**SQL> --**

**SQL> -- ---------------------------------------------------------**

**SQL> -- The following comments will also be sent / spooled to the**

**SQL> -- output text file to identify the ownership of the**

**SQL> -- Oracle SQL\*Plus work.**

**SQL> --**

**SQL> -- COMP 2714**

**SQL> -- SET 2D**

**SQL> -- Assignment Asn03**

**SQL> --**

**SQL> -- Fung, Sonny A00928267**

**SQL> -- email: sonnyf.17@hotmail.com**

**SQL> --**

**SQL> -- Chang, Chih-Hsi A01017955**

**SQL> -- email: cchang189@my.bcit.ca**

**SQL> --**

**SQL> -- ---------------------------------------------------------**

**SQL> --**

**SQL> ALTER SESSION SET NLS\_DATE\_FORMAT='YYYY-MM-DD';**

**Session altered.**

**SQL> --**

**SQL> SELECT SYSDATE**

**2 FROM DUAL;**

**SYSDATE**

**----------**

**2018-02-01**

**SQL> -- Q1. The average price of a room in London.**

**SQL> -- a. Using JOIN**

**SQL> SELECT AVG(r.price)**

**2 FROM Hotel h**

**3 JOIN Room r**

**4 ON h.hotelNo = r.hotelNo**

**5 WHERE h.hotelAddress LIKE '%London%'**

**6 ;**

**AVG(R.PRICE)**

**------------**

**55**

**SQL> -- b. Using IN subquery**

**SQL> SELECT AVG(r.price)**

**2 FROM Room r**

**3 WHERE r.hotelNo IN**

**4 (SELECT h.hotelNo**

**5 FROM Hotel h**

**6 WHERE h.hotelAddress LIKE '%London%')**

**7 ;**

**AVG(R.PRICE)**

**------------**

**55**

**SQL> -- Q2. The number of different guests have made bookings**

**SQL> -- for Feb., 2018 for each hotel.**

**SQL> SELECT h.hotelName, COUNT(DISTINCT b.guestNo)**

**2 FROM Booking b**

**3 JOIN Hotel h**

**4 ON b.hotelNo = h.hotelNo**

**5 WHERE (dateTo IS NULL OR dateTo >= DATE'2018-02-01')**

**6 AND dateFrom < DATE'2018-03-01'**

**7 GROUP BY h.hotelName**

**8 ORDER BY h.hotelName**

**9 ;**

**HOTELNAME COUNT(DISTINCTB.GUESTNO)**

**---------------- ------------------------**

**Delta Inn 2**

**Grosvenor Hotel 5**

**Grosvenor Inn 3**

**Holiday Inn 1**

**Imperial Palace 2**

**Meridian Hotel 1**

**Park Royal Hotel 1**

**The Ramada 1**

**8 rows selected.**

**SQL> -- Q3. The details of all rooms at the Grosvenor Hotel.**

**SQL> SELECT r.hotelNo, r.roomNo, r.type, r.price, g.guestName**

**2 FROM Room r**

**3 LEFT JOIN**

**4 (SELECT b.hotelNo, b.roomNo, b.guestNo**

**5 FROM Booking b**

**6 WHERE dateFrom <= DATE'2018-02-05'**

**7 AND (dateTo IS NULL OR dateTo >= Date'2018-02-05')) b**

**8 ON r.hotelNo = b.hotelNo**

**9 AND r.roomNo = b.roomNo**

**10 LEFT JOIN Guest g**

**11 ON b.guestNo = g.guestNo**

**12 WHERE r.hotelNo IN**

**13 (SELECT h.hotelNo**

**14 FROM Hotel h**

**15 WHERE h.hotelName LIKE '%Grosvenor%')**

**16 ORDER BY r.hotelNo, r.roomNo**

**17 ;**

**HOTELNO ROOMNO TYPE PRICE GUESTNAME**

**---------- ---------- -------- ---------- ---------------**

**1 1 Single 40**

**1 2 Single 40**

**1 3 Single 