



CSE2007 : Database Management Systems

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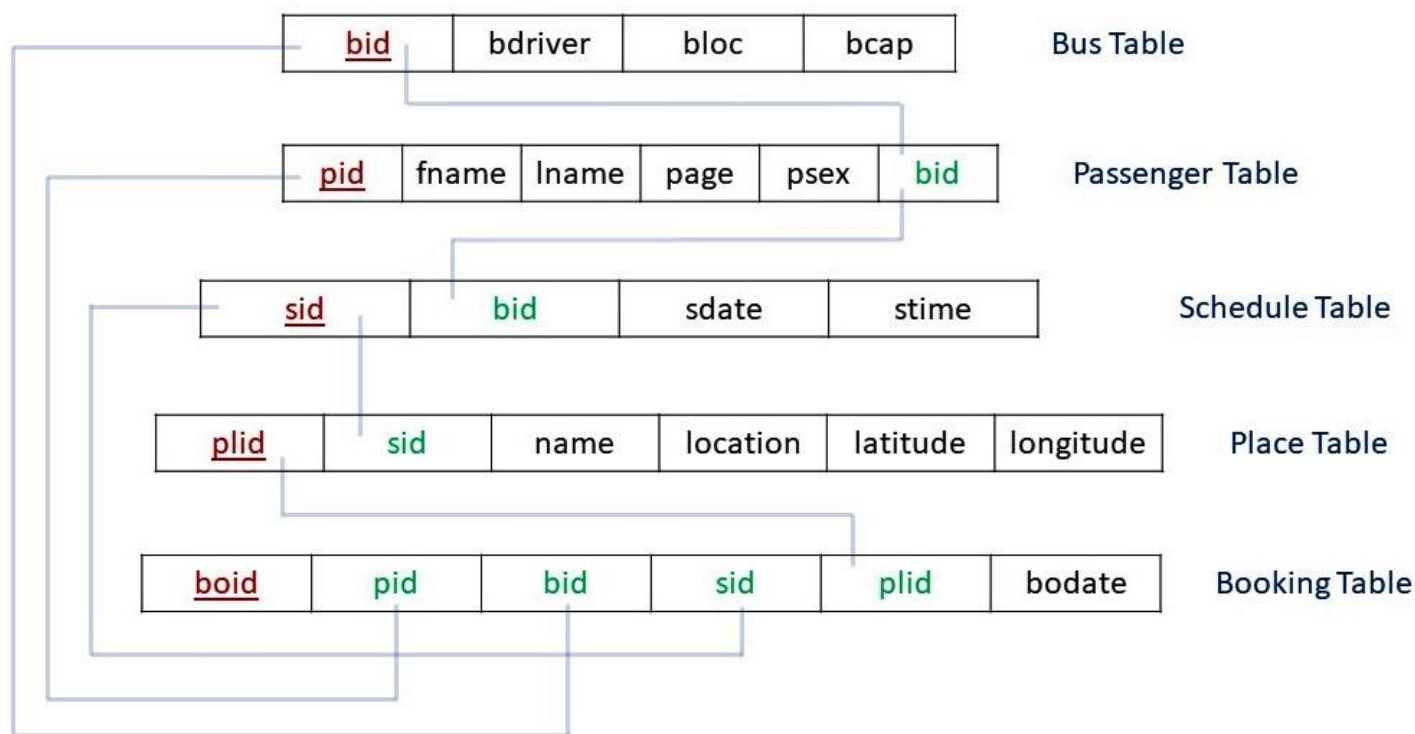
Lab Slot : L45 + L46

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Submitted to : Ms. Dhanavanthini madam

Practice Lab Exercises on a Database

ER to Relational Mapping



Consider the above given relations : (Travel Database)

Bus Table				Place Table					
<u>bid</u>	bdriver	bloc	bcap	<u>plid</u>	<u>sid</u>	name	location	latitude	Longitude
1	Balraju	Tirupati	92	11	500	Tirumala	Tirupati	27.2204801	-80.2544100
2	Veerayya	Hyderabad	60	12	501	Koti	Hyderabad	108.554011	33.208799
3	Kamalesh	Hyderabad	75	13	502	Koti	Hyderabad	108.554011	33.208799
4	Ratna	Warangal	84	14	503	Kazipet	Warangal	-10.279154	-40.404871
5	Bheemudu	Vijayawada	78	15	504	Kandrika	Vijayawada	133.570188	133.570188
6	Suri	Guntur	97	16	505	Brodipet	Guntur	-20.257808	27.125600

