

## FIT3171 Assignment 1B- Assumptions

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- It is assumed that the address attributes of CENTRE and MEMBER are decomposable to street, town, and postcode

This structure is taken from the provided Monash Movement class staffing report

MEMBER and STAFF names have been decomposed into their family name and given names.

Centre Name and facility names are assumed to be simple attributes

- The family name and given name of staff members and Monash Movement members are assumed to be optional attributes  
Notably, the attributes for Facility name, Centre name, class description, facility description area assumed to be mandatory attributes
- Surrogate keys have been added for the following relations

Surrogate key	Natural PK	Justification
enrollment_no in ENROLMENT relation	centre_id, class_no, member_no	The natural PK is three attributes. The PK of this relation is also the PK of the MEMBER_ATTENDANCE relation, therefore, adding a surrogate key declutters the relation.
class_staff_no in CLASS_STAFF	centre_id, class_no, staff_no	The natural PK is three attributes
assessment_no in ASSESSMENT	member_no, assess_date	The natural PK attributes are of different types. Assessment Number is much more compact.

- The foreign key attribute of the unary relationship in MEMBER has been renamed to member\_referred.

Additionally, the below foreign key attributes have been renamed for clarity

Relation	Renamed attribute	New name
CENTRE	FK attribute from STAFF_MEMBER -> staff_id	manager_staff_id
MEMBER	FK attribute from CENTRE -> centre_id	nominated_center_id

- Check constraints have been added to the following attributes, this is because it is assumed that the values for these attributes are not likely to change.

Attribute	Check constraint
staff_role attribute in STAFF_MEMBER	Can only take one of the following values A – Administration C – Cleaner D – Instructor Dry P – Instructor Pool M – Manager S – Sales T - Security
staff_first_aid cert in STAFF_MEMBER	Can only take one of the following values Y- Yes N - No
class_gender_restr in CLASS	Can only take one of the following values F- Female M – Male U- Unrestricted
class_staff_leader in CLASS_STAFF	Can only take one of the following values Y- Yes N - No
Member_attend_session in MEMBER_ATTENDANCE	Can only take one of the following values P – Attended (Present) A - Absent

- The following data type and sizes have been assumed.

Attribute type	Data type	Size/Precision	Reason
Postcode	VARCHAR	Size- 10	Since postcode is not used for numeric calculations and as it's size can vary from country to country, VARCHAR is used. As per <a href="http://www.grcdi.nl/pidm/postal%20code.html">http://www.grcdi.nl/pidm/postal%20code.html</a> The longest postal code currently in use 10 digits long
ID attributes	NUMERIC	Precision -7	These are given NUMERIC data type since the PK might need to auto increment. A large possible range of values is allowed for this reason
Attributes with decimals Eg- assess_weight	NUMERIC	Scale – 2	Scale is provided as 2, to allow for two decimal points
Facility capacity, class capacity	NUMERIC	Precision- 3	The precision is set to 3 to cap the capacity at 1000