T1-tsa-ra.docx

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Unit Code: FIT2094

Applied Class No: 3

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

1(b)

R1 = ((πpoi\_id, poi\_type\_id POINT\_OF\_INTEREST) ⨝ (πpoi\_type\_id (σpoi\_type\_descr = ‘Nature and Wildlife’ POI\_TYPE)))

R2 = ((πpoi\_id POINT\_OF\_INTEREST) ⨝ (πpoi\_id (σreview\_rating > 3 REVIEW)))

R = πpoi\_id, poi\_name, poi\_street\_address, poi\_description POINT\_OF\_INTEREST ⨝ (R1 ⋂ R2)

1(c)

R1 = (πpoi\_id, poi\_name, town\_id POINT\_OF\_INTEREST) ⨝ (πtown\_id (σtown\_name = ‘Broome’ and town\_lat = -17.9644 and town\_long = 122.2304))

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

R = πpoi\_id, poi\_name, member\_id, member\_gname, review\_date\_time, review\_rating, review\_comment (R1 ⨝ R2)