**The Fitness Studio**

A fitness studio offers several classes and training programs to its members, has multiple instructors and operates on a monthly membership. They require a database to store information about their classes, instructors, members, and memberships. They want to track class schedules, member attendance, instructor availability, and membership details for billing purposes. They would also need to analyze attendance patterns and member preferences to optimize class schedules and improve member satisfaction.

Entities:

1. **Class** – contains information about each fitness class, including its name, description, duration, schedule, and capacity
2. **Instructor** – stores details about each instructor, including name, contact info and availability
3. **Member** – details of each member of the fitness studio, including name, contact details, and member status
4. **Membership** – tracks membership details, including start and end date and payment status for each member
5. **Attendance** – records members attendance in each class, includes member id, with class id and date of attendance
6. **Schedule** – maintains the daily class schedule, includes ClassID, InstructorID and time slot
7. **Location** – Fitness studio address, facility name, fitness room
8. **Equipment** – inventories all the fitness equipment in the fitness studio
9. **Maintenance** – keeps record of the maintenance schedule for each piece of equipment and the instructor who performed maintenance activity.
10. **Billing** – stores billing info, including invoices, payment history, and payment methods for each member.

By utilizing a database to manage these entities, the fitness studio can effectively track class schedules, instructor availability, member attendance and billing info. They can generate reports to check attendance patterns, optimize class schedules, and ensure accurate billing for memberships. This info will help enhance offers and streamline operations.

*Note – other entities exist such as addresses, rewards program, etc. Consider these… make sample data in a spreadsheet, think it through, normalize.*