40**

**1 4 Single 40 Sundeep Mohan**

**1 5 Double 55**

**1 6 Double 55**

**1 7 Double 55 Eileen Reynolds**

**1 8 Double 55**

**1 9 Family 85**

**1 10 Family 90**

**1 11 Deluxe 110**

**HOTELNO ROOMNO TYPE PRICE GUESTNAME**

**---------- ---------- -------- ---------- ---------------**

**1 12 Deluxe 120**

**1 13 Deluxe 120**

**8 1 Double 95 Rick Hamilton**

**8 2 Double 95**

**8 3 Double 95**

**8 4 Double 95**

**8 5 Double 95**

**8 6 Family 125**

**8 7 Family 125**

**8 8 Family 125**

**8 9 Family 125**

**HOTELNO ROOMNO TYPE PRICE GUESTNAME**

**---------- ---------- -------- ---------- ---------------**

**8 10 Family 125**

**8 11 Deluxe 155**

**8 12 Deluxe 155**

**8 13 Deluxe 155**

**8 14 Deluxe 155**

**8 15 Deluxe 155 Tony Saunders**

**8 16 Single 45**

**8 17 Single 45**

**8 18 Single 45**

**8 19 Single 45**

**8 20 Single 45 Sundeep Mohan**

**33 rows selected.**

**SQL> -- Q4. List the rooms that are currently unoccupied.**

**SQL> -- Use NOT IN**

**SQL> SELECT r.hotelNo, r.roomNo**

**2 FROM Room r**

**3 WHERE (r.hotelNo, r.roomNo) NOT IN**

**4 (SELECT b.hotelNo, b.roomNo**

**5 FROM Booking b**

**6 WHERE dateFrom <= DATE'2018-02-05'**

**7 AND (dateTo IS NULL OR dateTo >= Date'2018-02-05'))**

**8 AND r.hotelNo IN**

**9 (SELECT h.hotelNo**

**10 FROM Hotel h**

**11 WHERE h.hotelName LIKE '%Grosvenor%')**

**12 ORDER BY r.hotelNo, r.roomNo**

**13 ;**

**HOTELNO ROOMNO**

**---------- ----------**

**1 1**

**1 2**

**1 3**

**1 5**

**1 6**

**1 8**

**1 9**

**1 10**

**1 11**

**1 12**

**1 13**

**HOTELNO ROOMNO**

**---------- ----------**

**8 2**

**8 3**

**8 4**

**8 5**

**8 6**

**8 7**

**8 8**

**8 9**

**8 10**

**8 11**

**8 12**

**HOTELNO ROOMNO**

**---------- ----------**

**8 13**

**8 14**

**8 16**

**8 17**

**8 18**

**8 19**

**28 rows selected.**

**SQL> -- Q5. List the rooms that are currently unoccupied.**

**SQL> -- Use NOT EXISTS**

**SQL> SELECT r.hotelNo, r.roomNo**

**2 FROM Room r**

**3 WHERE NOT EXISTS**

**4 (SELECT b.hotelNo, b.roomNo**

**5 FROM Booking b**

**6 WHERE dateFrom <= DATE'2018-02-05'**

**7 AND (dateTo IS NULL OR dateTo >= Date'2018-02-05')**

**8 AND r.hotelNo = b.hotelNo**

**9 AND r.roomNo = b.roomNo)**

**10 AND r.hotelNo IN**

**11 (SELECT h.hotelNo**

**12 FROM Hotel h**

**13 WHERE h.hotelName LIKE '%Grosvenor%')**

**14 ORDER BY r.hotelNo, r.roomNo**

**15 ;**

**HOTELNO ROOMNO**

**---------- ----------**

**1 1**

**1 2**

**1 3**

**1 5**

**1 6**

**1 8**

**1 9**

**1 10**

**1 11**

**1 12**

**1 13**

**HOTELNO ROOMNO**

**---------- ----------**

**8 2**

**8 3**

**8 4**

**8 5**

**8 6**

**8 7**

**8 8**

**8 9**

**8 10**

**8 11**

**8 12**

**HOTELNO ROOMNO**

**---------- ----------**

**8 13**

**8 14**

**8 16**

**8 17**

**8 18**

**8 19**

**28 rows selected.