

# **CPSC 5071 Data Management for Data Science**

## **Project Title: Gym Fitness Management System**

### **Project Name: *Work-it-Out***

#### **GROUP 4**

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## **Mission Statement**

The mission of the *Work-it-Out* boutique gym management system is to create a simple and affordable web application for boutique gym and health club startups. The application is designed to accommodate all the needs an owner may have while being easy to use and low-maintenance.

## **Product Description**

There are over 115,000 boutique gyms, health clubs and fitness studios in the United States. While the market for boutique gyms is competitive, barriers to entry into the industry are low, so the number of gyms is likely to increase. Gym owners are experts at creating quality exercise environments, but often lack the technical expertise to create an information technology system that can accommodate and streamline gym operations. Gym owners also understand that in today's world, potential clients expect a gym to have an online portal where they can sign up and manage their accounts. Existing information technology solutions are often too expensive, too high-maintenance or too complex to be useful for new gym owners. In addition, some systems are overly simplistic, missing key components that gym owners need to effectively manage their business. These owners need access to low-cost, low-maintenance, all-inclusive and easy to use information systems that can get their gyms up and running. We designed *Work-it-Out* to fill the gap in this market.

The *Work-it-Out* system is a one-stop shop for gym owners in need of an information technology system. It combines a front-end online portal with a back-end relational database to store and update all the data a gym owner needs to manage their business. It

allows users, trainers, and owners to access the database to conduct business and interact with each other.

Modern fitness enthusiasts expect a clean and simple online application that allows them to manage their membership from anywhere. *Work-it-out* allows users to sign up for a variety of membership options, manage their work out plans, and choose trainers through an easy-to-understand online portal.

Since gym quality is often defined by the quality of the staff, *Work-it-Out* has designed a portal that allows trainers to effectively manage themselves. Through the online portal, trainers can interact with their trainees by designing exercise and meal plans. They can also effectively manage their time by creating schedules for themselves and their clients. This system is designed to keep trainers happy by making client management as easy as possible, giving trainers more time to do what they do best. That way, owners can attract and retain rock-star talent to take their gym to the next level.

Finally, gym owners themselves have privileged administrator status in the portal. This gives them, and any trusted employees they choose, access to every facet of the business. Gym owners can make purchases for new equipment through the portal to keep their gym up to date with the latest fitness technology. Transactions made by an administrator will automatically be logged into the database so owners can keep track of their expenses in real time. The expense portal will also allow owners to keep track of all cash out flows including payments to employees. In addition, owners can also track any income that the gym has received in real time. These two features in tandem allow owners to always have an up to date and accurate picture of the financial state of their gym.

In summary, the features of *Work- it-out* will ensure that all the boutique gym stakeholders have affordable, efficient and integrated access to information. It will enable admins to manage members, trainers, and gym products more efficiently. Trainers and members will be able to track performances and consistency with just a few clicks. Lastly, Gym owners will be able to track the performance of their business ventures and utilize the resulting information to make strategic decisions for growth and expansion. Figure 1, 2 and 3 in the following pages illustrate the various entities considered in this project as well as their relationships.

