T1-tsa-ra.docx

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Unit Code: FIT2094

Applied Class No: Applied 01, Melbourne Wed 18:00

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)

R1 = π town\_id POINT\_OF\_INTEREST

R2 = π town\_id, town\_name, town\_state TOWN

R = R1 - R2

1(b)

R1 = POI\_TYPE ⨝ POINT\_OF\_INTEREST

R2 = σ poi\_type\_descr = 'Nature and Wildlife' R1

R3 = σ poi\_review\_rating > 3 R2

R = π poi\_id, poi\_name, poi\_street\_address, poi\_description R3

1(c)

R1 = σ town\_name='Broome' and town\_lat=-17.9644 and town\_long=122.2304 TOWN

R2 = (π town\_id R1) ⨝ (π town\_id, poi\_id, poi\_name POINT\_OF\_INTEREST)

R3 = (π poi\_id, poi\_name R2) ⨝ (π poi\_id, review\_date\_time, review\_rating, review\_comment, member\_id REVIEW)

R4 = (π member\_id, poi\_id, poi\_name, review\_date\_time, review\_rating, review\_comment R3) ⨝ (π member\_id, member\_gname MEMBER)

R = π member\_id, member\_gname, poi\_id, poi\_name, review\_date\_time, review\_rating, review\_comment R4