2134,'Mumbai','robert',1234567899,3),('chris@gmail.com',567  
8,'Chennai','chris',4321567890,2),('peter@gmail.com',1209,'Banga  
lore','peter',1276549890,1);
```

insert into driver values

```
('john@gmail.com',3456,'Bangalore','john',1234567890,1),('hems  
worth@gmail.com',1234,'Delhi','hemsworth',2345678901,3),('kha  
n@gmail.com',9874,'Mumbai','khan',1234567899,4),('ram@gmail.  
com',8678,'Mumbai','ram',4321567890,4),('shyam@gmail.com',12  
49,'Delhi','shyam',1276549890,3);
```

```
insert into vehicle values ('1','KA01ML3689','sedan',  
'john@gmail.com'),('2','MH01HQ6789','sedan',  
'khan@gmail.com'),('3','DL01ML1239','mini',  
'hemsworth@gmail.com'),('4','MH01HQ1234','SUV',  
'ram@gmail.com'),('5','DL51RL4567','sedan',  
'shyam@gmail.com');
```

```
insert into trip values  
('101','hsr','jayanagar','1','thor@gmail.com'),('102','agara','hebal','1',  
thor@gmail.com'),('103','navi','bandra','2','robert@gmail.com'),('1  
04','juhu','bandra','2','robert@gmail.com'),('105','CP','rajpath','5','w  
anda@gmail.com');
```

```
insert into payment values ('11','101',100), ('12','102',800),  
('13','103',500), ('14','104',400), ('15','105',1600);
```


JOINS :

1)Query to get the pickup and drop locations for all users [Inner Join]

```
MariaDB [cs657_project]> select pickup,droploc from trip as t inner join customer as c on t.user_id=c.user_id;
```

pickup	droploc
hsr	jayanagar
agara	hebal
navi	bandra
juhu	bandra
CP	rajpath

5 rows in set (0.001 sec)

2)Query to find all vehicles and the corresponding trips irrespective of the fact that they have completed trips [Right Outer Join]

```
MariaDB [cs657_project]> select t.trip_id,v.vehicle_id from trip as t right join vehicle as v on t.vehicle_id=v.vehicle_id;
```

trip_id	vehicle_id
101	1
102	1
103	2
104	2
NULL	3
NULL	4
105	5

3)Query to find all the customers registered on the platform irrespective of the fact they booked a trip.[Left Outer Join]

```
MariaDB [cs657_project]> select c.user_id,trip_id from customer as c left join trip as t on c.user_id=t.user_id;
```

user_id	trip_id
peter@gmail.com	NULL
thor@gmail.com	101
thor@gmail.com	102
chris@gmail.com	NULL
robert@gmail.com	103
robert@gmail.com	104
wanda@gmail.com	105

7 rows in set (0.009 sec)

4)All combinations of admin and customers grouped by city [Natural Join]

```
MariaDB [cs657_project]> select user_id,admin_id,customer.city from customer join admin order by customer.city;
+-----+-----+-----+
| user_id | admin_id | city |
+-----+-----+-----+
| peter@gmail.com | evan@gmail.com | Bangalore |
| thor@gmail.com | steve@gmail.com | Bangalore |
| peter@gmail.com | steve@gmail.com | Bangalore |
| thor@gmail.com | pratt@gmail.com | Bangalore |
| peter@gmail.com | pratt@gmail.com | Bangalore |
| thor@gmail.com | harry@gmail.com | Bangalore |
| peter@gmail.com | harry@gmail.com | Bangalore |
| thor@gmail.com | marvel@gmail.com | Bangalore |
| peter@gmail.com | marvel@gmail.com | Bangalore |
| thor@gmail.com | evan@gmail.com | Bangalore |
| chris@gmail.com | evan@gmail.com | Chennai |
| chris@gmail.com | steve@gmail.com | Chennai |
| chris@gmail.com | pratt@gmail.com | Chennai |
| chris@gmail.com | harry@gmail.com | Chennai |
| chris@gmail.com | marvel@gmail.com | Chennai |
| wanda@gmail.com | steve@gmail.com | Delhi |
| wanda@gmail.com | pratt@gmail.com | Delhi |
| wanda@gmail.com | harry@gmail.com | Delhi |
| wanda@gmail.com | marvel@gmail.com | Delhi |
| wanda@gmail.com | evan@gmail.com | Delhi |
| robert@gmail.com | steve@gmail.com | Mumbai |
| robert@gmail.com | pratt@gmail.com | Mumbai |
| robert@gmail.com | harry@gmail.com | Mumbai |
| robert@gmail.com | marvel@gmail.com | Mumbai |
| robert@gmail.com | evan@gmail.com | Mumbai |
+-----+-----+-----+
25 rows in set (0.001 sec)
```

5)Query to find the customers and the corresponding payments they have made for a trip .

