

**PES UNIVERSITY**

***DATABASE MANAGEMENT SYSTEM  
MINI PROJECT***

**TITLE: CAR RENTAL SYSTEM**

Submitted by:

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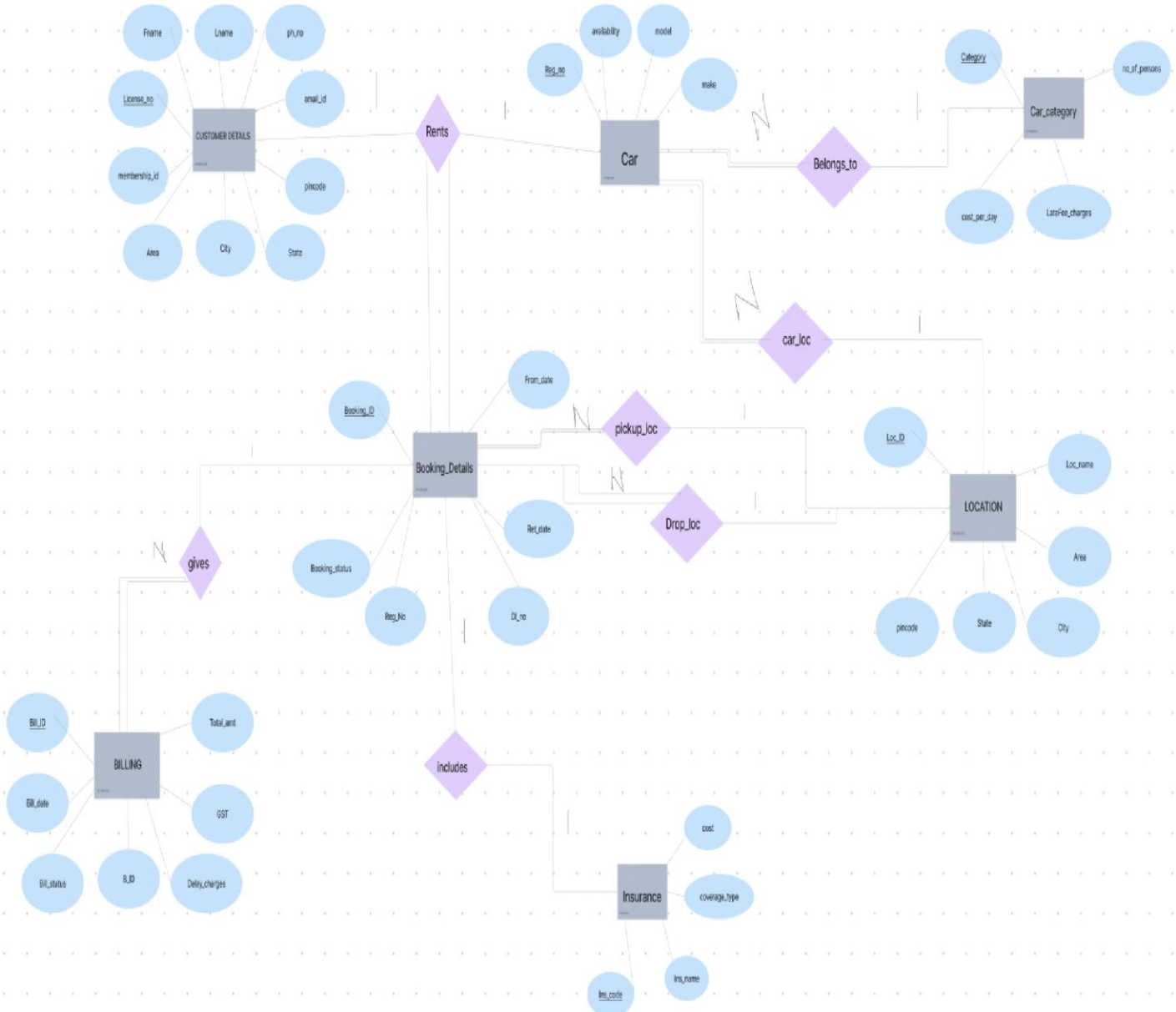
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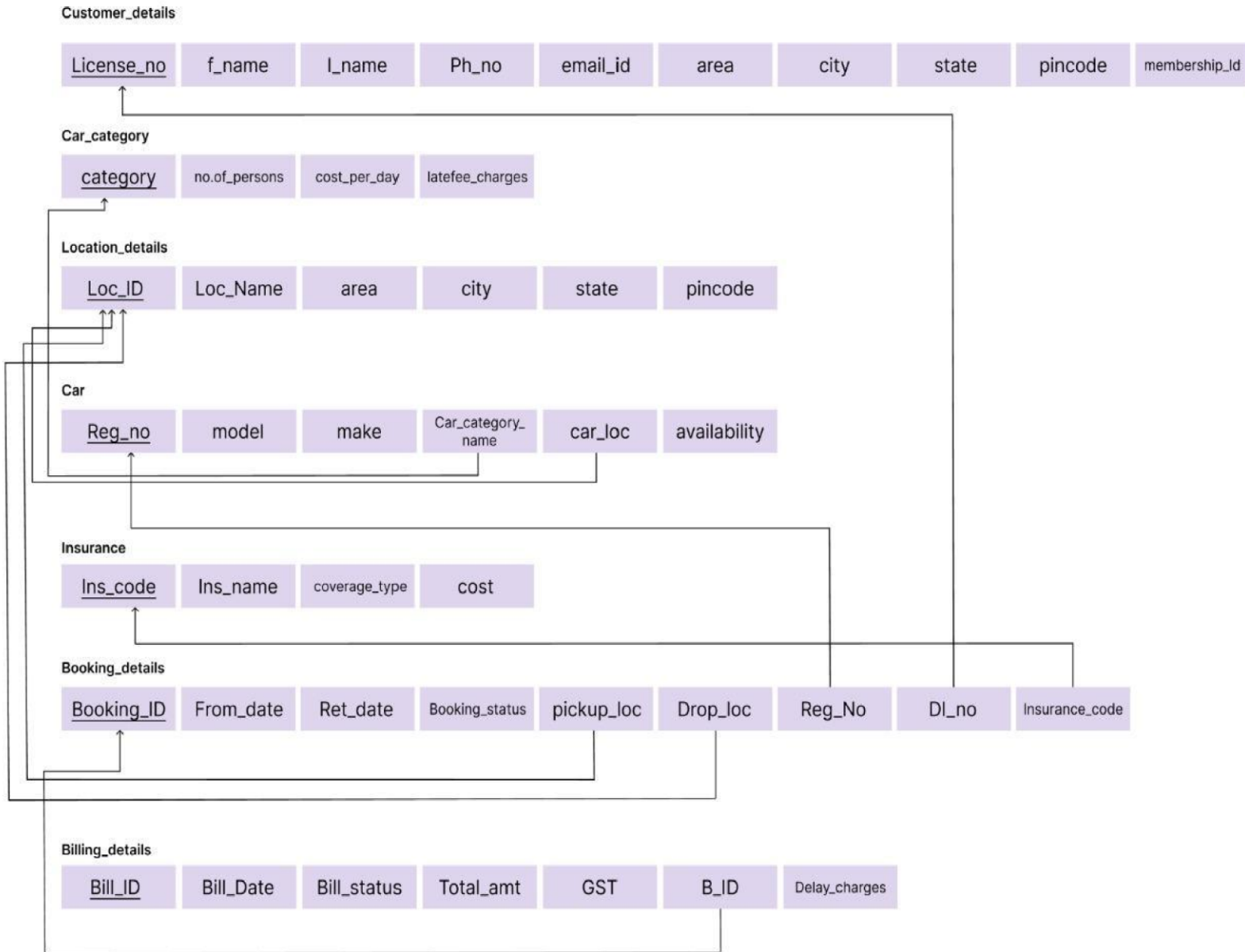
## **Short Description and Scope of the Project**

