

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 customer 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 which will be recommended to the customer by the nutritionist which will be provided as a part of product entity. Meals do not need to be bound to nutritionist. A customer can also order meals as a part of product.

Product, Order, Supplier Relationship:

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

Product and Nutritionist Relationship:

- A product can be recommended by the nutritionist to the customer.
- Recommends is an associative entity which 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 as attributes.

Customer, Utilities and Manufacturer Relationship:

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

Utilities, Locker, Equipment set Relationship:

- Utilities can be of two types:
 - Locker
 - Equipment set
- A customer can use the above utilities, ie, locker and equipments.
- An equipment set 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 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, Manager, Staff, Trainer, 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.

Customer and its relations:

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