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

**SQL> --**

**SQL> -- COMP 2714**

**SQL> -- SET 2C**

**SQL> -- Assignment Asn03**

**SQL> -- Kobunnoi, Kunlaya A00959419**

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

**SQL> --**

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

**SQL> -- BUILT DATABASE**

**SQL> -- START C:\Users\Kunlaya\workspace\COMP2714\Assignments\Assignment3\Asn3SetupHotels.sql**

**SQL> --**

**SQL> -- ASSIGNMENT**

**SQL> -- START C:\Users\Kunlaya\workspace\COMP2714\Assignments\Assignment3\Asn03\_Kobunnoik.sql**

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

**SQL> --**

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

**Session altered.**

**SQL> --**

**SQL> SELECT SYSDATE**

**2 FROM DUAL;**

**SYSDATE**

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

**2016-10-06**

**SQL> --**

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

**SQL> --Q1) What is the average price of a room in London?**

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

**SQL> -- A) Using join?**

**SQL> SELECT AVG(r.price) AS "Average price In London"**

**2 FROM Room r**

**3 INNER JOIN Hotel h**

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

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

**6 ;**

**Average price In London**

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

**55**

**SQL> -- B) Do this using IN subquery?**

**SQL> SELECT AVG(price) AS "Average price in London"**

**2 FROM Room**

**3 WHERE hotelNo IN**

**4 (SELECT hotelNo**

**5 FROM Hotel**

**6 WHERE hotelAddress LIKE'%London%'**

**7 );**

**Average price in London**

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

**55**

**SQL>**

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

**SQL> -- Q2) How many different guests have made bookings for August?**

**SQL> -- Use the month of 2016-10 instead of August, and do the**

**SQL> -- query for each hotel, listing in hotelName order:**

**SQL> -- i.e.) How many different guests have made bookings for 2016-10**

**SQL> -- for each hotel.**

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

**SQL> SELECT h.hotelName, COUNT(DISTINCT b.guestNo) AS "Number of guest"**

**2 FROM Booking b**

**3 JOIN Hotel h ON h.hotelNo = b.hotelNo**

**4 WHERE (dateTo IS NULL OR dateTo >= DATE'2016-10-01')**

**5 AND dateFrom < DATE'2016-11-01'**

**6 GROUP BY h.hotelName**

**7 ORDER BY h.hotelName ASC**

**8 ;**

**HOTELNAME Number of guest**

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

**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> --**

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

**SQL> -- Q3) List the details of all rooms at the Grosvenor Hotel, including**

**SQL> -- the name of the guest staying in the room, if the room is occupied**

**SQL> -- Use 2016-10-06 as today's date. Include all 'Grosvenor' hotels.**

**SQL> -- List in hotelNo, roomNo order.**

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

**SQL> SELECT h.hotelNo,**

**2 r.roomNo,**

**3 r.type,**

**4 r.price,**

**5 g.guestname**

**6 FROM Room r**

**7 INNER JOIN**

**8 (SELECT \***

**9 FROM Hotel**

**10 WHERE hotelName LIKE '%Grosvenor%'**

**11 ) h ON r.hotelNo = h.hotelNo**

**12 LEFT JOIN**

**13 (SELECT \***

**14 FROM Booking**

**15 WHERE dateFrom <= DATE'2016-10-06'**

**16 AND (dateTo IS NULL OR dateTo >= DATE'2016-10-06')**

**17 ) b ON h.hotelNo = b.hotelNo AND r.roomNo = b.roomNo**

**18 LEFT JOIN**

**19 Guest g ON b.guestNo = g.guestNo**

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

**21 ;**

**HOTELNO ROOMNO TYPE PRICE GUESTNAME**

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

**1 1 Single 40**

**1 2 Single 40**

**1 3 Single 40 Diana Darby**

**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> --**

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

**SQL> --Q4) List the rooms that are currently unoccupied at all 'Grosvenor' hotels**

**SQL> --List in hotelNo, roomNo oder. Use NOT IN**

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

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

