471 Database Management Systems
My Gym Booking
Final Report

https://github.com/VictorTDong/471-MyGymBooking

Table of Contents

Abstract **5**

Introduction **5**

What problem does My Gym Booking solve? 5

How does My Gym Booking address the problem? 5

Project Design **6**

EER Diagram **11**

Implementation **13**

Relational Model **13**

SQL Queries 14

Queries for Class 14

Create a new class 14

Get classes with facility information 14

Updating a class 14

Deleting a class 14

Updating class participants 15

Queries for Shifts 15

Get shifts with information from facility 15

Updating shift information 15

Creating a shift 15

Deleting a shift 15

Get the trainer' shift 15

Queries for Facility 15

Deleting a class 15

Queries for Schedule 16

Get schedule of a client 16

Deleting a schedule 16

Queries for Account 16

Creating an account 16

Get account info from a member 16

Updating account password 16

Queries for Membership 16

Creating a membership 16

API **16**

GYM API 17

Introduction 17

Overview 17

Error Codes 17
API Endpoints 17
Account 17
GET Get all accounts 17
Sample request: 17
Sample response: 18
GET Get an account 20
Sample request: 20
Sample response: 20
POST Update account 20
Sample request: 21
Sample response: 21
POST Create account 21
Sample request: 22
Sample response: 22
DEL Delete account 22
Sample request: 22
Sample response: 22
Class 22
GET Get all classes 22
Sample request: 22
Sample response: 22
POST Create class 23
Sample request: 24
Sample response: 24
DEL Delete a class 24
Sample request: 24
Sample response: 24
GET Get single class 24
Sample request: 25
Sample response: 25
POST Update class 25
Sample request: 25
Sample response: 25
Facility 25
GET Get all facilities 25
Sample request: 25
Sample response: 25
GET Get a facility 26
Sample request: 26
Sample response: 26

Membership 27
GET Get all memberships 27
Sample request: 27
Sample response: 27
GET Get a membership 27
Sample request: 27
Sample response: 27
POST Create membership 28
Sample request: 28
Sample response: 28
Schedule 28
GET Get all bookings 28
Sample request: 28
Sample response: 28
GET Get a booking 29
Sample request: 29
Sample response: 29
DEL Delete booking 29
Sample request: 30
Sample response: 30
POST Create booking 30
Sample request: 30
Sample response: 30
Shift 30
GET Get all shifts 30
Sample request: 31
Sample response: 31
GET Get a shift 33
Sample request: 33
Sample response: 33
DEL Delete shift 33
Sample request: 34
Sample response: 34
POST Update shift 34
Sample request: 34
Sample response: 34
POST Create shift 34
Sample request: 35
Sample response: 35

User guide **35**

Setup 35
System requirements: 35
Pre-login 37
Client 40
Manager 45
Janitor 61

References: **67**

Appendix **69**

Abstract

My Gym booking is an interactive website that seeks to solve a problem apparent in most gyms and fitness centers, overcrowding. Our website easily allows gym owners to implement a flexible client reservation system. By using our website the gym owners can easily display class times and member participation. This information allows users to choose a time to workout when they feel safe or reserve space during a more popular time. The current system used is outdated; compared to current systems implemented like the University of Calgary's booking system, ours offer an easier interface. We use an SQL based database thus allowing us to easily create, read, update and delete data as need be. We are able to provide an interface that allows users to be more efficient in the booking process.

Introduction

What problem does My Gym Booking solve?

The COVID-19 pandemic has made apparent that many of the world's systems aren't aren't up to standard. My Gym Booking attempts to target one of these systems. Reserving time in a gym became the best way to guarantee space in a business with limited capacity. Aswell having a database for occupancy allows the staff of the facility to save time by not having to manually track each person entering and leaving the facility.

How does My Gym Booking address the problem?

My Gym Booking allows paying members to pre-book time in the gym, ensuring that they will not be turned around at the door. They are also allowed to view the number of people registered for a time slot. With this information they are better allowed to make an informed decision based on their personal risk tolerance. After booking a time slot, the user is allowed to modify their plans based on their needs at the moment.

