VEHICLE PARKING MANAGEMENT SYSTEM

DRZ PARKING SYSTEM

PROJECT REPORT

course Code:CSE-2424

COURSE TITLE: DATABASE MANAGEMENT SYSTEM

submitted To

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DRZ PARKING SYSTEM

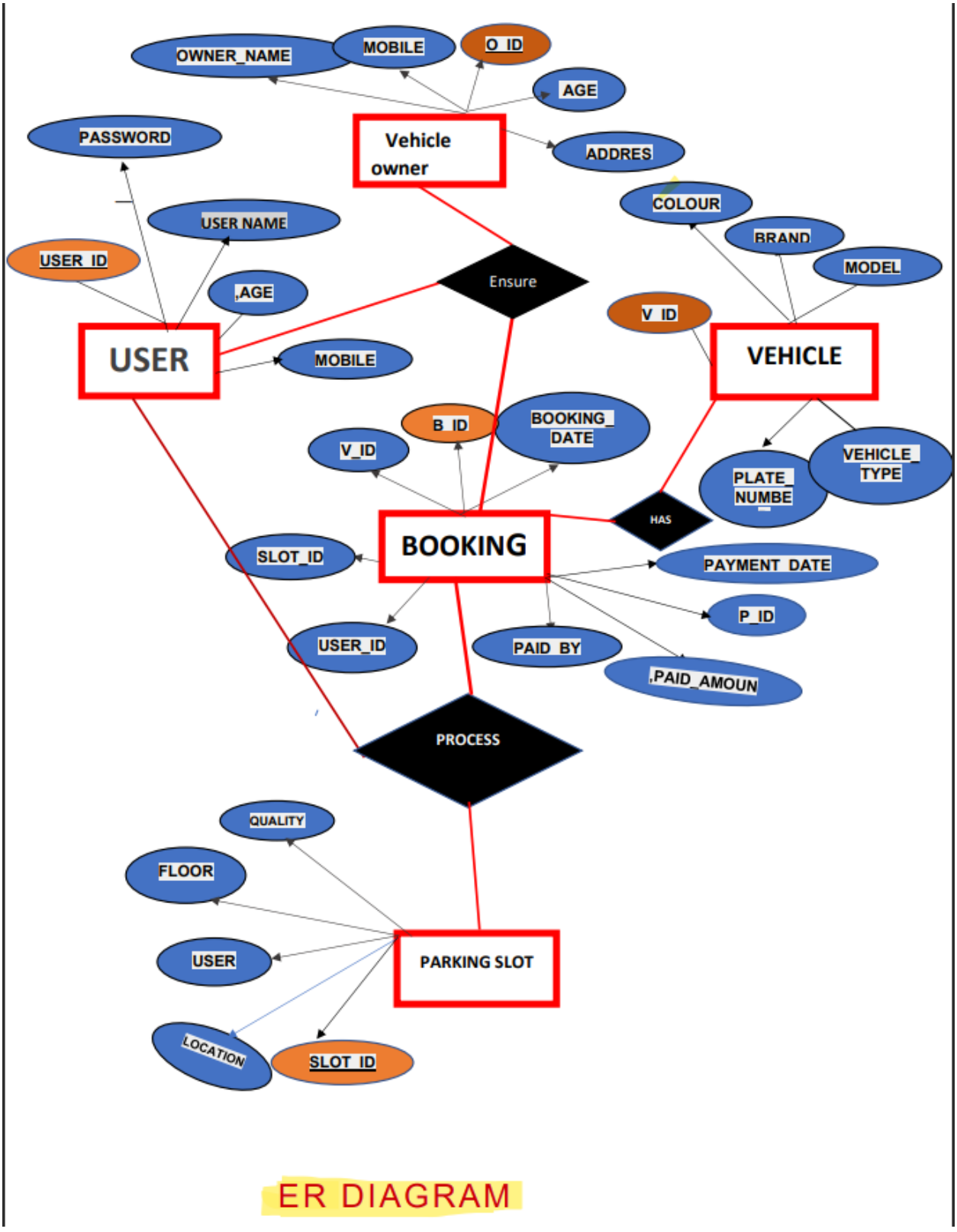
ABSTRACT

The main aim of this project is to reduce the traffic in the parking place. Normally we can see in the multiplexes, cinema halls, large industries, and function halls there is a problem. They have to go and search which line is empty and which line has a place to park the vehicle, for parking then they need workers for parking in correct position it is the money consumed process. so to avoid this problem Car Parking System project is implemented.

