**Gym Management System - Project Synopsis**

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**1. Project Title: Gym Management System**

**2. Introduction:**

The Gym Management System is a .NET-based application designed to maintain and automate the day-to-day operations of a gym. The system helps gym administrators manage member information, track attendance, schedule classes, handle billing, and monitor overall gym performance.

**3. Objectives:**

* To develop a user-friendly system that mechanize the management of gym operations.
* To provide a centralized platform for managing member profiles, attendance, and membership plans.
* To facilitate class scheduling and trainer assignments.

**4. User Roles:**

* **Administrator**: Full access to all system functionalities, including user management, billing, and reporting.
* **Staff/Trainer**: Access to class schedules, member information, and progress tracking related to their assigned classes.
* **Member**: Access to personal profile, class schedules, and payment history.

**5. Scope of the Project:**

The Gym Management System covers the following functionalities:

* **Membership**: Registration of new members, updating member information, managing membership plans, tracking member attendance and membership plans.
* **Trainers**: Managing trainer details, roles, and scheduling of trainers for various classes.
* **Schedules**: Creating and managing class schedules, assigning trainers, and enrolling members in classes.
* **Equipment**: Listing and managing all the available gym equipment.

**6. System Architecture:**

The Gym Management System is built using the .NET framework, utilizing the following technologies:

* **Frontend**:HTML5, CSS3&Bootstrap and Angular to create dynamic, responsive, and user-friendly web applications.
* **WebAPI**: C# as a frontend and backend bridge.
* **Database**: SQL Server for data storage and management.

**7. Development Tools:**

* **IDE**: Visual Studio 2022 or later
* **Framework**: .NET 6.0 or later
* **Database**: Microsoft SQL Server
* **Languages**: C#, HTML, CSS, Typescript
* **Version Control**: Git

**8. Conclusion:**

A Gym Management System is a crucial tool for modern gyms aiming to boost their efficiency and enhance member satisfaction. By automating a range of administrative tasks, the system allows gym staff to concentrate on delivering a better experience to members. At the same time, it provides administrators with valuable insights into the gym's operations and performance.