The CAR RENTAL SYSTEM helps the user to check the available cars, Booking of cars, etc. The aim of this project is to design and develop a database maintaining the records of different types of cars, reservation status based on relation model. The scope of this system is maintaining a database for Car Rental System to reduce manual errors by developing web-based systems for online car rental organization. This also aims to show the user the available options for the pick up and drop locations of a car which the user can rent and it displays the insurance available for the car. The system also shows you a bill for the service you have opted for. This project is made for helping people to book cars. As cars are only used for traveling purposes, car reservation is in high demand in cities and towns. Hence this project is made useful for reserving the desired cars in advance. Then this project contains entity relationship model diagrams based on car rental system and introduction to relation model. There is also a design of the database of the car rental system based on relation models. Example of some SQL queries to retrieve data from a car management database.

# ER Diagram



# Relational Schema



## DDL statements - Building the database

```
CREATE TABLE CUSTOMER_DETAILS
( License_No CHAR(8) NOT NULL,
  F_name VARCHAR(25) NOT NULL,
  L_name VARCHAR(25) NOT NULL,
  Ph_No VARCHAR(10) NOT NULL,
  email_id VARCHAR(30) NOT NULL,
  Area VARCHAR(30) NOT NULL,
  City VARCHAR(20) NOT NULL,
  State VARCHAR(20) NOT NULL,
  Pincode INTEGER(6) NOT NULL,
  MEMBERSHIP_ID CHAR(5) Default '00000' NOT NULL,
  PRIMARY KEY (License_No)
);
```

```
CREATE TABLE CAR_CATEGORY
( Category VARCHAR(25) NOT NULL,
  No_of_persons INTEGER(2) NOT NULL,
  Cost_per_day INTEGER(5) DEFAULT '500' NOT NULL,
  LateFee_charges INTEGER(4) NOT NULL,
  PRIMARY KEY (Category)
);
```

```
CREATE TABLE LOCATION_DETAILS
( Loc_ID CHAR(4) NOT NULL,
  Loc_Name VARCHAR(50) NOT NULL,
  Area VARCHAR(30) NOT NULL,
  City VARCHAR(20) NOT NULL,
  State VARCHAR(20) NOT NULL,
  Pincode INTEGER(6) NOT NULL,
  PRIMARY KEY (Loc_ID)
);
```

```
CREATE TABLE CAR
( Reg_no CHAR(7) NOT NULL,
  Model VARCHAR(25) NOT NULL,
  Make VARCHAR(25) NOT NULL,
  Car_category_name VARCHAR(25) NOT NULL,
  Car_loc CHAR(4) NOT NULL,
  Availability CHAR(1) default 'Y' NOT NULL,
```

```

PRIMARY KEY (Reg_no),
FOREIGN KEY (Car_category_name) REFERENCES
CAR_CATEGORY(Category) on delete cascade on update cascade,
FOREIGN KEY (Car_loc) REFERENCES LOCATION_DETAILS(LOC_ID) on delete cascade on
update cascade

```

```
);
```

```

CREATE TABLE INSURANCE
( Ins_code CHAR(5) NOT NULL,
  Ins_name VARCHAR(50) NOT NULL,
  Coverage_type VARCHAR(200) NOT NULL,
  Cost INTEGER(4) NOT NULL,
  PRIMARY KEY (Ins_code),
  UNIQUE (Ins_name)
);

```

```

CREATE TABLE BOOKING_DETAILS
( Booking_ID CHAR(5) NOT NULL,
  From_date DATE NOT NULL,
  Ret_date DATE NOT NULL,
  Booking_status CHAR(1) DEFAULT 'N' NOT NULL,
  Pickup_Loc CHAR(4) NOT NULL,
  Drop_Loc CHAR(4) NOT NULL,
  Reg_No CHAR(7) NOT NULL,
  DL_No CHAR(8) NOT NULL,
  Insurance_Code CHAR(5),
  PRIMARY KEY (Booking_ID),
  FOREIGN KEY ( Pickup_Loc) REFERENCES LOCATION_DETAILS(Loc_ID) on delete
cascade on update cascade,
  FOREIGN KEY (Drop_Loc) REFERENCES LOCATION_DETAILS(Loc_ID) on delete cascade
on update cascade,
  FOREIGN KEY (Reg_No) REFERENCES CAR(Reg_no) on delete cascade on update
cascade,
  FOREIGN KEY (DL_No) REFERENCES CUSTOMER_DETAILS(License_No) on delete cascade
on update cascade,
  FOREIGN KEY (Insurance_Code) REFERENCES INSURANCE(Ins_code) on delete cascade
on update cascade
);

```

```
CREATE TABLE BILLING_DETAILS
```

```

( BILL_ID CHAR(6) NOT NULL,
  BILL_DATE DATE NOT NULL,
  BILL_STATUS CHAR(2) DEFAULT 'NP' NOT NULL,
  Total_amt INTEGER(6) NOT NULL,
  GST INTEGER(5) NOT NULL,
  B_ID CHAR(5) NOT NULL,
  Delay_charges INTEGER(4) DEFAULT '0' NOT NULL,

PRIMARY KEY (BILL_ID),
  FOREIGN KEY (B_ID) REFERENCES BOOKING_DETAILS(Booking_ID) on delete cascade on
update cascade
);

