Project Title: Fitness Club Automation

**Writeup :-**

Project Objective:

The primary objective of this project is to develop an application that automates the operations and management of a fitness club (gym). This application will streamline various processes within the fitness club, making it more efficient and user-friendly.

Background of the Problem Statement:

Fit Pro Pvt. Ltd., a leading fitness club management company, has entrusted you with the role of a Full Stack Developer to create an integrated solution for their fitness clubs. The need for this project arises from the complexity of managing a fitness club's daily activities, which include user management, gym trainer profiles, and financial transactions. The existing manual processes are prone to errors and inefficiencies, and the company seeks a modern and automated system to overcome these challenges.

Project Tasks:

To achieve the project's objectives, several tasks need to be completed:

1. Database Development Using MySQL:

- Create a robust and scalable database using MySQL to store all relevant information, ensuring data integrity and security.

2. Code Development for Various Application Layers:

- Develop the code for different layers of the application, ensuring a well-structured and maintainable system.

3. Entity Layer:

- Create entities for gym trainers, subscribers, and users, establishing appropriate relationship mappings to represent the real-world connections between these entities accurately.

4. Repository Layer:

- Develop a repository layer to handle all database operations, ensuring efficient data retrieval, storage, and management.

5. Service Layer:

- Implement the service layer, demonstrating dependency injection to decouple components and following the interface segregation principle for cleaner and more maintainable code.

6. Controller Layer:

- Develop the controller layer to expose necessary APIs, including but not limited to:

- Adding gym trainers to the database

- Retrieving all profiles of gym trainers

- Retrieving a profile of a specific trainer

- Fetching subscription details of a customer

- Retrieving information about all subscribers of the gym

- Allocating a gym trainer to one or more subscribers

- Retrieving all subscribers mapped with a gym trainer

- Recording a fees payment of the subscriber

7. GitHub Repository:

- Push the source code of the project to a dedicated GitHub repository, allowing for version control, collaboration, and code management.

Link -- https://github.com/Subham-Gitcode/Java-fsd.git

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