Schedule Table				Passenger Table						Booking Table					
<u>sid</u>	<u>bid</u>	sdate	Stime	<u>pid</u>	fname	lname	page	psex	<u>bid</u>	<u>boid</u>	<u>pid</u>	<u>bid</u>	<u>sid</u>	<u>plid</u>	Bodate
500	1	27-05-2021	13:05	101	Gudi	Prasad	21	M	1	50	101	1	500	11	10-05-2021
501	2	24-05-2021	15:15	102	Sesha	Pranav	19	M	2	51	102	2	501	12	07-05-2021
502	3	31-05-2021	09:42	103	Bandi	Lakshmi	33	F	3	52	103	3	502	13	28-05-2021
503	4	04-06-2021	01:10	104	Porika	Rahul	28	M	4	53	104	4	503	14	01-06-2021
504	5	04-06-2021	22:30	105	Bandi	Karuna	8	F	5	54	105	5	504	15	25-05-2021
505	6	10-06-2021	22:30	106	Burra	Sujatha	50	F	6	55	106	6	505	16	25-05-2021

Answer the following Queries using above tables :

1. Create table Bus with attributes bid, bdriver, bloc, bcap.

```
> CREATE TABLE Bus(bid number(1) NOT NULL, bdriver varchar2(8), bloc varchar2(10), bcap number(2),
PRIMARY KEY(bid));

SQL> CREATE TABLE Bus(bid number(1) NOT NULL, bdriver varchar2(8), bloc varchar2(10), bcap number(2), PRIMARY KEY(bid));
Table created.
```

2. Create table Passenger with attributes pid, fname, lname, page, psex, bid.

> CREATE TABLE Passenger(pid number(3) NOT NULL, fname varchar2(6), lname varchar2(7), page number(2), psex varchar2(1), bid number(1), PRIMARY KEY(pid), FOREIGN KEY(bid) REFERENCES Bus);

```
SQL> CREATE TABLE Passenger (  
  2  pid number(3) NOT NULL, fname varchar2(6), lname varchar2(7),  
  3  page number(2), psex varchar2(1), bid number(1),  
  4  PRIMARY KEY(pid), FOREIGN KEY(bid) REFERENCES Bus  
  5  );  
  
Table created.
```

3. Insert the data given above in all the tables given above.

> INSERT INTO Bus VALUES(&bid, '&bdriver', '&bloc', &bcap);

> INSERT INTO Passenger VALUES(&pid, '&fname', '&lname', &page, '&psex', &bid);

> INSERT INTO Schedule VALUES(&sid, &bid, '&sdate', '&stime');

> INSERT INTO Place VALUES(&plid, &sid, '&name', '&location', &latitude, &longitude);

> INSERT INTO Booking VALUES(&boid, &pid, &bid, &sid, &plid, '&bodate');

```
SQL> INSERT INTO Bus VALUES(&bid, '&bdriver', '&bloc', &bcap);  
Enter value for bid: 1  
Enter value for bdriver: Balraju  
Enter value for bloc: Tirupati  
Enter value for bcap: 92  
old 1: INSERT INTO Bus VALUES(&bid, '&bdriver', '&bloc', &bcap)  
new 1: INSERT INTO Bus VALUES(1, 'Balraju', 'Tirupati', 92)  
  
1 row created.
```

```
SQL> INSERT INTO Passenger VALUES(&pid, '&fname', '&lname', &page, '&psex', &bid);  
Enter value for pid: 101  
Enter value for fname: Gudi  
Enter value for lname: Prasad  
Enter value for page: 21  
Enter value for psex: M  
Enter value for bid: 1  
old 1: INSERT INTO Passenger VALUES(&pid, '&fname', '&lname', &page, '&psex', &bid)  
new 1: INSERT INTO Passenger VALUES(101, 'Gudi', 'Prasad', 21, 'M', 1)  
  
1 row created.
```

```
SQL> INSERT INTO Schedule VALUES(&sid, &bid, '&sdate', '&stime');  
Enter value for sid: 500  
Enter value for bid: 1  
Enter value for sdate: 27-MAY-2021  
Enter value for stime: 13:05  
old 1: INSERT INTO Schedule VALUES(&sid, &bid, '&sdate', '&stime')  
new 1: INSERT INTO Schedule VALUES(500, 1, '27-MAY-2021', '13:05')  
  
1 row created.
```

```
SQL> INSERT INTO Place VALUES(&plid, &sid, '&name', '&location', &latitude, &longitude);  
Enter value for plid: 11  
Enter value for sid: 500  
Enter value for name: Tirumala  
Enter value for location: Tirupati  
Enter value for latitude: 27.2204801  
Enter value for longitude: -80.2544100  
old 1: INSERT INTO Place VALUES(&plid, &sid, '&name', '&location', &latitude, &longitude)  
new 1: INSERT INTO Place VALUES(11, 500, 'Tirumala', 'Tirupati', 27.2204801, -80.2544100)  
  
1 row created.
```

```
SQL> INSERT INTO Booking VALUES(&boid, &pid, &bid, &sid, &plid, '&bodate');  
Enter value for boid: 50  
Enter value for pid: 101  
Enter value for bid: 1  
Enter value for sid: 500  
Enter value for plid: 11  
Enter value for bodate: 10-MAY-2021  
old 1: INSERT INTO Booking VALUES(&boid, &pid, &bid, &sid, &plid, '&bodate')  
new 1: INSERT INTO Booking VALUES(50, 101, 1, 500, 11, '10-MAY-2021')  
  
1 row created.
```