```

## Populating the Database

```

INSERT INTO CUSTOMER_DETAILS VALUES('F1234554',
'Surya','Teja',9063147965,'teju0262@gmail.com',
'Water front','Kurnool','A.P',750808,'M1001');
INSERT INTO CUSTOMER_DETAILS VALUES('F9764521', 'Neelesh','NP','9764567903',
'neeleshnp@gmail.com',
'Rajajinagar','Bengaluru','Karnataka',750801,'M1002');
INSERT INTO CUSTOMER_DETAILS VALUES('F2345611', 'Varun','meda','8189187546',
'varunmeda@gmail.com',
'MR layout','Ananthapur','A.P',913035,'M1003');
INSERT INTO CUSTOMER_DETAILS VALUES('R8763578', 'Mohith','Sai','7345678902',
'mohith@gmail.com','L.B Nagar',
'Hyderabad','Telangana',752024,'M1004');
INSERT INTO CUSTOMER_DETAILS VALUES('I3478953', 'Rohan','Reddy','9872563478',
'rohan7112@gmail.com','Venkatesh nagar',
'Gulbarga','Karnataka',752523,'M1005');
INSERT INTO CUSTOMER_DETAILS VALUES('E7521097',
'Shanmukh','Kalyan','9098123429', 'shanmukh@gmail.com','XYZ layout',
'Nellore','A.P',762452,'M10006');
INSERT INTO CUSTOMER_DETAILS VALUES('T0981237', 'Kiran','Reddy','6712890345',
'kiran@gmail.com','888 ROAD',
'Vijayawada','A.P',923674,'M1008');
INSERT INTO CUSTOMER_DETAILS VALUES('F0091266',
'Karthik','Jampani','7892340918', 'karthik@gmail.com','1007 PARKWAY',

```

```

'Prakasam','A.P',722125,'M1010');
INSERT INTO CUSTOMER_DETAILS VALUES('P1234567', 'Aneela','Gurram','9902489357',
'aneela@gmail.com','2256 STREET',
'Bengaluru','Karnataka',652892,'M10009');
INSERT INTO CUSTOMER_DETAILS VALUES('V5690245', 'Sathvika','Reddy','9908762514',
'sathvika@gmail.com','0099 X ROAD',
'Hyderabad','Telangana',973254,'M1020');

INSERT INTO CAR_CATEGORY VALUES('ECONOMY',5,DEFAULT,900);
INSERT INTO CAR_CATEGORY VALUES('COMPACT',5,3200,300);
INSERT INTO CAR_CATEGORY VALUES('MID SIZE',5,1500,200);
INSERT INTO CAR_CATEGORY VALUES('STANDARD',5,2200,400);
INSERT INTO CAR_CATEGORY VALUES('FULL SIZE',4,1800,1200);

INSERT INTO CAR_CATEGORY VALUES('LUXURY CAR',5,7500,2250);
INSERT INTO CAR_CATEGORY VALUES('MID SIZE SUV',5,DEFAULT,1000);
INSERT INTO CAR_CATEGORY VALUES('STANDARD SUV',5,3000,1200);
INSERT INTO CAR_CATEGORY VALUES('FULL SIZE SUV',8,6000,1800);
INSERT INTO CAR_CATEGORY VALUES('MINI VAN',7,DEFAULT,2000);

INSERT INTO LOCATION_DETAILS VALUES('L101',' KIA',
'ORR','Bengaluru','Karnataka',752352);
INSERT INTO LOCATION_DETAILS VALUES('L102','2256 road',
'Church Street','bengaluru','Karnataka',900454);
INSERT INTO LOCATION_DETAILS VALUES('L103','road no52',
'Electronic city','Bengaluru','Karnataka',752613);
INSERT INTO LOCATION_DETAILS VALUES('L104','T hub',
'Hi-tech city','Hyderabad','Telangana',770949);
INSERT INTO LOCATION_DETAILS VALUES('L105','80/112G',
'Banjara Hills','Hyderabad','Telangana',201566);
INSERT INTO LOCATION_DETAILS VALUES('L106','54/11',
'Banasankari','Bengaluru','Karnataka',071914);

INSERT INTO CAR VALUES('ABX1234','CIVIC','HONDA','ECONOMY','L101',DEFAULT);
INSERT INTO CAR VALUES('SDF4567','FIESTA','FORD',
'STANDARD','L102','N');
INSERT INTO CAR VALUES('GLZ2376','COROLLA','TOYOTA',
'ECONOMY','L104','Y');
INSERT INTO CAR VALUES('HJK1234','CIVIC','HONDA',
'ECONOMY','L102','N');
INSERT INTO CAR VALUES('GLS7625','SELTOS','KIA',

```



```

'STANDARD SUV','L106','N');
INSERT INTO CAR VALUES('FKD8202','GOLF','VOLKSWAGAN',
'LUXURY CAR','L106',DEFAULT);
INSERT INTO CAR VALUES('HMX1890','PRIUS','TOYOTA',
'COMPACT','L105','N');
INSERT INTO CAR VALUES('KJS1983','PRIUS','TOYOTA',
'ECONOMY','L104','Y');
INSERT INTO CAR VALUES('SDL9356','FOCUS','FORD',
'COMPACT','L103',DEFAULT);
INSERT INTO CAR VALUES('OTY7293','CRUZE','CHEVROLET',
'MID SIZE','L102','Y');
INSERT INTO CAR VALUES('QWE4562','LEGACY','SUBARU',
'FULL SIZE','L101','Y');
INSERT INTO CAR VALUES('CXZ2356','AVENGER','DODGE',
'MID SIZE','L102','Y');

INSERT INTO INSURANCE VALUES('I201','COLLISION DAMAGE WAIVER',
'Covers theft and total damage to the rental car',800);
INSERT INTO INSURANCE VALUES('I202',
'SUPPLEMENTAL LIABILITY PROTECTION','Covers damage done to others',500);
INSERT INTO INSURANCE VALUES('I203',
'PERSONAL ACCIDENT INSURANCE','Covers medical costs for driver and
passengers',600);
INSERT INTO INSURANCE VALUES('I204',
'PERSONAL EFFECTS COVERAGE','Covers theft of personal belongings',300);

INSERT INTO BOOKING_DETAILS
VALUES('B1001','2016-01-20','2016-01-25','Y','L101','L101','ABX1234','F1234554',
'I201');
INSERT INTO BOOKING_DETAILS
VALUES('B1002','2016-01-21','2016-01-24',DEFAULT,'L102','L103','GLS7625','R87635
78','I204');
INSERT INTO BOOKING_DETAILS VALUES('B1003','2016-02-10',
'2016-01-15','N','L103','L105','SDF4567','F9764521','I203');

```

# QUERIES:

## Join Queries:

**Displays complete information about the car :**

Showing rows 0 - 14 (15 total, Query took 0.0017 seconds.) [Car\_loc: ... - L106...]

```
SELECT * FROM car_category LEFT JOIN car ON car_category.Category = car.Car_category_name ORDER BY car.Car_loc;
```

☐ Profiling [ Edit inline ] [ Edit ] [ Explain SQL ] [ Create PHP code ] [ Refresh ]

