

My Muscle Fitness Center

System Requirements:

- The fitness center has multiple branches, each branch has id, Manager, location, and opening date.
- Each trainee registers in only one branch, we register the name of the trainee, registration date, birth date, gender, national id, phone number, and email address.
- The system registers the trainee subscription info such as membership id, trainee id, package id, branch id, membership status (Active, Frozen, Expired, suspended), start date, membership expiry date, remaining freezes.
- Each trainee has goal, goal register date, goal time frame.
- The system needs to store the freezing history of trainees. freeze info are freeze id, trainee id, start date, end date, and membership id. With the number of freezes determined by the membership package, the trainee cannot exceed the number of freezes available in his membership package.
- Each branch has membership packages, each package has a name, price, no of months, no of invitations, no of freezes, Spa, Classes, no of PT sessions, and no of nutrition sessions.
- Each trainer is assigned to one branch, the trainer has name, birth date, national id, gender, salary, phone number, email address, hiring date, seniority, certificates, specialization, and employment status.
- Each trainer has a schedule where it saves his weekly shifts time, and duration.
- We register the trainees attendance info (date and time) and remove the attendance days from the membership subscription remaining days.
- The system saves the trainees fitness record to track their progress (Health_record), it saves the record date, height, weight, waist size, chest size, hip size, health conditions, fat percentage, and muscle mass.
- Every personal trainer creates an exercise routine for the trainee, consisting of the routine name, days per week, cardio per week.
- Each branch of the fitness center has its own equipment. The system records every equipment item with details such as its unique ID, name, category, Branch id, purchase date, status, and the date of its last maintenance.
- Every trainee can share feedback about their experience in the fitness center. Feedback can relate to various aspects such as the quality of service, trainers, facilities, and equipment. For each feedback entry, the system records details like the date, the rating, goal achievement status, and any comments. Rating must be between 1 to 5.
- All staff members are registered in the system to manage their personal and professional information. For each staff member, the system keeps data such as name, national ID, gender, date of birth, hiring date, job position (like receptionist, nutritionist, manager, or cleaner), salary, phone number, email address, employment status (active, on leave, or terminated), start shift time, and end shift time.
- Each payment made by a trainee is recorded to maintain accurate financial records. The system stores details including the payment ID, date of payment, membership package id, total amount, paid amount, remaining amount, the payment method used, and the payment status (fully paid, partially paid, or refunded). It also includes the receipt number to make financial tracking and reporting easier.
- The fitness center works with several suppliers who provide goods and equipment. For each supplier, the system records their name, contact person, phone number, email address, and location details including address, city, and country. It also notes the type of supplies they provide and their current business status to help manage partnerships and ensure steady inventory flow.
- The supplies represent the actual goods and products used or sold in the fitness center, such as protein products, towels, or training accessories. Each supply item is recorded with its name, category, price per unit, quantity, supplier id, and date of purchase.
- Each facility within a branch (gym hall, spa, etc.) is tracked in the system to ensure it is available and well maintained. For each facility, the system keeps information like its name, capacity (the maximum number of users it can accommodate), and availability status (available, under maintenance, or closed). It also stores opening and closing times, the last maintenance date, and the name of the staff member responsible for supervising that facility.
- The system supports nutrition plans for trainees who want personalized dietary guidance. This includes nutritionist id, trainee id, weekly calories, start date, end date, current plan status (active, completed, or paused), plan type and plan details.

Technical Requirements

- Implement your database in files and files groups according to data size and your estimation.
- Choose the right datatype for each column and use naming conventions in naming of all objects.
- Implement Indexes for your database to get best performance for your DB.
- Use constraints and triggers to make sure of data integrity and users' access.
- Use procedures and functions to do all system tasks, and views to show any results, so system users do not need to write any query to do any task and only use created objects.
- Make Different options for the users to search and display results with different criteria.
- four accounts are needed for the system, one admin account that performs admin tasks only, account for the general manager who registers info about branches managers, account for branch manager to register data about staff, supplies and suppliers, and account for receptionist to register trainees
- Each account can deal with and work with his related tasks only and cannot access others' tasks and objects (implement SQL users and their permissions).
- The system should make a daily back up (automatically).

Project deliveries:

- System Requirement sheet.
- System ERD (Image or Word format).
- Database Files.
- SQL Server solution that has script file for each team member contain queries and code he has done, and one script file for all database structure, objects and data.
- Text file containing name and brief description for all objects in DB (Views, Proc, Functions, Triggers, etc.).
- Test sheets that contain test queries, their result and comments.
- Text file contains all accounts for the database and passwords.