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HOMEWORK # 3

TASK1:

Run the script hotel.sql

```
mysql> source /home/enstazao/DATA_BASE_Lab/HomeWork#3/hotel.sql
Query OK, 0 rows affected, 1 warning (0.00 sec)

Query OK, 1 row affected (0.01 sec)

Database changed
Query OK, 0 rows affected, 1 warning (0.00 sec)

Query OK, 0 rows affected, 1 warning (0.00 sec)

Query OK, 0 rows affected, 1 warning (0.01 sec)

Query OK, 0 rows affected, 1 warning (0.00 sec)

Query OK, 0 rows affected (0.03 sec)

Query OK, 1 row affected (0.01 sec)

Query OK, 1 row affected (0.00 sec)

Query OK, 1 row affected (0.00 sec)

Query OK, 1 row affected (0.00 sec)

Query OK, 1 row affected (0.01 sec)

Query OK, 0 rows affected (0.03 sec)

Query OK, 1 row affected (0.00 sec)
```

TASK2:

List all hotels whose name's third alphabet has a 't'. Order the result in desceding order by hotelname.

```
mysql> SELECT hotelname FROM hotel WHERE hotelname LIKE '__t%' ORDER BY hotelname DESC;
+-----------+
| hotelname |
+-----------+
| Watergate |
| Latham    |
+-----------+
2 rows in set (0.00 sec)

mysql>
```

TASK3:

List all those hotels, rooms which were booked by those guests who are from Glasgow and their first name is Tony or last name is Farrel. List the guest detail as well.

mysql> SELECT hotelname, roomno FROM booking NATURAL JOIN guest NATURAL JOIN hotel WHERE guestaddress LIKE '%Glasgow' AND SUBSTRING_INDEX(SUBSTRING_INDEX(guestname, ' ', 1), ' ', -1)='Tony' OR TRIM(SUBSTR(guest
name, LOCATE(' ', guestname)))='Farrel';

```
mysql> SELECT hotelname, roomno FROM booking NATURAL JOIN guest NATURAL JOIN hotel WHERE guestaddress LIKE '%Glasgow' AND SUBSTRING_INDEX(SUBSTRING_INDEX(guestname, ' ', 1), ' ', -1)='Tony'  OR TRIM(SUBSTR(guest
name, LOCATE(' ', guestname)))='Farrel';
+-----------+--------+
| hotelname | roomno |
+-----------+--------+
| Latham    |   1001 |
| Grosvenor |    501 |
+-----------+--------+
2 rows in set (0.00 sec)

mysql>
```

TASK4:

List the room no. along with its hotel no and hotelname, whose price is second most highest.

mysql> SELECT roomno, hotelNo, hotelName FROM hotel
   -> NATURAL JOIN room WHERE price = (SELECT MAX(price)
       FROM room WHERE price <
   -> (SELECT MAX(price) FROM room));

```
mysql> SELECT roomno, hotelNo, hotelName FROM hotel NATURAL JOIN room WHERE price = (SELECT MAX(price) FROM room WHERE price < (SELECT MAX(price) FROM room));
+--------+---------+--------------+
| roomno | hotelNo | hotelName    |
+--------+---------+--------------+
|   1101 | ch01    | Omni Shoreham |
+--------+---------+--------------+
1 row in set (0.00 sec)

mysql>
```

TASK5:

List all the room nos. which were booked in the period 2005-2010. Also display the room's hotel no and hotel name.

mysql> SELECT roomno, hotelno, hotelname FROM booking NATURAL JOIN
    -> hotel WHERE YEAR(datefrom) IN (2005, 2006, 2007, 2008, 2009, 2010);

```
mysql> SELECT roomno, hotelno, hotelname FROM booking NATURAL JOIN hotel WHERE YEAR(datefrom) IN (2005, 2006, 2007, 2008, 2009, 2010);
+--------+---------+-----------+
| roomno | hotelno | hotelname |
+--------+---------+-----------+
|   1001 | dc01    | Latham    |
+--------+---------+-----------+
1 row in set (0.00 sec)

mysql>
```

TASK6:

List the room no. along with its hotel no and hotelname, who have third most lowest price in the room category of type single.

```
mysql> SELECT roomno, hotelno, hotelname FROM room NATURAL JOIN hotel WHERE price = ( SELECT MIN(price) FROM room WHERE type='single' AND price > ( SELECT MIN(price) FROM room WHERE price > ( SELECT MIN(price) FROM room)) );
+--------+---------+-----------+
| roomno | hotelno | hotelname |
+--------+---------+-----------+
|    901 | dc01    | Latham    |
+--------+---------+-----------+
1 row in set (0.00 sec)

mysql>
```

TASK7:

List all the hotel's name which have double as well as family type rooms.

```
mysql> SELECT hotelname FROM room NATURAL JOIN hotel WHERE type = 'double' AND hotelno = any ( Select hotelno from room where type = 'family');
+-----------+
| hotelname |
+-----------+
| Grosvenor |
| Latham    |
+-----------+
2 rows in set (0.00 sec)

mysql>
```

TASK8:

List all the hotels which have single as well as double type rooms but no family type room.

mysql> SELECT hotelname FROM room NATURAL JOIN hotel WHERE type='single' AND hotelno =ANY(SELECT hotelno FROM room WHERE type='double') AND hotelno NOT IN (SELECT hotelno FROM room WHERE type='family');

```
mysql> SELECT hotelname FROM room NATURAL JOIN hotel WHERE type='single' AND hotelno =ANY(SELECT hotelno FROM room WHERE type='double') AND hotelno NOT IN (SELECT hotelno FROM room WHERE type='family');
+-------------+
| hotelname   |
+-------------+
| Phoenix Park |
| Watergate    |
+-------------+
2 rows in set (0.00 sec)

mysql>
```

TASK9:

List all double or family rooms with a price below £40.00 per night, in ascending order of price. Also display the room's hotel no and hotel name.

mysql> SELECT roomno, hotelno, hotelname FROM room NATURAL JOIN hotel WHERE type!='single' AND price < 40;

```
mysql> SELECT roomno, hotelno, hotelname FROM room NATURAL JOIN hotel WHERE type!='single' AND price < 40;
+--------+---------+--------------+
| roomno | hotelno | hotelname    |
+--------+---------+--------------+
|    601 | fb01    | Grosvenor    |
|    701 | fb01    | Grosvenor    |
|    801 | ch02    | Phoenix Park |
|   1001 | dc01    | Latham       |
|   1101 | dc01    | Latham       |
+--------+---------+--------------+
5 rows in set (0.00 sec)

mysql>
```

TASK10:

List the price and type of all rooms at the Grosvenor Hotel.

```
mysql> SELECT price, type FROM hotel NATURAL JOIN room WHERE hotelname = 'Grosvenor';
+-------+--------+
| price | type   |
+-------+--------+
| 19.00 | single |
| 29.00 | double |
| 39.00 | family |
+-------+--------+
3 rows in set (0.00 sec)

mysql>
```

TASK11:

List all guests currently staying at the Watergate Hotel.

```
mysql> SELECT guestname FROM guest NATURAL JOIN hotel NATURAL JOIN booking WHERE hotelname = 'Watergate';
+--------------+
| guestname    |
+--------------+
| John Kay     |
| Mary Tregear |
+--------------+
2 rows in set (0.00 sec)

mysql>
```

TASK12:

List those hotels which have greater than 2 rooms.

```
mysql> SELECT IF(COUNT(roomno)>2,hotelname,"") AS 2_Room_Hotel  FROM room NATURAL JOIN hotel GROUP BY hotelno;
+--------------+
| 2_Room_Hotel |
+--------------+
|              |
|              |
| Latham       |
| Grosvenor    |
|              |
+--------------+
5 rows in set (0.00 sec)

mysql>
```

TASK13:

List the number of rooms in each hotel in London.

mysql> SELECT hotelname, COUNT(roomno) FROM room NATURAL JOIN hotel WHERE city = 'london' GROUP BY hotelno;

```
mysql> SELECT hotelname, COUNT(roomno) FROM room NATURAL JOIN hotel WHERE city = 'london' GROUP BY hotelno;
+---------------+---------------+
| hotelname     | COUNT(roomno) |
+---------------+---------------+
| Omni Shoreham |             2 |
| Phoenix Park  |             2 |
| Grosvenor     |             3 |
+---------------+---------------+
3 rows in set (0.00 sec)

mysql> s
```