4. Display all the passenger’s information.

> SELECT * FROM Passenger;

```
SQL> SELECT * FROM Passenger;  
  
  PID FNAME  LNAME      PAGE P      BID  
-----  
  101 Gudi    Prasad      21 M      1  
  102 Sesha   Pranav      19 M      2  
  103 Bandi   Lakshmi     33 F      3  
  104 Porika  Rahul       28 M      4  
  105 Bandi   Karuna       8 F      5  
  106 Burra   Sujatha     50 F      6  
  
6 rows selected.
```

5. Display passenger lname along with his pid, bus bid.

> SELECT pid, bid, lname FROM Passenger;

```
SQL> SELECT pid, bid, lname FROM Passenger;
```

PID	BID	LNAME
101	1	Prasad
102	2	Pranav
103	3	Lakshmi
104	4	Rahul
105	5	Karuna
106	6	Sujatha

6 rows selected.

6. Display the passenger names whose age is above 18.

> SELECT fname, lname FROM Passenger WHERE page>18;

```
SQL> SELECT fname, lname FROM Passenger WHERE page>18;
```

FNAME	LNAME
Gudi	Prasad
Sesha	Pranav
Bandi	Lakshmi
Porika	Rahul
Burra	Sujatha

7. Display gender of passengers without duplication.

> SELECT DISTINCT psex AS Gender FROM Passenger;

```
SQL> SELECT DISTINCT psex FROM Passenger;
```

P
-
M
F

8. Display bid, sdate of the bus scheduled to Vijayawada.

> SELECT DISTINCT Bus.bid, Schedule.sdate FROM Bus JOIN Schedule ON Bus.bid=Schedule.bid WHERE Bus.bloc='Vijayawada';

```
SQL> SELECT DISTINCT Bus.bid, Schedule.sdate FROM Bus
2 JOIN Schedule ON Bus.bid=Schedule.bid WHERE Bus.bloc='Vijayawada';
```

BID	SDATE
5	04-JUN-21

9. Modify bid of passenger having fname as ‘Burra’ to 3.

> UPDATE Passenger SET bid=3 WHERE fname='Burra';
> SELECT * FROM Passenger;

```
SQL> UPDATE Passenger SET bid=3 WHERE fname='Burra';

1 row updated.

SQL> SELECT * FROM Passenger;
```

PID	FNAME	LNAME	PAGE	P	BID
101	Gudi	Prasad	21	M	1
102	Sesha	Pranav	19	M	2
103	Bandi	Lakshmi	33	F	3
104	Porika	Rahul	28	M	4
105	Bandi	Karuna	8	F	5
106	Burra	Sujatha	50	F	3

```
6 rows selected.
```