☐ Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

+ Options

Category	No_of_persons	Cost_per_day	LateFee_charges	Reg_no	Model	Make	Car_category_name	Car_loc	Availability
FULL SIZE SUV	8	6000	1800	NULL	NULL	NULL	NULL	NULL	NULL
MINI VAN	7	500	2000	NULL	NULL	NULL	NULL	NULL	NULL
MID SIZE SUV	5	500	1000	NULL	NULL	NULL	NULL	NULL	NULL
ECONOMY	5	500	900	ABX1234	CIVIC	HONDA	ECONOMY	L101	Y
FULL SIZE	4	1800	1200	QWE4562	LEGACY	SUBARU	FULL SIZE	L101	Y
MID SIZE	5	1500	200	OTY7293	CRUZE	CHEVROLET	MID SIZE	L102	Y
MID SIZE	5	1500	200	CXZ2356	AVENGER	DODGE	MID SIZE	L102	Y
STANDARD	5	2200	400	SDF4567	FIESTA	FORD	STANDARD	L102	N
ECONOMY	5	500	900	HJK1234	CIVIC	HONDA	ECONOMY	L102	N
COMPACT	5	3200	300	SDL9356	FOCUS	FORD	COMPACT	L103	Y
ECONOMY	5	500	900	GLZ2376	COROLLA	TOYOTA	ECONOMY	L104	Y
ECONOMY	5	500	900	KJS1983	PRIUS	TOYOTA	ECONOMY	L104	Y
COMPACT	5	3200	300	HNX1890	PRIUS	TOYOTA	COMPACT	L105	N
LUXURY CAR	5	7500	2250	FKD8202	GOLF	VOLKSWAGAN	LUXURY CAR	L106	Y
STANDARD SUV	5	3000	1200	GLS7625	SELTO	KIA	STANDARD SUV	L106	N

**Displays complete information about the car ordered by car\_loc :**

Showing rows 0 - 11 (12 total, Query took 0.0089 seconds.) [Car\_loc: L101... - L106...]

```
SELECT * FROM car_category RIGHT JOIN car ON car_category.Category = car.Car_category_name ORDER BY car.Car_loc;
```

☐ Profiling [ Edit inline ] [ Edit ] [ Explain SQL ] [ Create PHP code ] [ Refresh ]

☐ Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

+ Options

Category	No_of_persons	Cost_per_day	LateFee_charges	Reg_no	Model	Make	Car_category_name	Car_loc	Availability
ECONOMY	5	500	900	ABX1234	CIVIC	HONDA	ECONOMY	L101	Y
FULL SIZE	4	1800	1200	QWE4562	LEGACY	SUBARU	FULL SIZE	L101	Y
MID SIZE	5	1500	200	CXZ2356	AVENGER	DODGE	MID SIZE	L102	Y
STANDARD	5	2200	400	SDF4567	FIESTA	FORD	STANDARD	L102	N
MID SIZE	5	1500	200	OTY7293	CRUZE	CHEVROLET	MID SIZE	L102	Y
ECONOMY	5	500	900	HJK1234	CIVIC	HONDA	ECONOMY	L102	N
COMPACT	5	3200	300	SDL9356	FOCUS	FORD	COMPACT	L103	Y
ECONOMY	5	500	900	KJS1983	PRIUS	TOYOTA	ECONOMY	L104	Y
ECONOMY	5	500	900	GLZ2376	COROLLA	TOYOTA	ECONOMY	L104	Y
COMPACT	5	3200	300	HNX1890	PRIUS	TOYOTA	COMPACT	L105	N
STANDARD SUV	5	3000	1200	GLS7625	SELTO	KIA	STANDARD SUV	L106	N
LUXURY CAR	5	7500	2250	FKD8202	GOLF	VOLKSWAGAN	LUXURY CAR	L106	Y

## Displays complete information about the customer and booking :

Showing rows 0 - 2 (3 total, Query took 0.0012 seconds.)

```
SELECT * FROM customer_details INNER JOIN booking_details ON customer_details.License_No = booking_details.DL_No;
```

☐ Profiling [\[ Edit inline \]](#) [\[ Edit \]](#) [\[ Explain SQL \]](#) [\[ Create PHP code \]](#) [\[ Refresh \]](#)

☐ Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

+ Options

License_No	F_name	L_name	Ph_No	email_id	Area	City	State	Pincode	MEMBERSHIP_ID	Booking_ID	From_date	Ret_date	Booking_status
F1234554	Surya	Teja	9063147965	teju0262@gmail.com	Water front	Kurnool	A.P	750808	M1001	B1001	2016-01-20	2016-01-25	Y
R8763578	Mohith	Sai	7345678902	mohith@gmail.com	L B Nagar	Hyderabad	Telangana	752024	M1004	B1002	2016-01-21	2016-01-24	N
F9764521	Neelesh	NP	9764567903	neeshnp@gmail.com	Rajajinagar	Bengaluru	Karnataka	750801	M1002	B1003	2016-02-10	2016-01-15	N

☐ Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

Query results operations

[Print](#) [Copy to clipboard](#) [Export](#) [Display chart](#) [Create view](#)

## Performs self join on location\_details :

Showing rows 0 - -1 (0 total, Query took 0.0104 seconds.)

```
SELECT A.Loc_id, B.Loc_ID , A.Loc_name,A.area FROM location_details A, location_details B WHERE A.Loc_ID <> B.Loc_ID ORDER BY A.Area;
```

☐ Profiling [\[ Edit inline \]](#) [\[ Edit \]](#) [\[ Explain SQL \]](#) [\[ Create PHP code \]](#) [\[ Refresh \]](#)

☐ Show all | Number of rows: 25 | Filter rows: Search this table

+ Options

Loc_id	Loc_ID	Loc_name	area
L106	L101	54/11	Banasankari
L106	L102	54/11	Banasankari
L106	L103	54/11	Banasankari
L106	L104	54/11	Banasankari
L106	L105	54/11	Banasankari
L105	L101	80/112G	Banjara Hills
L105	L102	80/112G	Banjara Hills
L105	L103	80/112G	Banjara Hills
L105	L104	80/112G	Banjara Hills
L105	L106	80/112G	Banjara Hills
L102	L103	2256 road	Church Street
L102	L104	2256 road	Church Street
L102	L105	2256 road	Church Street
L102	L106	2256 road	Church Street
L102	L101	2256 road	Church Street
L103	L101	road no52	Electronic city
L103	L102	road no52	Electronic city
L103	L104	road no52	Electronic city
L103	L105	road no52	Electronic city
L103	L106	road no52	Electronic city
L104	L105	T hub	Hi-tech city

## Displays complete information about the booking and location :

Showing rows 0 - 2 (3 total, Query took 0.0006 seconds.)

```
SELECT * FROM booking_details INNER JOIN location_details ON booking_details.Pickup_Loc = location_details.Loc_ID;
```