Employees of the gym are also offered a variety of services based on their role in the company. Trainers (or other class leaders) are able to view their upcoming class schedule to better prepare for their lessons and gauge upcoming participation. Janitors are able to view an automatically generated cleaning schedule for the different facilities of the gym. Management is able to modify account information for users and other employees. They are also able to input the upcoming classes for the day.

Project Design

Members are the clients of the gym. Before logging in they are able to view the schedules for both classes and facilities(fig 1.1 and fig 1.2). They are also able to log in/out of their account (fig 2). When logged into their account, the user will then be able to register for a class(fig 3), and be able to view their schedule (fig 4). While logged in the user's password can also be changed (fig 5).

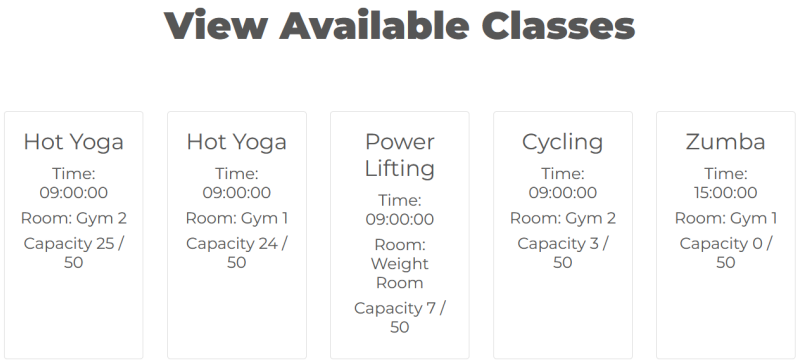


fig 1.1

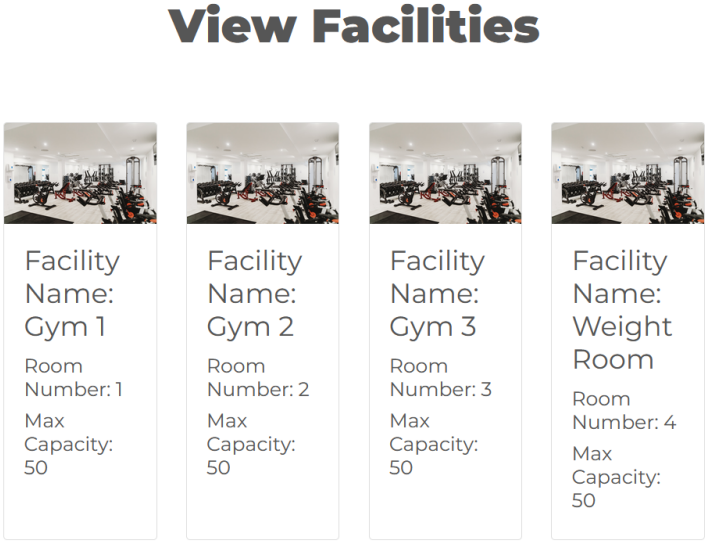


fig 1.2

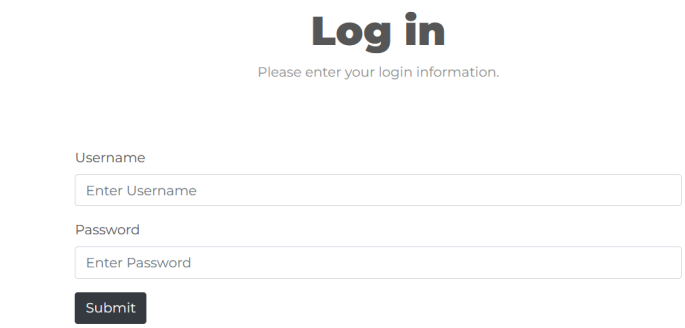


fig 2

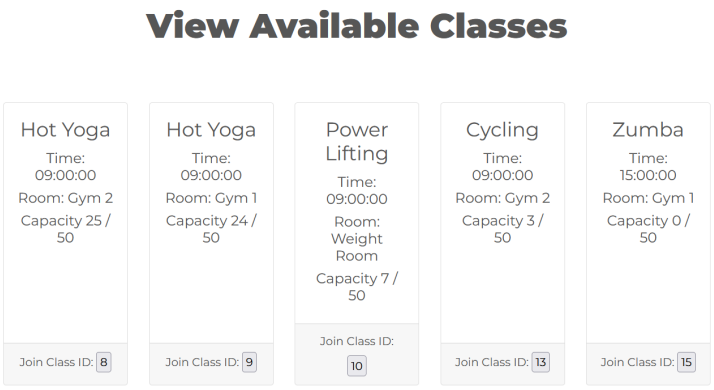


fig 3

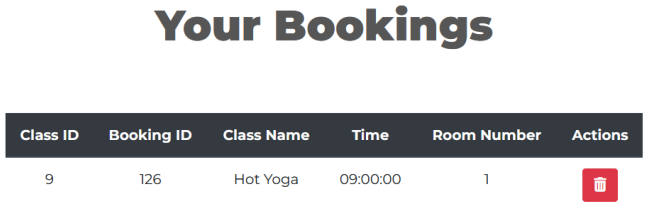


fig 4

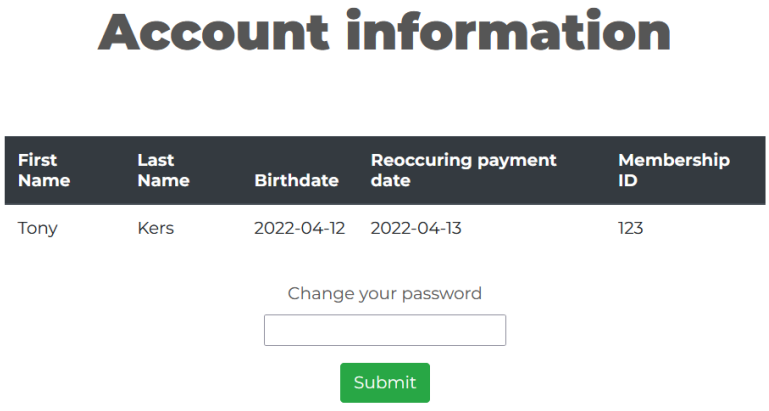
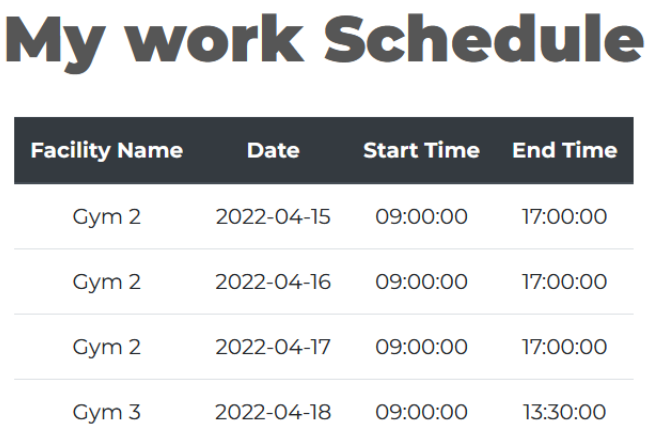


fig 5

Trainers are employees of the gym that teach a class. They are able to view the class and facility schedule before they log in (fig 1.1 and fig 1.2). When they log in they are able to view their work schedule (fig 6).