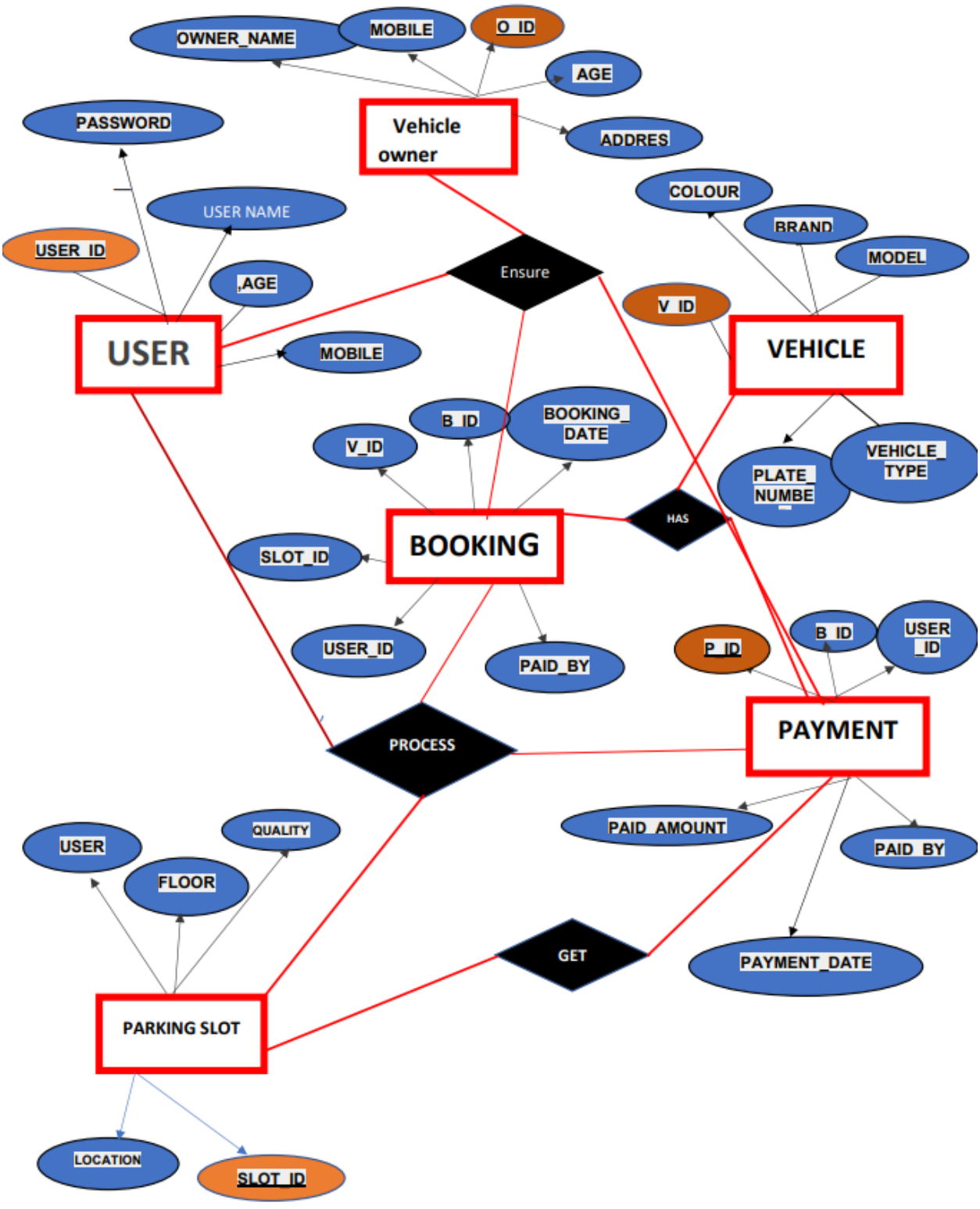
Managing car parks isn't an easy task for companies and organizations because there are lots of moving parts including traffic and the availability of spaces. It is a time-consuming task, requires human labor, and is inefficient. Using a parking management system can help reduce a business's administrative overhead on parking and reduce the impact of their parking space on their local community.

The system consists of a user-friendly interface that allows users to access parking lot information, reserve parking spaces, and track their parking history. It alsoprovides real-time availability updates, ensuring that users can find and secure parking spots easily.

For parking lot administrators, the system offers powerful tools for managing parking lots, monitoring occupancy levels, generating reports, and facilitating seamless transactions. It automates the process of vehicle entry and exit, utilizing technologies such as license plate recognition and ticketless access systems.