# Entity Relationship Diagrams: Logical Model

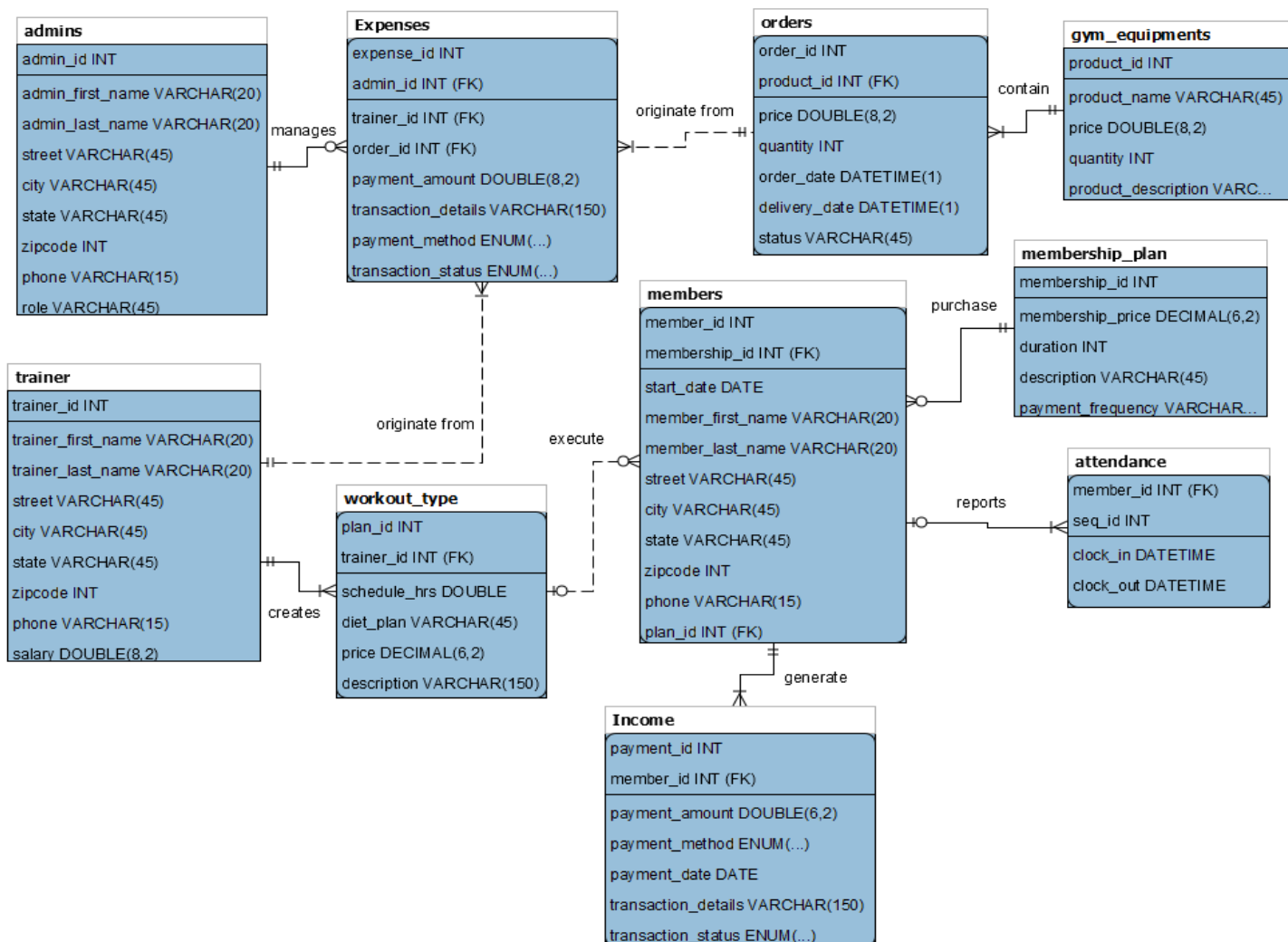


Figure 1: Entity Relation Diagram for *Work-It-Out* Project

## External model from the member's point of view.

This view illustrates how members will be able to enroll by choosing a membership plan and various work out plans while keeping track of their gym attendance as well as transactions associated with the gym membership.

