* 1. Check Table statements:

1. Create a table named EMP (eno, ename, age)

→
```
CREATE TABLE EMP (
        eno NUMBER PRIMARY KEY,
        ename VARCHAR2(50),
        age NUMBER
        );
```

2. Insert 3 records within the table

→
```
INSERT INTO EMP (eno,ename,age) VALUES
                     (101,'Rajesh',30),
                     (102,'AMit',28),
                     (103,'Vikas',35);
```

3. Apply Rollback

→
```
ROLLBACK;
```

4. Insert 2 records within the table

→
```
INSERT INTO EMP (eno, ename, age) VALUES
                     (104,'Mehul',27),
                     (105,'Kiran',32);
```

5 Apply Commit

→
```
COMMIT;
```

Q- 2 Do as directed using TCL statements.

1. Create a table named STUDENT (stud_id, fname, lname, age)

```
-> CREATE TABLE STUDENT (
        stud_id NUMBER PRIMARY KEY,
        fname VARCHAR2(50),
        lname VARCHAR2(50),
        age NUMBER
        );
```

2. Insert 2 records within the table

```
-> INSERT INTO STUDENT (stud_id, fname, lname, age) VALUES
        (201, 'Ravi', 'Patel', 22),
        (202, 'Neha', 'Shah', 21);
```

3. Apply Rollback

```
-> ROLLBACK;
```

4. check "SELECT * FROM STUDENT"

```
-> SELECT * FROM STUDENT;
```

5. Insert 3 records within the table

```
-> Insert INTO STUDENT (stud_id, fname, lname, age) VALUES
        (203, 'Amit', 'Trivedi', 23),
        (204, 'Meena', 'Joshi', 22),
        (205, 'Harsh', 'Desai', 24);
```

Q.3 Check DCL statements:

1. Give insert, update, delete and select permission to FY2 user on the student table

→ GRANT INSERT, UPDATE, DELETE, SELECT ON
    STUDENT TO FY2;

2. Give all permissions to FY3 user on the EMP table

→ GRANT ALL ON EMP TO FY3;

5. Take away all above permissions from respective user.

→ REVOKE ALL ON EMP FROM FY3;
REVOKE INSERT, UPDATE, SELECT ON STUDENT FROM
    FY2;

sion

Q.5 Create relational database that contains the following tables and insert the following date into tables.

* CREATE tbldept, tblstud_info

```
→ CREATE TABLE tbldept(
        Dno NUMBER PRIMARY KEY,
        Dname VARCHAR2(50)
     );

→ CREATE TABLE tblstud_info(
        Rno NUMBER PRIMARY KEY,
        Fname VARCHAR2(50),
        Sname VARCHAR2(50),
        Dno NUMBER,
        Sem NUMBER,
        Contact_no VARCHAR2(15),
        Gender CHAR(1),
        Bdata DATE,
        FOREIGN KEY (Dno) REFRENCES
                       tbldept(Dno)
        );
```

* Insert

```
→ INSERT INTO tbldept (Dno, Dname) VALUES
        (1, 'Information Technology'),
        (2,'Electrical'),
        (3,'Civil'),
        (4,'Mechanical'),
        (5,'chemical');
```

```
→ INSERT INTO tblstud_info (Rno, Fname, Sname, Dno,
      Sem, Contact_no, Gender, Bdate) VALUES
(1,'Ankur','Kahar',1,1,'9823454543','M',TO_DATE('12/02/2001',
                                         'DD/MM/YYYY')),
(2,'DHAVAL','Joshi',2,1,'876767656','M',TO_DATE('23/05/2002',
                                         ''DD/MM/YYYY')),
(3,'Ankita','Shah',1,1,'8977777666','F',TO_DATE('01/11/2000','DD/MM/
                                         YYYY')),
(10,'Komal','Pandya',2,3,9898987666','F',TO_DATE('15/07/2005','
                                         'DD/MMYYYY))
(13,'Amit','Mehta',3,3,'9898787876','M',TO_DATE('26/02/2009',
                                         'DD/MM/YYYY')),
(23,'Jinal','Gandhi',2,1,'9823456787','F',TO_DATE('28/09/2000',
                                         'DD/MM/YYYY')),
(22,'Ganesh','Patel',2,3,'9898766554','M',TO_DATE('16/07/2002',
                                         'DD/MM/YYYY')),
(4,'Shweta','Patel',3,1,'9824534567','F',TO_DATE('18/01/2003','
                                         DD/MM/YYYY')),
(7,'Pooja','Desai',3,3,'9975310987','F',TO_DATE('19/06/2004','
                                         DD/MM/YYYY')),
(8,'Komal','Bhatia',2,3,'9864208642','F',TO_DATE('18/07/2006',
                                         'DD/MM/YYYY'));
```

