# 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

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| --- | --- | --- |
| 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

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| 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.

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| 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 – Instrucor 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.

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| --- | --- | --- | --- |
| 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 <http://www.grcdi.nl/pidm/postal%20code.html>  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 |