**2 FROM Hotel h**

**3 JOIN Room r**

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

**5 WHERE h.hotelName LIKE '%Grosvenor%'**

**6 AND r.roomNo NOT IN**

**7 (SELECT b.roomNo**

**8 FROM Booking b**

**9 WHERE dateFrom <= DATE'2016-10-06'**

**10 AND (dateTo IS NULL OR dateTo >= DATE'2016-10-06')**

**11 AND b.hotelNo = r.hotelNo)**

**12 ORDER BY hotelNo ASC, roomNo ASC;**

**HOTELNO ROOMNO**

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

**1 1**

**1 2**

**1 5**

**1 6**

**1 8**

**1 9**

**1 10**

**1 11**

**1 12**

**1 13**

**8 2**

**HOTELNO ROOMNO**

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

**8 3**

**8 4**

**8 5**

**8 6**

**8 7**

**8 8**

**8 9**

**8 10**

**8 11**

**8 12**

**8 13**

**HOTELNO ROOMNO**

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

**8 14**

**8 16**

**8 17**

**8 18**

**8 19**

**27 rows selected.**

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

**SQL> --Q5)List the rooms that are currently unoccupied at all 'Grosvenor' hotels**

**SQL> -- List in hotelNo, roomNo order. Use NOT EXISTS.**

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

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

**2 FROM Hotel h**

**3 JOIN Room r**

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

**5 WHERE h.hotelName LIKE '%Grosvenor%'**

**6 AND NOT EXISTS**

**7 (SELECT \***

**8 FROM Booking b**

**9 WHERE dateFrom <= DATE'2016-10-06'**

**10 AND (dateTo IS NULL OR dateTo >= DATE'2016-10-06')**

**11 AND b.hotelNo = r.hotelNo**

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

**13 ORDER BY hotelNo ASC, roomNo ASC**

**14 ;**

**HOTELNO ROOMNO**

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

**1 1**

**1 2**

**1 5**

**1 6**

**1 8**

**1 9**

**1 10**

**1 11**

**1 12**

**1 13**

**8 2**

**HOTELNO ROOMNO**

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

**8 3**

**8 4**

**8 5**

**8 6**

**8 7**

**8 8**

**8 9**

**8 10**

**8 11**

**8 12**

**8 13**

**HOTELNO ROOMNO**

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

**8 14**

**8 16**

**8 17**

**8 18**

**8 19**

**27 rows selected.**

**SQL> --**

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

**SQL> -- Q6) List the rooms that are currently unocupied at all 'Grosvenor' hotels**

**SQL> -- List in hotelNo, roomNo roder. Use LEFT JOIN**

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

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

**2 FROM Room r**

**3 LEFT JOIN Hotel h ON h.hotelNo = r.hotelNo**

**4 LEFT JOIN (**

**5 SELECT \***

**6 FROM Booking**

**7 WHERE dateFrom <= DATE'2016-10-06'**

**8 AND (dateTo IS NULL OR dateTo >= DATE'2016-10-06')**

**9 ) b ON b.hotelNo = h.hotelNo**

**10 AND b.roomNo = r.roomNo**

**11 LEFT JOIN Guest g ON g.guestNo = b.guestNo**

**12 WHERE g.guestNo is NULL**

**13 AND h.hotelName LIKE '%Grosvenor%'**

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

**15 ;**

**HOTELNO ROOMNO**

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

**1 1**

**1 2**

**1 5**

**1 6**

**1 8**

**1 9**

**1 10**

**1 11**

**1 12**

**1 13**

**8 2**

**HOTELNO ROOMNO**

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

**8 3**

**8 4**

**8 5**

**8 6**

**8 7**

**8 8**

**8 9**

**8 10**

**8 11**

**8 12**

**8 13**

**HOTELNO ROOMNO**

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

**8 14**

**8 16**

**8 17**

**8 18**

**8 19**

**27 rows selected.**

**SQL> --**

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

**SQL> --Q7) List the rooms that are currently unoccupied at all 'Grosvenor' hotels**

**SQL> -- List in hotelNo, roomNo order. Use MINUS**

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

**SQL> SELECT hotelNo, roomNo**

**2 FROM Hotel**

**3 NATURAL JOIN Room**

**4 WHERE hotelName LIKE '%Grosvenor%'**

**5 MINUS**

**6 SELECT hotelNo, roomNo**

**7 From Hotel**

**8 NATURAL JOIN Room**

**9 NATURAL JOIN Booking**

**10 WHERE dateFrom <= DATE'2016-10-06'**

**11 AND (dateTo IS NULL OR dateTo >= DATE'2016-10-06')**

**12 ORDER By hotelNo, roomNo**

**13 ;**

**HOTELNO ROOMNO**

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