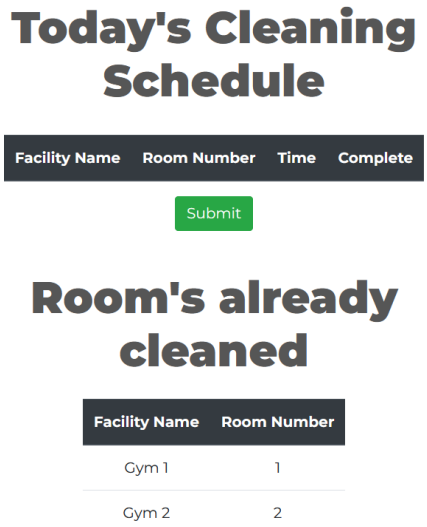


My work Schedule

Facility Name	Date	Start Time	End Time
Gym 2	2022-04-15	09:00:00	17:00:00
Gym 2	2022-04-16	09:00:00	17:00:00
Gym 2	2022-04-17	09:00:00	17:00:00
Gym 3	2022-04-18	09:00:00	13:30:00

fig 6

Janitors are employees of the gym that clean after a class ends. They are able to view the class and facility schedule before they log in (fig 1.1 and fig 1.2). When they log in they are able to view their cleaning schedule (fig 7).



Today's Cleaning Schedule

Facility Name	Room Number	Time	Complete

Submit

Room's already cleaned

Facility Name	Room Number
Gym 1	1
Gym 2	2

fig 7

Managers are employees who are able to control the more administrative duties for the gym. They are able to view the class and facility schedule before they log in (fig 1.1 and fig 1.2).

While logged in they are able to manage client information(fig 8), register members(fig 9), manage classes(fig 10), and manage shifts (fig 11).

