

**VISVESVARAYA TECHNOLOGICAL UNIVERSITY,
BELGAUM 590014**



Database Application Development Project Report on
“Mall Management Portal”

By

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Eleanor Prashamshini (1BM16CS005)

Under the Guidance of

Mrs. K. Panimozhi

Assistant Professor, Department of CSE
BMS College of Engineering

Database Application Development carried out at



Department of Computer Science and Engineering
BMS College of Engineering
(Autonomous college under VTU)
P.O. Box No.: 1908, Bull Temple Road, Bangalore-560 019
2017-2018

BMS COLLEGE OF ENGINEERING
DEPARTMENT OF COMPUTER SCIENCE AND
ENGINEERING



CERTIFICATE

This is to certify that the Database Application development titled “**Mall Management Portal**” has been carried out by **Aditi Awasthi (1BM16CS008)**, **Daksh Gandhi (1BM16CS029)** and **Eleanor Prashamshini (1BM16CS005)** during the academic year 2017-2018.

Signature of the guide
Mrs. K. Panimozhi
Assistant Professor
Department of Computer Science and Engineering
BMS College of Engineering, Bangalore

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DEPARTMENT OF COMPUTER SCIENCE AND
ENGINEERING



DECLARATION

We, Aditi Awasthi (1BM16CS008), Daksh Gandhi (1BM16CS029) and Eleanor Prashamshini (1BM16CS005) students of 4th Semester, B.E, Department of Computer Science and Engineering, BMS College of Engineering, Bangalore, hereby declare that this Database Application development work entitled "Mall Management Portal" has been carried out by us under the guidance of Mrs. **K. Panimozhi**, Assistant Professor, Department of CSE, BMS College of Engineering, Bangalore during the academic semester Jan-May 2018.

We also declare that to the best of our knowledge and belief, the development reported here is not from part of any other report by any other students.

Signature

Aditi Awasthi (1BM16CS008)

Daksh Gandhi (1BM16CS029)

Eleanor Prashamshini (1BM16CS005)

1. Short Description of the Project Work

This project revolves around the development of a database application that aims at automating, revolutionizing and simplifying the various aspects of management of a full-scale mall by providing controlled authority to the involved users to manage their respective processes in the system.

2. Requirements

Project Requirements are as follows:

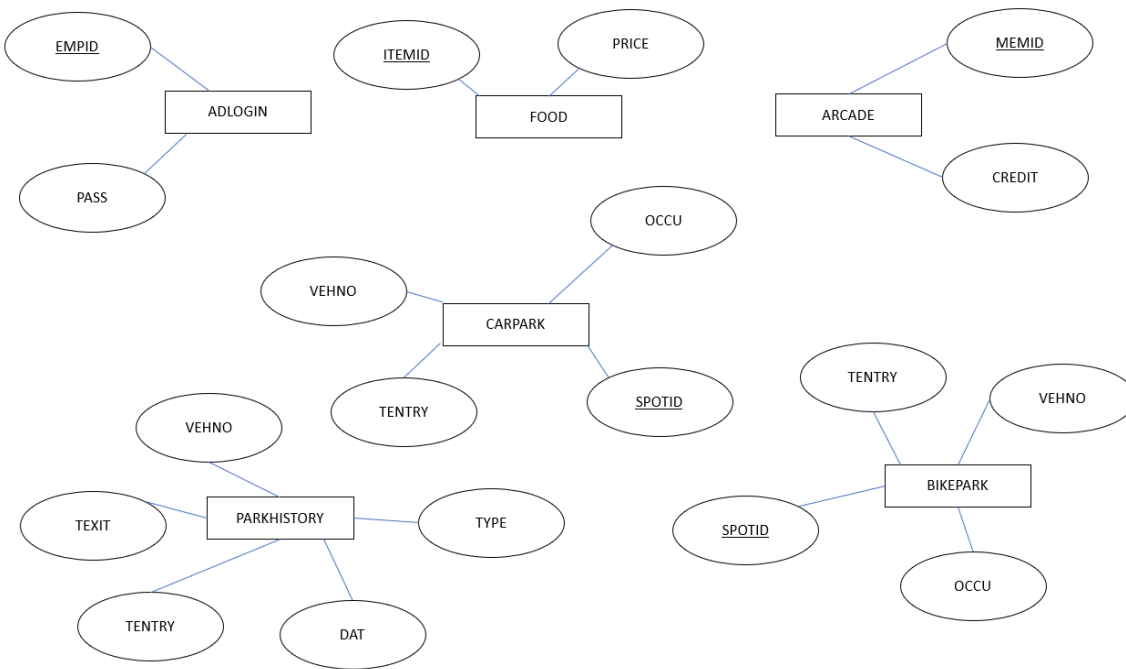
- a. Admin can view the complete list of employees and the net profit.
- b. Arcade employee can generate the membership ID and update the credits for members to play with.
- c. Food court employee can place order for food and generate the receipt for the customer.
- d. Movie theatre employee can update the movies list, change the movie showing in the theatre and book tickets for customers.
- e. Parking lot employee can make the entry for a vehicle, pick a parking spot and generate a bill on exit of the vehicle.
- f. Shopkeeper controls the employee list and updates the revenues earned.

