**REQUIREMENT ANALYSIS REPORT OF ATMACA SPORT CLUB**

**Group Members:**

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**Customer:** Atmaca Spor Club

**Introduction:**

The purpose of this project is creating a database system and incorporate it to the web site for ATMACA SPORT CLUB. The database system technology that is chosen is MS SQL.

**Entities & Definitions:**

**Person:**

An individual associated with the gym, whether as a member, staff, personal trainer, instructor.

**Member:**

A person who has registered for a membership at the gym.

**Staff:**

Individuals employed by the gym to perform various tasks, such as personal trainer, instructor.

**Personal Trainer:**

A specialized staff member responsible for providing personalized fitness training to gym members.

**Instructor:**

A staff member responsible for leading group classes.

**Attendance:**

Records the attendance of members for sessions.

**Class:**

A group fitness class offered by the gym, led by an instructor.

**Workout:**

A routine or set of exercises prescribed for a member, by a personal trainer.

**Equipment:**

Physical exercise tools and machines available in the gym.

**Maintenance:**

Records related to the upkeep and maintenance of gym equipment.

**Financial Transaction:**

Records financial transactions within the gym. Salary, product sale, maintenance, payment

**Membership Payment:**

Specific information about a payment made by a member for membership.

**Membership Plan:**

Describes the different types of membership plans offered by the gym.

**Body Measurement:**

Tracks measurements and metrics of members' physical progress, such as weight, body fat percentage.

**Sale:**

Records transactions related to the sale of gym-related products.

**Product:**

Represents items available for sale within the gym, such as supplements or accessories.

**metin, kağıt, menü, yayımlama, neşir, neşriyat içeren bir resim

Açıklama otomatik olarak oluşturulduCustomer Related Document**

**metin, kağıt, baskı, basma işlemi içeren bir resim

Açıklama otomatik olarak oluşturuldu**

**Business Processes & Definitions**

**Membership Registration:**

The process of registering individuals as members, including collecting personal information and selecting a membership plan.

**Training Session Scheduling:**

Involves scheduling personalized training sessions with personal trainers.

**Class Scheduling:**

The process of scheduling fitness classes conducted by instructors.

**Measurement Recording:**

Captures and updates member measurements during fitness assessments.

**Payment Processing:** Handles the processing of membership payments and other financial transactions.

**Equipment Maintenance:**

Manages the maintenance of gym equipment to ensure proper functioning.

**Product Sales:**

Involves the sale of products to members.

**Business Rules & Restrictions**

The Atmaca Gym informations will be stored in the database system in which people (member and staff) and their related informations are accessed by the owner of the company who is Mr.Ersin.

1. All person related to this gym have a unique Social Security Number (Ssn), name, surname, gender, age, address, birthdate and phone number. An individual's address is composed of city and state. Age is derived from birthdate.
2. A sale has a unique SaleID, Saledate, quantity, and total amount.
3. A product has a unique product ID, name, price, and quantity in stock. A sale can only be made from the gym to exactly one person, and a person can buy at least one product. A sale consists of at least one product.
4. A member has a unique MemberID and possesses start date, end date, and remaining time. Remaining time is represented in a derived structure.
5. A staff has a unique StaffID and salary.
6. A personal Trainer has a unique PTID and specialization.
7. An instructor has a unique InsId.
8. A staff must be either a Personal Trainer, a Instructor or both.
9. A class has a unique ClassId, Max participant number and Duration which is composed of start time and end time.
10. An attendance has unique AttendanceID , Attendance date. A member may attend many classes.

A attendance is exactly one for the class but A class may have many attendance.

1. A class is given by exactly one Instructor and a instructor may have give many classes.
2. A Personal trainer trains one or more members. A member can be trained by at most one Personal Trainer.
3. Product sales provide positive income to gym facility. Every person can buy any product, therefore financial transaction increases the gym revenue. This effection occuring to transaction belongs to exactly one sale. Also transaction can either be dependent to any sale or not.
4. A Financial Transaction has an unique ID, date, amount and its description.
5. Financial Transaction can be created for Product Sale, Membership Payment, Equipment Maintenance and Salary Payment. Salary Payment and Equipment Maintenance effect negatively impact to score of revenue. But Product Sale and Membership Payment effect positively associated with income.
6. Membership Payment has a unique PaymentID, amount, payment type and date.Membership Payment creates a transaction and it effects positively to revenue.
7. Maintenance has a unique ID as MaintenanceID, date, description and cost. Maintenance Payment creates a transaction and it effects negatively to revenue.
8. Member is the customer of GYM facility. Member have to make payment to certain plans in order to enroll in courses. Members may also have body measurement record in database.
9. Each member has a membership plan and this plan consists of unique PlanID, name, description, fee and duration. A plan may be selected from many members.
10. A workout is activity for members to train themselves. A workout has a unique ID as its name, description and duration. For each workout, members may use at least one equipment.
11. An equipment has a unique ID as its name, quantity and condition. For each equipment, members may do at least one workout.
12. More than one maintenance can be applied for an equipment or might not be applied.

**Functional Requirements**

**Member Registration:**

Ability to register new members with basic personal information (name, surname, contact details).

**Staff Management:**

Capability to store, update, and delete staff information.

**Personal Trainer Assignment:**

Feature to assign personal trainers to members. Each trainer should have defined working hours and areas of expertise.

**Classes:**

Organization of group classes, definition of classes.

**Account Transactions:**

Recording financial transactions such as membership fees, salary, maintenance and product sales.

**Attendance Tracking:**

Recording member attendance for classes.

**Equipment Tracking:**

Maintaining an inventory of fitness equipment and identifying those requiring maintenance.

**Measurement and Progress Monitoring:**

Recording members' physical measurements and tracking their progress.

**Product Sales:**

Recording sales transactions for gym-related products (clothing, supplements, accessories).

**Non-Functional Requirements**

**Performance:**

The database and application should perform efficiently, providing quick responses.

**Usability:**

User-friendly interface and ease of use.

**Backup and Recovery:**

Regular backups of the database and a plan for recovery in case of data loss.

**Compatibility:**

Compatibility with different browsers and devices.

**Compliance:**

Adherence to relevant regulations, especially regarding the protection of personal data.

**Update and Maintenance:**

Regular updates and maintenance of the system and database.