DBMS LAB FAT

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Tables and Sample data

Consider the relational schema containing the following relations:

TECHNICIAN(**Technician_id**, First_Name, Last_Name, City, Job)

CUSTOMER(**Cust_id**,Cust_Fname, Cust_Lname, FirstTime_issue, Technician_id)

APPOINTMENT(**Appointment_id**, Cust_id, Technician_id, Appointment_date, Appt_time_hrs, Feedback)

SAMPLE DATA:

TECHNICIAN

Technician_id	First_Name	Last_Name	City	Department
101	Siva	Kumar	Chennai	Plumber
102	Kiran	Sharma	Delhi	Electrician
103	Ravi	Trivedi	Lucknow	Welder
104	Krishna	Rao	Hyderabad	Electrician

CUSTOMER

Cust_id	Cust_Fname	Cust_Lname	FirstTime_issue	Technician_id
501	Sita	Devi	Yes	101
502	Dinesh	Kumar	No	101
503	Sham	Kumar	Yes	102
504	Ravi	Kiran	No	103

APPOINTMENT

Appointment_id	Cust_id	Technician_id	Appointment_date	Appt_time_hrs	Feedback
1001	501	101	15-MAY-2021	9	Nice
1002	502	101	16-JUN-2021	13	Nice
1003	503	102	17-JUN-2021	15	Avg
1004	504	103	18-JUN-2021	17	Poor

1	Create the tables using DDL instructions, include appropriate primary and foreign key constraints. Insert the necessary sample data given.	10

Create Queries -

```
CREATE TABLE TECHNICIAN_20BRS1193 (Technician_id INT PRIMARY KEY, First_Name VARCHAR2(25)
NOT NULL, Last_Name VARCHAR2(25) NOT NULL, City VARCHAR2(25), Job VARCHAR2(25));

CREATE TABLE CUSTOMER_20BRS1193 (Cust_id INT PRIMARY KEY, Cust_Fname VARCHAR2(25) NOT
NULL, Cust_Lname VARCHAR2(25) NOT NULL, FirstTime_issue VARCHAR2(25), Technician_id INT,
CONSTRAINT FK_G1 FOREIGN KEY (Technician_id) REFERENCES
TECHNICIAN_20BRS1193(Technician_id));

CREATE TABLE APPOINTMENT_20BRS1193 (Appointment_id INT PRIMARY KEY, Cust_id INT,
Technician_id INT, Appointment_date DATE, Appt_time_hrs INT CHECK (Appt_time_hrs <= 24),
Feedback VARCHAR2(50), CONSTRAINT FK_G2 FOREIGN KEY (Cust_id) REFERENCES
CUSTOMER_20BRS1193(Cust_id), CONSTRAINT FK_G3 FOREIGN KEY (Technician_id) REFERENCES
TECHNICIAN_20BRS1193(Technician_id));
```

```
SQL> CREATE TABLE TECHNICIAN_20BRS1193 (Technician_id INT PRIMARY KEY, First_Name VARCHAR2(25) NOT NULL, Last_Na
me VARCHAR2(25) NOT NULL, City VARCHAR2(25), Job VARCHAR2(25));

Table created.

SQL> CREATE TABLE CUSTOMER_20BRS1193 (Cust_id INT PRIMARY KEY, Cust_Fname VARCHAR2(25) NOT NULL, Cust_Lname VARC
HAR2(25) NOT NULL, FirstTime_issue VARCHAR2(25), Technician_id INT, CONSTRAINT FK_G1 FOREIGN KEY (Technician_id)
 REFERENCES TECHNICIAN_20BRS1193(Technician_id));

Table created.

SQL> CREATE TABLE APPOINTMENT_20BRS1193 (Appointment_id INT PRIMARY KEY, Cust_id INT, Technician_id INT, Appoint
ment_date DATE, Appt_time_hrs INT CHECK (Appt_time_hrs <= 24), Feedback VARCHAR2(50), CONSTRAINT FK_G2 FOREIGN K
EY (Cust_id) REFERENCES CUSTOMER_20BRS1193(Cust_id), CONSTRAINT FK_G3 FOREIGN KEY (Technician_id) REFERENCES TEC
HNICIAN_20BRS1193(Technician_id));

Table created.
```

