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**College of Engineering and Technology**

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| **Department of Computer Science** |
| **Course: Software Engineering (COMP 433)**  **Project Case Study** |

# FitnessPro GYM

## Introduction

Established 6 years ago, FitnessPro is a high-quality fitness center located at 4000 m2 building structure. FitnessPro provides high-quality fitness and GYM cervices along with other types of sports such as swimming, boxing, Muay Thai, body building, and so forth. The fitness center serves 500 members of different ages and genders. Some of the memberships are dedicated for children ages 5 and above.

Since that FitnessPro is committed to providing high-quality services, they are looking for a replacement for their old desktop GYM application, which is a basic members management system with limited services in terms of memberships. They are thinking of moving to a new, modern, state-of-the-art fitness center system that integrates cutting-edge technology to better serves their expanding members community.

Please note that the information provided in this TOR (Terms of Reference) is very basic, and your group will need to extend this and add many additional features.

## General Background

The current system operated at FitnessPro center is based on the outdated, limited, and slow desktop application, along with some Excel sheets that are operated trainers and accountants. The current desktop application is lacking the capabilities of creating new memberships, new promotion memberships (for example, they want to create a limited offer for one week in which you can enroll in certain memberships, let’s say the GYM, and having a 40% off price). The desktop application is also lacking the feature of creating schedules of exercises and food programs for members, schedules for trainers, tracking the whole lifecycle of members in the center, and the intersection of memberships as some memberships can be intersected and some cannot.

Excel sheets are used by trainers in the measuring room where trainers take the hight, and track weight of members on regular bases. Accountatnt, also uses excel sheets to track members’ payments, expenses of the center, payroll salaries for employees and so forth. The information is scattered in the Excel sheets, desktop app, and it is very hard to generate reports for the management. Members are notified verbally when their membership is about to end, which is very annoying.

## Reception Unit

When a new member arrives at the center, he/she is asked to fill a form about personal information, then chooses a membership. A member can register in more than membership, for example, he/she can enroll in the GYM, and also swimming/boxing/Muay Thai, and so forth. We have special discounts for families and kids. Some members can choose entry type membership, which is based on a number of entries. Reception unit is also responsible for tracking the memberships, payments, and locker memberships. Some members pay in cash, others in checks, and others pay several installments, which is very hard to track and manage.

# Trainers

Trainers have special schedule and special program (body building, swimming, Boxing, etc). Each one is responsible for preparing a training schedule for members and also nutrition program for weight loss. Members are notified verbally and manually about their training and nutrition programs, which is very annoying and inefficient.

## Management

The management is concerned with reports about members, memberships, financial status, expenses, which is very hard to obtain since the information is scattered in different formats.

Please note the following:

1. The above description is basic; your group needs to extend it by adding additional, smart features.
2. Do not, in any case share your work with any person outside your group. I expect each group to be different in their additional features.
3. Unless you provide a high-quality output, high grades will be hard to achieve.
4. Copying between groups will not be tolerated and will be directed to university punishment committees (سيتم تحويل المجموعات التي تشارك عملها مع مجموعات أخرى الى اللجان التأديبية في الجامعة)
5. I wish you the best of luck.