OWNER_NAME
MOBILE
O_ID
AGE
PASSWORD
Vehicle owner
ADDRES
COLOUR
BRAND
MODEL
USER NAME
USER_ID
,AGE
Ensure
V_ID
USER
MOBILE
VEHICLE
B_ID
BOOKING_ DATE
V_ID
VEHICLE_ TYPE
PLATE_ NUMBE
HAS
BOOKING
SLOT_ID
PAYMENT_DATE
P_ID
USER_ID
PAID_BY
,PAID_AMOUN
PROCESS
QUALITY
FLOOR
USER
PARKING SLOT
LOCATION
SLOT_ID

ER DIAGRAM



NORMALIZED_ERD

SCEMA

1.User – (USER_ID, USER_NAME, MOBILE, PASSWORD, AGE)

2.Vehicle - (V_ID, COLOUR, BRAND, PLATE_NUMBER, MODEL, VEHICLE_TYPE)

3.Vehicle Owner - (O_ID, OWNER_NAME, AGE, MOBILE, ADDRESS)

4.Parking Slot – (SLOT_ID, LOCATION, USER_ID, QUALITY, FLOOR)

5.Booking –(B_ID, V_ID, SLOT_ID, USER_ID, PAID_BY, BOOKING_DATE, DUE)

6.Payment –(P_ID, B_ID, USER_ID, PAID_BY, PAID_AMOUNT, PAYMENT_DATE)

DDL STATEMENTS & TABLES WITH DATA

USER SQL

```
CREATE TABLE  "USERS"
  ( "USER_ID" VARCHAR2(40) NOT NULL ENABLE,
        "USER_NAME" VARCHAR2(40) NOT NULL ENABLE,
        "MOBILE" VARCHAR2(40)  NOT NULL ENABLE,
        "PASSWORD" VARCHAR2(40) NOT NULL ENABLE,
        "AGE" NUMBER(10,0) NOT NULL ENABLE,
         CONSTRAINT "USERS_PK" PRIMARY KEY ("USER_ID") ENABLE
```

USER TABLE

EDIT	USER_ID	USER_NAME	MOBILE	PASSWORD	AGE
	U2	WASIM	0140078022	YY11	32
	U4	PRIYA	0185478004	YY0099	45
	U9	HASNAT	0138547864	HSS66	20
	U3	FAHIM	0175278960	V009	41
	U7	FARUK	0175278860	o1GTG	27
	U8	SADIA	01474758777	SADIYA11	23
	U1	JIM	0175478964	22AA	21
	U5	VK YASIR	0185470000	11PPOO	19
	U10	MIMI	014007777	2522DDD	50
	U6	JANNAT	0185470004	TRUCK55	15

VEHICLE SQL

```
CREATE TABLE  "VEHICLE"
   (  "V_ID" VARCHAR2(10) NOT NULL ENABLE,
      "COLOUR" VARCHAR2(40) NOT NULL ENABLE,
      "BRAND" VARCHAR2(40) NOT NULL ENABLE,
      "PLATE_NUMBER" VARCHAR2(40) NOT NULL ENABLE,
      "MODEL" VARCHAR2(40) NOT NULL ENABLE,
      "VEHICLE_TYPE" VARCHAR2(40),
       CONSTRAINT "VEHICLE_PK" PRIMARY KEY ("V_ID")
ENABLE,
       CONSTRAINT "VEHICLE_UK1" UNIQUE ("V_ID",
"PLATE_NUMBER") ENABLE
   )
/
```

VEHICLE TABLE

EDIT	V_ID	COLOUR	BRAND	PLATE_NUMBER	MODEL	VEHICLE_TYPE
	V003	BLACK	YAMAHA	1211111	R15	BIKE
	V007	MARRON	HONDA	44544	HCC4	TRUCK
	V009	NAVY	TUCSON	441441	CX667	SCOOTER
	V010	GREEN	TATA	115544	T676	TEXI
	V002	GREEN	TATA	145454	TATA.CC	CRANE
	V004	BLUE	MARVEL	45454	C444	TAXI
	V006	GREY	Mazda	453453	G56	POLICE VAN
	V008	WHITE	LEXUS	445445	LU334	CAR
	V001	RED	BMW	112111	BMW_IX	AMBULANCE
	V005	YELLOW	JAMPA	45462	J334	BICYCLE

VEHICLE_OWNER

CREATE TABLE "VEHICLE_OWNER"