☐ Profiling [\[ Edit inline \]](#) [\[ Edit \]](#) [\[ Explain SQL \]](#) [\[ Create PHP code \]](#) [\[ Refresh \]](#)

☐ Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

+ Options

Booking_ID	From_date	Ret_date	Booking_status	Pickup_Loc	Drop_Loc	Reg_No	DL_No	Insurance_Code	Loc_ID	Loc_Name	Area	City	State	Pincode
B1001	2016-01-20	2016-01-25	Y	L101	L101	ABX1234	F1234554	I201	L101	KIA	ORR	Bengaluru	Karnataka	752352
B1002	2016-01-21	2016-01-24	N	L102	L103	GLS7625	R8763578	I204	L102	2256 road	Church Street	bengaluru	Karnataka	900454
B1003	2016-02-10	2016-01-15	N	L103	L105	SDF4567	F9764521	I203	L103	road no52	Electronic city	Bengaluru	Karnataka	752613

## Displays complete information about the booking and billing :

Show query box

MySQL returned an empty result set (i.e. zero rows). (Query took 0.0028 seconds.)

```
SELECT * FROM booking_details INNER JOIN billing_details ON booking_details.Booking_ID = billing_details.BILL_ID;
```

☐ Profiling [\[ Edit inline \]](#) [\[ Edit \]](#) [\[ Explain SQL \]](#) [\[ Create PHP code \]](#) [\[ Refresh \]](#)

Booking_ID	From_date	Ret_date	Booking_status	Pickup_Loc	Drop_Loc	Reg_No	DL_No	Insurance_Code	BILL_ID	BILL_DATE	BILL_STATUS	Total_amt	GST	B_ID	Delay_charges
------------	-----------	----------	----------------	------------	----------	--------	-------	----------------	---------	-----------	-------------	-----------	-----	------	---------------

Query results operations

Create view

## Aggregate Functions:

Displays total amount to be received from a particular car\_category :

Show query box

✓ Showing rows 0 - 9 (10 total, Query took 0.0109 seconds.)

```
SELECT category, avg(no_of_persons), SUM(cost_per_day) FROM car_category group by category;
```

☐ Profiling [ [Edit inline](#) ] [ [Edit](#) ] [ [Explain SQL](#) ] [ [Create PHP code](#) ] [ [Refresh](#) ]

☐ Show all | Number of rows: 25 ▾ Filter rows:

+ Options

			category	avg(no_of_persons)	SUM(cost_per_day)	
<input type="checkbox"/>				COMPACT	5.0000	3200
<input type="checkbox"/>				ECONOMY	5.0000	500
<input type="checkbox"/>				FULL SIZE	4.0000	1800
<input type="checkbox"/>				FULL SIZE SUV	8.0000	6000
<input type="checkbox"/>				LUXURY CAR	5.0000	7500
<input type="checkbox"/>				MID SIZE	5.0000	1500
<input type="checkbox"/>				MID SIZE SUV	5.0000	500
<input type="checkbox"/>				MINI VAN	7.0000	500
<input type="checkbox"/>				STANDARD	5.0000	2200
<input type="checkbox"/>				STANDARD SUV	5.0000	3000

☐ Check all With selected: Edit Copy Delete Export

## Displays no.of customers belonging to a particular state :

✓ Showing rows 0 - 2 (3 total, Query took 0.0030 seconds.)

```
SELECT state,count(License_no) FROM `customer_details` group by State;
```

☐ Profiling [\[ Edit inline \]](#) [\[ Edit \]](#) [\[ Explain SQL \]](#) [\[ Create PHP code \]](#) [\[ Refresh \]](#)

☐ Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

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	state	count(License_no)
<input type="checkbox"/> <a href="#">Edit</a> <a href="#">Copy</a> <a href="#">Delete</a>	A.P	5
<input type="checkbox"/> <a href="#">Edit</a> <a href="#">Copy</a> <a href="#">Delete</a>	Karnataka	3
<input type="checkbox"/> <a href="#">Edit</a> <a href="#">Copy</a> <a href="#">Delete</a>	Telangana	2

☐ Check all | With selected: [Edit](#) [Copy](#) [Delete](#) [Export](#)

## Displays the location and no.of cars present at a particular location:

✓ Showing rows 0 - 5 (6 total, Query took 0.0008 seconds.)

```
SELECT car_loc,COUNT(Reg_no) FROM car GROUP BY car_loc;
```

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☐ Show all | Number of rows: 25 | Filter rows: Search this table

+ Options

car_loc	COUNT(Reg_no)
L101	2
L102	4
L103	1
L104	2
L105	1
L106	2

☐ Show all | Number of rows: 25 | Filter rows: Search this table

[Query results export](#)

## Displays the aggregate details of insurances offered:

✓ Showing rows 0 - 0 (1 total, Query took 0.0013 seconds.)

```
SELECT avg(cost),sum(cost) from insurance;
```

☐ Profiling [ [Edit inline](#) ] [ [Edit](#) ] [ [Explain SQL](#) ] [ [Create PHP code](#) ] [ [Refresh](#) ]

☐ Show all | Number of rows: 25 | Filter rows:

+ Options

avg(cost)	sum(cost)
550.0000	2200

☐ Show all | Number of rows: 25 | Filter rows:

## Displays total amount a customer has to pay for a particular car\_category :

✓ Showing rows 0 - 3 (4 total, Query took 0.0093 seconds.)

```
SELECT category, avg(cost_per_day + Latefee_charges) FROM car_category group by no_of_persons;
```

☐ Profiling [ [Edit inline](#) ] [ [Edit](#) ] [ [Explain SQL](#) ] [ [Create PHP code](#) ] [ [Refresh](#) ]

☐ Show all | Number of rows: 25 | Filter rows:  Sort by key: None

+ Options

	category	avg(cost_per_day + Latefee_charges)
<input type="checkbox"/> <a href="#">Edit</a> <a href="#">Copy</a> <a href="#">Delete</a>	FULL SIZE	3000.0000
<input type="checkbox"/> <a href="#">Edit</a> <a href="#">Copy</a> <a href="#">Delete</a>	COMPACT	3521.4286
<input type="checkbox"/> <a href="#">Edit</a> <a href="#">Copy</a> <a href="#">Delete</a>	MINI VAN	2500.0000
<input type="checkbox"/> <a href="#">Edit</a> <a href="#">Copy</a> <a href="#">Delete</a>	FULL SIZE SUV	7800.0000

☐ Check all | With selected: [Edit](#) [Copy](#) [Delete](#) [Export](#)

☐ Show all | Number of rows: 25 | Filter rows:  Sort by key: None

Query results operations



## Displays the number of bills generated by the car rental service:

✓ Showing rows 0 - 0 (1 total, Query took 0.0024 seconds.)

```
select count(bill_id),((total_amt * (GST/100) ) + total_amt + Delay_charges) as total from billing_details;
```