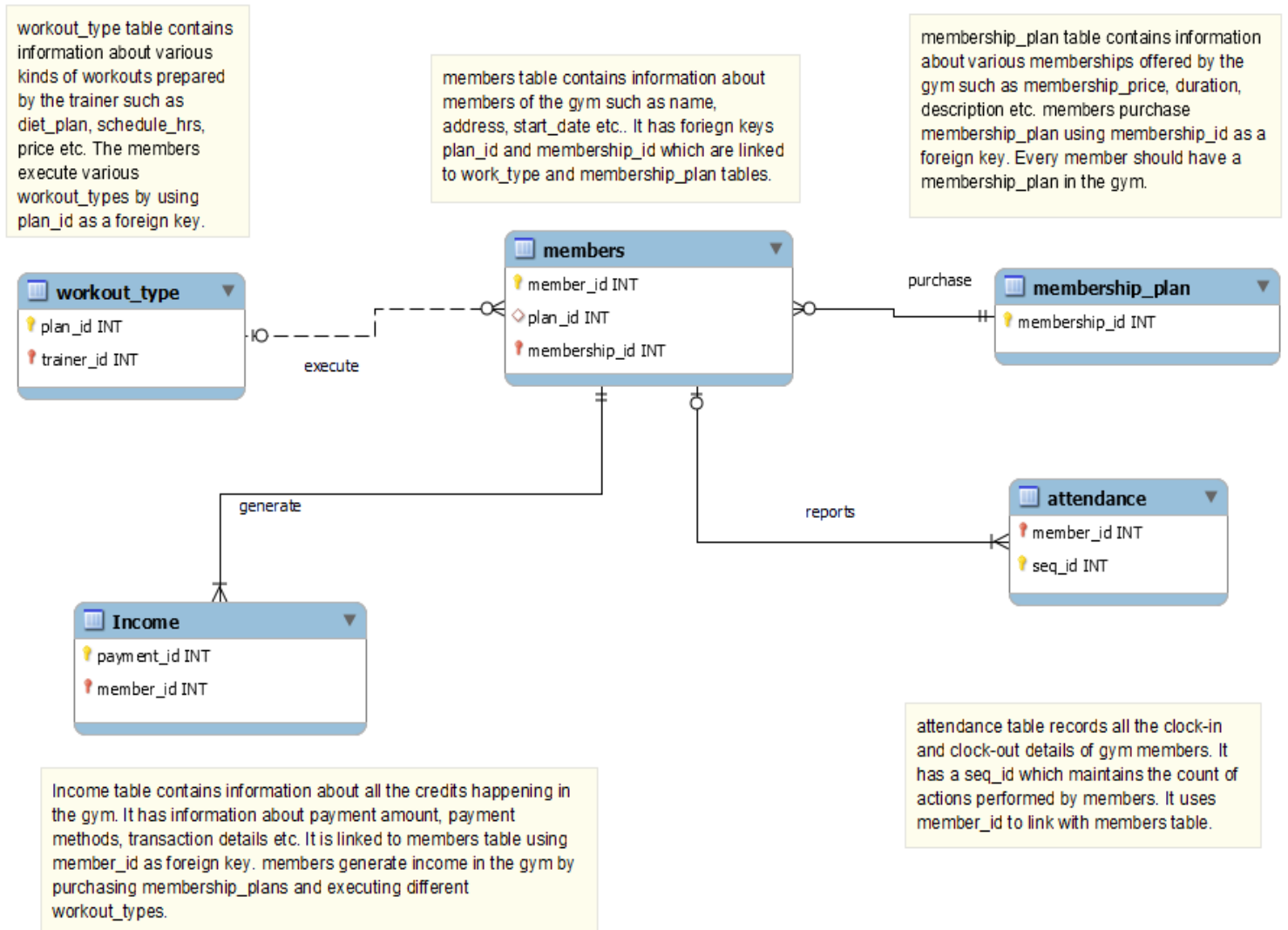


Figure 2 External model from a members view

### External model from the Trainer's point of view.

Figure 3 illustrates the data management from a trainer's perspective. It shows how the trainers will obtain various member details from the administrator and in return, design the corresponding workouts and meal types for the members.

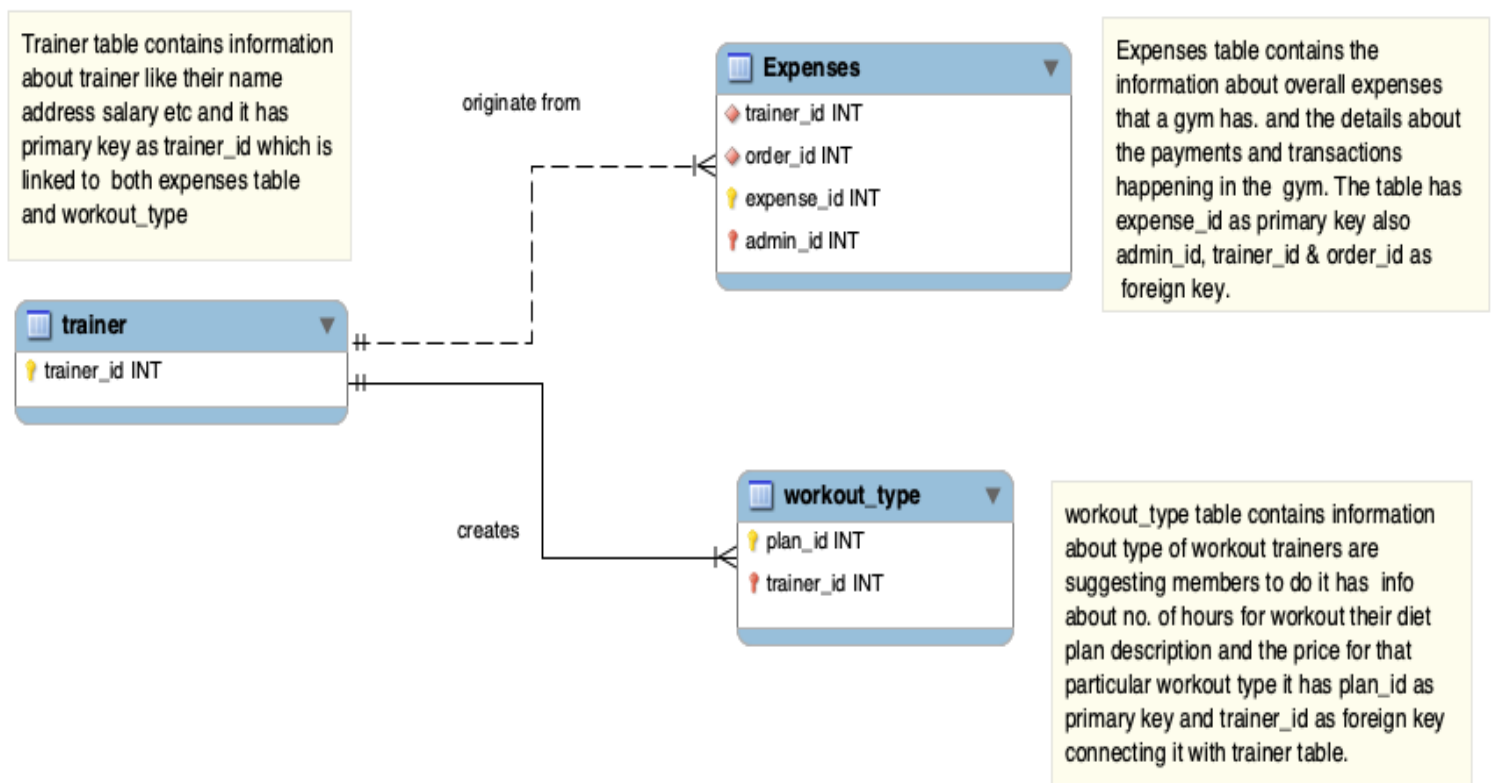


Figure 3 External Model From a Trainer's View