("O_ID" VARCHAR2(40) NOT NULL ENABLE,

"OWNER_NAME" VARCHAR2(100) NOT NULL ENABLE,

"AGE" NUMBER(10,0) NOT NULL ENABLE,

"MOBILE" VARCHAR2(40) NOT NULL ENABLE,

"ADDRESS" VARCHAR2(40) NOT NULL ENABLE,

CONSTRAINT "VEHICLE_OWNER_PK" PRIMARY KEY ("O_ID") ENABLE

VEHICLE_OWNER TABLE

EDIT	O_ID	OWNER_NAME	AGE	MOBILE	ADDRESS
	O3	JIYA	48	0185478964	KHULNA
	O10	JINNAH	47	0175278111	ZAMALKHAN
	O2	PRIYA	45	0175478964	DHAKA
	O4	OMOR	29	0175278960	KOLKATA
	O7	NIDAL	24	01905478964	COXSBAZAR
	O8	SAMI	26	0175214960	NOHAKLI
	O1	MAHFUZ	25	0145478964	CHITTAGONG
	O5	EMU	49	0175478964	COMMILA
	O6	MILI	35	0140078964	B ANDARBAN
	O9	ESHA	30	0140078000	BOGURA

PARKING_SLOT SQL

```
CREATE TABLE  "PARKING_SLOT"
  ( "SLOT_ID" VARCHAR2(400) NOT NULL ENABLE,
        "LOCATION" VARCHAR2(400) NOT NULL ENABLE,
      USER_ID" VARCHAR2(40) NOT NULL ENABLE,
        "QUALITY" VARCHAR2(4000) NOT NULL ENABLE,
        "FLOOR" VARCHAR2(4000) NOT NULL ENABLE,
         CONSTRAINT "PARKING_SLOT_PK" PRIMARY KEY ("SLOT_ID") ENABLE,
         CONSTRAINT "PARKING_SLOT_UK1" UNIQUE ("SLOT_ID", "USER_ID") ENABLE,
         CONSTRAINT "PARKING_SLOT_FK2" FOREIGN KEY ("USER_ID")
          REFERENCES  "USERS" ("USER_ID") ENABLE
```

)

PARKING_SLOT TABLE

EDIT	SLOT_ID	LOCATION	USER_ID	QUALITY	FLOOR
	S3	3B	U3	PREMIUM	2ND
	S5	5E	U5	DISABLE AREA	3RD
	S7	7G	U7	PREMIUM	2ND
	S9	9Y	U9	PREMIUM	2ND
	S2	2B	U2	VIP	1ST
	S4	4B	U4	DISABLE AREA	3RD
	S8	8M	U8	VIP	1ST
	S10	10U	U10	GENARAL	GROUND
	S6	6F	U6	VIP	1ST
	S1	1A	U1	GENARAL	GROUND

BOOKING SQL

```
CREATE TABLE  "BOOKING"
  ( "B_ID" VARCHAR2(100) NOT NULL ENABLE,
        "V_ID" VARCHAR2(100) NOT NULL ENABLE,
"SLOT_ID" VARCHAR2(100) NOT NULL ENABLE,
        "USER_ID" VARCHAR2(100) NOT NULL ENABLE,
        "PAID_BY" VARCHAR2(50) NOT NULL ENABLE,
        "BOOKING_DATE" DATE,
        "DUE NUMBER(10,0),
CONSTRAINT "BOOKING_PK" PRIMARY KEY ("B_ID") ENABLE,
```

CONSTRAINT "BOOKING_UK1" UNIQUE ("B_ID", "V_ID", "USER_ID", "SLOT_ID") ENABLE,

CONSTRAINT "BOOKING_FK" FOREIGN KEY ("V_ID")

REFERENCES "VEHICLE" ("V_ID") ENABLE,

CONSTRAINT "BOOKING_FK2" FOREIGN KEY ("SLOT_ID")

REFERENCES "PARKING_SLOT" ("SLOT_ID") ENABLE,

CONSTRAINT "BOOKING_FK3" FOREIGN KEY ("USER_ID")

REFERENCES "USERS" ("USER_ID") ENABLE)

BOOKING TABLE

EDIT	B_ID	V_ID	SLOT_ID	USER_ID	PAID_BY	BOOKING_DATE	DUE
	B1	V001	S1	U1	MAHFUZ	01-MAY-23	500
	B2	V002	S2	U2	PRIYA	02-MAY-23	400
	B5	V005	S5	U5	EMU	05-MAY-23	1000
	B6	V006	S6	U6	TAHSIN	06-JUN-23	550
	B8	V008	S8	U8	MAHI	15-MAY-23	780
	B10	V010	S10	U10	HASNAT	20-MAY-23	400
	B3	V003	S3	U3	JIYA	03-MAY-23	600
	B4	V004	S4	U4	OMOR	04-MAY-23	800
	B7	V007	S7	U7	HASAN	09-MAY-23	700
	B9	V009	S9	U9	JAMAL	21-MAY-23	1500