☐ Profiling [ [Edit inline](#) ] [ [Edit](#) ] [ [Explain SQL](#) ] [ [Create PHP code](#) ] [ [Refresh](#) ]

☐ Show all | Number of rows: 25 ▼ Filter rows:

- Options

count(bill_id)	total
0	NULL

☐ Show all | Number of rows: 25 ▼ Filter rows:

Query results operations

## Set Operations :

### Displays the union b/w city and state :

✓ Showing rows 0 - 1 (2 total, Query took 0.0087 seconds.)

```
SELECT City,State FROM customer_details WHERE state='Karnataka' UNION SELECT City,state FROM location_details WHERE state='Karnataka' ORDER BY City;
```

☐ Profiling [ [Edit inline](#) ] [ [Edit](#) ] [ [Explain SQL](#) ] [ [Create PHP code](#) ] [ [Refresh](#) ]

☐ Show all | Number of rows: 25 ▼ Filter rows:  Sort by key: None ▼

- Options

City	State
Bengaluru	Karnataka
Gulbarga	Karnataka

☐ Show all | Number of rows: 25 ▼ Filter rows:  Sort by key: None ▼



**Displays the union b/w city and state of the customers belonging to karnataka :**

✓ Showing rows 0 - 6 (7 total, Query took 0.0010 seconds.)

```
SELECT City,State FROM customer_details WHERE state='Karnataka' UNION all SELECT City,state FROM location_details WHERE state='Karnataka' ORDER BY City;
```

☐ Profiling [ [Edit inline](#) ] [ [Edit](#) ] [ [Explain SQL](#) ] [ [Create PHP code](#) ] [ [Refresh](#) ]

☐ Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

+ Options

City	State
Bengaluru	Karnataka
Bengaluru	Karnataka
bengaluru	Karnataka
Bengaluru	Karnataka
Bengaluru	Karnataka
Bengaluru	Karnataka
Gulbarga	Karnataka

**Displays the category of cars the rental service has:**

✓ Showing rows 0 - 6 (7 total, Query took 0.0005 seconds.)

```
SELECT car_category_name FROM car INTERSECT SELECT category FROM car_category;
```

☐ Profiling [ [Edit inline](#) ] [ [Edit](#) ] [ [Explain SQL](#) ] [ [Create PHP code](#) ] [ [Refresh](#) ]

☐ Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key:

- Options

car_category_name
COMPACT
ECONOMY
FULL SIZE
LUXURY CAR
MID SIZE
STANDARD
STANDARD SUV

**Displays the customer\_details(License\_no) who booked a car :**

✓ Showing rows 0 - 2 (3 total, Query took 0.0005 seconds.)

```
SELECT License_no FROM customer_details intersect SELECT DL_no FROM booking_details;
```

☐ Profiling [ [Edit inline](#) ] [ [Edit](#) ] [ [Explain SQL](#) ] [ [Create PHP code](#) ] [ [Refresh](#) ]

☐ Show all | Number of rows: 25 ▼ Filter rows:  Sort by

+ Options

**License\_no**

F1234554

F9764521

R8763578

**Displays the availability of car at particular location:**

✓ Showing rows 0 - 5 (6 total, Query took 0.0009 seconds.)

```
SELECT car_loc FROM car intersect SELECT Loc_ID FROM location_details;
```

☐ Profiling [ [Edit inline](#) ] [ [Edit](#) ] [ [Explain SQL](#) ] [ [Create PHP code](#) ] [ [Refresh](#) ]

☐ Show all | Number of rows: 25 ▼ Filter rows:

+ Options

**car\_loc**

L101

L102

L103

L104

L105

L106

## Functions and Procedures :

A function to display if an offer is applicable for a particular insurance policy :

✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0057 seconds.)

```
CREATE FUNCTION offer_applicable(cost int) returns VARCHAR(20) DETERMINISTIC BEGIN IF cost > 500 THEN RETURN ('Yes'); ELSE RETURN ('No'); END IF; end;
```

[ Edit inline ] [ Edit ] [ Create PHP code ]

✓ Showing rows 0 - 3 (4 total, Query took 0.0012 seconds.)

```
select cost, Coverage_type, Ins_code, Ins_name, offer_applicable(cost) as offer_applicable from insurance;
```

☐ Profiling [ Edit inline ] [ Edit ] [ Explain SQL ] [ Create PHP code ] [ Refresh ]

☐ Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

+ Options

		cost	Coverage_type	Ins_code	Ins_name	offer_applicable
<input type="checkbox"/>	Edit Copy Delete	800	Covers theft and total damage to the rental car	I201	COLLISION DAMAGE WAIVER	Yes
<input type="checkbox"/>	Edit Copy Delete	500	Covers damage done to others	I202	SUPPLEMENTAL LIABILITY PROTECTION	No
<input type="checkbox"/>	Edit Copy Delete	600	Covers medical costs for driver and passengers	I203	PERSONAL ACCIDENT INSURANCE	Yes
<input type="checkbox"/>	Edit Copy Delete	300	Covers theft of personal belongings	I204	PERSONAL EFFECTS COVERAGE	No

☐ Check all | With selected: Edit Copy Delete Export

A procedure to display booking details for a particular booking\_id entered :

✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0052 seconds.)

```
create procedure booking_status(in b_id varchar(5)) BEGIN select * from booking_details where Booking_ID=b_id; end;
```

[ Edit inline ] [ Edit ] [ Create PHP code ]

✓ Showing rows 0 - 0 (1 total, Query took 0.0008 seconds.)

```
call booking_status('B1001');
```

[ Edit inline ] [ Edit ] [ Create PHP code ]

☐ Show all | Number of rows: 25 | Filter rows: Search this table

+ Options

Booking_ID	From_date	Ret_date	Booking_status	Pickup_Loc	Drop_Loc	Reg_No	DL_No	Insurance_Code
B1001	2016-01-20	2016-01-25	Y	L101	L101	ABX1234	F1234554	I201

☐ Show all | Number of rows: 25 | Filter rows: Search this table

Query results operations

## Triggers and Cursors :

Trigger gets generated when we try to insert a value greater than `cost_per_day` for `late_fee_charges` :

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0100 seconds.)

```
CREATE TRIGGER category_insertion BEFORE INSERT ON car_category FOR EACH ROW BEGIN DECLARE error_msg VARCHAR(255); SET error_msg = ('late_fee_charges exceeded cost_per_day'); IF (New.cost_per_day) < (New.Latefee_charges) THEN SIGNAL SQLSTATE '45000' SET MESSAGE_TEXT = error_msg; END IF; END;
```

[\[ Edit inline \]](#) [\[ Edit \]](#) [\[ Create PHP code \]](#)