10. Alter table Passenger add column ‘mobile’ of NUMBER data type and insert values into this column only.

```
> ALTER TABLE Passenger ADD mobile number(10);

> UPDATE Passenger SET mobile=9391589364 WHERE pid=101;

> UPDATE Passenger SET mobile=9715089301 WHERE pid=102;

> UPDATE Passenger SET mobile=8091539340 WHERE pid=103;

> UPDATE Passenger SET mobile=6300148711 WHERE pid=104;

> UPDATE Passenger SET mobile=7386661270 WHERE pid=105;

> UPDATE Passenger SET mobile=8844122571 WHERE pid=106;

> SELECT * FROM Passenger;
```

```
SQL> ALTER TABLE Passenger ADD mobile number(10);

Table altered.

SQL> UPDATE Passenger SET mobile=9391589364 WHERE pid=101;

1 row updated.

SQL> UPDATE Passenger SET mobile=9715089301 WHERE pid=102;

1 row updated.

SQL> UPDATE Passenger SET mobile=8091539340 WHERE pid=103;

1 row updated.

SQL> UPDATE Passenger SET mobile=6300148711 WHERE pid=104;

1 row updated.

SQL> UPDATE Passenger SET mobile=7386661270 WHERE pid=105;

1 row updated.

SQL> UPDATE Passenger SET mobile=8844122571 WHERE pid=106;

1 row updated.

SQL> SELECT * FROM Passenger;
```

PID	FNAME	LNAME	PAGE	P	BID	MOBILE
101	Gudi	Prasad	21	M	1	9391589364
102	Sesha	Pranav	19	M	2	9715089301
103	Bandi	Lakshmi	33	F	3	8091539340
104	Porika	Rahul	28	M	4	6300148711
105	Bandi	Karuna	8	F	5	7386661270
106	Burra	Sujatha	50	F	3	8844122571

```
6 rows selected.
```

11. Alter table Passenger to modify the size of column ‘mobile’.

> ALTER TABLE Passenger MODIFY mobile number(11);

```
SQL> ALTER TABLE Passenger MODIFY mobile number(11);

Table altered.
```

12. Modify the field name ‘mobile’ of Passenger table to ‘phone’.

> ALTER TABLE Passenger RENAME COLUMN mobile TO phone;

> DESC Passenger;

```
SQL> ALTER TABLE Passenger RENAME COLUMN mobile TO phone;

Table altered.

SQL> DESC Passenger;
Name                                     Null?   Type
-----
PID                                     NOT NULL NUMBER(3)
FNAME                                  VARCHAR2(6)
LNAME                                  VARCHAR2(7)
PAGE                                   NUMBER(2)
PSEX                                   VARCHAR2(1)
BID                                    NUMBER(1)
PHONE                                  NUMBER(11)
```

13. Rename table ‘Bus’ as ‘Vehicle’.

> RENAME Bus TO Vehicle;

> DESC Vehicle;

```
SQL> RENAME Bus TO Vehicle;

Table renamed.

SQL> DESC Vehicle;
Name                                     Null?   Type
-----
BID                                     NOT NULL NUMBER(1)
BDRIVER                                VARCHAR2(8)
BLOC                                   VARCHAR2(10)
BCAP                                   NUMBER(2)
```

14. Alter table Passenger remove column ‘phone’.

> ALTER TABLE Passenger DROP COLUMN phone;

> DESC Passenger;

```
SQL> ALTER TABLE Passenger DROP COLUMN phone;

Table altered.

SQL> DESC Passenger;
Name                                     Null?   Type
-----
PID                                     NOT NULL NUMBER(3)
FNAME                                  VARCHAR2(6)
LNAME                                  VARCHAR2(7)
PAGE                                   NUMBER(2)
PSEX                                   VARCHAR2(1)
BID                                    NUMBER(1)
```

15. Create a table ‘CopyOfVehicle’ as a copy of the table Vehicle.

> CREATE TABLE CopyOfVehicle AS SELECT * FROM Vehicle;

> SELECT * FROM Vehicle;

> SELECT * FROM CopyOfVehicle;

```
SQL> CREATE TABLE CopyOfVehicle AS SELECT * FROM Vehicle;
Table created.
SQL> SELECT * FROM Vehicle;

  BID BDRIVER  BLOC  BCAP
-----
   1 Balraju  Tirupati   92
   2 Veerayya Hyderabad  60
   3 Kamalesh Hyderabad  75
   4 Ratna    Warangal   84
   5 Bheemudu Vijayawada  78
   6 Suri     Guntur     97

6 rows selected.
SQL> SELECT * FROM CopyOfVehicle;

  BID BDRIVER  BLOC  BCAP
-----
   1 Balraju  Tirupati   92
   2 Veerayya Hyderabad  60
   3 Kamalesh Hyderabad  75
   4 Ratna    Warangal   84
   5 Bheemudu Vijayawada  78
   6 Suri     Guntur     97

6 rows selected.
```

