TEAM-8

ADIT SHAH:1001933530   JAYKUMAR PATEL:1001945949

CSE 5330: Phase 1 of the project

<u>Sport club management system</u>

Sports clubs are one of the busiest places among metropolitan areas and the university/school. Most of the time it is completely crowded. If the crowd is not handled properly it won't take much time to convert into chaos. To prevent this from happening, there is a need for systematic management. Hence we plan on developing the project on sports/athletics club management system which will help in managing the club, keeping track of equipment, organizing events(matches) systematically, keeping records of the club members, staff members, time occupancy of facilities, and many more.

Since It will be a complex database with an abundance of records, there would be some limitations in the system. So we have added some constraints to the database.

1] We are supposing that the club opening time and closing time are prefixed.

2] We also assume that some sports have a limited capacity of people who can play at a time.

3] Quantity of equipment is limited to a number such that, same number of people could be facilitated by the club for that particular sport at the moment.

4] We are having an attendance machine for keeping track of people's activities like entering the facility, registering sports equipment under the person according to the sports they chose.

5] The facility has a particular amount of rooms/courts designated to a sport. At a particular time, only a certain number of people can be facilitated.

6] Equipment is always in good condition, if any of them is damaged, then it is replaced immediately. Thus whenever a new person asks to use it, it would be available immediately.

7]Whenever the equipment is not available, that is because the maximum limit of people who can use the facility has been reached.

Data requirement:

- **Member Table**:
  - ➔ Member ID(m_id)
  - ➔ Plan_id
  - ➔ First Name
  - ➔ Last Name
  - ➔ DOB
  - ➔ Age
  - ➔ Address
  - ➔ Sex(Gender)
  - ➔ Contact(mobile)
  - ➔ Membership id(membership plan)
  - ➔ Email ID(not mandatory)
  - ➔ Issue Date

  Every member has a unique member ID and a plan they may have opted for while enrolling. This table will have a few other personal information of the members having membership in the club. Also, let us know how long is the validity of membership is.

- **Sports Facilities**:
    - ➔ Name(sports name)
    - ➔ Sports ID
    - ➔ Location(Location in facility)
    - ➔ Equipment Id(Eq_id)
    - ➔ Inspected date
    - ➔ Current occupants

Each sport has a unique ID and is located at a certain location in the building. The club has the appropriate equipment for that sport. Each sports facility is inspected regularly to maintain quality. The system may keep track of its occupant, to let others know waiting. This information allows us to know the current facility is available for use or being used by whom.

- **Employee Table**:
    - ➔ Employee ID
    - ➔ First Name
    - ➔ Last Name
    - ➔ DOB
    - ➔ Age
    - ➔ Salary
    - ➔ Sex
    - ➔ Address
    - ➔ Contact(Phone Number)
    - ➔ Email ID (Not mandatory)

There are many employees working at clubs. Each employee needs to be recognized uniquely. For this purpose employee id, every employee has a unique id. There can be many types of employees such as receptionists, maids for cleaning, etc. Each employee is associated with a place. At any given moment one employee can be assigned to a particular place only.

- **Equipment Maintenance**:
    ➔ Equipment Id
    ➔ Sport Id
    ➔ Equipment name
    ➔ Condition (rated between 1-10)
    ➔ Availability

There are lots of sports facilities at the club. Every sport requires different instruments. Each sport may have more than one facility at the club. Hence each piece of equipment has a unique id called equipment id and is associated with a sport, that can be known by the sports id assigned to it. Each equipment's condition is checked to maintain the quality. Also to know if the equipment is available for use or is already being used by someone else in the club, availability can be checked.

- **Member Activity**:
    ➔ Member Id
    ➔ Equipment Id
    ➔ Sport Id
    ➔ Equipment check-in

➜ Equipment check-out

Helps in keeping a record of member's activity like at what time what equipment was used by him, and till what time he used it. This tells how much time did he play what sport.

- **Membership plans**:
  - ➜ Plan Id
  - ➜ description
  - ➜ Cost
  - ➜ Amenities included

Details about the different membership plans provided by the clubs. Different membership plans have different amenities and different membership time duration.

- **ESports schedule**:
  - ➜ Event id
  - ➜ Name
  - ➜ Sport id
  - ➜ Location in facility
  - ➜ Start Time
  - ➜ End time

Useful in managing schedules for events(matches) held at the club so that it does not clash with any other event at the club.

- **Event-ticket sales**:

➜ Event id

➜ Name

➜ Price

➜ Total Sales

Details about ticket sales of the particular event(match) held at the club.

Business Goals:

The above-collected data can be used for generating insight details like:

- We can get to know during which age group of people choose to take which membership the most. Thus we can make our aim such age group accordingly.
- for how many hours does a member plays the sports.could be found out on the basis of the time duration between the equipment check in and equipment checkout. Then taking sum of all the such hours for a particular member.
- gives us the total amount of revenue generated by each sport from the ticket sells of those events
- To get combination of statistics for events and its prices.
- Through the data collected for events, we can also decide at what time and day the sports match has the maximum sale of tickets and target that particular time.
- We can capture which manager is good at managing event, assuming that the event he manages was successful.
- After analyzing the data, we can also figure out which membership plan is most preferred and can update existing plans accordingly, and can create more similar plans.