DB ASSIGNMENT 04

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20K0183 ; Sec: B

QUESTION 01

a)

This will produce a relation with a single attribute (Hotel No) giving the no. of those hotels with a room price greater than £50.

b)

This will produce a join of Hotel and Room relations containing all the attributes of both Hotel and Room. Basically, it will produce a relation containing all rooms and all hotels

c) This will produce a join of Hotel and those tuples of Room with a price greater than £50.
It will produce a relation containing all hotel names with a room price above £50.

d) This relation will produce a list of all the guests who have booked all hotels in London

QUESTION 02

a)

Hotel

b)

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

c)

$\Pi_{guestName, guestAddress}(Guest)$

d)

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

e)

$Guest \bowtie_{guestNo}(\sigma_{DateFrom \leq '15-11-22' \wedge DateTo \geq '15-11-22'}(Booking \bowtie_{hotelNo}(\sigma_{hotelName='Grosvenor Hotel'}(Hotel))))$

f)

//Outer join

$(Room \bowtie_{hotelNo} (\sigma_{hotelName = 'Grosvenor\ hotel'} (Hotel)))$

$\Pi_{guestName, hotelNo, roomNo}($

$(Guest \bowtie_{guestNo} (\sigma_{dateFrom \leq '15\text{-}11\text{-}22' \wedge dateTo \geq '15\text{-}11\text{-}22'}($

$Booking \bowtie_{hotelNo} (\sigma_{hotelName = 'Grosvenor\ hotel'} (Hotel))))$

g)

$\Pi_{guestNo, guestName, guestAddress}($

$Guest \bowtie_{guestNo} (\sigma_{dateFrom \leq '15\text{-}11\text{-}22' \wedge dateTo \geq '15\text{-}11\text{-}22'}($

$Booking \bowtie_{hotelNo} (\sigma_{hotelName = 'Grosvenor\ hotel'} (Hotel))))$

h)

$\Pi_{roomNo, hotelNo, type}$ (Room $\bowtie$ hotelNo ($\sigma_{hotelName = 'Grosvenor Hotel'}$ (Hotel)))

Advantages: Security & Reduced Complexity

End of Assignment