PAYMENT SQL

CREATE TABLE "PAYMENT"

("P_ID" VARCHAR2(100) NOT NULL ENABLE,

"B_ID" VARCHAR2(100) NOT NULL ENABLE,

"USER_ID" VARCHAR2(100) NOT NULL ENABLE,

"PAID_BY" VARCHAR2(100) NOT NULL ENABLE,

"PAID_AMOUNT NUMBER(10,0) NOT NULL ENABLE,

"PAYMENT_DATE" DATE NOT NULL ENABLE,

CONSTRAINT "PAYMENT_PK" PRIMARY KEY ("P_ID") ENABLE,

CONSTRAINT "PAYMENT_UK1" UNIQUE ("P_ID", "B_ID", "USER_ID") ENABLE,

CONSTRAINT "PAYMENT_CK1" CHECK ("PAID_AMOUNT">0) ENABLE,

CONSTRAINT "PAYMENT_FK" FOREIGN KEY ("B_ID")

REFERENCES "BOOKING" ("B_ID") ENABLE,

CONSTRAINT "PAYMENT_FK2" FOREIGN KEY ("USER_ID")

REFERENCES "USERS" ("USER_ID") ENABLE

PAAYMENT TABLE

EDIT	P_ID	B_ID	USER_ID	PAID_BY	PAID_AMOUNT	PAYMENT_DATE
	P3	B3	U3	JIYA	600	03-MAY-23
	P10	B10	U10	HASNAT	400	20-MAY-23
	P1	B1	U1	MAHFUZ	500	01-MAY-23
	P5	B5	U5	EMU	1000	05-MAY-23
	P6	B6	U6	TAHSIN	550	06-JUN-23
	P9	B9	U9	JAMAL	1500	21-MAY-23
	P2	B2	U2	PRIYA	400	02-MAY-23
	P4	B4	U4	OMOR	800	04-MAY-23
	P7	B7	U7	HASAN	700	09-MAY-23
	P8	B8	U8	MAHI	780	15-MAY-23

)

A) SEARCHING DATA IN POSSIBLE WAYS (AT LEAST TEN WAYS) FROM INDIVIDUAL TABLE

1.FIND THE OWNER INFORMATION ABOUT "MAHFUZ"

SQL>>

```
SELECT*
FROM VEHICLE_OWNER
WHERE OWNER_NAME = 'MAHFUZ'
```

O_ID	OWNER_NAME	AGE	MOBILE	ADDRESS
O1	MAHFUZ	25	0145478964	CHITTAGONG

2.FIND THE SUMMATION PAYMENT OF "DUE_AMOUNT".

SQL>>

```
SELECT SUM(PAID_AMOUNT)
FROM PAYMENT
```

SUM(PAID_AMOUNT)
7230

3.FIND THE DETAILS ABOUT "TATA" BRAND.

SQL>>

```
SELECT *
FROM VEHICLE
WHERE BRAND='TATA'
```

V_ID	COLOUR	BRAND	PLATE_NUMBER	MODEL	VEHICLE_TYPE
V010	GREEN	TATA	115544	T676	TEXI
V002	GREEN	TATA	145454	TATA.CC	CRANE

4.FIND THE MINIMUM AGE FROM OWNER TABLE

SQL>>

```
SELECT MIN(AGE)
FROM VEHICLE_OWNER
```

MIN(AGE)
24

5.FIND THE DETAILS WHOSE ARE USED 'VIP' QULITY SLOT.

SQL>>

```
SELECT SLOT_ID, QUALITY,FLOOR
FROM PARKING_SLOT
WHERE QUALITY='VIP'
```

SLOT_ID	QUALITY	FLOOR
S2	VIP	1ST
S8	VIP	1ST
S6	VIP	1ST

6.SHOW THE HASAN PAID_AMOUNT IN DECENDING ORDER.

SQL>>

```
SELECT PAID_BY,PAID_AMOUNT
FROM PAYMENT
WHERE PAID_BY='HASAN'
ORDER BY PAID_AMOUNT DESC
```

PAID_BY	PAID_AMOUNT
HASAN	700

7.FIND DETAILS WHOSE NAME STARTS WIH "P".

