T1-tsa-ra.docx

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Unit Code: FIT2094

Applied Class No: A09

Comments for your marker:

Write the **relational algebra operations** for each of Task 1 queries below (your answer must show an *understanding of query efficiency*).

List of symbols for copying/pasting as you enter your answers below:

project: π, select: σ, join: ⨝, intersect: ⋂, union: ⋃, minus: -

1(a) List the id, name and state of all towns which do not have any point of interest

R = π town\_id, town\_name, town\_state (σ R1 TOWN)

R1 = (σ town\_id TOWN - σ town\_id POINT\_OF\_INTEREST)

1(b) List the id, name, street address and description of all points of interests which fall under ‘Nature and Wildlife’ type and have a review rating above 3.

π poi\_id, poi\_name, poi\_street\_address, poi\_description(σpoi\_review\_rating>3, poi\_type\_id =R1 POINT\_OF\_INTEREST )

R1 = π poi\_type\_id (σpoi\_type\_descr = ‘Nature and Wildlife’ POI\_TYPE )

1(c) List member id, member given name, poi id, poi name, review date time, review rating and review comment of all reviews written for POIs which are located in a town named Broome (latitude:-17.9644, longitude:122.2304)

π member\_id, member\_gname, poi\_id,poi\_name,review\_date\_time,review\_rating,review\_comment ( POINT\_OF\_INTEREST ⨝R3=REVIEW.poi\_id REVIEW ⨝R5=MEMBER.member\_id MEMBER)

R5 = π member\_id (R4)

R4 = σ poi\_id =R3 (REVIEW) – get all reviews for broom

R3 = π poi\_id (R2) – get poi\_id for broom

R2 = σ town\_id =R1 (POINT\_OF\_INTEREST) – get all poi details for broom

R1 = π town\_id (σ town\_lat = -17.9644,town\_long= 122.2304 TOWN) – Get broom town id