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# HIIT-LABS GYM

Stage 1

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## **Gym Management System for HIIT-LABS**

### **Description**

The gym management system for HIIT-LABS is designed to streamline daily operations by creating a central platform for both gym and staff members so that they can view and manage information about fitness classes and available amenities. The system incorporates membership enrollment, staff management, class registration, managing equipment and the facility. To enhance security and efficiency, a gym check-in system will be used for attendance and monitoring facility capacity. Our system is comprised of nine classes that are interconnected and rely on one another to function effectively. By integrating all these features, HIIT LABS management system aims to create smooth and efficient user experience for both gym and staff members.

### **Gym Management System**

- Gym Management (***Main controller class: Gym***)

This program manages the entire system by coordinating all system components: Classes, Memberships, Staff, Equipment, Members and Facility. It is the Main class responsible for managing and initializing the gym system.

- Member Management (***Class: Member***)

Stores customers information such as age, billing details, attendance, and membership type. This class links members to the classes that they can register for and is the central place to store attendance logs received from the checkIn class.

- Class Sessions (***Class: fitnessClasses***)

Manages & lists all available classes offered by the gym. This class is responsible for and allows members to view which classes are offered based on the membership tier they have selected. Classes should be able to:

- Creating new classes
- Schedule/reschedule classes
- Show available classes based on membership tier
- Show fitness trainer
- Add/drop classes members from the class
- Recognize when classes are available or have reached capacity.

- Membership Management (***Class: Membership***)

Manages the status of memberships. Managing the tiers (Basic & Premium), upgrades/downgrades between tiers, membership restrictions, cancellations, or adding new members.

- Staff Management (***Class: Staff***)

Operates using role-based control that identifies the employee based on system credentials. Employee roles can include:

- Manager
- Trainer
- Front Desk
- Fitness Instructors
- Sales & Membership Advisors

This class also manages staff information such as names, employee roles, contact information, schedules, and credentials.

- Equipment Management (***Class: Equipment***)

Track equipment usage, availability and maintenance schedules.

- Add/remove equipment from system.
- Updating equipment availability
- Logging equipment maintenance

- Facility Management (***Class: Facility***)

Provides different information based on the user. There will be two different user views

- Member view: allows members to see available classes, available rooms, capacity limits for in-session classes, and amenities that are offered based off the membership selected.
- Staff view: allows staff to update facility statuses such as closing rooms for cleaning, mark equipment as unavailable/available, monitor traffic in the facility & capacity in rooms, and update amenity availability. S

Extra Features:

- Check-In Feature (***Class: checkIn***)

Allows members to enter the gym by verifying their membership status. Members would enter in their 4-digit member ID that they would set up during registration.

- Allow staff to view logging records to monitor traffic and classroom capacity.

- The CheckIn feature records when a member checks in and sends attendance updates to the Member class for storage