

## Assumptions

### 1. General assumptions:

- All the assumptions from the assignment 1A are applicable for this assignment (Appendix 1)
- Payment is made by the member once for one class (for all the sessions of that class)
- SIGN\_UP was given a surrogate key 'sign\_up\_no', since its initial primary key consists of three attributes, which all are foreign keys. The defined surrogate key is unique within the entire system.
- Class type was made in a form of a look up table, since the new class types are still expected to be added in the future

### 2. Attributes that are restricted to Y and N:

Attribute name	Entity(table), where it is located	Explanation
staff_first_aid_certified	STAFF	Explains whether the staff member is first aid certified or not
class_staff_leader	CLASS_STAFF	Explains whether the staff member is a leader of a class or not
mem_sess_attend	MEMBER_SESSION_ATTENDANCE	Explains whether the member attended the session or not

### 3. Optional/mandatory attributes

## Tatiana Sutulova, 30806151

- Almost all the attributes are mandatory since they are needed to give the full picture of the entity
- member\_recommender is optional, since member does not necessarily have the member who recommended them the Monash Movement
- class\_descr is optional, since the class name may be informative enough to explain what the class is about
- fac\_descr is optional, since the facility name may be informative enough to explain what the facility is

### 4. The data types and scale/length

Attribute name	Data type	Scale/length	Explanation
staff_id	Number	8	Fixed length of an id. Monash student id of 8 digits was taken as an example.
member_no			
centre_phone	CHAR	10	Based on the Australian normal format of the phone number.
member_phone			
class_phone			
class_max_participants	NUMBER	3	All these attributes will never exceed number of three digits
class_sess_no			
class_duration			
fac_capacity			
fitassess_weight			
The rest of the attributes was approximated based on the forms provided in the specifications, applying common sense or making a research			

## 5. Appendix

### FIT3171 Databases Assignment 1A

#### Assumptions:

#### ERD:

- 1) The FITNESS\_CENTRE entity will have at least one STAFF, which is a manager, before it can operate.
- 2) FITNESS\_CENTRE may have no MEMBERS when it is just established.
- 3) FACILITY may not have any CLASSES at some period of time and more than one CLASS may be conducted on the FACILITY
- 4) The STAFF member may not run any CLASSES, depending on their role, for example if the STAFF is manager.
- 5) When the CLASS is just established, there may be no MEMBERS who signed up for it
- 6) One particular FITNESS\_ASSESSMENT is conducted by one STAFF only
- 7) One STAFF is capable of conducting several different CLASSES
- 8) There is no STAFF who is not assigned FITNESS\_CENTRE
- 9) One MEMBER may be referred by maximum 1 MEMBER, however one MEMBER may refer a lot of MEMBERS
- 10) A MEMBER may not refer or not be referred by any MEMBERS
- 11) A FITNESS\_CENTRE may not be assigned as a home centre for any MEMBERS, as well as a lot of MEMBERS may assign it.

#### UML:

- 1) **Member's memberName** is a composite attribute and consists of **memberFName** (member's first name) and **memberLName**
- 2) Address attributes: **centreAddress** and **memberAddress** are composite attributes, which are subdivided into streetNumber, streetName, region, postalCode, townCity, state
- 3) **BMI** is a Body Mass Index, which may be calculated, knowing the body weight and height. However, since the height is not measured, the BMI is not a calculated attribute.
- 4) **VO2Max** may be calculated, knowing the body weight and the heart rate ( which is a part of the blood pressure measurement), therefore it is a calculated attribute.