```
MariaDB [cs657_project]> select user_id,amount from trip inner join payment where trip.trip_id=payment.trip_id;
+-----+-----+
| user_id | amount |
+-----+-----+
| robert@gmail.com | 500 |
| robert@gmail.com | 400 |
| thor@gmail.com | 100 |
| thor@gmail.com | 800 |
| wanda@gmail.com | 1600 |
+-----+-----+
5 rows in set (0.001 sec)
```

6)Query to find the driver_id,prickup and drop locations of the drivers who have completed a trip

```
MariaDB [cs657_project]> select driver_id,pickup,droploc from vehicle inner join trip on vehicle.vehicle_id = trip.vehicle_id;
```

driver_id	pickup	droploc
john@gmail.com	hsr	jayanagar
john@gmail.com	agara	hebal
khan@gmail.com	navi	bandra
khan@gmail.com	juhu	bandra
shyam@gmail.com	CP	rajpath

```
5 rows in set (0.002 sec)
```

AGGREGATE FUNCTION :

1)Total Count of various customers in different cities across India.

```
MariaDB [cs657_project]> select city,count(user_id) from customer group by city;
```

city	count(user_id)
Bangalore	2
Chennai	1
Delhi	1
Mumbai	1

```
4 rows in set (0.001 sec)
```

2)Query for finding Max amount paid as payment for a trip by the customer.

```
MariaDB [cs657_project]> select trip_id,max(amount) from payment;
```

trip_id	max(amount)
101	1600

```
1 row in set (0.137 sec)
```

3)Query to find the net profit by the company so far on the trips.

```
MariaDB [cs657_project]> select sum(profit) as net_profit from profit;
```

net_profit
680

```
1 row in set (0.166 sec)
```

4)Query to find the average amount paid in all trips registered so far.

```
MariaDB [cs657_project]> select avg(amount) from payment;
```

```
+-----+
```

```
| avg(amount) |
```

```
+-----+
```

```
|      680.0000 |
```

```
+-----+
```

```
1 row in set (0.001 sec)
```

SET OPERATIONS :

1.Query to find all customers and admin from city 1 that is Bengalurur. [Union]

```
MariaDB [cs657_project]> select user_id from customer where customer.city_id =1 union select admin_id from admin where admin.city_id =1;
+-----+
| user_id |
+-----+
| peter@gmail.com |
| thor@gmail.com |
| evan@gmail.com |
+-----+
3 rows in set (0.009 sec)
```

2.Query to find the user_id of customers who have taken any trip.[Intersect]

```
MariaDB [cs657_project]> select user_id from customer intersect select user_id from trip;
+-----+
| user_id |
+-----+
| thor@gmail.com |
| robert@gmail.com |
| wanda@gmail.com |
+-----+
3 rows in set (0.103 sec)
```

3.Query to find users who have taken any trips . [Except]

```
MariaDB [cs657_project]> select user_id from customer except select user_id from trip;
+-----+
| user_id |
+-----+
| peter@gmail.com |
| chris@gmail.com |
+-----+
2 rows in set (0.001 sec)
```

4.Query to find all customers who have taken the trip and not taken the trip without removing repeating customers.[Union All]

```
MariaDB [cs657_project]> select user_id from customer union all select user_id from trip;
+-----+
| user_id |
+-----+
| peter@gmail.com |
| thor@gmail.com |
| chris@gmail.com |
| robert@gmail.com |
| wanda@gmail.com |
| robert@gmail.com |
| robert@gmail.com |
| thor@gmail.com |
| thor@gmail.com |
| wanda@gmail.com |
+-----+
10 rows in set (0.001 sec)
```


TRIGGERS :

TRIGGER update_profit inserts profit eared by each trip into the profit table