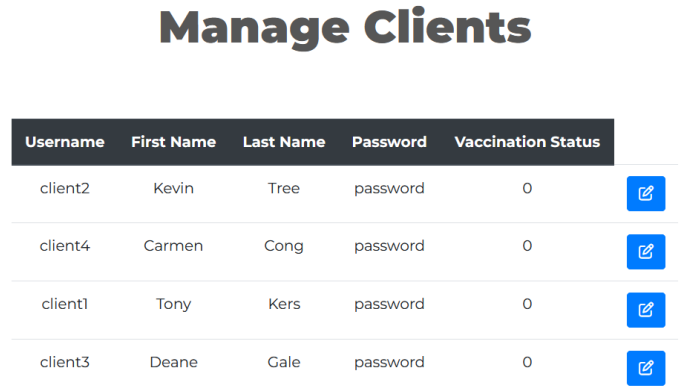


fig 8

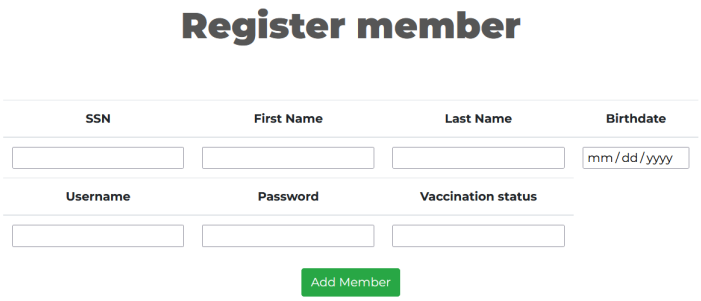


fig 9

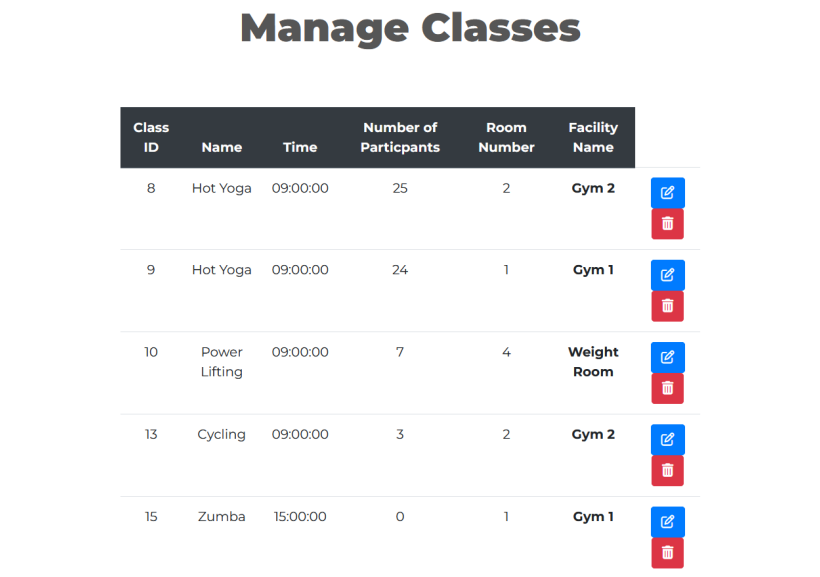


fig 10

Manage Shifts

SSN	Employee First Name	Employee Last Name	Date	Time	Facility	Room Number	
321	Brendan	Bob	2022-04-14	12:00:00-17:00:00	**Gym 2**	**2**	
