

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.