```
MariaDB [cs657_project]> CREATE OR REPLACE TRIGGER update_profit
-> BEFORE insert
-> ON payment FOR EACH ROW
-> BEGIN
-> INSERT INTO profit values (new.trip_id,0.20*new.amount);
->
-> END; $$
Query OK, 0 rows affected (0.025 sec)

MariaDB [cs657_project]> DELIMITER ;
```

```
MariaDB [cs657_project]> select * from payment;
+-----+-----+-----+
| payment_id | trip_id | amount |
+-----+-----+-----+
| 11         | 101     | 100    |
| 12         | 102     | 800    |
| 13         | 103     | 500    |
| 14         | 104     | 400    |
| 15         | 105     | 1600   |
+-----+-----+-----+
5 rows in set (0.000 sec)
```

```
MariaDB [cs657_project]> select * from profit;
+-----+-----+
| trip_id | profit |
+-----+-----+
| 101     | 20     |
| 102     | 160    |
| 103     | 100    |
| 104     | 80     |
| 105     | 320    |
+-----+-----+
5 rows in set (0.000 sec)
```

Functions :

Function to display the net profit for the company from each trip

```
MariaDB [cs657_project]> select trip_id,check_amount(trip_id) from payment;
ERROR 1241 (21000): Operand should contain 1 column(s)
MariaDB [cs657_project]> delimiter $$
MariaDB [cs657_project]> Create or replace function check_amount(tripling_id varch
    -> returns varchar(100)
    -> deterministic
    -> begin
    ->     declare money integer;
    ->     declare mes varchar(100);
    ->
    -> select amount into money from payment where trip_id=tripling_id;
    ->
    ->     set mes := Concat("The profit from this trip is ",0.20*money);
    ->     return mes;
    -> end;
    -> $$
Query OK, 0 rows affected (0.125 sec)

MariaDB [cs657_project]> DELIMITER ;
```

```
MariaDB [cs657_project]> select trip_id,check_amount(trip_id) from payment;
+-----+-----+
| trip_id | check_amount(trip_id) |
+-----+-----+
| 101     | The profit from this trip is 20.00 |
| 102     | The profit from this trip is 160.00 |
| 103     | The profit from this trip is 100.00 |
| 104     | The profit from this trip is 80.00 |
| 105     | The profit from this trip is 320.00 |
+-----+-----+
```

VIEW :

Creating view paymentCustomer which will store the net amount spent by all the customers on the platform .

create view paymentCustomer as select user_id,sum(amount) from trip inner join payment where trip.trip_id=payment.trip_id group by trip.user_id;

```
MariaDB [cs657_project]> create view paymentCustomer as select user_id,sum(amount) from trip inner join payment where trip.trip_id=payment.trip_id group by trip.user_id;
Query OK, 0 rows affected (0.012 sec)
```

```
MariaDB [cs657_project]> select * from paymentCustomer;
+-----+-----+
| user_id          | sum(amount) |
+-----+-----+
| robert@gmail.com |          900 |
| thor@gmail.com   |          900 |
| wanda@gmail.com  |         1600 |
+-----+-----+
3 rows in set (0.002 sec)
```

Creating a View adminBangalore to store admin of bangalore

```
MariaDB [cs657_project]> create view adminBangalore as select admin_id,name from admin where city_id=1;
Query OK, 0 rows affected (0.603 sec)
```

```
MariaDB [cs657_project]> select * from admin;
+-----+-----+-----+-----+-----+-----+
| admin_id | password | city      | name  | phone    | city_id |
+-----+-----+-----+-----+-----+-----+
| evan@gmail.com | 3456     | Bangalore | evan  | 1234567890 | 1 |
| harry@gmail.com | 9874     | Mumbai   | harry | 1234567899 | 3 |
| marvel@gmail.com | 8678     | Chennai  | marvel | 4321567890 | 2 |
| pratt@gmail.com | 1249     | Delhi    | pratt | 1276549890 | 3 |
| steve@gmail.com | 1234     | Delhi    | steve | 2345678901 | 3 |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.000 sec)
```