16. Delete all the rows from ‘CopyOfVehicle’ table.

> DELETE FROM CopyOfVehicle;

> SELECT * FROM CopyOfVehicle;

```
SQL> DELETE FROM CopyOfVehicle;
6 rows deleted.
SQL> SELECT * FROM CopyOfVehicle;
no rows selected
```

17. Remove ‘CopyOfVehicle’ table.

> DROP TABLE CopyOfVehicle;

```
SQL> DROP TABLE CopyOfVehicle;
Table dropped.
```

18. Display all the passengers in descending order based on their age.

> SELECT * FROM Passenger ORDER BY page DESC;


```
SQL> SELECT * FROM Passenger ORDER BY page DESC;
```

PID	FNAME	LNAME	PAGE	P	BID
106	Burra	Sujatha	50	F	3
103	Bandi	Lakshmi	33	F	3
104	Porika	Rahul	28	M	4
101	Gudi	Prasad	21	M	1
102	Sesha	Pranav	19	M	2
105	Bandi	Karuna	8	F	5

6 rows selected.

19. How many male, female and total passengers are travelling.

> SELECT COUNT(case when psex='M' then 1 end) as male, COUNT(case when psex='F' then 1 end) as female, COUNT(*) as total FROM Passenger;

```
SQL> SELECT
2   COUNT(case when psex='M' then 1 end) as male,
3   COUNT(case when psex='F' then 1 end) as female,
4   COUNT(*) as total
5 FROM Passenger;
```

MALE	FEMALE	TOTAL
3	3	6

20. Find the passenger lname whose bus booking date was 25-05-2021.

> SELECT Passenger.lname FROM Passenger JOIN Booking ON Passenger.pid=Booking.pid WHERE Booking.bodate='25-May-2021';

```
SQL> SELECT Passenger.lname FROM Passenger JOIN Booking
2   ON Passenger.pid=Booking.pid WHERE Booking.bodate='25-May-2021';
```

LNAME

Karuna
Sujatha

21. Find the passenger fname whose bus capacity is between or equal 80 and 100.

> SELECT Passenger.fname FROM Passenger JOIN Bus ON Passenger.bid=Bus.bid WHERE Bus.bcap>=80 AND Bus.bcap<=100;

```
SQL> SELECT Passenger.fname FROM Passenger JOIN Bus ON
2   Passenger.bid=Bus.bid WHERE Bus.bcap>=80 AND Bus.bcap<=100;
```

FNAME

Gudi
Porika

22. Find the passenger fname and gender who have bus driver as ‘Balraju’.

> SELECT Passenger.fname, Passenger.psex FROM Passenger JOIN Bus ON Passenger.bid=Bus.bid WHERE Bus.bdriver='Balraju';

```
SQL> SELECT Passenger.fname, Passenger.psex FROM Passenger JOIN
  2  Bus ON Passenger.bid=Bus.bid WHERE Bus.bdriver='Balraju';

FNAME  P
----- -
Gudi   M
```

23. Display sdate of all busses in the format ‘DDthMonthYYYY’.

> SELECT TO_CHAR(sdate, 'DDth Month YYYY') AS DDth_Month_YYYY FROM Schedule;

```
SQL> SELECT TO_CHAR(sdate, 'DDth Month YYYY') AS DDth_Month_YYYY FROM Schedule;

DDTH_MONTH_YYYY
-----
27TH May      2021
24TH May      2021
31ST May      2021
04TH June     2021
04TH June     2021
10TH June     2021

6 rows selected.
```

24. Display bus driver names whose bus is scheduled on or before 4th June 2021.

> SELECT Bus.bdriver FROM Bus JOIN Schedule ON Bus.bid=Schedule.bid WHERE Schedule.sdate<='04-JUNE-2021';

```
SQL> SELECT Bus.bdriver FROM Bus JOIN Schedule ON
  2  Bus.bid=Schedule.bid WHERE Schedule.sdate<='04-JUNE-2021';

BDRIVER
-----
Balraju
Veerayya
Kamalesh
Ratna
Bheemudu
```

25. Display passenger fname, lname whose destination is to ‘Koti’.

> SELECT Passenger.fname, Passenger.lname FROM Passenger JOIN Schedule ON Passenger.bid=Schedule.bid JOIN Place ON Schedule.sid=Place.sid WHERE Place.name='Koti';

```
SQL> SELECT Passenger.fname, Passenger.lname FROM Passenger
  2  JOIN Schedule ON Passenger.bid=Schedule.bid JOIN Place
  3  ON Schedule.sid=Place.sid WHERE Place.name='Koti';

FNAME  LNAME
-----
Sesha  Pranav
Bandi  Lakshmi
Burra  Sujatha
```

