FIT9136 Assignment 2B

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<u>Unitcode</u> : FIT9132

<u>Applied No.</u> : A01 Wednesday 8am class G16 room

Task-1 Relational algebra

a) $R1 = \pi_{item\_id,item\_desc}(ITEM)$

$R2 = \pi_{item\_id}(\pi_{item\_id,service\_code}(APPTSERVICE\_ITEM) \bowtie \pi_{service\_code}(APPT\_SERV))$

$R3 = \pi_{item\_id,item\_desc}(R2 \bowtie \pi_{item\_id,item\_desc}(ITEM))$

$R = R1 - R3$

b) $R1 = \pi_{patient\_no,patient\_fname,patient\_lname,ec\_id}(\sigma_{patient\_city= \text{'Mooroolbark'}} (Patient))$

$R2 = \pi_{patient\_no,patient\_fname,patient\_lname,ec\_fname,ec\_lname,ec\_phone}(R1 \bowtie (EMERGENCY\_CONTACT))$

$R3 = \pi_{patient\_no}(\sigma_{appt\_datetime = \text{'08 September 2023'}}(APPOINTMENT))$

$R = \pi_{patient\_no,patient\_fname,patient\_lname,ec\_fname,ec\_lname,ec\_phone}(R2 \bowtie R3)$

c) $R1 = \pi_{spec\_id} (\sigma_{spec\_name = \text{'ENDODONTICS'}}(SPECIALISATION))$

$R2 = \pi_{provider\_code} (R1 \bowtie \pi_{provider\_code,spec\_id}(PROVIDER))$

$R3 = \pi_{patient\_no}(R2 \bowtie \pi_{provider\_code,patient\_no}(APPOINTMENT)$

$R = \pi_{patient\_no,patient\_fname,patient\_lname,patient\_contactemail}(R3 \bowtie \pi_{patient\_no,patient\_fname,patient\_lname,patient\_contactemail}(Patient))$