**

**SQL> -- Q6. List the rooms that are currently unoccupied.**

**SQL> -- Use LEFT JOIN**

**SQL> SELECT r.hotelNo, r.roomNo**

**2 FROM Room r**

**3 LEFT JOIN**

**4 (SELECT b.hotelNo, b.roomNo**

**5 FROM Booking b**

**6 WHERE dateFrom <= DATE'2018-02-05'**

**7 AND (dateTo IS NULL OR dateTo >= Date'2018-02-05')) b**

**8 ON r.hotelNo = b.hotelNo**

**9 AND r.roomNo = b.roomNo**

**10 WHERE r.hotelNo IN**

**11 (SELECT h.hotelNo**

**12 FROM Hotel h**

**13 WHERE h.hotelName LIKE '%Grosvenor%')**

**14 AND b.roomNo IS NULL**

**15 ORDER BY r.hotelNo, r.roomNo**

**16 ;**

**HOTELNO ROOMNO**

**---------- ----------**

**1 1**

**1 2**

**1 3**

**1 5**

**1 6**

**1 8**

**1 9**

**1 10**

**1 11**

**1 12**

**1 13**

**HOTELNO ROOMNO**

**---------- ----------**

**8 2**

**8 3**

**8 4**

**8 5**

**8 6**

**8 7**

**8 8**

**8 9**

**8 10**

**8 11**

**8 12**

**HOTELNO ROOMNO**

**---------- ----------**

**8 13**

**8 14**

**8 16**

**8 17**

**8 18**

**8 19**

**28 rows selected.**

**SQL> -- Q7. List the rooms that are currently unoccupied.**

**SQL> -- Use MINUS**

**SQL> SELECT r.hotelNo, r.roomNo**

**2 FROM Room r**

**3 WHERE r.hotelNo IN**

**4 (SELECT h.hotelNo**

**5 FROM Hotel h**

**6 WHERE h.hotelName LIKE '%Grosvenor%')**

**7 MINUS**

**8 SELECT r2.hotelNo, r2.roomNo**

**9 FROM Room r2**

**10 JOIN Booking b**

**11 ON r2.hotelNo = b.hotelNo**

**12 AND r2.roomNo = b.roomNo**

**13 WHERE dateFrom <= DATE'2018-02-05'**

**14 AND (dateTo IS NULL OR dateTo >= Date'2018-02-05')**

**15 ORDER BY hotelNo, roomNo**

**16 ;**

**HOTELNO ROOMNO**

**---------- ----------**

**1 1**

**1 2**

**1 3**

**1 5**

**1 6**

**1 8**

**1 9**

**1 10**

**1 11**

**1 12**

**1 13**

**HOTELNO ROOMNO**

**---------- ----------**

**8 2**

**8 3**

**8 4**

**8 5**

**8 6**

**8 7**

**8 8**

**8 9**

**8 10**

**8 11**

**8 12**

**HOTELNO ROOMNO**

**---------- ----------**

**8 13**

**8 14**

**8 16**

**8 17**

**8 18**

**8 19**

**28 rows selected.**

**SQL> -- Q8. The average number of bookings for each hotel.**

**SQL> SELECT COUNT(\*)/COUNT(DISTINCT b.hotelNo)**

**2 FROM Booking b**

**3 WHERE (b.dateTo IS NULL OR b.dateTo >= DATE'2018-02-01')**

**4 AND b.dateFrom < DATE'2018-03-01'**

**5 ;**

**COUNT(\*)/COUNT(DISTINCTB.HOTELNO)**

**---------------------------------**

**2.125**

**SQL> -- Q9. The lost income from unoccupied rooms at each hotel today.**

**SQL> SELECT h.hotelNo, h.hotelName, SUM(r.price)**

**2 FROM Hotel h**

**3 JOIN Room r**

**4 ON h.hotelNo = r.hotelNo**

**5 WHERE (h.hotelNo,r.roomNo) NOT IN**

**6 (SELECT b.hotelNo, b.roomNo**

**7 FROM Booking b**

**8 WHERE dateFrom <= DATE'2018-02-05'**

**9 AND (dateTo IS NULL OR dateTo >= Date'2018-02-05'))**

**10 GROUP BY h.hotelNo, h.hotelName**

**11 ORDER BY h.hotelNo**

**12 ;**

**HOTELNO HOTELNAME SUM(R.PRICE)**

**---------- ---------------- ------------**

**1 Grosvenor Hotel 810**

**2 Meridian Hotel 1060**

**3 Holiday Inn 545**

**4 The Ramada 2600**

**5 Imperial Palace 2070**

**6 Park Royal Hotel 1072**

**7 Delta Inn 900**

**8 Grosvenor Inn 1805**

**8 rows selected.