**1 1**

**1 2**

**1 5**

**1 6**

**1 8**

**1 9**

**1 10**

**1 11**

**1 12**

**1 13**

**8 2**

**HOTELNO ROOMNO**

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

**8 3**

**8 4**

**8 5**

**8 6**

**8 7**

**8 8**

**8 9**

**8 10**

**8 11**

**8 12**

**8 13**

**HOTELNO ROOMNO**

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

**8 14**

**8 16**

**8 17**

**8 18**

**8 19**

**27 rows selected.**

**SQL> --**

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

**SQL> --Q8) What is the average number of bookings for each hotel in**

**SQL> -- 2016-10 instead of August**

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

**SQL> SELECT AVG(COUNT(guestNo)) AS "Average of Bookings"**

**2 FROM Booking b**

**3 WHERE (dateTo IS NULL OR dateTo >= DATE'2016-10-01')**

**4 AND dateFrom <= DATE'2016-10-31'**

**5 GROUP BY b.hotelNo;**

**Average of Bookings**

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

**2.125**

**SQL> --**

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

**SQL> --Q9) What is the lost income from unoccupied rooms at each hotel today?**

**SQL> -- 2016-10-06**

**SQL> -- list HotelNo, hotelName, LostIncome in hotelNo order.**

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

**SQL> SELECT h.hotelNo,**

**2 h.hotelName**

**3 SUM(r.price) AS "Lost Income"**

**4 FROM Room r**

**5 INNER JOIN Hotel h**

**6 ON r.hotelNo = h.hotelNo**

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

**8 (SELECT hotelNo, roomNo**

**9 FROM Booking b**

**10 WHERE dateFrom <= DATE'2016-10-06'**

**11 AND (dateTo IS NULL OR dateTo >= DATE'2016-10-06')**

**12 )**

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

**14 ORDER BY h.hotelNo;**

**HOTELNO HOTELNAME Lost Income**

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

**1 Grosvenor Hotel 770**

**2 Meridian Hotel 1060**

**3 Holiday Inn 545**

**4 The Ramada 2600**

**5 Imperial Palace 1780**

**6 Park Royal Hotel 1072**

**7 Delta Inn 900**

**8 Grosvenor Inn 1805**

**8 rows selected.**

**SQL>**

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

**SQL> -- 10. Create a view containing the guests for each guest at the Grosvenor**

**SQL> -- Use 2016-10-06 as today, and guestAccount as view name. [The account info**

**SQL> -- for each guest means: Room (roomNo), Name (guestName), Check-in**

**SQL> -- (dateFrom), Check-out (dateTo=today), Rate (price), #Days (calculate from**

**SQL> -- dateTo and dateFrom), and Total (calculate from dateTo, dateFrom and price]**

**SQL> -- Add a query to test the view.**

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

**SQL> DROP VIEW guestAccount;**

**View dropped.**

**SQL>**

**SQL> CREATE VIEW guestAccount**

**2 (Room, Name, "Check-In", "Check-Out", Rate, Days, Total)**

**3 AS**

**4 SELECT b.roomNo, g.guestName, b.dateFrom, DATE'2016-10-06', r.price,**

**5 (DATE'2016-10-06' - b.dateFrom), (DATE'2016-10-06' - b.dateFrom)\*r.price**

**6 FROM Booking b**

**7 INNER JOIN Room r**

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

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

**10 INNER JOIN Guest g**

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

**12 WHERE dateFrom <= DATE'2016-10-06'**

**13 AND (b.dateTo >= DATE'2016-10-06' OR b.dateTo IS NULL)**

**14 AND b.hotelNo IN**

**15 (SELECT h.hotelNo**

**16 FROM Hotel h**

**17 WHERE h.hotelName LIKE 'Grosvenor Hotel');**

**View created.**

**SQL>**

**SQL>**

**SQL> SELECT \***

**2 FROM guestAccount**

**3 ORDER BY Room;**

**ROOM NAME Check-In Check-Out RATE DAYS**

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

**TOTAL**

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

**3 Diana Darby 2016-10-05 2016-10-06 40 1**

**40**

**4 Sundeep Mohan 2016-09-21 2016-10-06 40 15**

**600**

**7 Eileen Reynolds 2016-09-30 2016-10-06 55 6**

**330**

**SQL> ;**

**1 SELECT \***

**2 FROM guestAccount**

**3\* ORDER BY Room**

**SQL>**

**SQL>**

**SQL> --**

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

**SQL> --**

**SQL> SPOOL OFF**