```
MariaDB [cs657_project]> select * from adminBangalore;
+-----+-----+
| admin_id | name |
+-----+-----+
| evan@gmail.com | evan |
+-----+-----+
1 row in set (0.001 sec)
```

FRONT END :

AddViewEditRemoveExecute

Enter User Details:

User ID:

City

85-17

Bangalore

Password:

Name:

City_id

Phone:

Add User

Made with Streamlit

TAXI

85-17

RIO TAXI

555-1800

🏠 Add

🔗 **View**

☰ Edit

⚙️ Remove

▶️ Execute

View created tasks

Current Users

	User ID	Password	City	Name	Phone	City_id
0	chris@gmail.com	5678	Chennai	chris	4321567890	2
1	peter@gmail.com	1209	Bangalore	peter	1276549890	1
2	robert@gmail.com	2134	Mumbai	robert	1234567899	3
3	thor@gmail.com	1234	Bangalore	thor	1234567890	1
4	wanda@gmail.com	234	Delhi	wanda	2345678901	3

User Location

	index	City
0	Bangalore	2
1	Chennai	1
2	Mumbai	1
3	Delhi	1



User Location

	index	City
0	Bangalore	2
1	Chennai	1
2	Mumbai	1
3	Delhi	1



🏠 Add

🔗 View

⌵ Edit

⚙️ Remove

▶ Execute

Update created tasks

```
▼ [
  ▼ 0 : [
    0 : "chris@gmail.com"
    1 : "111"
    2 : "Chennai"
    3 : "chris"
    4 : 4321567890
    5 : 2
  ]
  ▼ 1 : [
    0 : "peter@gmail.com"
    1 : "1043"
    2 : "Bangalore"
    3 : "peter"
    4 : 1276549890
    5 : 1
  ]
  ▼ 2 : [
    0 : "robert@gmail.com"
    1 : "1111"
    2 : "Mumbai"
    3 : "robert"
    4 : 1234567899
    5 : 3
  ]
]
```


Current Users

	User ID	Password	City	Name	Phone	City_id
0	chris@gmail.com	111	Chennai	chris	4321567890	2
1	peter@gmail.com	1043	Bangalore	peter	1276549890	1
2	robert@gmail.com	1111	Mumbai	robert	1234567899	3
3	thor@gmail.com	255	Bangalore	thor	1234567890	1
4	wanda@gmail.com	560102	Delhi	wanda	2345678901	3

Dealer to Edit

wanda@gmail.com


Password:

560102

Update Password

Successfully updated:: [wanda@gmail.com](#) to ::[wanda@gmail.com](#)

Current Users

 Add View Edit Remove Execute

Delete created tasks

Current Users ^

	User ID	Password	City	Name	Phone	City_id
0	chris@gmail.com	111	Chennai	chris	4321567890	2
1	peter@gmail.com	1043	Bangalore	peter	1276549890	1
2	robert@gmail.com	1111	Mumbai	robert	1234567899	3
3	thor@gmail.com	255	Bangalore	thor	1234567890	1
4	wanda@gmail.com	560102	Delhi	wanda	2345678901	3

Task to Delete

peter@gmail.com ▼

Do you want to delete : [peter@gmail.com](#)

Delete User

Current Users ^

	User ID	Password	City	Name	Phone	City_id
0	chris@gmail.com	111	Chennai	chris	4321567890	2
1	peter@gmail.com	1043	Bangalore	peter	1276549890	1
2	robert@gmail.com	1111	Mumbai	robert	1234567899	3
3	thor@gmail.com	255	Bangalore	thor	1234567890	1

Add

View

Edit

Remove

Execute

Execute the Query

SQL Code Here

```
show tables;
```

Execute


Query Submitted

```
show tables;
```

Results

Tabular Format

	Tables_in_cs657_project
0	admin
1	adminbangalore
2	customer
3	driver
4	payment
5	paymentcustomer
6	platform



🏠 Add 🔗 View ≡ Edit ⚙️ Remove ▶️ **Execute**

Execute the Query

SQL Code Here

```
select * from customer;
```

Execute

Query Submitted

```
select * from customer;
```

Results

Tabular Format

	user_id	password	city	name	phone	city_id
0	chris@gmail.com	111	Chennai	chris	4321567890	2
1	peter@gmail.com	1043	Bangalore	peter	1276549890	1
2	robert@gmail.com	1111	Mumbai	robert	1234567899	3
3	thor@gmail.com	255	Bangalore	thor	1234567890	1
4	wanda@gmail.com	560102	Delhi	wanda	2345678901	3