Relational algebra

Table

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project: π, select: σ , join: ⨝, left outer join ⟕, right outer join ⟖, full outer join ⟗, intersect ⋂, union ⋃, minus -

iii)

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List all names and addresses of guests currently staying in deluxe room of any hotel (assume that if the guest has a tuple in the BOOKING relation, then they are currently staying in the hotel)

Display ; all names and addresses of guests

C:guests currently staying in deluxe room of any hotel

project: π, select: σ , join: ⨝, left outer join ⟕, right outer join ⟖, full outer join ⟗, intersect ⋂, union ⋃, minus -

delux\_room = π hotel\_no, room\_no σ room\_type = ‘delux’

booking\_guest\_no\_in\_Droom = π guest\_no (π guest\_no,hotel\_no, room\_no booking⨝ delux\_room )

finalAns = π guest\_name, guest\_address ( booking\_guest\_no\_in\_Droom ⨝ guest )

List all names and addresses of guests currently staying at the Grosvenor Hotel (assume that if the guest has a tuple in the BOOKING relation, then they are currently staying in the hotel)

Dis : all names and addresses of guests

Ghotel = π hotel\_id (σ = ‘Grosvenor Hotel’)(hotel)

GuestBookingInG = π guest\_id (π hotel\_id, guest\_id (booking) ⨝ Ghotel)

Guest= π guest\_name, guest\_address (GuestBookingInG⨝ guest )

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project: π, select: σ , join: ⨝, left outer join ⟕, right outer join ⟖, full outer join ⟗, intersect ⋂, union ⋃, minus -

List categories (positions) of staff who have made sales

Staff\_made\_sales

π staff\_position (π staff\_name (staff) ⨝ π staff\_name =sold\_by (sale) )

project: π, select: *σ* , join: ⨝, left outer join ⟕, right outer join ⟖, full outer join ⟗, intersect ⋂, union ⋃, minus -

Text

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Write relational algebra queries to answer the following.For each query, return EXACTLY (and only) what is asked for.State any assumptions that you need to make.

a) Find the titles of all the movies that have only male movie stars

nonmale-star = π starId (*σ gender <> male ) (MOviestar)*

maleStar= π movieid *(starIn* ⨝ nonmale-star*)*

*finalans=* π movietitle (movie) - π movietitle (movie ⨝ maleStar )

B ) Find the titles of all movies where an actor plays him/herself (e.g., in “Being John Malkovich”, John Malkovich plays John Malkovich

c) Find the titles of all movies that have all the female actors from the movie titled “The Thing” in them.

Thething = Π movieid (*σ title = ‘*The Thing*’)(movie)*

StarIn The Thing = Π starId (StarIn ⨝ Thething*)*

*femaleStarInTheThing =*  Π starId *σ* gender = ‘female’(StarIn The Thing ⨝ star *)*