T1-tsa-ra.docx

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Unit Code: FIT9132

Applied Class No: A03

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)

R = ((π town\_id TOWN) – (π town\_id POINT\_OF\_INTEREST)) ⨝ (π town\_id, town\_name, town\_state TOWN)

1(b)

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

R = π poi\_id, poi\_name, poi\_street\_address, poi\_description (POI\_TYPE\_ID ⨝ (π poi\_type\_id, poi\_id, poi\_name, poi\_street\_address, poi\_description (σ poi\_review\_rating > 3.0 POINT\_OF\_INTEREST)))

1(c)

BROOME\_ID = π town\_id (σ town\_name = ‘Broome’, town\_lat = -17.9644, town\_long = 122.2304 TOWN)

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

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

R = R1 ⨝ R2