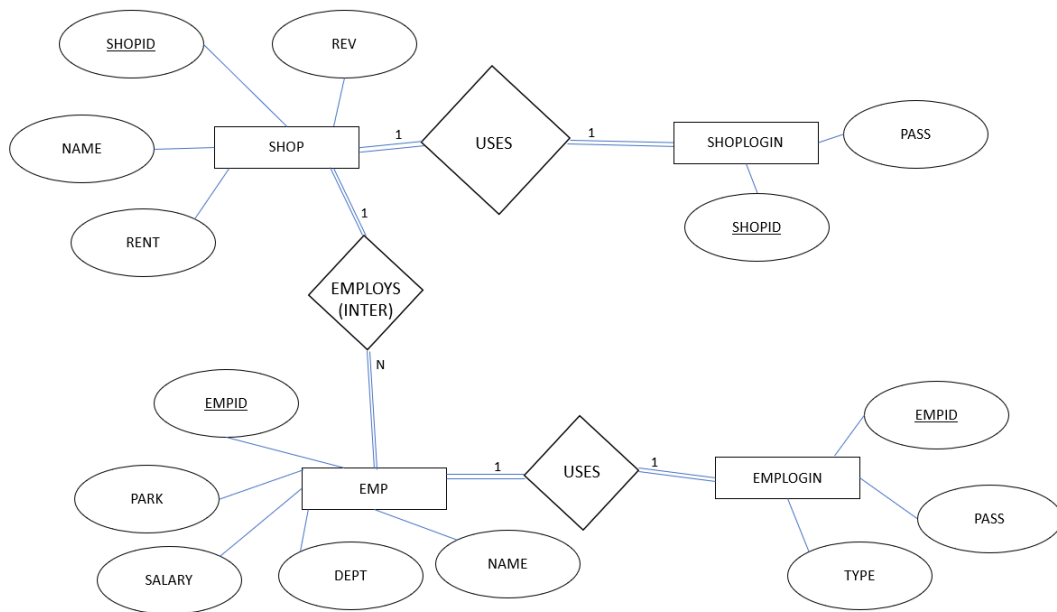
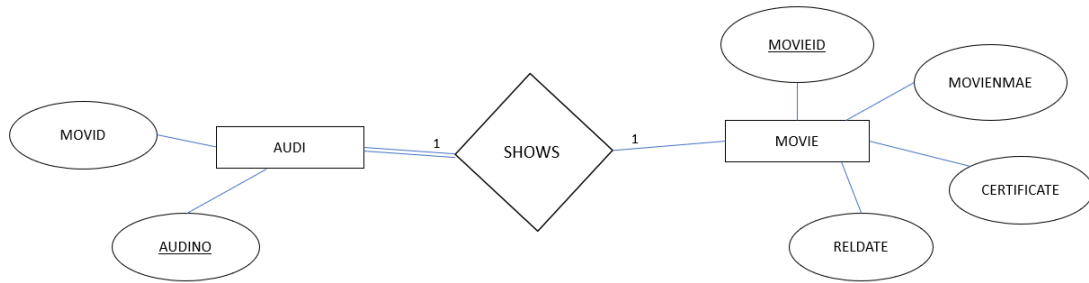
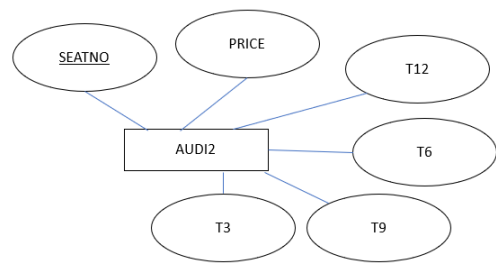
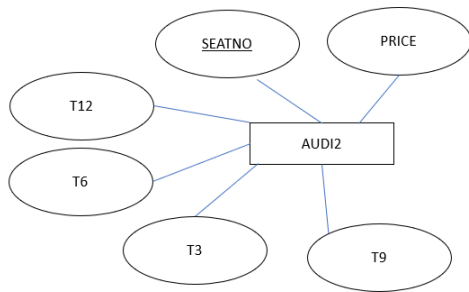
3. List of Entities, Attributes and Keys