1. Display the students' detail with department name

```
→ SELECT s.Rno, s.Fname, s.Sname, s.Contact_no, s.Gender,
         s.Bdate, d.Dname
  FROM   tblstud_info s
  JOIN   tbldept d  ON  s.Dno = d.Dno
```

3. Display the first name, surname, contact number and dept. name whose first name contains 'a' character at any place.

```
→ SELECT s.Fname, s.Sname, s.Contact_no, d.Dname
  FROM tblstud_info s
  JOIN tbldept d ON s.Dno = d.Dno
  WHERE s.Fname LIKE '%a%';
```

5. Display students' detail who are not studying in civil or Mechanical department

```
→ SELECT s.Rno, s.Fname, s.Sname, s.Contact_no, s.Gender,
         s.Bdate, d.Dname
  FROM tblstud_info s
  JOIN tbldept d ON s.Dno = d.Dno
  WHERE d.Dname NOT IN ('Civil', 'Mechanical');
```

7. Display the department detail where not a single student is studying.

```
→ SELECT d.Dno, d.Dname
  FROM tbldept d
  LEFT JOIN tblstud_info s on d.Dno = s.Dno
  WHERE s.Dno IS NULL;
```

9. Display the total numbers of female student in each department.

```
→ SELECT d.Dname, COUNT(s.Rno) AS Female_Students
  FROM tblstud_info s
  JOIN tbldept d ON s.Dno = d.Dno
  WHERE s.Gender = 'F'
  GROUP BY d.Dname;
```

sion

```
→ SELECT s.Rno, s.Fname, s.Sname, [illegible] ier,
         s.Bdate, d.Dname
```

11. Display the student as well as department's information whose surname is Patel.

→
```
SELECT s.Rno, s.Fname, s.Sname, s.Contact_no,
       s.Gender, s.Bdate, d.Dname
FROM tblstud_info s
JOIN tbldept d ON s.Dno = d.Dno
WHERE s.Sname = 'Patel';
```

13 Count total numbers of student in each department and arrange them in higher to lower order.

→
```
SELECT d.Dname, COUNT (s.Rno) AS Total_Students
FROM tblstud_info s
JOIN tbldept d ON s.Dno = d.Dno
GROUP BY d.Dname
ORDER BY Total_Students DESC;
```

15 Display students information with dept.name in ascending order by dept.name and descending order by surname of student.

→
```
SELECT s.Rno, s.Fname, s.Sname, s.Contact_no, s.Gender,
       s.Bdate, d.Dname
FROM tblstud_info s
JOIN tbldept d ON s.Dno = d.Dno
ORDER BY d.Dname ASC, s.Sname DESC;
```

17. Display the students detail with dept.name whose birthday is in the month of February.

→
```
SELECT s.Rno, s.Fname, S.Sname, s.Contact_no, s.Gender,
       s.Bdate, d.Dname
FROM tblstud_info s
JOIN tbldept d ON s.Dno = d.Dno
```

Q.6

```
WHERE EXTRACT (MONTH FROM s.Bdate) = 2;
```

19. Display the students detail with dept.name whose birthday is in the 4th week of the month.

```
-> SELECT s.Rno, s.Fname, s.Sname, s.Contact_no,
          s.Gender, s.Bdate, d.Dname
   FROM tblstud_info s
   JOIN tbldept d ON s.Dno = d.Dno
   WHERE TO_CHAR (s.Bdate, 'WW') = '04';
```

Q.6 Create following table and insert record in it as given

* table customer

```
→ CREATE TABLE Customer (
        Cust_id NUMBER PRIMARY KEY,
        Cust name VARCHAR2(20),
        Address VARCHAR2(20),
        City VARCHAR2(20),
        Phone_no NUMBER
        );
```

* Table Order_Table

```
→ CREATE TABLE Order_Table(
        Order_id NUMBER PRIMARY KEY,
        Order_date DATE,
        Ship_date DATE,
        Total_amt NUMBER,
        Cust_id NUMBER,
        FOREIGN KEY (cust_id) REFRENCES Customer (Cust_id)
    );
```

* Insert Customer Records

```
→ INSERT INTO Customer (Cust_id, Cust_name, Address, City,
        Phone_no)
  VALUES
     (100,'Jackspost','345 viewridge','Pune', 5986609),
     (101,'Tkb sport shop','490 BoliRd','Banglore', 3681223),
     (102,'Vollyrite','9722 Hamilton','Mumbai', 34413341),
     (103,'Just Tennis','Hillview Mall','Banglore', 6779312),
     (104,'Every Mountain','574, SunnyRd','Chennai', 5485425),
     (105,'K1 Sports','345 El Paseo','Banglore', 9963658);
```

```
(106,'Shape up','908 Samaritan','Mumbai',5425869),
(107,'Women Sport','West Village','Mumbai',5425869),
(108,'North Woods Health','96,Pine way','Pune',2225852),
(109,'Jack','South village','Pune',4545484),
(110,'Vericina','690 Karni Rd','Banglore',4085245);
```