26. Display the bus driver name that starts with ‘B’.

> SELECT bdriver FROM Bus WHERE bdriver LIKE 'B%';

```
SQL> SELECT bdriver FROM Bus WHERE bdriver LIKE 'B%';

BDRIVER
-----
Balraju
Bheemudu
```

27. Display the bus driver name that ends with ‘a’.

> SELECT bdriver FROM Bus WHERE bdriver LIKE '%a';

```
SQL> SELECT bdriver FROM Bus WHERE bdriver LIKE '%a';

BDRIVER
-----
Veerayya
Ratna
```

28. Display all the names of passengers whose bus driver with any of the following bid 2, 3.

> SELECT Passenger.pid, Passenger.fname, Passenger.lname FROM Passenger JOIN Bus ON Passenger.bid=Bus.bid WHERE Bus.bid=2 OR Bus.bid=3;

```
SQL> SELECT Passenger.pid, Passenger.fname, Passenger.lname FROM Passenger
2 JOIN Bus ON Passenger.bid=Bus.bid WHERE Bus.bid=2 OR Bus.bid=3;

      PID FNAME  LNAME
-----
      102 Sesha  Pranav
      103 Bandi  Lakshmi
      106 Burra  Sujatha
```

29. Display all the location names in Place table in UPPER CASE and in lower case.

> SELECT UPPER(name) AS Caps, LOWER(name) AS Small FROM Place;

```
SQL> SELECT UPPER(name) AS Caps, LOWER(name) AS Small FROM Place;

CAPS      SMALL
-----
TIRUMALA  tirumala
KOTI      koti
KOTI      koti
KAZIPET   kazipet
KANDRIKA  kandrika
BRODIPET  brodipet

6 rows selected.
```

30. Display the first three characters and last three of names in the Place table using substrng function.

> SELECT SUBSTR(name,1,3) AS first, SUBSTR(name,-3) AS last FROM Place;

```
SQL> SELECT SUBSTR(name,1,3) AS first, SUBSTR(name,-3) AS last FROM Place;

FIRST          LAST
-----
Tir            ala
Kot            oti
Kot            oti
Kaz            pet
Kan            ika
Bro            pet

6 rows selected.
```

31. Display the substring of the bloc (starting from 2nd position to 5th position) of all in Bus table.

> SELECT SUBSTR(bloc,2,5) AS subloc FROM Bus;

```
SQL> SELECT SUBSTR(bloc,2,5) AS subloc FROM Bus;

SUBLOC
-----
irupa
ydera
ydera
arang
ijaya
untur

6 rows selected.
```

32. Display sdate on adding five months to it.

> SELECT sdate AS before, TRUNC(ADD_MONTHS(sdate, 5)) AS After FROM Schedule;

```
SQL> SELECT sdate AS before, TRUNC(ADD_MONTHS(sdate, 5)) AS After FROM Schedule;

BEFORE        AFTER
-----
27-MAY-21    27-OCT-21
24-MAY-21    24-OCT-21
31-MAY-21    31-OCT-21
04-JUN-21    04-NOV-21
04-JUN-21    04-NOV-21
10-JUN-21    10-NOV-21

6 rows selected.
```

33. Display longitude of all the locations rounded to 3 decimals.

> SELECT ROUND(longitude, 3) AS roundoff FROM Place;

```
SQL> SELECT ROUND(longitude, 3) AS roundoff FROM Place;

ROUNDOFF
-----
-80.254
 33.209
 33.209
-40.405
 133.57
  27.126

6 rows selected.
```

34. Find the last day and next day of the month in which each passenger has booked a bus.

> SELECT LAST_DAY(bodate) AS lastday, NEXT_DAY(bodate, 1) AS nextday FROM Booking;

```
SQL> SELECT LAST_DAY(bodate) AS lastday,
2 NEXT_DAY(bodate, 1) AS nextday FROM Booking;

LASTDAY    NEXTDAY
-----
31-MAY-21  16-MAY-21
31-MAY-21  09-MAY-21
31-MAY-21  30-MAY-21
30-JUN-21  06-JUN-21
31-MAY-21  30-MAY-21
31-MAY-21  30-MAY-21

6 rows selected.
```

