K200353 DB Assignment 4 Date:

Q3

a Returns the HotelNo's in the table of Rooms where the price > 50

b Returns all the tuples with the inner join of both the Hotels and Rooms.

c Returns the hotelName where the price > 50 via inner join of hotels and rooms through hotelNO. ~~A relation~~

d Return all guestName whose hotels have been booked in London

Q1 a Select HoteNO FROM ROOM where price > 50;

b Select ~~Hotel.HotelNo~~ * FROM Hotel, Rooms where Hotel.hotelNO = Rooms.hotelNo;

c select HotelName From Hotel, Room where Hotel.hoteNO = Room.HotelNO AND Room.price > 50;

d Select g.GuestName, b.hotelNO
From Booking b, Guest g
where b.guestNO = g.guestNO AND b.hotelNO IN (select hotelNO FROM Hotel where City = 'Canada');

Date:

Q2 i) Hotel

b) $\sigma_{price<20}(\sigma_{type='s'}(Room))$ OR $\sigma_{price<20 \wedge type='s'}(Room)$

c) Solution 1:-

$\Pi_{Guest.guestName, Hotel.city}(Hotel \bowtie_{Hotel.hotelNo = Booking.hotelNo} (Booking \bowtie_{Booking.guestNo = Guest.guestNo} Guest))$

Solution 2:-

$\Pi_{Guest.GuestName, Hotel.city}(\sigma_{Hotel.HotelNo = Booking.hotelNo \wedge Booking.guestNo = Guest.guestNo}(Hotel \times Booking \times Guest))$

d) $\Pi_{Room.price, Room.type}(Room \bowtie_{Room.HotelNo = Hotel.HotelNo}(\sigma_{Hotel.hotelNo = 'Grosvenor'}(Hotel)))$

e) Solution 1:-

$\Pi_{Guest.GuestNo, Guest.Address, Guest.GuestName}(Guest \bowtie_{Guest.guestNo = Booking.guestNo} Booking \bowtie_{Booking.hotelNo = Hotel.hotelNo} (\sigma_{Hotel.hotelName = 'Grosvenor'}(Hotel)))$

Solution 2:-

$\Pi_{Guest.guestName, Guest.GuestNo, Guest.guestAddress}(\sigma_{Hotel.hotelNo = Booking.hotelNo \wedge Guest.guestNo = Booking.guestNo \wedge Hotel.hotelNo = "Grosvenor"}(Hotel \times Booking \times Guest))$

Date:

f. $\Pi_{roomNo, hotelNO, type, price, guestNos}$ (Room ⋈ Room.hotelNO = booking.hotelNO Booking ⋈ booking.hotelNO = Hotel.hotelNO ($\sigma_{Hotel = 'Grosvenor'}$ (Hotel))

g. $\Pi_{guestNo, guestName, guestAddress}$ (Guest ⋈ Guest.guestNO = Booking.guestNO Booking ⋈ Booking.hotelNO = Hotel.hotelNO ($\sigma_{hotelName = 'Grosvenor'}$ (Hotel)))

h. $\Pi_{roomNo, hotelNo, type}$ (Room ⋈ Room.hotelNo = Hotel.hotelNO ($\sigma_{hotelNo = 'Grosnover'}$ (Hotel)

with the help of the view, the main table can't be changed & the user can simply see a list of all available rooms & types at the 'Grosnover' Hotel.