SQL>>

```
SELECT *
FROM VEHICLE_OWNER
WHERE OWNER_NAME LIKE 'P%'
```

O_ID	OWNER_NAME	AGE	MOBILE	ADDRESS
O2	PRIYA	45	0175478964	DHAKA

8.SHOW THE 2ND FLOOR DETAILS

SQL>>

```
SELECT*
FROM PARKING_SLOT
WHERE FLOOR='2ND'
```

SLOT_ID	LOCATION	USER_ID	QUALITY	FLOOR
S3	3B	U3	PREMIUM	2ND
S7	7G	U7	PREMIUM	2ND
S9	9Y	U9	PREMIUM	2ND

9. FIND THE 'VEHICLE TYPE' COLOUR IN ASCENDING ORDER.

SQL>>

```
SELECT COLOUR,VEHICLE_TYPE
FROM VEHICLE
ORDER BY COLOUR ASC
```

COLOUR	VEHICLE_TYPE
BLACK	BIKE
BLUE	TAXI
GREEN	CRANE
GREEN	TEXI
GREY	POLICE VAN
MARRON	TRUCK
NAVY	SCOOTER
RED	AMBULANCE
WHITE	CAR
YELLOW	BICYCLE

10.FIND THE BOOKING DATE WHICH ARE BETWEEN 1-MAY-20. MAY-2023

SQL>>

```
SELECT PAID_BY,B_ID,BOOKING_DATE
FROM BOOKING

WHERE BOOKING_DATE BETWEEN '2-MAY-23' AND '5-MAY-23'
```

PAID_BY	B_ID	BOOKING_DATE
PRIYA	B2	02-MAY-23
EMU	B5	05-MAY-23
JIYA	B3	03-MAY-23
OMOR	B4	04-MAY-23

4 rows returned in 0.00 seconds CSV

B) SEARCHING DATA IN POSSIBLE WAYS (AT LEAST 05 WAYS) FROM MULTIPLE TABLES

1. FIND THE LOCATION WHOSE USED 'VIP' QUALITY

SQL>>

```
SELECT PAID_BY ,LOCATION, QUALITY
FROM BOOKING NATURAL JOIN PARKING_SLOT
WHERE QUALITY='VIP'
```

RESULT

PAID_BY	LOCATION	QUALITY
PRIYA	2B	VIP
TAHSIN	6F	VIP
MAHI	8M	VIP

2. FIND THE USER ID WHOSE DUE LESS THEN 500

SQL>>

```
SELECT USER_ID,DUE
 FROM USERS NATURAL JOIN BOOKING
 WHERE DUE<500
```

RESULT

USER_ID	PAID_BY	DUE
U2	PRIYA	400
U10	HASNAT	400

3. FIND THE USER INFORMATION WHO IS BOOKED VEHICLE IN 5 MAY.

SQL>>

```
SELECT USER_ID, PAID_BY AS CASTOMER_NAME
,BOOKING_DATE,DUE
      FROM USERS NATURAL JOIN BOOKING
      WHERE BOOKING_DATE='05-MAY-23'
```

RESULT

USER_ID	CASTOMER_NAME	BOOKING_DATE	DUE
U5	EMU	05-MAY-23	1000

4.

SHOWING USER INFORMATION WHOSE USED QULITY SPACE IN PARKING_SLOT.

SQL>>

```
SELECT  USER_NAME,QUALITY
FROM PARKING_SLOT, USERS
WHERE  PARKING_SLOT .USER_ID
=USERS.USER_ID
```

RESULT

USER_NAME	QUALITY
WASIM	VIP
PRIYA	DISABLE AREA
HASNAT	PREMIUM
FAHIM	PREMIUM
FARUK	PREMIUM
SADIA	VIP
JIM	GENARAL
VK YASIR	DISABLE AREA
MIMI	GENARAL
JANNAT	VIP

---

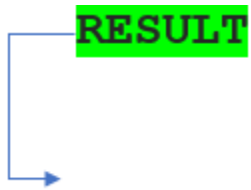
5 SHOWING ALL INFORMATION USERS AND PAYMENT TABLE USING LEFT OUTER JOIN .

SQL>>

SELECT *

FROM PAYMENT LEFT JOIN USERS

ON PAYMENT.USER_ID =USERS.USER_ID;



P_ID	B_ID	USER_ID	PAID_BY	PAID_AMOUNT	PAYMENT_DATE	USER_ID	USER_NAME	MOBILE	PASSWORD	AGE
P2	B2	U2	PRIYA	400	02-MAY-23	U2	WASIM	01400780 22	YY11	32
P4	B4	U4	OMOR	800	04-MAY-23	U4	PRIYA	01854780 04	YY0099	45
P9	B9	U9	JAMAL	1500	21-MAY-23	U9	HASNAT	01385478 64	HSS66	20
P3	B3	U3	JIYA	600	03-MAY-23	U3	FAHIM	01752789 60	V009	41
P7	B7	U7	HASAN	700	09-MAY-23	U7	FARUK	01752788 60	o1GTG	27
P8	B8	U8	MAHI	780	15-MAY-23	U8	SADIA	01474758 777	SADIYA11	23
P1	B1	U1	MAHFUZ	500	01-MAY-23	U1	JIM	01754789 64	22AA	21
P5	B5	U5	EMU	1000	05-MAY-23	U5	VK YASIR	01854700 00	11PPOO	19
P10	B10	U10	HASNAT	400	20-MAY-23	U10	MIMI	01400777 7	2522DDD	50
P6	B6	U6	TAHSIN	550	06-JUN-23	U6	JANNAT	01854700 04	TRUCK55	15