321	Brendan	Bob	2022-04-14	09:00:00-12:00:00	**Gym 3**	**3**	

SSN	Date	Start Time	End Time	Room Number	
	mm/dd/yyyy	--:-- --	--:-- --		Add Shift

fig 11

EER Diagram

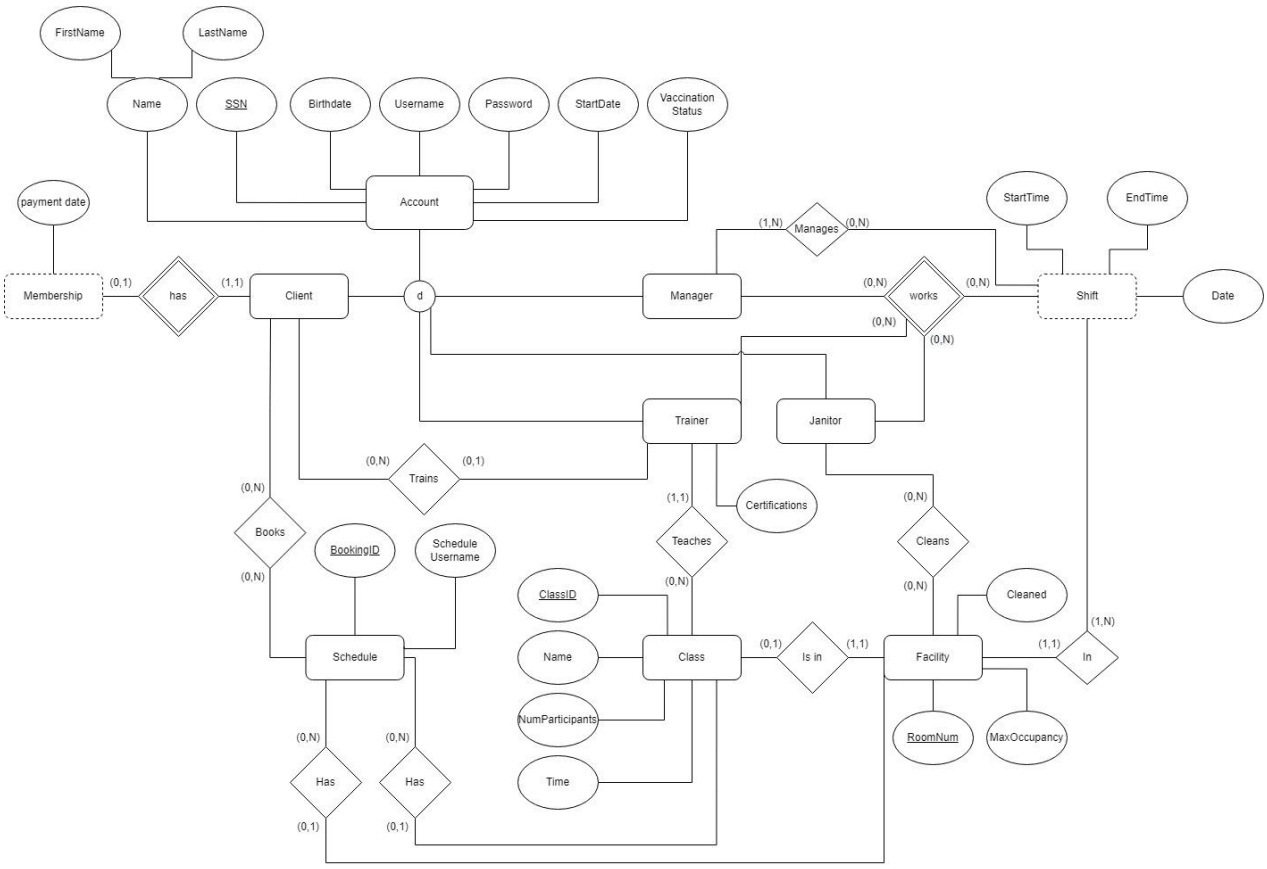
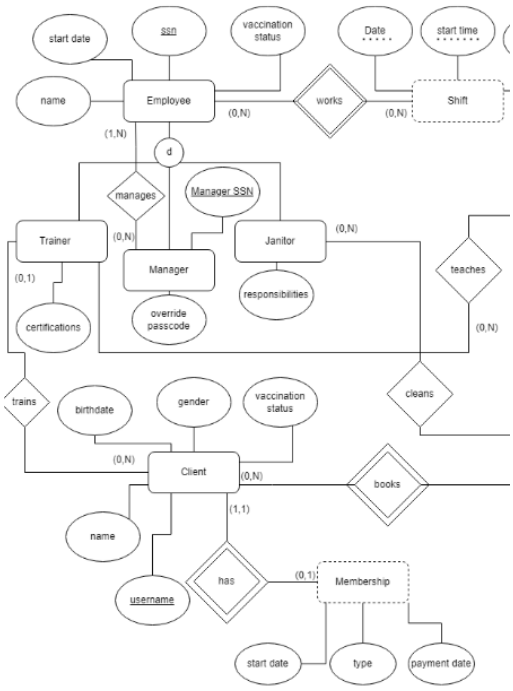


