**GymGate**

**Introduction:**

**GymGate** is a **Gym Management System and** is a comprehensive solution designed to manage the various aspects of a gym, including memberships, subscriptions, class scheduling, coach assignments, and specialty offerings. The system facilitates the organization and tracking of gym activities, ensuring efficient operations and enhancing the overall member experience.

**Requirements**

**Functional Requirements**

1. **User Management:**
   * Add, update, and delete user information.
   * Enroll users in classes.
   * View user details and class enrollments.
   * Manage subscription details, including setting and updating subscription start and end dates.
2. **Class Management:**
   * Create and schedule classes with details like title, description, and max size.
   * Assign a user to a class in the role of a coach.
   * Track user enrollment for each class.
3. **Specialty Management:**
   * Define and manage specialties offered by the gym.
   * Link specialties to specific users (coaches).
4. **Subscription Management:**
   * Track subscription periods for each user, including start and end dates.
   * Notify users of upcoming subscription expirations.
   * Handle subscription renewals and updates.
5. **Role Management:**
   * Support different roles (e.g., Admin, Trainer, Member).
   * Assign and manage roles for different users.

**Non-functional Requirements:**

1. **Usability:** The system should have an intuitive user interface for easy navigation.
2. **Security:** Ensure data privacy and protection, particularly for personal and sensitive information.
3. **Performance:** The system should handle concurrent access efficiently, especially during peak hours.

**ERD Diagram:**