C) ALL TYPES OF SUB-QUERIES

1. FIND WHICH PAYMENT PAID AMOUNT SAME AS PAID AMOUNT =1000

SQL>>

```
SELECT P_ID,USER_ID,PAID_AMOUNT

FROM PAYMENT

WHERE PAID_AMOUNT = (SELECT PAID_AMOUNT FROM
PAYMENT WHERE PAID_AMOUNT=1000);
```

P_ID	USER_ID	PAID_AMOUNT
P5	U5	1000

2. FIND THE ADRESS OF “JIINAH”.

SQL>>

```
SELECT OWNER_NAME,ADDRESS
FROM VEHICLE_OWNER
WHERE ADDRESS =(SELECT ADDRESS
        FROM VEHICLE_OWNER
         WHERE OWNER_NAME = 'JINNAH')
```

RESULT

OWNER_NAME	ADDRESS
JINNAH	ZAMALKHAN

3.FIND THE USER INFORMATION WHOSE AGE IS NOT 20.

SQL>>

```
SELECT USER_NAME,USER_ID,AGE

FROM USERS

WHERE AGE NOT IN (SELECT AGE

FROM USERS WHERE AGE >20);
```

USER_NAME	USER_ID	AGE
JANNAT	U6	15
HASNAT	U9	20
VK YASIR	U5	19

4.SHOW THE INFORMATION WHOSER PAID AMOPUNT AS SAME AS ‘MAHI’

SQL>>

```
SELECT USER_ID ,PAID_BY,PAID_AMOUNT,PAYMENT_DATE

FROM PAYMENT

WHERE PAID_BY=(SELECT PAID_BY

FROM PAYMENT

WHERE PAID_BY='MAHI')
```

RESULT

USER_ID	PAID_BY	PAID_AMOUNT	PAYMENT_DATE
U8	MAHI	780	15-MAY-23

5. FIND THE BOOKING USERS DETAILS WHOSE DUE MORE THEN 500 .

SQL>>

```
SELECT PAID_BY AS NAME ,USER_ID AS ID ,DUE

FROM BOOKING

WHERE DUE  IN (SELECT DUE

FROM BOOKING WHERE DUE>500)
```

NAME	ID	DUE
EMU	U5	1000
TAHSIN	U6	550
MAHI	U8	780
JIYA	U3	600
OMOR	U4	800
HASAN	U7	700
JAMAL	U9	1500

D) PL/SQL (AT LEAST 5 TYPES)

1. SHOW THE DETAILS WHOSE USER_ID IS 'U5'

PL_SQL

```
DECLARE

A PAYMENT.USER_ID%type;

B PAYMENT.P_ID%type;
```

```
C PAYMENT.PAID_AMOUNT%type;
BEGIN
SELECT USER_ID,P_ID,PAID_AMOUNT INTO A,B,C
FROM PAYMENT
WHERE USER_ID='U5';
dbms_output.put_line('USER_Details:');
dbms_output.put_line('USER_ID : '||A);
dbms_output.put_line('P_ID : '||B);
dbms_output.put_line('Agent_PAID_AMOUNT : '||C);
END;
```

RESULT

```
USER_Details:
USER_ID : U5
P_ID : P5
Agent_PAID_AMOUNT : 1000

Statement processed.


0.03 seconds
```

2.SHOW THE IMFORMATION ABOUT “JANNAT

PL SQL

```
USERS.USER_ID%type;
```

```
B USERS.USER_NAME%type;
C USERS.MOBILE%type;
BEGIN
SELECT USER_ID,USER_NAME,MOBILE INTO A,B,C
FROM USERS
WHERE USER_NAME='JANNAT';
dbms_output.put_line('USER INFORMATION:');
dbms_output.put_line('USER_ID : '||A);
dbms_output.put_line('USER_NAME : '||B);
dbms_output.put_line('MOBILE : '||C);
END;
```

RESULT

```
USER INFORMATION:
USER_ID : U6
USER_NAME : JANNAT
MOBILE : 0185470004

Statement processed.


0.01 seconds
```

3.SHOW ALL PAYMENT INFORMATION.