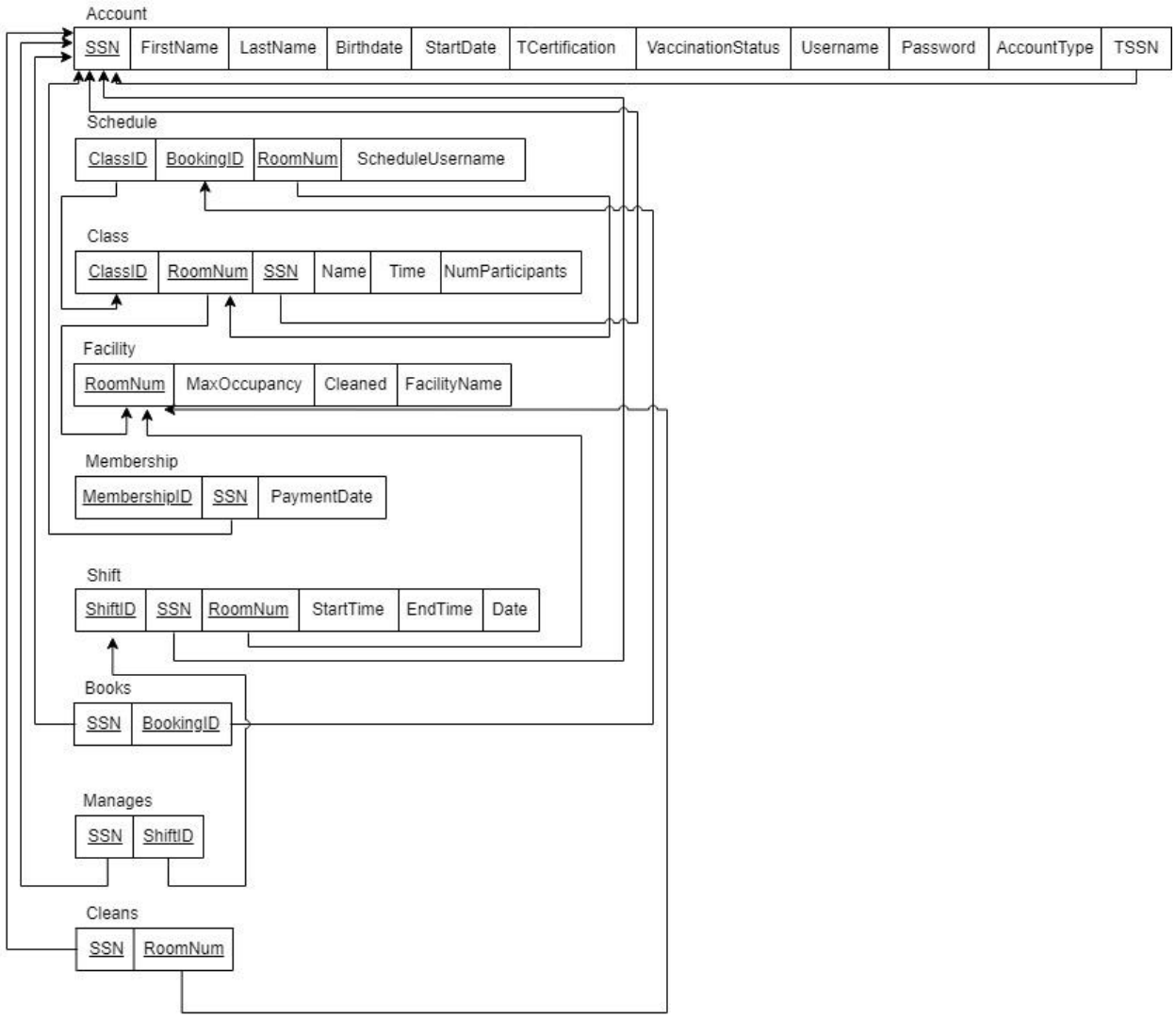
fig 12

For the final results of our project, we made some changes including adding another entity called Account because based on the implementation of our project it made sense to split the super class Employee into 3 separate accounts since the entity Client shares the same attributes and will require the same log in process. The difference is shown between fig 12 and fig 13. Further detail of the old EER is provided in the appendix.


start date
ssn
vaccination status
Date
start time
name
Employee
works
Shift
(0,N)
(0,N)
(1,N)
d
manages
Manager SSN
Trainer
(0,N)
Janitor
(0,N)
Manager
teaches
(0,1)
responsibilities
certifications
override passcode
(0,N)
trains
birthdate
gender
vaccination status
cleans
(0,N)
Client
(0,N)
books
(1,1)
name
has
(0,1)
Membership
username
start date
type
payment date

Implementation

Relational Model



We had to make some changes so it aligns with our new EER diagram. The previous versions of the EER and RM will be included in the appendix.

The program has changed since the presentation. The website is now fully functional. During the presentation, there were some issues with PHPMYADMIN which didn't let us export our database and the problem has since been fixed by reinstalling a previous version of XAMPP with an older version of php. The API's are fully functional and during the presentation we had issues with them but that is due to our website storing session cookies. In the API section we have Postman results from our website as referenced in the link provided. These results were all generated with the correct session cookies for the specified user and as well as API's for our project with full documentation and examples (More details provided in the appendix). Please refer to the Postman link for requests from our website.
For our project, we have used PHPMYADMIN for our database management system. This system provided an easy to use interface that allowed us to implement our database and run the SQL statements. In each of our functionalities of the system, we have used various SQL statements including the SELECT, DELETE, UPDATE and INSERT to help with the collection and manipulating of data in our system.

