

## Sub Queries and Joins

- a) **List the price and type of all rooms at the Grosvenor Hotel.**

```
SELECT price, type
FROM Room
WHERE hotelNo =
(
  SELECT hotelNo
  FROM Hotel
  WHERE hotelName = 'Grosvenor Hotel'
);
```

- b) **List the details of all rooms at the Grosvenor Hotel, including the name of the guest staying in the room, if the room is occupied.**

```
SELECT R.*
FROM Room AS R
LEFT JOIN
(
  SELECT G.guestName, H.hotelNo, B.roomNo
  FROM Guest AS G, Hotel AS H, Booking AS B
  WHERE G.guestNo = B.guestNo AND
  B.hotelNo = H.hotelNo AND
  hotelName = 'Grosvenor Hotel' AND
  dateFrom <= CURRENT_DATE AND
  dateTo >= CURRENT_DATE
) AS query2
ON R.hotelNo = query2.hotelNo AND
R.roomNo = query2.roomNo;
```

- c) **List the rooms that are currently unoccupied at the Grosvenor Hotel.**

```
SELECT *
FROM Room AS R
WHERE roomNo NOT IN
(
  SELECT roomNo
  FROM Booking AS B, Hotel AS H
  WHERE
  (
    dateFrom <= CURRENT_DATE AND
    dateTo >= CURRENT_DATE
  )
  AND B.hotelNo = H.hotelNo AND
  hotelName = 'Grosvenor Hotel');
```

**d) List the number of rooms in each hotel in London.**

```
SELECT H.hotelNo, COUNT(roomNo) AS count
FROM Room AS R, Hotel AS H
WHERE R.hotelNo = H.hotelNo AND
city LIKE '%London%'
GROUP BY R.hotelNo;
```