PL SQL>>

```
DECLARE

A PAYMENT%rowtype;

cursor C IS

SELECT*

FROM PAYMENT;

BEGIN

OPEN C;

dbms_output.put_line('PAYMENT DETAILS: ');

dbms_output.put_line(' ');

LOOP

FETCH C INTO A;

EXIT WHEN C%notfound;

dbms_output.put_line('payment Id :'||A.P_ID);

dbms_output.put_line('Name :'||A.PAID_BY);

dbms_output.put_line('amount :'||A.PAID_AMOUNT);

dbms_output.put_line('date :'||A.PAYMENT_DATE);

dbms_output.put_line(' ');

END LOOP;

CLOSE C;

END;
```

RESULT

```
PAYMENT DETAILS:

payment Id :P3
Name :JIYA
amount :600
date :03-MAY-23

payment Id :P10
Name :HASNAT
amount :400
date :20-MAY-23

payment Id :P1
Name :MAHFUZ
amount :500
date :01-MAY-23

payment Id :P5
Name :EMU
amount :1000
date :05-MAY-23

payment Id :P6
Name :TAHSIN
amount :550
date :06-JUN-23

payment Id :P9
Name :JAMAL
amount :1500
date :21-MAY-23

payment Id :P2
Name :PRIYA
amount :400
date :02-MAY-23

payment Id :P4
Name :OMOR
amount :800
date :04-MAY-23

payment Id :P7
Name :HASAN
amount :700
date :09-MAY-23

payment Id :P8
Name :MAHI
amount :780
date :15-MAY-23


Statement processed.
```

4. FIND THE INFORMATION ABOUT PARKING_SLOT.

PL SQL>>

```
DECLARE

A PARKING_SLOT%rowtype;

cursor C IS

SELECT*

FROM PARKING_SLOT;

BEGIN

OPEN C;
```

```
dbms_output.put_line('PARKING_SLOT INFORMATION: ');

dbms_output.put_line(' ');

LOOP

FETCH C INTO A;

EXIT WHEN C%notfound;

dbms_output.put_line(' Id :'||A.SLOT_ID);

dbms_output.put_line('loc:'||A.LOCATION);

dbms_output.put_line(' quality :'||A.QUALITY);

dbms_output.put_line('floor :'||A.FLOOR);

dbms_output.put_line(' ');

END LOOP;

CLOSE C;

END;
```

RESULT

```
PARKING_SLOT INFORMATION:

 Id :S3
loc:3B
 quality :PREMIUM
floor :2ND

 Id :S5
loc:5E
 quality :DISABLE AREA
floor :3RD

 Id :S7
loc:7G
 quality :PREMIUM
floor :2ND

 Id :S9
loc:9Y
 quality :PREMIUM
floor :2ND

 Id :S2
loc:2B
 quality :VIP
floor :1ST

 Id :S4
loc:4B
 quality :DISABLE AREA
floor :3RD

 Id :S8
loc:8M
 quality :VIP
floor :1ST

 Id :S10
loc:10U
 quality :GENARAL
floor :GROUND

 Id :S6
loc:6F
 quality :VIP
floor :1ST

 Id :S1
loc:1A
 quality :GENARAL
floor :GROUND


Statement processed.
```

5. SHOW LOGIN INFORMATION WHOSE AGE IS 21.

PL SQL>>

```
DECLARE

A USERS.USER_ID%type;

B USERS.AGE%type;

C USERS.PASSWORD%type;

BEGIN

SELECT USER_ID,AGE,PASSWORD INTO A,B,C

FROM USERS

WHERE AGE ='21';

dbms_output.put_line('LOGIN INFO :');

dbms_output.put_line('USER_ID : '||A);

dbms_output.put_line('AGE : '||B);

dbms_output.put_line('PASSWORD : '||C);

END;
```

RESULT

```
LOGIN INFO :
USER_ID : U1
AGE : 21
PASSWORD : 22AA

Statement processed.
```

CONCLUSION

Implementing a Vehicle Parking Management System project in DBMS enhances data management, security, scalability, and performance, leading to efficient and effective parking operations management . By utilizing a DBMS, the system can efficiently organize and manage parking-related data, ensuring data integrity and consistency. The robust security features of a DBMS help protect sensitive information and prevent unauthorized access. Additionally, the scalability of the DBMS allows the parking management system to handle increasing data volumes and accommodate growing parking operations. The performance optimization techniques provided by the DBMS ensure fast and efficient data retrieval, even during peak times. Overall, these benefits contribute to the efficient and effective management of parking operations, enhancing the overall user experience and operational efficiency of the system.

Thank you!!

|^|ASSALAMUALAIKUM|^|