

University of British Columbia
Department of Computer Science
CPSC 304 2019 W2

Group Project - Implementation of a Relational Database

Project Title:	Recreational Facilities Management Software
Project Milestone:	Milestone 1: Project Proposal

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By typing our names and student numbers in the above table, we certify that the work in the attached assignment was performed solely by those whose names and student IDs are included above.

In addition, we indicate that we are fully aware of the rules and consequences of plagiarism, as set forth by the Department of Computer Science and the University of British Columbia

For this project we implemented a Recreational Facilities Management Software. Our database models a gym membership system, which displays features such as a member's information (phone number, email, address, plans, payment methods), classes that members can take, and the facilities that classes are held in. The software also provides a description and information about the time, location (room and facility), and instructor of each class. Members can view and edit their billing information, as well as update contact information and sign up for classes. They will also be able to view the status of the classes and the ratings of instructors. Members can also change their passwords, but not the usernames which their accounts are linked to. If members wish, they can cancel their memberships and delete their accounts and sensitive personal information.

Based on the feedback we received, we went ahead and made the following adjustments to the schema:

1. We added a description attribute to the *facility* table which provides a short description about when each facility was established and the classes that are offered in that facility.
2. We renamed 'title' to 'sType' in the *status* entity, to represent the status type which can be one of: Bronze, Silver, Gold, Platinum, Student, Senior, and Low-Income, and each of these plans have various costs.
3. We added a new entity named *classT(title, description, type)* which has a foreign key of 'type' referring to *classType(title)* and provides the title and the description for each class type offered.
4. We added a new entity named *Room(RID,FID)* which entails information about the facility and the room a certain class is held in. Following this addition, we added RID as an attribute to several other tables such as the *class* entity, and *canHave* and *Takes* relationships.
5. We removed PID from *CreditCard* and *PAPAccount* tables, and added a new table *payment(PID, frequency, creditCardNumber, accountNumber)* with 'creditCardNumber' and 'accountNumber' being the foreign keys that correspond to the primary keys of each payment method.

6. An important adjustment was also made to the *member* table, in which we added attributes 'login', 'password' and 'email', and removed 'driversLicenseNumber'. We made this decision based on 'email' being an essential method of communication while storing the 'DRL' wouldn't be as essential. Also, license numbers are sensitive pieces of information.
7. Another point worth mentioning is that class availability and a member's status is what determines the color classes appear as for members.