- a. adlogin (EMPID(Key), PASS)
- b. arcade (MEMID(Key), CREDIT)
- c. food (ITEMID(Key), PRICE)
- d. audi (AUDINO(Key), MOVID)
- e. audi1 (SEATNO(Key), PRICE, T12, T3, T6, T9)
- f. audi2 (SEATNO(Key), PRICE, T12, T3, T6, T9)

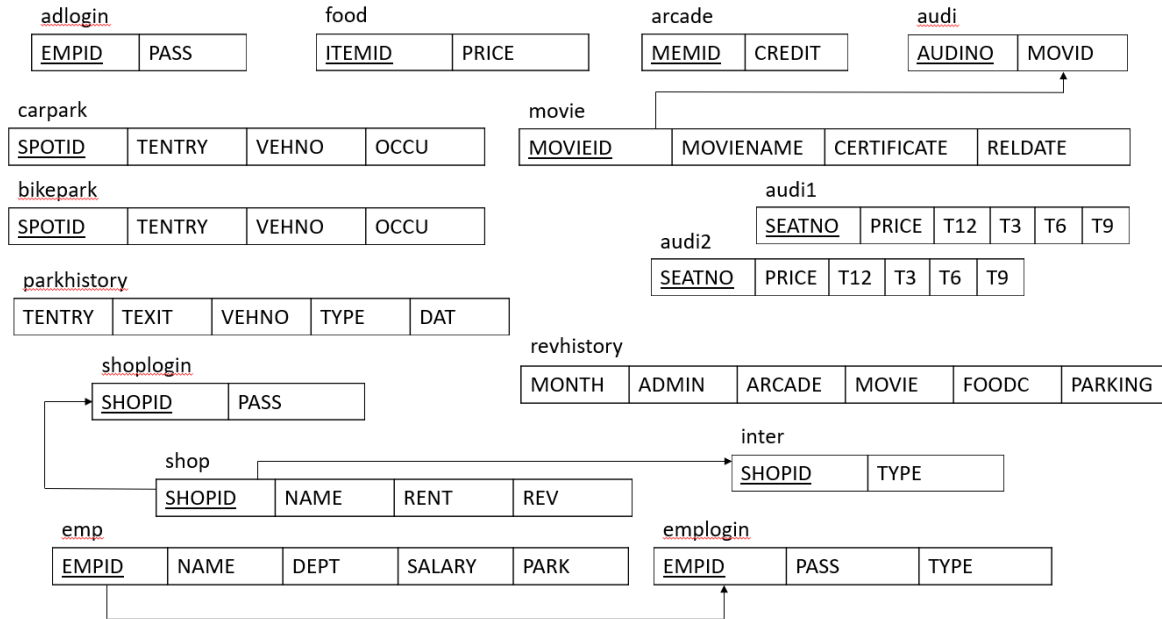
- g. movie (MOVIEID(Key), MOVIEName, CERTIFICATE, RELDATE)
- h. carpark (SPOTID(Key), TENTRY, VEHNO, OCCU)
- i. bikepark (SPOTID(Key), TENTRY, VEHNO, OCCU)
- j. parkhistory (TENTRY, TEXT, VEHNO, TYPE, DAT)
- k. shop (SHOPID(Key), NAME, RENT, REV)
- l. shoplogin (SHOPID(Key), PASS)
- m. inter (SHOPID(Key), TYPE)
- n. revhistory (MONTH, ADMIN, ARCADE, MOVIE, FOODC, PARKING)
- o. emp (EMPID(Key), NAME, DEPT, SALARY, PARK)
- p. emplogin (EMPID(Key), PASS, TYPE)