**

**SQL> -- Q10. Create a view containing the account**

**SQL> -- for each guest at the Grosvenor Hotel.**

**SQL> DROP VIEW guestAccount**

**2 ;**

**View dropped.**

**SQL> CREATE VIEW guestAccount**

**2 AS**

**3 SELECT r.roomNo AS Room**

**4 ,g.guestName AS Name**

**5 ,b.dateFrom AS "Check-in"**

**6 ,Date'2018-02-05' AS "Check-out"**

**7 ,r.price AS Rate**

**8 ,(Date'2018-02-05' - b.dateFrom) AS "#Days"**

**9 ,r.price \* (Date'2018-02-05' - b.dateFrom) AS Total**

**10 FROM Room r**

**11 JOIN Booking b**

**12 ON r.hotelNo = b.hotelNo**

**13 AND r.roomNo = b.roomNo**

**14 JOIN Guest g**

**15 ON b.guestNo = g.guestNo**

**16 WHERE dateFrom <= DATE'2018-02-05'**

**17 AND (dateTo IS NULL OR dateTo >= Date'2018-02-05')**

**18 AND r.hotelNo IN**

**19 (SELECT h.hotelNo**

**20 FROM Hotel h**

**21 WHERE h.hotelName LIKE '%Grosvenor%')**

**22 ;**

**View created.**

**SQL> SELECT \***

**2 FROM guestAccount**

**3 ;**

**ROOM NAME Check-in Check-out RATE #Days**

**---------- --------------- ---------- ---------- ---------- ----------**

**TOTAL**

**----------**

**4 Sundeep Mohan 2018-01-21 2018-02-05 40 15**

**600**

**7 Eileen Reynolds 2018-01-30 2018-02-05 55 6**

**330**

**15 Tony Saunders 2018-02-03 2018-02-05 155 2**

**310**

**ROOM NAME Check-in Check-out RATE #Days**

**---------- --------------- ---------- ---------- ---------- ----------**

**TOTAL**

**----------**

**20 Sundeep Mohan 2018-02-01 2018-02-05 45 4**

**180**

**1 Rick Hamilton 2018-01-19 2018-02-05 95 17**

**1615**

**SQL> -- Q11. Find special guests.**

**SQL> SELECT g.guestName, g.guestAddress**

**2 FROM Guest g**

**3 WHERE g.guestNo IN**

**4 (SELECT b.guestNo**

**5 FROM Booking b**

**6 WHERE b.hotelNo IN**

**7 (SELECT h.hotelNo**

**8 FROM Hotel h**

**9 WHERE h.hotelName LIKE '%Grosvenor%'))**

**10 AND g.guestNo IN**

**11 (SELECT b.guestNo**

**12 FROM Booking b**

**13 WHERE b.hotelNo IN**

**14 (SELECT h.hotelNo**

**15 FROM Hotel h**

**16 WHERE h.hotelName LIKE '%Park Royal Hotel%'))**

**17 AND g.guestNo NOT IN**

**18 (SELECT b.guestNo**

**19 FROM Booking b**

**20 WHERE b.hotelNo IN**

**21 (SELECT h.hotelNo**

**22 FROM Hotel h**

**23 WHERE h.hotelName LIKE '%Meridian Hotel%'))**

**24 ;**

**GUESTNAME GUESTADDRESS**

**--------------- ----------------------------------------**

**Peter Kennedy 20 Austin Drive, London**

**Ken Matsuda 333 100th Avenue, Vancouver**

**SQL> --**

**SQL> SPOOL OFF**