Inserting values -

```
INSERT ALL
    INTO TECHNICIAN_20BRS1193 VALUES (101, 'Siva', 'Kumar', 'Chennai', 'Plumber')
    INTO TECHNICIAN_20BRS1193 VALUES (102, 'Kiran', 'Sharma', 'Delhi', 'Electrician')
    INTO TECHNICIAN_20BRS1193 VALUES (103, 'Ravi', 'Trivedi', 'Lucknow', 'Welder')
    INTO TECHNICIAN_20BRS1193 VALUES (104, 'Krishna', 'Rao', 'Hyderabad', 'Electrician')
SELECT * FROM DUAL;


INSERT ALL
    INTO CUSTOMER_20BRS1193 VALUES (501, 'Sita', 'Devi', 'Yes', 101)
    INTO CUSTOMER_20BRS1193 VALUES (502, 'Dinesh', 'Kumar', 'No', 101)
    INTO CUSTOMER_20BRS1193 VALUES (503, 'Sham', 'Kumar', 'Yes', 102)
    INTO CUSTOMER_20BRS1193 VALUES (504, 'Ravi', 'Kiran', 'No', 103)
SELECT * FROM DUAL;

INSERT ALL
    INTO APPOINTMENT_20BRS1193 VALUES (1001, 501, 101, '15-MAY-2021', 9, 'Nice')
    INTO APPOINTMENT_20BRS1193 VALUES (1002, 502, 101, '16-JUN-2021', 13, 'Nice')
    INTO APPOINTMENT_20BRS1193 VALUES (1003, 503, 102, '17-JUN-2021', 15, 'Avg')
    INTO APPOINTMENT_20BRS1193 VALUES (1004, 504, 103, '18-JUN-2021', 17, 'Poor')
SELECT * FROM DUAL;
```

```
SQL> INSERT ALL
  2  INTO TECHNICIAN_20BRS1193 VALUES (101, 'Siva', 'Kumar', 'Chennai', 'Plumber')
  3  INTO TECHNICIAN_20BRS1193 VALUES (102, 'Kiran', 'Sharma', 'Delhi', 'Electrician')
  4  INTO TECHNICIAN_20BRS1193 VALUES (103, 'Ravi', 'Trivedi', 'Lucknow', 'Welder')
  5  INTO TECHNICIAN_20BRS1193 VALUES (104, 'Krishna', 'Rao', 'Hyderabad', 'Electrician')
  6  SELECT * FROM DUAL;

4 rows created.

SQL>
SQL>
SQL> INSERT ALL
  2  INTO CUSTOMER_20BRS1193 VALUES (501, 'Sita', 'Devi', 'Yes', 101)
  3  INTO CUSTOMER_20BRS1193 VALUES (502, 'Dinesh', 'Kumar', 'No', 101)
  4  INTO CUSTOMER_20BRS1193 VALUES (503, 'Sham', 'Kumar', 'Yes', 102)
  5  INTO CUSTOMER_20BRS1193 VALUES (504, 'Ravi', 'Kiran', 'No', 103)
  6  SELECT * FROM DUAL;

4 rows created.

SQL>
SQL> INSERT ALL
  2  INTO APPOINTMENT_20BRS1193 VALUES (1001, 501, 101, '15-MAY-2021', 9, 'Nice')
  3  INTO APPOINTMENT_20BRS1193 VALUES (1002, 502, 101, '16-JUN-2021', 13, 'Nice')
  4  INTO APPOINTMENT_20BRS1193 VALUES (1003, 503, 102, '17-JUN-2021', 15, 'Avg')
  5  INTO APPOINTMENT_20BRS1193 VALUES (1004, 504, 103, '18-JUN-2021', 17, 'Poor')
  6  SELECT * FROM DUAL;

4 rows created.
```

2	Display the Technician First Name and job of those who attended to first time issues reported by customers	5

```
SELECT First_Name, Job FROM TECHNICIAN_20BRS1193 WHERE Technician_id IN (SELECT
Technician_id FROM CUSTOMER_20BRS1193 WHERE FirstTime_issue = 'Yes') ORDER BY First_Name;
```

```
SQL> SELECT First_Name, Job FROM TECHNICIAN_20BRS1193 WHERE Technician_id IN (SELECT Technician_id FROM CUSTOMER
_20BRS1193 WHERE FirstTime_issue = 'Yes') ORDER BY First_Name;

FIRST_NAME           JOB
-------------------- ------------------------
Kiran                Electrician
Siva                 Plumber
```