4. Entity-Relationship diagram





5.1 Schema Diagram



5.2 Constraints

5.2.1 Column level constraints

- Primary keys of the respective tables (as underlined above) cannot have NULL values

5.2.2 Table level constraints

- MOVID in audi references MOVIEID in movie
- EMPID in employin references EMPID in emp
- SHOPID in shoplogin references SHOPID in shop
- SHOPID in inter references SHOPID in shop.

6. Front-End Screen shots

In this section, front-end screen shots of all the forms are shown.

6.1 Login Window

The screenshot shows a web browser window titled "Mall Management Portal". The page has a dark blue header with the word "Login" in white. Below the header, there are two input fields: "Login ID:" with the value "admin" and "Password:" with masked characters "*****". Below these fields are three buttons: "Admin Login", "Employee Login", and "Shopkeeper Login". At the bottom right of the page, there is a copyright notice: "© 2018, ADE Developers".

Field	Value
Login ID	admin
Password	*****

Buttons: Admin Login, Employee Login, Shopkeeper Login

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6.2 Admin Window

The screenshot shows a web browser window titled "Mall Management Portal". The page has a dark blue header with the text "Employees List". Below the header, there is a table with 5 columns: SHOPID, NAME, RENT, and REV. The table contains 4 rows of data. To the right of the table is an orange "Logout" button. Below the table, there is a label "Profit this month:" followed by a text input field containing the value "28100". At the bottom right, there is a blue button labeled "Start New Month". At the bottom of the page, there is a copyright notice: "© 2018, ADE Developers".

	SHOPID	NAME	RENT	REV
▶	50	Arcade	10000	200000
	60	Food	4000	150000
	70	Movie	14000	5000000
	80	Parking	0	100

Logout

Profit this month: 28100

Start New Month

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6.3 Arcade Window

Mall Management Portal

Arcade Membership

Membership ID:

Current Amount:

Amount to be added:

Your Membership ID is : 9605

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Mall Management Portal

Arcade Membership

Membership ID:

Current Amount:

Amount to be added:

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6.4 Food Court Window

Mall Management Portal

Food Court Menu

Logout

Starter

☐ Spring Roll
☐ Chicken Tikka
☐ Paneer Tikka

Main Course

☐ Butter Chicken
☐ Shahi Paneer
☐ Chhole Bhature
☐ Kulcha

Dessert

☐ Ice Cream
☐ Choco Lava Cake

Beverage

☐ Tea
☐ Lime Soda
☐ Cold Drink

Place Order

© 2018, ADE Developers

Mall Management Portal

Food Court Menu

Logout

Starter

☐ Spring Roll
☐ Chicken Tikka
☒ Paneer Tikka

Main Course

☒ Butter Chicken
☐ Shahi Paneer
☐ Chhole Bhature
☒ Kulcha

Dessert

☒ Ice Cream
☒ Choco Lava Cake

Beverage

☒ Tea
☒ Lime Soda
☐ Cold Drink

Place Order

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Your bill is: 680₹
OK

6.5 Theatre and movie related Windows

Mall Management Portal

Movie Theatre

Logout

Update Movie List

Book Tickets

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Mall Management Protocol

Movie Updates

Back

Movie Name:

Movie ID:

Release Date:

Certificate:

Movie in Audi 1: Submit

Movie in Audi 2: Submit

Submit

Movie List

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List

	MOVIEID	MOVIE NAME	CERTIFICATE	RELEDATE
▶	22	dil	U/A	
	23	ddlj	U/A	21 Jan 2019
	123	Chak De India	U	21 Apr
	456	ABCD	U	21 Apr
	952	ploiuyt	U/A	31-09-92
	1900	Infinity War	U/A	27-04-2018
*				

Movie Theatre

[Back](#)

	AUDINO	MOVIE NAME
	Audi2	dil
▶	Audi1	Infinity War
*		

Audi 1

Audi 2

Choose time slot:

- ☐ 12 to 3
- ☐ 3 to 6
- ☐ 6 to 9
- ☒ 9 to 12

Seat Booking

[Back](#)[Logout](#)

	1	2	3	4
A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
C	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Total Charge: [Book](#)

SCREEN

Seat Booking

[Back](#)[Logout](#)

	1	2	3	4
A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
C	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Total Charge: [Book](#)

SCREEN

6.6 Parking Windows

Mall Management Portal

Parking

Logout

☐ Car

☐ Scooter

Entry

Exit

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Mall Management Portal

Parking Entry

Back

Vehicle Number: KA08AD5678

Logout

	1	2	3	4	5	6	7	8
A								
B								
C								
D								

Enter

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Mall Management Portal

— □ ×

Parking Entry

Back

Vehicle Number:

Logout

	1	2	3	4	5	6	7	8
A	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
B	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
C	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
D	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Enter

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Mall Management Portal

— □ ×

Parking Exit

Back

Logout

Vehicle

es

20Rs

OK

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6.7 Shopkeeper Windows

Mall Management Portal

List of Employees

	EMPID	NAME	DEPT	SALARY
▶	105	chaube	80	70000
	106	saket	80	15000
*				

<

Refresh

>

Add Employee

Remove Employee

Enter Monthly Revenue

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Mall Management Portal

Add Employee

Back

ID:

110

Name:

deepthi

Salary:

10000

Parking Spot:

D1

Password:

Submit

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Delete Employee

Employee ID:

Delete

Revenue

Back

Rent:

Total Employee Salary:

Gross Monthly Income:

7. Back-End table descriptions

7.1 Admin Login

Table Description

```
SQL> desc adlogin;
  Name                               Null?   Type
-----
EMPID                               NOT NULL VARCHAR2(20)
PASS                                VARCHAR2(20)
```

Table Data

```
SQL> select * from adlogin;

EMPID          PASS
-----
admin          admin
```

7.2 Arcade

Table Description

```
SQL> desc arcade;
  Name                               Null?   Type
-----
MEMID                               NOT NULL VARCHAR2(10)
CREDIT                                FLOAT(63)
```

Table Data

```
SQL> select * from arcade;

MEMID          CREDIT
-----
9987           600
5189           499
2574           712.45
1838           4863
3795           1000000
4138           400
3327           10092
1538           1200
3719           11014
9605           900
```

7.3 Food Court

Table Description

```
SQL> desc food;
```

Name	Null?	Type
ITEMID	NOT NULL	VARCHAR2(20)
PRICE		FLOAT(63)

