DBMS LAB HOMEWORK 3
Hotel Management Database

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

select hotelname from hotel where hotelname like "__t%" order by hotelname desc;

```
MariaDB [guest_house]>
MariaDB [guest_house]> select hotelname from hotel where hotelname like "__t%" order by
hotelname desc;
+-----------+
| hotelname |
+-----------+
| Watergate |
| Latham    |
+-----------+
2 rows in set (0.001 sec)
```

2. 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.

select hotelno, roomno, g.guestno, guestname, guestaddress from (booking b inner join guest g on b.guestno = g.guestno) where guestaddress like "%Glasgow" and guestname like "Tony%" or guestname like "%Farrel";

```
MariaDB [guest_house]> select hotelno, roomno, g.guestno, guestname, guestaddress from (booking
b inner join guest g on b.guestno = g.guestno) where guestaddress like "%Glasgow" and guestname
like "Tony%" or guestname like "%Farrel";
+---------+--------+---------+--------------+----------------------+
| hotelno | roomno | guestno | guestname    | guestaddress         |
+---------+--------+---------+--------------+----------------------+
| fb01    |    501 |   10005 | Carol Farrel | 6 Achray St, Glasgow |
| dc01    |   1001 |   10007 | Tony Shaw    | 12 Park Pl, Glasgow  |
+---------+--------+---------+--------------+----------------------+
2 rows in set (0.001 sec)
```

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

Select roomno, hotel.hotelno, hotelname from hotel INNER JOIN room on hotel.hotelno = room.hotelno where price = (select max(price) from room where price not in (select max(price) from room));

```
MariaDB [guest_house]> Select  roomno, hotel.hotelno, hotelname from hotel INNER JOIN
room on hotel.hotelno = room.hotelno where price = (select max(price) from room where
price not in (select max(price) from room));
+--------+---------+---------------+
| roomno | hotelno | hotelname     |
+--------+---------+---------------+
|   1101 | ch01    | Omni Shoreham |
+--------+---------+---------------+
1 row in set (0.001 sec)
```

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

<u>**Ambiguity in this query**</u>
Select hotel.hotelno, roomno, hotelname, datefrom, dateto from booking INNER JOIN hotel on booking.hotelno = hotel.hotelno where YEAR(datefrom) >= '2005' and YEAR(dateto) <= '2010';
Empty set (0.001 sec)

```
MariaDB [guest_house]> Select hotel.hotelno, roomno, hotelname, datefrom, dateto from
booking INNER JOIN hotel on booking.hotelno = hotel.hotelno where YEAR(datefrom) >= '2
005' and YEAR(dateto) <= '2010';
Empty set (0.000 sec)

MariaDB [guest_house]> Select hotel.hotelno, roomno, hotelname, datefrom, dateto from
booking INNER JOIN hotel on booking.hotelno = hotel.hotelno where YEAR(datefrom) >= '2
005' or YEAR(dateto) <= '2010';
+---------+--------+--------------+------------+------------+
| hotelno | roomno | hotelname    | datefrom   | dateto     |
+---------+--------+--------------+------------+------------+
| ch02    |    801 | Phoenix Park | 2004-04-25 | 2004-05-06 |
| dc01    |   1001 | Latham       | 2006-05-13 | 2011-05-15 |
| fb01    |    501 | Grosvenor    | 2004-04-01 | 2004-04-08 |
| fb01    |    601 | Grosvenor    | 2004-04-15 | 2004-05-15 |
| fb01    |    501 | Grosvenor    | 2004-05-02 | 2004-05-07 |
| fb02    |   1001 | Watergate    | 2004-04-05 | 2010-04-04 |
+---------+--------+--------------+------------+------------+
6 rows in set (0.001 sec)
```

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

select roomno, room.hotelno, hotelname from room INNER JOIN hotel on room.hotelno = hotel.hotelno where price = (select price from room where type = 'single' order by price desc limit 3,1);

```
MariaDB [guest_house]> select roomno, room.hotelno, hotelname from room INNER JO
IN hotel on room.hotelno = hotel.hotelno where price = (select price from room w
here type = 'single' order by price desc limit 3,1);
+--------+---------+-----------+
| roomno | hotelno | hotelname |
+--------+---------+-----------+
|    901 | dc01    | Latham    |
+--------+---------+-----------+
1 row in set (0.001 sec)
```

**6. List all the hotel's name which have double as well as family type rooms.
select hotelname, type from hotel INNER JOIN room on hotel.hotelno = room.hotelno where type = 'double' or type = 'family' group by hotelname order by hotelname;**

```
MariaDB [guest_house]> select hotelname, type from hotel INNER JOIN room on hote
l.hotelno = room.hotelno where type = 'double' or type =  'family' group by hote
lname order by hotelname;
+----------------+--------+
| hotelname      | type   |
+----------------+--------+
| Grosvenor      | double |
| Latham         | double |
| Omni Shoreham  | family |
| Phoenix Park   | double |
| Watergate      | double |
+----------------+--------+
5 rows in set (0.001 sec)
```