3	Display the appointment id and customer names of those who had taken appointment for plumbing work.	5

```
SELECT APPOINTMENT_20BRS1193.Appointment_id, CUSTOMER_20BRS1193.Cust_Fname FROM
(CUSTOMER_20BRS1193 INNER JOIN APPOINTMENT_20BRS1193 ON CUSTOMER_20BRS1193.Cust_id =
APPOINTMENT_20BRS1193.Cust_id) JOIN TECHNICIAN_20BRS1193 ON
APPOINTMENT_20BRS1193.Technician_id = TECHNICIAN_20BRS1193.Technician_id WHERE
TECHNICIAN_20BRS1193.Job = 'Plumber';
```

```
SQL> SELECT APPOINTMENT_20BRS1193.Appointment_id, CUSTOMER_20BRS1193.Cust_Fname FROM (CUSTOMER_20BRS1193 INNER J
OIN APPOINTMENT_20BRS1193 ON CUSTOMER_20BRS1193.Cust_id = APPOINTMENT_20BRS1193.Cust_id) JOIN TECHNICIAN_20BRS11
93 ON APPOINTMENT_20BRS1193.Technician_id = TECHNICIAN_20BRS1193.Technician_id WHERE TECHNICIAN_20BRS1193.Job =
'Plumber';

APPOINTMENT_ID CUST_FNAME
-------------- ------------------------
          1001 Sita
          1002 Dinesh
```

4	Display the appointment id and customer name of customers who have given a feedback as 'Nice'	5

```
SELECT APPOINTMENT_20BRS1193.Appointment_id, TECHNICIAN_20BRS1193.First_Name AS
TECHNICIAN_FNAME FROM APPOINTMENT_20BRS1193 INNER JOIN TECHNICIAN_20BRS1193 ON
APPOINTMENT_20BRS1193.Technician_id = TECHNICIAN_20BRS1193.Technician_id WHERE
APPOINTMENT_20BRS1193.Feedback = 'Nice';
```

```
SQL> SELECT APPOINTMENT_20BRS1193.Appointment_id, TECHNICIAN_20BRS1193.First_Name AS TECHNICIAN_FNAME FROM APPOI
NTMENT_20BRS1193 INNER JOIN TECHNICIAN_20BRS1193 ON APPOINTMENT_20BRS1193.Technician_id = TECHNICIAN_20BRS1193.T
echnician_id WHERE APPOINTMENT_20BRS1193.Feedback = 'Nice';

APPOINTMENT_ID TECHNICIAN_FNAME
-------------- ------------------------
          1001 Siva
          1002 Siva
```

5	Create a view to find the technician id and first name of technicians who are electricians.	7

```
CREATE VIEW ELECTRICIANS AS (SELECT T.Technician_id, T.First_Name FROM
TECHNICIAN_20BRS1193 T WHERE T.Job = 'Electrician');
SELECT * FROM ELECTRICIANS;
```

```
SQL> CREATE VIEW ELECTRICIANS AS (SELECT T.Technician_id, T.First_Name FROM TECHNICIAN_20BRS1193 T WHERE T.Job =
 'Electrician');

View created.

SQL> SELECT * FROM ELECTRICIANS;

TECHNICIAN_ID FIRST_NAME
------------- ------------------------
          102 Kiran
          104 Krishna
```

6	Write a procedure to display the count of appointments made after 12PM in the month of June. Also write the block of code to call the procedure.	8
	TOTAL	40 Marks

Procedure code –

```
CREATE OR REPLACE PROCEDURE APT_COUNT
(CNT OUT INT)
IS
BEGIN
    SELECT COUNT(*) INTO CNT FROM APPOINTMENT_20BRS1193 WHERE INSTR(Appointment_date,
'JUN') > 0 AND Appt_time_hrs >= 12;
END APT_COUNT;
/
```

Main Code –

```
set serverout on;
DECLARE
    CNT INTEGER;
BEGIN
    APT_COUNT(CNT);
    dbms_output.put_line('The no. of appointments made after 12PM in Jun are ' || CNT);
END;
/
```

```
SQL> @C:\Users\Oracle\Documents\LabFAT\1.sql

Procedure created.

SQL> @C:\Users\Oracle\Documents\LabFAT\1_2.sql
The no. of appointments made after 12PM in Jun are 3

PL/SQL procedure successfully completed.

SQL>
```