Table Data

```
SQL> select * from food;
```

ITEMID	PRICE
1	80
2	200
3	150
4	250
5	200
6	120
7	80
8	60
9	60
10	20
11	60
ITEMID	PRICE
12	40

7.4 Movie Theatre

Table Description

```
SQL> desc audi;
```

Name	Null?	Type
AUDINO		VARCHAR2(10)
MOVID		VARCHAR2(10)

```
SQL> desc audi1;
```

Name	Null?	Type
SEATNO	NOT NULL	VARCHAR2(5)
PRICE		FLOAT(63)
T12		VARCHAR2(5)
T3		VARCHAR2(5)
T6		VARCHAR2(5)
T9		VARCHAR2(5)

```
SQL> desc audi2;
```

Name	Null?	Type
SEATNO	NOT NULL	VARCHAR2(5)
PRICE		FLOAT(63)
T12		VARCHAR2(5)
T3		VARCHAR2(5)
T6		VARCHAR2(5)
T9		VARCHAR2(5)

```
SQL> desc movie;
```

Name	Null?	Type
MOVIEID	NOT NULL	VARCHAR2(10)
MOVIEName		VARCHAR2(20)
CERTIFICATE		VARCHAR2(10)
RELDATE		VARCHAR2(20)

Table Data

```
SQL> select * from movie;
```

MOVIEID	MOVIEName	CERTIFICAT	RELDATE
23	ddlj	U/A	21 jan 2019
123	Chak De India	U	21 Apr
456	ABCD	U	21 Apr
1900	Infinity War	U/A	27-04-2018

```
SQL> select * from audi;
```

AUDINO	MOVID
Audi1	1900
Audi2	22

```
SQL> select * from audi1;
```

SEATN	PRICE	T12	T3	T6	T9
A1	550	Y	N	N	N
A2	550	Y	Y	N	N
A3	550	Y	N	N	N
A4	550	Y	Y	N	N
B1	550	Y	N	N	N
B2	550	Y	Y	N	Y
B3	550	Y	Y	N	Y
B4	550	Y	N	N	N
C1	550	Y	N	N	N
C2	550	Y	N	N	N
C3	550	Y	N	N	N

SEATN	PRICE	T12	T3	T6	T9
C4	550	Y	N	N	N
D1	550	N	N	N	N
D2	550	Y	N	N	N
D3	550	Y	N	N	N
D4	550	N	N	N	N

```
SQL> select * from audi2;
```

SEATN	PRICE	T12	T3	T6	T9
A1	550	N	N	N	N
A2	550	Y	N	N	N
A3	550	N	Y	N	N
A4	550	N	N	N	N
B1	550	N	N	N	N
B2	550	N	Y	N	N
B3	550	Y	Y	N	N
B4	550	N	N	N	N
C1	550	N	N	N	N
C2	550	N	N	N	N
C3	550	N	N	N	N

SEATN	PRICE	T12	T3	T6	T9
C4	550	N	N	N	N
D1	550	N	N	N	N
D2	550	N	N	N	N
D3	550	N	N	N	N
D4	550	N	N	N	N

7.5 Parking

Table Description

```
SQL> desc carpark;
```

Name	Null?	Type
SPOTID	NOT NULL	VARCHAR2(20)
TENTRY		TIMESTAMP(6)
VEHNO		VARCHAR2(20)
OCCU		VARCHAR2(5)

```
SQL> desc bikepark;
```

Name	Null?	Type
SPOTID	NOT NULL	VARCHAR2(20)
TENTRY		TIMESTAMP(6)
VEHNO		VARCHAR2(20)
OCCU		VARCHAR2(5)

```
SQL> desc parkhistory;
```

Name	Null?	Type
TENTRY		TIMESTAMP(6)
TEXIT		TIMESTAMP(6)
VEHNO		VARCHAR2(20)
TYPE		VARCHAR2(10)
DAT		VARCHAR2(20)

