



WEB ENGINEERING
Semester Project Proposal
POWER GYM
An Online Gym Website

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SUBMITTED TO: MAM KHUSHBAKHT

Project Proposal

Objectives:

- To provide a comprehensive online presence for the gym.
- To facilitate membership registration and management.
- To offer detailed information about classes, schedules, and trainers.
- To enable booking and payments for classes and personal training sessions.

Target Audience:

- Current gym members.
- Potential members looking for local gyms.
- Fitness enthusiasts seeking specific classes or personal training.

Features:

- **Homepage:** Overview of the gym, promotional content.
- **Membership Registration and Login:** Users can create accounts, manage memberships.
- **Class Schedules and Booking System:** Detailed schedules, online booking.
- **Contact Page:** Contact form, map, and address.

Project Management Plan

Timeline:

- **Week 1-2:** Research and proposal development.
- **Week 3-4:** Use case and class diagram creation.
- **Week 5-8:** Frontend design and implementation.
- **Week 9:** Security measures and SEO implementation.
- **Week 10:** Testing and debugging.
- **Week 11:** Final review and deployment to GitHub.

Tasks and Responsibilities:

- **Project Manager:** Overall project coordination, budget management.
- **Frontend Developer:** HTML, CSS, JavaScript implementation.
- **Backend Developer:** Server-side scripting, database management.
- **UX/UI Designer:** Visual design, user experience optimization.
- **QA Engineer:** Testing and debugging.

Budget

Estimated Costs:

- **Web Hosting:** \$100/month.
- **Domain Registration:** \$15/year.
- **Software Licenses:** \$200 (one-time).
- **Development Tools:** \$300 (one-time).
- **Personnel Costs:** \$5000 (developers and designers over the project period).
- **Miscellaneous:** \$500.

Use Case and Class Diagrams

Use Cases

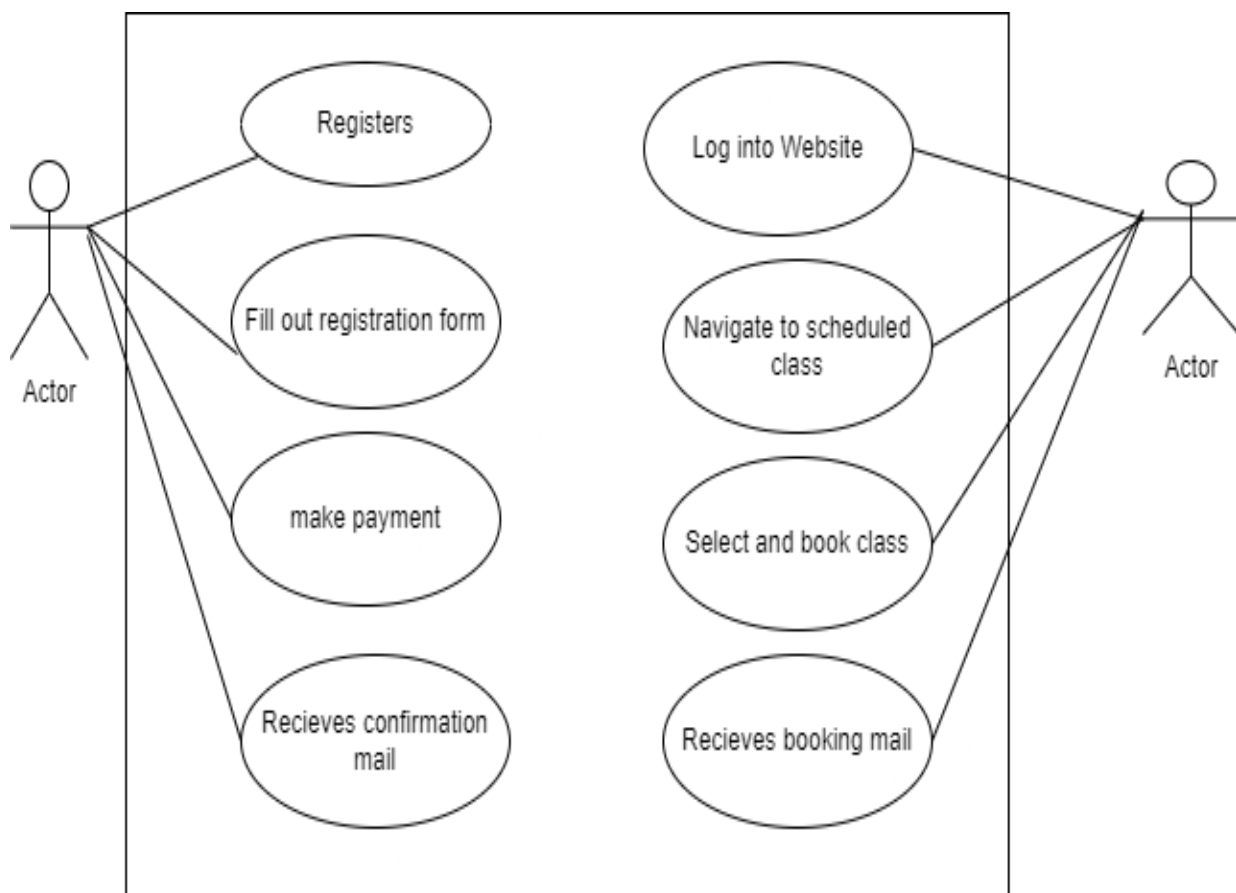
Use Case 1: Membership Registration

- **Actor 1:** User.
- **Description:** User registers for a gym membership by filling out a form and making a payment.
- **Steps:**
 1. User navigates to the registration page.
 2. User fills out the registration form.
 3. User submits the form and makes payment.
 4. System sends a confirmation email to the user.