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

select hotel.hotelno, hotelname, type from hotel INNER JOIN room on hotel.hotelno = room.hotelno where type not in ('family') order by hotelname;

```
MariaDB [guest_house]> select hotel.hotelno, hotelname, type from hotel INNER JO
IN room on hotel.hotelno = room.hotelno where type not in ('family') order by ho
telname;
+---------+---------------+--------+
| hotelno | hotelname     | type   |
+---------+---------------+--------+
| fb01    | Grosvenor     | single |
| fb01    | Grosvenor     | double |
| dc01    | Latham        | single |
| dc01    | Latham        | double |
| ch01    | Omni Shoreham | single |
| ch02    | Phoenix Park  | single |
| ch02    | Phoenix Park  | double |
| fb02    | Watergate     | single |
| fb02    | Watergate     | double |
+---------+---------------+--------+
9 rows in set (0.002 sec)
```

8. 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.

select room.hotelno, roomno, hotelname, type, price from room INNER JOIN hotel on room.hotelno = hotel.hotelno where price <= 40.00 and (type = 'double' or type = 'family') order by price;

```
MariaDB [guest_house]> select room.hotelno, roomno, hotelname, type, price from room I
NNER JOIN hotel on room.hotelno = hotel.hotelno where price <= 40.00 and (type = 'doub
le' or type = 'family') order by price;
+---------+--------+--------------+--------+-------+
| hotelno | roomno | hotelname    | type   | price |
+---------+--------+--------------+--------+-------+
| ch02    |    801 | Phoenix Park | double | 15.00 |
| fb01    |    601 | Grosvenor    | double | 29.00 |
| dc01    |   1001 | Latham       | double | 30.00 |
| dc01    |   1101 | Latham       | family | 35.00 |
| fb01    |    701 | Grosvenor    | family | 39.00 |
+---------+--------+--------------+--------+-------+
5 rows in set (0.001 sec)
```

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

select roomno, room.hotelno, hotelname, type, price from room INNER JOIN hotel on room.hotelno = hotel.hotelno where hotel.hotelno = (select hotel.hotelno from hotel where hotelname= 'Grosvenor');

```
MariaDB [guest_house]> select roomno, room.hotelno, hotelname, type, price from room I
NNER JOIN hotel on room.hotelno = hotel.hotelno where hotel.hotelno = (select hotel.ho
telno from hotel where hotelname= 'Grosvenor');
+--------+---------+-----------+--------+-------+
| roomno | hotelno | hotelname | type   | price |
+--------+---------+-----------+--------+-------+
|    501 | fb01    | Grosvenor | single | 19.00 |
|    601 | fb01    | Grosvenor | double | 29.00 |
|    701 | fb01    | Grosvenor | family | 39.00 |
+--------+---------+-----------+--------+-------+
3 rows in set (0.001 sec)
```

10. List all guests currently staying at the Watergate Hotel.

select guest.guestno, guestname, guestaddress from guest INNER JOIN booking on guest.guestno=booking.guestno where booking.hotelno = (select hotelno from hotel where hotelname = 'Watergate');

```
MariaDB [guest_house]> select guest.guestno, guestname, guestaddress from guest INNER
JOIN booking on guest.guestno=booking.guestno where booking.hotelno = (select hotelno
from hotel where hotelname = 'Watergate');
+---------+--------------+--------------------------+
| guestno | guestname    | guestaddress             |
+---------+--------------+--------------------------+
|   10001 | John Kay     | 56 High St, London       |
|   10003 | Mary Tregear | 5 Tarbot Rd, Aberdeen    |
+---------+--------------+--------------------------+
2 rows in set (0.001 sec)
```

11. List those hotels which have greater than 2 rooms.

select hotelno, count(roomno) as totalRooms from room group by hotelno;

```
MariaDB [guest_house]> select hotelno, count(roomno) as totalRooms from room group by
hotelno;
+---------+------------+
| hotelno | totalRooms |
+---------+------------+
| ch01    |          2 |
| ch02    |          2 |
| dc01    |          3 |
| fb01    |          3 |
| fb02    |          2 |
+---------+------------+
5 rows in set (0.001 sec)
```

12. List the number of rooms in each hotel in London.

SELECT r.hotelno, COUNT(roomno) AS count FROM room r, hotel h WHERE r.hotelno = h.hotelno AND city = 'London' GROUP BY hotelno;

```
MariaDB [guest_house]> Select roomno AS Number_of_rooms From room INNER JOIN hotel ON room.hotelno =
hotel.hotelno where city = 'London'ORDER BY roomno;
+-----------------+
| Number_of_rooms |
+-----------------+
|             501 |
|             601 |
|             701 |
|             701 |
|             801 |
|            1001 |
|            1101 |
+-----------------+
7 rows in set (0.001 sec)
```