

# **Gold Gym: Gym Management System**

## ▪ **Business Problem:**

With the increase in awareness to stay fit and the health benefits that come with it, there has been a rise in gym subscriptions. With this growth in demand for fitness centers Gym franchises are expanding gym locations in each city which leads to the need for a centralized management. Legacy systems involve maintaining customer records locally and in a manually written file format. This is an arduous and financially intensive process.

## **Entities:**

- Customer
- Utilities
- Supplier
- Order
- Product
- Employee
- Department
- Subscription
- Manufacturer
- Location

## **Customer, Order Relationship:**

- A customer can place an order.
- An order is related to a product in a way that customers can place an order for a product in the gym.
- A product can have two subtypes:
  - Supplements: Supplements can be of different types, for example, protein tablets and protein powder, etc.
  - Meals: There will be meal plans recommended to the customer by the nutritionist and provided as a part of the product entity. Meals do not need to be bound to a nutritionist. A customer can also order meals as a part of the product.

## **Product, Order, Supplier Relationship:**

- A supplier supplies the product when the customer places an order.
- A product can have attributes such as product name, product price, product type, product description etc.

## **Product and Nutritionist Relationship:**

- A product can be recommended by the nutritionist to the customer.
- Recommends is an associative entity that has recommended quantity and rec reason, date as attributes.

### **Customer, Location and Subscription Relationship:**

- A customer will have a subscription which will have a subscription ID.
- A subscription can have subscription type, for example, it can be silver, gold, or premium membership and every membership type has different charges.
- A customer's data will be deleted once the subscription ends.
- A customer can subscribe to any location.
- A location has state, area, city, street, zip code, building size as attributes.
- Gym location can only purchase utilities for a specific location, and their subscription will associate any utility they purchase with a particular location.

### **Customer, Utilities and Manufacturer Relationship:**

- A customer utilizes the utilities in the gym.
- The utilities are purchased from the manufacturer.
- Here purchases are an associative entity.

### **Utilities, Locker, Equipment set Relationship:**

- A customer can use the above utilities, i.e., locker, weights, and machines.
- Utilities will have two subtypes:
  - Weights
  - Machines

### **Customer, Nutritionist and Trainer Relationship:**

- Customer can or cannot take the services of a trainer.
- A customer can take the services of a nutritionist as well.
- A nutritionist can recommend products to the customer.
- A trainer will provide their training to the customer.

### **Employee and its relations:**

- Employees have the relations with Department, Location, Staff, Trainer, and Nutritionist.
- They may or may not have a single supervisor who can be obtained by the foreign key supervisor ID which refers to the employee ID of the supervisor.
- The employee is assigned to work in a specific location, while the customer places an order for a particular location

### **Customer and its relations:**

- Customer has the relations with order, subscription, recommends, location, utilities, nutritionist, and trainer.