35. Print a substring from the string 'Varaprasad'.

> SELECT SUBSTR('VARAPRASAD',5,10) AS gvp FROM dual;

```
SQL> SELECT SUBSTR('VARAPRASAD',5,10) AS gvp FROM dual;

GVP
-----
PRASAD
```

36. Replace the string 'Vara' from 'Varaprasad' by 'Hari'.

> SELECT REPLACE('VARAPRASAD','VARA','HARI') AS gvp FROM dual;

```
SQL> SELECT REPLACE('VARAPRASAD','VARA','HARI') AS gvp FROM dual;

GVP
-----
HARIPRASAD
```

37. Print the length of all the location names.

> SELECT location, LENGTH(location) AS length FROM Place;

```
SQL> SELECT location, LENGTH(location) AS length FROM Place;

LOCATION          LENGTH
-----
Tirupati         8
Hyderabad        9
Hyderabad        9
Warangal         8
Vijayawada       10
Guntur           6

6 rows selected.
```

38. Print the booking date in the format 2021/05/25.

> SELECT TO_DATE(bodate, 'YYYY/MM/DD') AS format FROM Booking;

```
SQL> SELECT TO_DATE(bodate, 'YYYY/MM/DD') AS format FROM Booking;

FORMAT
-----
21-MAY-10
21-MAY-07
21-MAY-28
21-JUN-01
21-MAY-25
21-MAY-25

6 rows selected.
```

39. Display the date after 6 months from current date.

> SELECT SYSDATE AS before, TRUNC(ADD_MONTHS(SYSDATE, 6)) AS After FROM dual;

```
SQL> SELECT SYSDATE AS before, TRUNC(ADD_MONTHS(SYSDATE, 6)) AS After FROM dual;

BEFORE      AFTER
-----
26-MAY-21  26-NOV-21
```

40. Display the next occurrence of Monday in this month.

> SELECT SYSDATE AS before, NEXT_DAY(SYSDATE, 'Monday') AS After FROM dual;

```
SQL> SELECT SYSDATE AS before, NEXT_DAY(SYSDATE, 'Monday') AS After FROM dual;

BEFORE      AFTER
-----
26-MAY-21  31-MAY-21
```

41. How many different locations are there in Place table.

> SELECT COUNT(DISTINCT location) FROM Place;

```
SQL> SELECT COUNT(DISTINCT location) FROM Place;

COUNT(DISTINCTLOCATION)
-----
5
```

42. For each location display minimum and maximum age of passenger travelling.

> SELECT MAX(Passenger.page) AS maximum, MIN(Passenger.page) AS mimimum FROM Passenger JOIN Schedule ON Passenger.bid=Schedule.bid JOIN Place ON Schedule.sid=Place.sid GROUP BY location;

```
SQL> SELECT MAX(Passenger.page) AS maximum, MIN(Passenger.page) AS mimimum
2 FROM Passenger JOIN Schedule ON Passenger.bid=Schedule.bid
3 JOIN Place ON Schedule.sid=Place.sid GROUP BY location;

MAXIMUM      MIMIMUM
-----
21           21
8            8
50           19
28           28
```

43. Print the average bus capacity.

> SELECT AVG(bcap) AS average FROM Bus;

```
SQL> SELECT AVG(bcap) AS average FROM Bus;

  AVERAGE
-----
        81
```

44. Count the number of passengers over 20 age.

> SELECT COUNT(DISTINCT page) FROM Passenger WHERE page>20;

```
SQL> SELECT COUNT(DISTINCT page) FROM Passenger WHERE page>20;

COUNT(DISTINCTPAGE)
-----
                    4
```

45. Print the passenger lname whose bus scheduled is today.

> SELECT Passenger.lname FROM Passenger JOIN Schedule ON Passenger.bid=Schedule.bid WHERE Schedule.sdate=SYSDATE;

```
SQL> SELECT Passenger.lname FROM Passenger JOIN Schedule ON
  2  Passenger.bid=Schedule.bid WHERE Schedule.sdate=SYSDATE;

no rows selected
```

46. Create a view to display the place details whose booking is on 25-05-2021

> CREATE TABLE new_booking AS SELECT Place.plid, Place.name, Place.location, Place.latitude, Place.longitude FROM Place JOIN Booking ON Place.plid=Booking.plid WHERE Booking.bodate='25-May-2021';

