

Project Selected: Gym Management System

Description:

The Gym Management System is designed to manage all operations within a fitness facility.

Classes:

Gym Management (Class: Gym):

This is the first menu, being the login menu for both staff and members (or customers who are signing up) will be greeted with. Getting asked to Either login or to sign up. Depending on which login credentials are entered, either the staff menu or the Member menu will appear. We are going to add a true or false feature that will allow the program to see if they have staff access or not. A Sub menu will also be opened after logging in, this will show multiple different options depending on whether a member or a staff. Members will only see that they can schedule a class (Class), Payment Information (Payment), Payment History (Payment), Account Information (Member), and signing out.

- Manage Core Systems Components: The Gym class will oversee and manage the entire system
- Display the main menu for the rest of the classes and menu options
- Provide access to members login, staff login, payments, and inventory/equipment management

Member (Class: Member):

The members will be asked if they wish to log in or to sign up. If chosen to login, they are asked to enter their login credentials to proceed any further. Or will be asked to enter their information, create a username and password, choose a membership tier, and make the first payment to activate their account. They can change their passwords only.

- Stores basic information of the customers
- Will have assign membership Id and membership Type. This can be edited by staff (Add/Edit/Remove)
- Access to Membership Menu and Payment menu, freely allow to manage their accounts to some accord.

Staff (Class: Staff):

The Staff menu will prompt user to log in first, once they are in. Staff can view/read profiles, work schedules, and roles. New staff members can be created in the system by adding their personal information (name, DOB, etc), role, and login credentials. This staff information can be updated, like their contact details, adjusting roles, or changing their assigned shifts. These Staff members can be deleted from the system when no longer employed or quit, these actions are only available for managers.

- Array List of all employees at the Facility.
- Implement Staff Access Control (Ex. Manager, Crew, etc).
- Manage Staff Information including Adding/Editing/Removing Schedule, Add/Remove Staff or Members from their list

Class (Class: Class):

This class allows gym members to book/register for their own classes that are available (classes that are not full or not yet scheduled). Gym members can also cancel their enrollment if they wish. They should be able to see how many spots are left in the class and if there is room in that class. While gym members can see how many spots are available, they are not able to see who specifically signed up for those spots, but staff members have that access. Staff members can see the class roster of each class, they can enroll/dis-enroll gym members, add/delete classes, and will be able to change class times as well. There will be specific time periods for classes to take place, and this will allow staff members to manage the ongoing classes.

Example:

8:30am to 10:30am - - - Yoga, Zumba

10:45am - 12:15pm - - - Cycling

[Lunch for Staff Instructors]

1:00pm - 2:00pm - - - Yoga

2:15pm - 4:15pm - - - Wall Climbing, Cardio

4:30pm - 6:30pm - - - Zumba,

6:45pm - 8:45pm - - - Running Club

[End of all Classes]

Depending on how many time slots and rooms are available, a limited number of classes can take place. (This class will also correspond to the Facility:class)

- Access to Class Schedule that will open up a menu that offers different fitness classes (Ex. Yoga, Zumba, Cycling, etc.)
- Must have access to Schedule Class to manage booking and availability
- Allow members to register/book for classes

Inventory (Class: Inventory):

Staff can create new inventory items by entering details such as the product/equipment names, ID, and quantity, which are all being saved in a 2D array. This data can be updated to adjust the stock amount or modify descriptions. Items can be deleted from the data that is no longer being sold, or equipment is damaged.

- Menu Option to manage gym products and equipment.
- Allow Staff to manage Inventory (Add/Edit/Remove) any products or equipment
- List will include Supplements Items that can be purchased (Protein Powder, Creatine, Pre-workout supplements, etc)

Membership (Class: Membership):

Different Membership types can be created with information such as its duration, cost, and benefits. Staff can read membership details to verify member eligibility and active status. Membership can be updated with upgrading or downgrading tiers, changing payment methods, or canceling it entirely, meaning to delete the membership from the Members Information but will still show until it expires.

- Different Tiers of Memberships (MembershipType)
 - o Basic Tier: Access to Gym Area (About \$10-20)
 - o Black Pass: Access to Gym Area, Resting Area with additional amenities, and Book Fitness Classes (About \$40)
- Members are freely allowed to manage their membership such as upgrading, canceling, or renewing.

Facility (Class: Facility):

This is a submenu, of only few options for both staff and members. Both can only see buttons for Gym and Classes, allowing them to visit those menus. Depending on which menu they are on, the button will be grayed out, letting them know they are on that page and to avoid creating duplicate menus. (Until we decide to add more facility areas)

- Represent all physical areas withing the Gym (Including Main Gym Area, Resting Area, and the Classes Area)
- Access to Inventory Menu for staff to manage the inventory with their login
- Access to Schedule Menu for Members to book/cancel a class with their login

Payment (Class: Payment):

Payment menu will allow payments to be created when processing member dues, class fees, or other transactions. Both Staff and Members can read payments history, however only Staff are allowed to delete this information. Both Staff and Members can update payments information such as changing payment methods or editing information. This menu will mostly show up when

members wish to buy an item or make a payment towards their membership but will sometimes show if either member or staff is making changes to payments information.

- Payment menu with a variety of options of paying for members (Cash, Credit, debit, etc.)
- Handle the Payment calculation changes when necessary (When paying with Cash)
- Access to Receipt Class, allowing it to print out a receipt if member wants one

Receipt (Class: Receipt):

Receipts will be created automatically whenever payment is processed. However, an option will be given if you want to view this receipt but will be saved in receipt history for future references. Both Members and Staff are able to view these information details. Staff are able to delete receipt history, if a duplicate exists.

- Prints out Receipt of purchase from after the payment class was successful.
- Give option to whether to print (display) a receipt. (Save Paper)

Schedule (Class: Schedule):

Schedule menu will show two different tables, one for staff hours and one for the classes time, location, etc. Staff Hour schedule will show up for staff members to make necessary changes, if an employee is calling off, calling in sick, or if the employee is picking up a shift. Staff can also make changes to the Classes Schedule such as the Class time, Class Name, and Class Location. Members will only be able to see the Classes Schedule to see available Times and opening spots, once they selected them, they will pay a class fee(\$5) to avoid customer signing up and not attending, like a safe guard.

- Connected with Staff and Class, as it will have two lists.
- List Management:
 - o Staff Schedules (Work Hours / Shifts)
 - o Class Schedules (Available Times / Opening)