Project Proposal

Class: CS 340
Name: Peter Moldenhauer
Date: 1/15/18

"Pete's Gym" Database

I will be making a database representing a fictional gym which I will call "Pete's Gym". In this gym, there will be numerous different aspects. Some of these will include members, classes and trainers and equipment. Different members of the gym can take different classes and can also be assigned different trainers. The gym will also have different equipment which can work out different muscle groups. I came up with this idea because one of my favorite hobbies is going to my local gym to exercise. I also feel that a database about a gym (or any business for that matter) can be very complex. Between my passion for exercising and the potential for high complexity, I feel that my gym idea will be a good candidate for a database.

The entities I will have in my database are:

- Members – The people who work out at the gym. They will have names, addresses and birthdays
- Trainers – The people who work at the gym and work with the members.
- Classes – The various fitness classes that members can take.
- Equipment – The different types of exercise equipment that the gym has.
- Muscle groups – The different areas of the body that equipment targets.

The relationships I will have in my database are:

- Members are assigned a trainer – A member can only be assigned one trainer, but a trainer can be assigned to multiple members (one to many relationship)
- Classes have members – Classes at the gym contain multiple members and members can be enrolled in multiple classes (many to many relationship)
- Trainers maintain equipment – Each piece of gym equipment is maintained by a trainer, but trainers will be responsible for maintaining multiple pieces of equipment (one to many relationship)
- Equipment targets muscle groups – Different pieces of equipment target different muscle groups. Similarly, multiple different muscle groups can be targeted from any piece of equipment (many to many relationship)