

# Gym Management System

Team: Admin, User, Trainer

## Purpose:

To eliminate the traditional physical registration methods of gym and replace it with this online registration system to avoid redundancy of data and provide digital facilities.

## Scope:

Currently, there are plenty of apps and online services that can give to you workout plan and diet plan and slow the current process however, very few apps demonstrate how the exercises are done and advise a plan. We will develop a website that give weekly workout plan and diet plan and other health advise related to exercise.

## Overview:

The system will take some inputs from the user whether he/she is interested in maintaining/gaining muscle and to become healthy and based on the inputs, System will create a schedule for workout and diet plan for the particular user.

system will store the data and keep track of the workouts and diet maintained by the user.

weekly improvement tracking point will be added in users account as gain point.

that gain point gives improvement result and gives him a score to maintain his discipline.

plan renew option is given to user with good discounted price.

## System Services:

This website is totally independent system that manages activities of the gym as taking enquiries, generating customer reports, trainer management administrative issues.

## Product Functions:

The system functions can be described as follows

- User opens the application.
- Registration
- Report Generation
- Receipt Generation
- weekly workout plan
- diet plan for user
- health advise with expert

## System Features:

The features that are available to the user. Admin can Add / Delete info of Trainers and Customer. Admin has all the rights to view the details of Gym. Admin can also view Transaction Details and update gym membership packages.

## System function:

- a. Security of data.
- b. Ensure data accuracy.
- c. Administrator controls the entire system.
- d. Minimize manual data entry.
- e. Higher efficiency.
- f. High effectiveness.
- g. User friendly and interactive.
- h. Retrieval and Updating tasks can be performed much faster and easier.

## Functional Requirement :

### A) Member registration:

Member registration system is designed to the registration process. Further the system is designed to avoid duplicated entries for same individual by validating the custid.

### b) Payments:

System is designed to record the payments. This records the payment of annual fee, monthly fee with relevant constraints are applied for the payments process.

### c) Manage package details:

System will manage the package by adding/removing the package details like name of package, price and duration of package. System will provide special discounts.

### d) Attendance:

System record the date and time of each member who comes to the gym also System is designed to record the time of arrival and departure of each member. Date will be stored in a database to retrieve necessary reports.

e) Workout management:

System is designed to add or modify the exercises that to be used in the gym and user also the modify workout plan.

f) Gym shift management:

System will allow the admin to store the data according to the shifts.

g) Manage Trainer profile:

System will allow the admin to update /manage the trainer's profile.

h) Machinery management:

System will track record of machineid, machinename and quantity.

## **Non-functional requirements:**

### **Security :**

User will be allowed to register. Each user will be to access system through authentication process. System will provide access to the content, operations using Role based security (Authorization) (Permissions based on Role). Using SSL in all transactions which will be performed user. It would protect confidential information shared by system to Stake holder of Shared by user to system. System will automatically log of all user after some time due to inactiveness. System will block operations for inactive user and would redirect for authentication. System will internally maintain secure communication channel between Servers (Web Servers, App Servers, database Server) Sensitive data will be always encrypted across communication. User proper firewall to protect servers from outside fishing, vulnerable attacks.

### **Reliability :**

The system will backup business data on regular basis and recover in short time duration to keep system operational Continuous updates are maintained, continuous Administration is done to keep system operational. During peak hours system will maintain same user experience by managing load balancing.

## **Availability :**

Uptime: 24\* 7 available.

## **Maintainability:**

A Commercial database software will be used to maintain System data Persistence. A ready made Web Server will be installed to host online portal (Web Site) to management server capabilities. Separate environment will be maintained for system for isolation in production, testing, and development.

## **Portability:**

PDA: Portable Device Application System will provide portable User Interface (HTML, CSS, JS) through users will be able to access online shopping portal. System can be deployed to single server, multi-server, to any OS, Cloud (Azure or AWS or GCP).

## **Accessibility:**

Admin can add/remove user based on due date.

## **Durability:**

System will retain user details for 15 minutes even though customer loose internet connection and join again. System will implement backup and recovery for retaining user data, business operation data and business data over time.

## **Modularity:**

System will designed and developed using reusable, independent or dependent business scenarios in the form of modules. These modules will be loosely coupled and highly cohesive.

## **Scalability:**

System will be able to provide consistent user experience to admin as well as visitors irrespective of load.

## **Safety:**

Online portal will be secure from malicious attack, fishing. Online functionalities are protected from outside with proper firewall configuration. Online will be always kept updated with latest anti-virus software. Business data will be backed up periodically to ensure safety of data using incremental back up strategy. Role based security will be applied for Application data and operations accessibility.

## Gym Management System

