T1-tsa-ra.docx

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Unit Code: FIT3171
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)
$R = \pi_{town\_id, town\_name, town\_state}(TOWN) - \pi_{town\_id}(\sigma_{town\_id}(POINT\_OF\_INTEREST))$

1(b)
$R1 = \sigma_{review\_rating > 3}(REVIEW \bowtie POINT\_OF\_INTEREST)$

$R2 = \sigma_{poi\_type\_descr = \text{'Nature and Wildlife'}}(POINT\_OF\_INTEREST \bowtie POI\_TYPE)$

$R = \pi_{poi\_id, poi\_name, poi\_street\_address, poi\_description}(R1 \cap R2)$

1(c)
$R1 = \sigma_{town\_lat = -17.9644, town\_long = 122.2304}(TOWN)$

$R = \pi_{member\_id, member\_gname, poi\_id, poi\_name, review\_date\_time, review\_rating, review\_comment}(R1 \cap$
$(POINT\_OF\_INTEREST \bowtie POI\_TYPE \bowtie REVIEW \bowtie MEMBER))$