* Insert Orders

→ DATE ~~YYYY-MM-DD~~ : 'DD/MM/YYYY'

```
→ INSERT INTO Order (Order_id, Order_date, Ship_date,
     Total_amt, Cust_id)
  VALUES
   (601, DATE '15/6/01', DATE '20/06/01', 2, 106),
   (602, DATE '07/06/06', DATE '07/07/03', 56, 102),
   (603, DATE '21/03/04', DATE '25/03/04', 224, 102),
   (604, DATE '04/07/04', NULL, 698, 106),
   (605, DATE '17/05/04', DATE '17/06/04', 8324, 106),
   (606, DATE '09/08/04', NULL, 3, 100),
   (607, DATE '06/05/09', ~~NULL~~ DATE '07/05/09', 6, 104),
   (608, DATE '15/10/09', DATE '24/10/09', 35, 104),
   (609, DATE '23/11/09', NULL, 98, 100),
   (610, DATE '25/11/09', NULL, 101, 101),
   (611, DATE '22/12/09', DATE '24/12/09', 45, 102),
   (612, DATE '25/12/09', DATE '26/12/09', 5860, 104),
   (613, DATE '30/12/09', NULL, 6400, 108),
   (614, DATE '04/04/10', DATE '05/04/10', 23940, 102),
   (615, DATE '02/04/10', DATE '05/04/10', 710, 107),
   (616, DATE '04/04/10', DATE '05/04/10', 764, 103),
   (617, DATE '04/02/11', DATE '05/05/11', 46370, 105),
   (618, DATE '03/04/12', DATE '07/06/12', 3510, 102),
   (619, DATE '11/04/13', DATE '16/12/13', 2260, 104),
   (620, DATE '04/03/13', DATE '11/06/13', 4450, 100),
   ~~(62~~
(621,DATE '17/06/13',DATE '18/10/13',730,100));
```

2. List name, city and phone number of all customers.

```
→ SELECT cust_name, city, phone_no FROM Customer;
```

4. List of customer name from the city 'Banglore'.

```
→ SELECT Cust_name FROM Customer
  WHERE City = 'Banglore';
```

6. List of customer names from the city neither 'Banglore' nor 'Mumbai'.

```
→ SELECT Cust_name FROM Customer WHERE City NOT
    IN ('Banglore','Mumbai');
```

8. List the order details for the customer no '102' & '103'.

```
→ SELECT * FROM Order WHERE Cust_id IN (102,103);
```

10 Find the total number of orders for customer no '102'.

```
→ SELECT COUNT(*) AS Total_Orders FROM Order WHERE
    Cust_id = 102;
```

12. List the details of customers whose name does not start with the alphabet 'J';

```
→ SELECT * FROM Customer WHERE Cust_name NOT
    LIKE 'J%';
```

14. List the details of customers whose name contains the alphabet 's' at any position.

```
→ SELECT * FROM Customer WHERE Cust_name
    LIKE '%s%';
```

16. List the details of orders whose total amount is between 3000 and 5000

→
```
SELECT * FROM Order WHERE Total_amt
  BETWEEN 3000 AND 5000;
```

18. List the details of customers in ascending order of their names

→
```
SELECT * FROM Customer ORDER BY Cust_name ASC;
```

20 List customer name-wise, total amount-wise details of all orders in descending order.

→
```
SELECT Cust_id, SUM(Total_amt) AS Total_order_Amount
FROM Order
GROUP BY Cust_id
ORDER BY Total_order_Amount DESC;
```

22. List the details of orders in the order in which they were ordered.

→
```
SELECT * FROM Order ORDER BY Order_date ASC;
```

24. Find the sum & average of the amount for orders placed by customers.

→
```
SELECT SUM(Total_amt) AS Total_Amount, AVG(Total_Amt)
  AS Average_Amount FROM Order;
```

26. Find the total number of orders that are not assigned ~~t~~ any shipping date

→
```
SELECT COUNT(*) AS Order_Without_Shipping
  FROM Order WHERE Ship_date IS NULL;
```

28. Find total order amount for each year.

```
→ SELECT YEAR(Order_date) AS Order_Year, SUM(Total_AMT
    ) AS Total_Amount
  FROM ORder
  GROUP BY Year (Order_date);
```

30. Find the dates on which 2 or more than 2 orders were placed.

```
→ SELECTED Order date, COUNT(*) AS Order_Count
  FROM Order
  GROUP BY Order_date HAVING COUNT (*)>=2;
```

32. List the details of orders with the customer name 'Vollynite'.

```
→ SELECT O.* FROM Order O
  JOIN Customer C ON O.cust_id = C.Cust_id
  WHERE C.Cust_name = 'Vollynite';
```

34. Display customer details whose shipping date is in the month of march.

```
→ SELECT C.* FROM Customer C
  JOIN Order O ON C.cust_id = O.Cust_id
  WHERE MONTH(O:ship_date) = 3;
```