Table Data

```
SQL> select * from bikepark;
```

SPOTID

TENTRY

VEHNO

OCCU

A1

N

A2

N

SPOTID

TENTRY

VEHNO

OCCU

A3

N

A4

SPOTID

TENTRY

VEHNO

OCCU

N

A5

N

A6

```
SQL> select * from carpark;
```

```
SPOTID
```

```
TENTRY
```

```
VEHNO OCCU
```

```
A1
```

```
N
```

```
A2
```

```
N
```

```
SPOTID
```

```
TENTRY
```

```
VEHNO OCCU
```

```
A3
```

```
29-APR-18 09.09.49.000000 AM
```

```
5674
```

```
N
```

```
A4
```

```
SPOTID
```

```
TENTRY
```

```
VEHNO OCCU
```

```
N
```

```
A5
```

```
29-APR-18 09.10.15.000000 AM
```

```
7865
```

```
N
```

```
SQL> select * from parkhistory;
```

```
TENTRY
```

```
TEXIT
```

```
VEHNO TYPE DAT
```

```
29-APR-18 09.39.37.000000 AM
```

```
30-APR-18 10.49.58.000000 AM
```

```
2341
```

```
bikepark
```

```
30-Apr-18
```


7.6 Shops

Table Description

```
SQL> desc shop;
```

Name	Null?	Type
SHOPID	NOT NULL	VARCHAR2(10)
NAME		VARCHAR2(30)
RENT		FLOAT(63)
REV		FLOAT(63)

```
SQL> desc shoplogin;
```

Name	Null?	Type
SHOPID	NOT NULL	VARCHAR2(10)
PASS		VARCHAR2(20)

```
SQL> desc inter;
```

Name	Null?	Type
SHOPID		VARCHAR2(10)
TYPE		VARCHAR2(20)

```
SQL> desc revhistory;
```

Name	Null?	Type
MONTH		VARCHAR2(10)
ADMIN		NUMBER(38)
ARCADE		NUMBER(38)
MOVIE		NUMBER(38)
FOODC		NUMBER(38)
PARKING		NUMBER(38)

Table Data

```
SQL> select * from inter;
```

SHOPID	TYPE
50	Arcade
60	Food
70	Movie
80	Parking

```
SQL> select * from shop;
```

SHOPID	NAME	RENT	REV
50	Arcade	10000	
60	Food	4000	
70	Movie	14000	
80	Parking	13000	

```
SQL> select * from shoplogin;
```

SHOPID	PASS
80	Parking
70	Movie
60	Food
50	Arcade

```
SQL> select * from revhistory;
```

MONTH	ADMIN	ARCADE	MOVIE	FOODC	PARKING
Apr-18	28100	100	100	100	100

7.7 Employees

Table Description

```
SQL> desc emp;
```

Name	Null?	Type
EMPID	NOT NULL	VARCHAR2(10)
NAME		VARCHAR2(20)
DEPT		VARCHAR2(10)
SALARY		FLOAT(63)
PARK		VARCHAR2(5)

```
SQL> desc emplogin;
```

Name	Null?	Type
EMPID	NOT NULL	VARCHAR2(20)
PASS		VARCHAR2(20)
TYPE		VARCHAR2(20)

Table Data

```
SQL> select * from emp;
```

EMPID	NAME	DEPT	SALARY	PARK
101	daksh	50	40000	A1
102	aditi	50	30000	A2
103	eleanor	60	50000	A3
104	arpit	70	20000	A4
105	chaube	80	70000	A5
107	vid	60	35000	A7
110	deepthi	80	10000	D1

```
SQL> select * from emplogin;
```

EMPID	PASS	TYPE
101	101	Arcade
102	102	Arcade
103	103	Food
104	104	Movie
105	105	Parking
107	107	Food
110	110	Parking

Normalization:

All the tables satisfy upto third normal form because it does not contain any non-atomic columns, partial functional dependency and transitive functional dependency.

Security Feature:

This project has been secured against SQL injection.