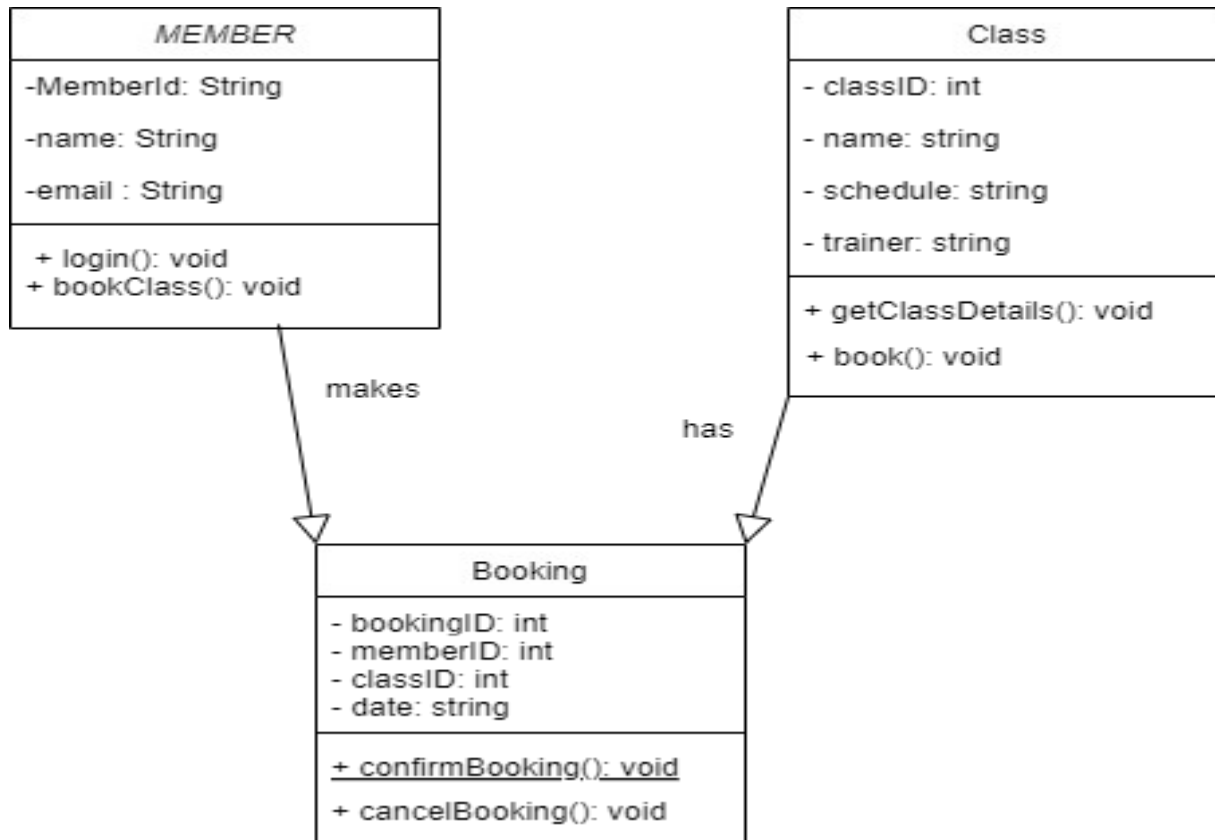
Use Case 2: Class Booking

- **Actor 2:** Member.
- **Description:** Member books a class or personal training session.
- **Steps:**
 1. Member logs into the website.
 2. Member navigates to the class schedule.
 3. Member selects a class and clicks 'Book'.
 4. System confirms the booking and sends a reminder email.

USE CASE DIAGRAM



CLASS DIAGRAM



Security and Website Visibility

Security Measures

- Implemented HTTPS for secure data transmission.
- Used input validation to prevent XSS and SQL injection attacks.
- Set secure flags on cookies.

SEO Best Practices

- Optimize meta tags and headings.
- Use descriptive alt attributes for images.
- Create an XML sitemap and submit to search engines.
- Integrate social media sharing buttons.

Website Testing

Testing Steps

- **Functional Testing:** Verified that all features work as expected.
- **Responsive Testing:** Checked the website on all devices (desktops, tablets, smartphones).
- **Browser Compatibility:** Tested on Chrome, Firefox, Safari, and Edge.
- **Bug Fixing:** Identified and resolved any issues found during testing.