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LAB FAT: SET 3

**Question-1**

Consider the Hotel database

Hotel (Hotel\_No, Name, Address)

Room (Room\_No, Hotel\_No, Type, Price)

Guest (Guest\_No, Name, Address, phone\_num)

1. Create tables identifying primary keys and foreign keys and insert necessary records.  
[15M]

```
CREATE TABLE
    HOTEL (
        HOTEL_NO NUMBER,
        NAME VARCHAR(50),
        ADDRESS VARCHAR(100),
        CONSTRAINT HOTEL_HOTEL_NO_PK PRIMARY KEY (HOTEL_NO)
    );

CREATE TABLE
    ROOM (
        ROOM_NO NUMBER UNIQUE,
        HOTEL_NO NUMBER,
        TYPE VARCHAR(20),
        PRICE DOUBLE PRECISION,
        CONSTRAINT ROOM_HOTEL_NO_FK FOREIGN KEY (HOTEL_NO) REFERENCES
HOTEL (HOTEL_NO),
        CONSTRAINT ROOM_ROOM_NO_PK PRIMARY KEY (HOTEL_NO, ROOM_NO)
    );

CREATE TABLE
    GUEST (
        GUEST_NO NUMBER,
        NAME VARCHAR(50),
        ADDRESS VARCHAR(100),
        PHONE_NUM NUMBER,
        ROOM_NO NUMBER,
        CONSTRAINT GUEST_GUEST_NO_PK PRIMARY KEY (GUEST_NO),
        CONSTRAINT GUEST_ROOM_NO_FK FOREIGN KEY (ROOM_NO) REFERENCES
ROOM (ROOM_NO)
    );
```

```
SQL> DESC HOTEL
```

Name	Null?	Type
HOTEL_NO	NOT NULL	NUMBER
NAME		VARCHAR2(50)
ADDRESS		VARCHAR2(100)

```
SQL> DESC ROOM
```

Name	Null?	Type
ROOM_NO	NOT NULL	NUMBER
HOTEL_NO	NOT NULL	NUMBER
TYPE		VARCHAR2(20)
PRICE		FLOAT(126)

```
SQL> DESC GUEST
```

Name	Null?	Type
GUEST_NO	NOT NULL	NUMBER
NAME		VARCHAR2(50)
ADDRESS		VARCHAR2(100)
PHONE_NUM		NUMBER
ROOM_NO		NUMBER

```
---
INSERT INTO
  HOTEL
VALUES
  (1, 'H1', 'A1');

INSERT INTO
  HOTEL
VALUES
  (2, 'H2', 'A2');

INSERT INTO
  HOTEL
VALUES
  (3, 'PARADISE', 'A3');

INSERT INTO
  HOTEL
VALUES
  (4, 'H4', 'A4');

INSERT INTO
  HOTEL
VALUES
  (5, 'H5', 'A5');

---
INSERT INTO
  ROOM
VALUES
  (1, 1, 'T1', 2000);
```

```
INSERT INTO
  ROOM
VALUES
  (2, 1, 'T2', 8000);
```

```
INSERT INTO
  ROOM
VALUES
  (3, 2, 'DOUBLE', 30);
```

```
INSERT INTO
  ROOM
VALUES
  (4, 2, 'FAMILY', 20);
```

```
INSERT INTO
  ROOM
VALUES
  (5, 3, 'T3', 2000);
```

```
INSERT INTO
  ROOM
VALUES
  (6, 3, 'T4', 12000);
```

```
--
INSERT INTO
  GUEST
VALUES
  (
    1,
    'G1',
    'A1, Hyderabad, Telangana',
    1234562891,
    1
  );
```

```
INSERT INTO
  GUEST
VALUES
  (
    2,
    'G2',
    'A2, Hyderabad, Telangana',
    2343924233,
    2
  );
```

```
INSERT INTO
  GUEST
VALUES
  (3, 'G3', 'A3', 2343334233, 5);
```

```
INSERT INTO
  GUEST
```

```
VALUES
(4, 'G4', 'A4', 9823924233, 5);

INSERT INTO
  GUEST
VALUES
(5, 'G5', 'A5', 9823234232, 1);
```

HOTEL_NO	NAME	ADDRESS
1	H1	A1
2	H2	A2
3	PARADISE	A3
4	H4	A4
5	H5	A5

  

ROOM_NO	HOTEL_NO	TYPE	PRICE
1	1	T1	2000
2	1	T2	8000
3	2	DOUBLE	30
4	2	FAMILY	20
5	3	T3	2000
6	3	T4	12000

GUEST_NO	NAME	ADDRESS	PHONE_NUM	ROOM_NO
1	G1	A1, Hyderabad, Telangana	1234562891	1
2	G2	A2, Hyderabad, Telangana	2343924233	2
3	G3	A3	2343334233	5
4	G4	A4	9823924233	5
5	G5	A5	9823234232	1

2. Write the following queries in SQL (4\*5 =20)

- a) List the names and addresses of all guests in Hyderabad, ordered by name.
- b) Find the average price of a room?
- c) List all double or family rooms with a price below £40.00 per night, in ascending order of price.
- d) List all guests currently staying at the paradise Hotel.
- E) List the price and type of all rooms at the Paradise Hotel.

```
SELECT
    NAME,
    ADDRESS
FROM
    GUEST
WHERE
    LOWER(ADDRESS) LIKE ('%hyderabad%')
ORDER BY
    NAME;
```

```
-- b.
SELECT
    AVG(PRICE)
FROM
    ROOM;
```

```
-- c.
SELECT
    *
FROM
    ROOM
WHERE
    TYPE IN ('DOUBLE', 'FAMILY')
    AND PRICE < 40
ORDER BY
    PRICE;
```

```
-- d.
SELECT
    GUEST.NAME
FROM
    GUEST,
    ROOM,
    HOTEL
WHERE
    GUEST.ROOM_NO = ROOM.ROOM_NO
    AND ROOM.HOTEL_NO = HOTEL.HOTEL_NO
    AND HOTEL.NAME LIKE ('PARADISE');
```

```
-- e.
SELECT
    PRICE,
    TYPE
FROM
    ROOM,
    HOTEL
WHERE
```

```
ROOM.HOTEL_NO = HOTEL.HOTEL_NO  
AND HOTEL.NAME LIKE('PARADISE');
```

NAME	ADDRESS
------	---------

G1	A1, Hyderabad, Telangana
G2	A2, Hyderabad, Telangana

AVG(PRICE)

4008.33333

ROOM_NO	HOTEL_NO	TYPE	PRICE
4	2	FAMILY	20
3	2	DOUBLE	30

NAME

G3  
G4

PRICE	TYPE
-------	------

2000	T3
12000	T4

### Question-2

Write the PL/SQL programs to create the procedure to find Fibonacci series. [15M]

```
CREATE OR REPLACE PROCEDURE FIBONACCI(TERMS NUMBER) AS
  A NUMBER;
  B NUMBER;
  TEMP NUMBER;
  CURR NUMBER;
BEGIN
  A := 0;
  B := 1;
  DBMS_OUTPUT.PUT_LINE(A);
  DBMS_OUTPUT.PUT_LINE(B);
  FOR I IN 3..TERMS LOOP
    CURR := A + B;
    DBMS_OUTPUT.PUT_LINE(CURR);
    A := B;
    B := CURR;
  END LOOP;
END;
/
```

Procedure created.

Enter value for terms: 10

0

1

1

2

3

5

8

13

21

34