> SELECT * FROM new_booking;

```
SQL> CREATE TABLE new_booking AS SELECT Place.plid, Place.name,
  2  Place.location, Place.latitude, Place.longitude FROM Place
  3  JOIN Booking ON Place.plid=Booking.plid WHERE Booking.bodate='25-May-2021';

Table created.

SQL> SELECT * FROM new_booking;

  PLID NAME      LOCATION      LATITUDE  LONGITUDE
-----
   15 Kandrika Vijayawada 133.570188 133.570188
   16 Brodipet Guntur    -20.257808  27.1256
```

47. Create a logical table to store required details who booked a bus capacity more than 80.

> CREATE TABLE new_bus AS SELECT Passenger.pid, Passenger.fname, Passenger.lname, Passenger.page, Passenger.psex, Bus.bcap FROM Passenger JOIN Bus ON Passenger.bid=Bus.bid WHERE Bus.bcap>80;

> SELECT * FROM new_bus;

```
SQL> CREATE TABLE new_bus AS SELECT Passenger.pid, Passenger.fname,
2 Passenger.lname, Passenger.page, Passenger.psex, Bus.bcap
3 FROM Passenger JOIN Bus ON Passenger.bid=Bus.bid WHERE Bus.bcap>80;

Table created.

SQL> SELECT * FROM new_bus;
```

PID	FNAME	LNAME	PAGE	P	BCAP
101	Gudi	Prasad	21	M	92
104	Porika	Rahul	28	M	84

48. Create a table to store the passenger details based on booking date.

```
> CREATE TABLE new_passenger AS SELECT Passenger.pid, Passenger.fname, Passenger.lname, Passenger.page,
Passenger.psex, Booking.bodate FROM Passenger JOIN Booking ON Passenger.pid=Booking.pid;

> SELECT * FROM new_passenger;
```

```
SQL> CREATE TABLE new_passenger AS SELECT Passenger.pid, Passenger.fname,
2 Passenger.lname, Passenger.page, Passenger.psex, Booking.bodate
3 FROM Passenger JOIN Booking ON Passenger.pid=Booking.pid;

Table created.

SQL> SELECT * FROM new_passenger;
```

PID	FNAME	LNAME	PAGE	P	BODATE
101	Gudi	Prasad	21	M	10-MAY-21
102	Sesha	Pranav	19	M	07-MAY-21
103	Bandi	Lakshmi	33	F	28-MAY-21
104	Porika	Rahul	28	M	01-JUN-21
105	Bandi	Karuna	8	F	25-MAY-21
106	Burra	Sujatha	50	F	25-MAY-21

6 rows selected.

49. Print the bus driver name corresponding passenger name and his destination who booked a bus on 28-05-2021.

```
> SELECT Bus.bdriver, Passenger.lname, Place.name FROM Bus JOIN Passenger ON Bus.bid = Passenger.bid JOIN
Booking ON Booking.pid = Passenger.pid JOIN Place ON Booking.plid=Place.plid WHERE Booking.bodate = '28-
MAY-2021';
```

```
SQL> SELECT Bus.bdriver, Passenger.lname, Place.name FROM Bus
2 JOIN Passenger ON Bus.bid = Passenger.bid JOIN Booking
3 ON Booking.pid = Passenger.pid JOIN Place ON
4 Booking.plid=Place.plid WHERE Booking.bodate='28-MAY-2021';
```

BDRIVER	LNAME	NAME
Kamalesh	Lakshmi	Koti

50. Display all details who is travelling to place ‘Kazipet’ and when and when is it booked ?

> SELECT Passenger.pid, Passenger.lname, Bus.bid, Place.name, Schedule.sdate, Booking.bodate FROM Bus JOIN Passenger ON Bus.bid = Passenger.bid JOIN Schedule ON Passenger.bid = Schedule.bid JOIN Place ON Schedule.sid=Place.sid JOIN Booking ON Place.plid=Booking.plid WHERE Place.name='Kazipet';

```
SQL> SELECT Passenger.pid, Passenger.lname, Bus.bid, Place.name,
2  Schedule.sdate, Booking.bodate FROM Bus JOIN Passenger ON
3  Bus.bid = Passenger.bid JOIN Schedule ON
4  Passenger.bid = Schedule.bid JOIN Place ON Schedule.sid=Place.sid JOIN
5  Booking ON Place.plid=Booking.plid WHERE Place.name='Kazipet';
```

PID	LNAME	BID	NAME	SDATE	BODATE
104	Rahul	4	Kazipet	04-JUN-21	01-JUN-21