A cursor is created for maintaining a backup of the cars :

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0307 seconds.)

```
create table car_backup ( R_ID varchar(8), car_name varchar(30), Company varchar(16), category_name varchar(10) , loc varchar(6), Status_of_car VARCHAR(1));
```

[\[ Edit inline \]](#) [\[ Edit \]](#) [\[ Create PHP code \]](#)

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0068 seconds.)

```
CREATE PROCEDURE cursor_1() BEGIN DECLARE done INT DEFAULT 0; DECLARE ID,name,manufacturer,name2,loc_id,status varchar(25); DECLARE cur CURSOR FOR SELECT * FROM car; DECLARE CONTINUE HANDLER FOR NOT FOUND SET done = 1; OPEN cur; label: LOOP FETCH cur INTO ID,name,manufacturer,name2,loc_id,status; INSERT INTO car_backup VALUES(ID,name,manufacturer,name2,loc_id,status); IF done = 1 THEN LEAVE label; END IF; END LOOP; CLOSE cur; END;
```

[\[ Edit inline \]](#) [\[ Edit \]](#) [\[ Create PHP code \]](#)

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0242 seconds.)

```
call cursor_1();
```

[\[ Edit inline \]](#) [\[ Edit \]](#) [\[ Create PHP code \]](#)

# Developing a Frontend

Frontend that displays view of all the tables:

×

table

customer

Menu

View

## CAR RENTAL SERVICE

View entered customer Details:

View all customers							
	License_no	F_name	L_name	Ph_no	email_id	area	city
0	E7521097	Shanmukha	Kalyan	909489599	shanmukh@gmail.com	XYZ layout	Nello
1	F0091266	Karthik	Jampani	7892340918	karthik@gmail.com	1007 PARKWAY	Praka
2	F1234554	Surya	Teja	9063147965	teju0262@gmail.com	Water front	Kurnc
3	F2345611	Varun	meda	8189187546	varunmeda@gmail.com	MR layout	Anan
4	F9764521	Neelesh	NP	9764567903	neeleshnp@gmail.com	Rajajinagar	Beng
5	I3478953	Rohan	Reddy	9872563478	rohan7112@gmail.com	Venkatesh nagar	Gulbe
6	P1234567	Aneela	Gurram	9902489357	aneela@gmail.com	2256 STREET	Beng
7	R8763578	Mohith	Sai	7345678902	mohith@gmail.com	L.B Nagar	Hyde
8	T0981237	Kiran	Reddy	6712890345	kiran@gmail.com	888 ROAD	Vijaye
9	V5690245	Sathvika	Reddy	9908762514	sathvika@gmail.com	0099 X ROAD	Hyde

## CAR RENTAL SERVICE

View entered car Details:

View all car						
	Reg_no	Model	Make	Car_category_name	Car_loc	Availability
0	ABX1234	CIVIC	HONDA	ECONOMY	L101	Y
1	CXZ2356	AVENGER	DODGE	MID SIZE	L102	Y
2	FKD8202	GOLF	VOLKSWAGAN	LUXURY CAR	L106	Y
3	GLS7625	SELTOS	KIA	STANDARD SUV	L106	N
4	GLZ2376	COROLLA	TOYOTA	ECONOMY	L104	Y
5	HJK1234	CIVIC	HONDA	ECONOMY	L102	N
6	HNX1890	PRIUS	TOYOTA	COMPACT	L105	N
7	KJS1983	PRIUS	TOYOTA	ECONOMY	L104	Y
8	OTY7293	CRUZE	CHEVROLET	MID SIZE	L102	Y
9	QWE4562	LEGACY	SUBARU	FULL SIZE	L101	Y

## View entered location Details:

[View all locations](#)

	Loc_ID	Loc_Name	Area	City	State	Pincode
0	L101	KIA	ORR	Bengaluru	Karnataka	752352
1	L102	2256 road	Church Street	bengaluru	Karnataka	900454
2	L103	road no52	Electronic city	Bengaluru	Karnataka	752613
3	L104	T hub	Hi-tech city	Hyderabad	Telangana	770949
4	L105	80/112G	Banjara Hills	Hyderabad	Telangana	201566
5	L106	54/11	Banasankari	Bengaluru	Karnataka	71914

## View entered booking Details:

[View all bookings](#)

	Booking_ID	From_date	Ret_date	Booking_status	Pickup_Loc	Drop_Loc	Reg_No	DL_No
0	B1001	2016-01-20	2016-01-25	Y	L101	L101	ABX1234	F123456
1	B1002	2016-01-21	2016-01-24	N	L102	L103	GLS7625	R876354
2	B1003	2016-02-10	2016-01-15	N	L103	L105	SDF4567	F976456



# CAR RENTAL SERVICE

## View entered car\_category Details:

View car_categories				
	Category	No_of_persons	Cost_per_day	LateFee_charges
0	COMPACT	5	3200	300
1	ECONOMY	5	500	900
2	FULL SIZE	4	1800	1200
3	FULL SIZE SUV	8	6000	1800
4	LUXURY CAR	5	7500	2250
5	MID SIZE	5	1500	200
6	MID SIZE SUV	5	500	1000
7	MINI VAN	7	500	2000
8	STANDARD	5	2200	400
9	STANDARD SUV	5	3000	1200

## View entered insurance Details:

View insurance policies				
	Ins_code	Ins_name	Coverage_type	Cost
0	I201	COLLISION DAMAGE WAIVER	Covers theft and total damage to the rental car	800
1	I202	SUPPLEMENTAL LIABILITY PROTECTION	Covers damage done to others	500
2	I203	PERSONAL ACCIDENT INSURANCE	Covers medical costs for driver and passengers	600
3	I204	PERSONAL EFFECTS COVERAGE	Covers theft of personal belongings	300

## Frontend where we perform update operations :

Customer\_details to edit

E7521097

License\_ID:

E7521097

area:

XYZ layout

First Name:

Shanmukha

city:

Nellore

Last Type:

Kalyan

State

Andhra Pradesh

phone number:

909489599

pincode:

762452

e-mail:

shanmukh@gmail.com

m\_id:

M1000

Update customer

Successfully updated:: E7521097 to ::E7521097



Current locations ▼

location to Edit

L101 ▼

loc\_id:

L101

city:

Hyderabad

loc\_name:

KIA

state:

Karnataka

area:

ORR

pincode:

752352

Update location

Successfully updated:: L101 to ::L101

Updated data ▼

## Update entered car Details:

Current cars ▼

car to Edit

ABX1234 ▼

reg\_id:

XYZ1234

car category:

ECONOMY

model:

crv

car\_loc:

L101

make:

HONDA

availability:

Y

Update car

Successfully updated:: ABX1234 to ::XYZ1234

## Update entered booking Details:

Current bookings



booking to Edit

B1001



booking\_id:

booking\_status:

reg\_no

B1005

Y

XYZ1234

from\_date:

pickup\_loc:

DL\_no:

2016-01-20

L101

F1234554

ret\_date:

drop\_loc:

insurance\_code:

2016-01-25

L101

I204

Update booking

Successfully updated:: B1001 to ::B1005

## Update entered car\_category Details:

Current categories ▼

category to Edit

COMPACT ▼

category:

COMPACT

cost\_per\_day:

3200

no\_of\_persons:

5

Latefee\_charges:

750

Update dealer

Successfully updated:: COMPACT to ::COMPACT

Updated data ▼

## Update entered insurance Details:

Current plans ▼

plan to Edit

I201 ▼

ins\_code:

I201

coverage\_type:

Covers theft and total damage to the rental car

ins\_name:

COLLISION DAMAGE WAIVER

cost:

900

Update plan

Successfully updated:: I201 to ::I201

# CAR RENTAL SERVICE

## Update entered billing Details:

Current billings ▼

billing to Edit

No options to select. ▼

Updated data ^

	BILL_ID	BILL_DATE	BILL_STATUS	Total_amt	GST	B_ID	Delay_charges

## Frontend where we perform delete operations:

# CAR RENTAL SERVICE

## Delete entered customer Details:

Current data ▼

customer to Delete

LUG123 ▼

Do you want to delete ::LUG123

Delete user

customer has been deleted successfully

# CAR RENTAL SERVICE

## Delete entered car Details:

Current data

▼

car to Delete

CXZ2356

▼

Do you want to delete ::CXZ2356

Delete car

Admin has been deleted successfully

# CAR RENTAL SERVICE

## Delete entered location Details:

Current data

▼

order to Delete

L106

▼

Do you want to delete ::L106

Delete order

Order has been deleted successfully

# CAR RENTAL SERVICE

## Delete entered booking Details:

Current data

▼

order to Delete

B1003

▼

Do you want to delete ::B1003

Delete order

Order has been deleted successfully

# CAR RENTAL SERVICE

## Delete entered car\_category Details:

Current data

▼

Dealer to Delete

FULL SIZE

▼

Do you want to delete ::FULL SIZE

Delete dealer

dealer has been deleted successfully

Updated data

▼



# CAR RENTAL SERVICE

## Delete entered insurance Details:

Current data

▼

order to Delete

I202

▼

Do you want to delete ::I202

Delete order

Order has been deleted successfully

# CAR RENTAL SERVICE

## Delete entered billing Details:

Current data

▼

order to Delete

No options to select.

▼

Do you want to delete ::None

Delete order

Frontend where we perform insert operations :

## CAR RENTAL SERVICE

Enter customer Details:

License No:	e-mail:	pincode:
<input type="text" value="ABC1234"/>	<input type="text" value="teju0262@gmail.com"/>	<input type="text" value="518002.00"/> - +
First Name:	area:	m_id:
<input type="text" value="Bhargav"/>	<input type="text" value="xyz"/>	<input type="text" value="M1012"/>
Last Name:	city:	
<input type="text" value="Kumar"/>	<input type="text" value="kurnool"/>	
phone number:	State	
<input type="text" value="8790485513"/>	<input type="text" value="Andhra Pradesh"/> ▼	

Successfully added customer: ABC1234

## CAR RENTAL SERVICE

Enter car Details:

reg_id:	car category:
<input type="text" value="AXY1234"/>	<input type="text" value="LUXURY CAR"/>
model:	car_loc:
<input type="text" value="S-class"/>	<input type="text" value="L103"/>
make:	availability:
<input type="text" value="Benz"/>	<input type="text" value="Y"/>

Successfully added car : AXY1234

# CAR RENTAL SERVICE

## Enter location Details:

loc_id:	city:
<input type="text" value="L112"/>	<input type="text" value="bengaluru"/>
loc_name:	state:
<input type="text" value="abc"/>	<input type="text" value="Karnataka"/>
area:	pincode:
<input type="text" value="xyz"/>	<input type="text" value="900457"/>
<input type="button" value="Add data"/>	

Successfully added location : L112

# CAR RENTAL SERVICE

## Enter booking Details:

booking_id:	booking_status:	reg_no
<input type="text" value="B1008"/>	<input type="text" value="Y"/>	<input type="text" value="SDF4567"/>
from_date:	pickup_loc:	DL_no:
<input type="text" value="2016-01-20"/>	<input type="text" value="L101"/>	<input type="text" value="F1234554'"/>
ret_date:	drop_loc:	insurance_code:
<input type="text" value="2016-01-25"/>	<input type="text" value="L112"/>	<input type="text" value="I201"/>
<input type="button" value="Add data"/>		

Successfully added booking : B1008

# CAR RENTAL SERVICE

## Enter car\_category Details:

category:

Sedan

cost\_per\_day:

5000

no\_of\_persons:

4

Latefee\_charges:

900

Add data

Successfully added car\_category : Sedan

# CAR RENTAL SERVICE

## Enter insurance Details:

ins\_code:

I207

coverage\_type:

'COLLISION DAMAGE WAIVER

ins\_name:

xyz

cost:

1000

Add data

Successfully added insurance : I207

## Enter billing Details:

bill\_id:

1

total\_amt:

8000

bill\_date:

2022-01-05

GST:

600

bill\_status:

paid

B\_id:

B1008

Delay\_charges:

0

Add data

Successfully added billing : 1

## Query table that accepts sql commands :

Enter the Query:

Enter the query here:

```
SELECT * FROM car_category LEFT JOIN car ON car_category.Category = car.Car_category_name  
ORDER BY car.Car_loc;
```

Submit

	0	1	2	3	4	5	6	7	8	9
0	FULL SIZE SUV	8	6000	1800	<NA>	<NA>	<NA>	<NA>	<NA>	<NA>
1	Sedan	4	5000	900	<NA>	<NA>	<NA>	<NA>	<NA>	<NA>
2	MINI VAN	7	500	2000	<NA>	<NA>	<NA>	<NA>	<NA>	<NA>
3	MID SIZE SUV	5	500	1000	<NA>	<NA>	<NA>	<NA>	<NA>	<NA>
4	STANDARD SUV	5	3000	1200	<NA>	<NA>	<NA>	<NA>	<NA>	<NA>
5	ECONOMY	5	500	900	XYZ1234	crv	HONDA	ECONOMY	L101	Y
6	STANDARD	5	2200	400	SDF4567	FIESTA	FORD	STANDARD	L102	N
7	ECONOMY	5	500	900	HJK1234	CIVIC	HONDA	ECONOMY	L102	N
8	MID SIZE	5	1500	200	QTY7293	CRIIZE	CHEVROLET	MID SIZE	L102	Y