SQL Queries

Queries for Class

Create a new class

```
INSERT INTO `class` (`ClassID`,`SSN`, `Name`, `Time`, `NumParticipants`,`RoomNum`)
VALUES ('$ClassID','$SSN','$ClassName','$Time', '0','$RoomNum');
```

Get classes with facility information

```
SELECT *
FROM `class` as c, `facility` as f
WHERE f.RoomNum = c.RoomNum ORDER BY c.ClassID ASC;

SELECT ClassID, Name, Time, RoomNum, NumParticipants, MaxOccupancy,
FacilityName
FROM class NATURAL JOIN facility
ORDER BY NumParticipants DESC;
```

Updating a class

```
UPDATE `class`
SET SSN = '$SSN', Name = '$ClassName', Time = '$Time', RoomNum = '$RoomNum'
WHERE ClassID = '$updateClassID';
```

Deleting a class

```
DELETE FROM `class`
WHERE ClassID = '$ClassID';
```

Updating class participants

```
UPDATE `class` Set `NumParticipants` = `NumParticipants` - 1
WHERE classID = $deleteClassID;
```

Queries for Shifts

Get shifts with information from facility

```
SELECT a.FirstName, a.LastName, a.SSN, `Date`, `StartTime`, `EndTime`,
f.FacilityName, f.RoomNum
FROM `shift` as s, `facility` as f, `account` as a
WHERE s.SSN = a.SSN AND s.RoomNum = f.RoomNum ORDER BY Date ASC;
```

Updating shift information

```
UPDATE `shift`
SET Date = '$insertDate', StartTime = '$insertStart_time', EndTime = '$insertEnd_time',
RoomNum = '$insertFacility'
WHERE SSN = '$updateSSN' AND Date = '$updateDate' AND StartTime =
'$updateStart_time' AND EndTime = '$updateEnd_time';
```

Creating a shift

```
INSERT INTO `shift` (`SSN`, `Date`, `StartTime`, `EndTime` , `RoomNum`)
VALUES ('$insertSSN','$insertDate','$insertStart_time','$insertEnd_time','$insertFacility');
```

Deleting a shift

```
DELETE FROM shift
WHERE SSN = '$delete_SSN' AND Date = '$date' AND StartTime = '$start_time' AND
EndTime = '$end_time';
```

Get the trainer' shift

```
SELECT s.SSN, s.Date, s.StartTime, s.EndTime, f.RoomNum, f.FacilityName
FROM `shift` as s, `facility` as f
WHERE s.RoomNum = f.RoomNum AND SSN = '$trainerSSN'
ORDER BY Date ASC;
```

Queries for Facility

Deleting a class

```
SELECT RoomNum, MaxOccupancy, FacilityName
FROM facility
ORDER BY RoomNum ASC;
```

Queries for Schedule

Get schedule of a client

```
SELECT c.Name, `BookingID`, s.ClassID, c.Time, c.RoomNum
FROM `schedule` as s, `Class` as c
WHERE c.ClassID = s.ClassID AND ScheduleUsername = '$memberUsername';
```

Deleting a schedule

```
DELETE FROM schedule
WHERE BookingID = '$deleteBookingID';
```

Queries for Account

Creating an account

```
INSERT INTO `account` (`Username`, `FirstName`, `LastName`, `Startdate`,
`AccountType`, `VaccinationStatus`, `BirthDate`, `Certification`, `SSN`, `Responsibilities`,
`Password`)
VALUES ('$insertUsername','$insertFirstName','$insertLastName', '$date',
'0','$insertVaccination','$insertBirthdate',NULL,'$insertSSN',NULL,'$insertPassword');
```

Get account info from a member

```
SELECT * FROM `account` as s, `membership` as m
WHERE m.SSN = s.SSN AND s.Username = '$memberUsername';
```

Updating account password

```
UPDATE account
SET Password = '$updatePassword'
WHERE UserName = '$username';
```

Queries for Membership

Creating a membership

```
INSERT INTO `membership` (`MembershipID`, `SSN`, `PaymentDate`)
VALUES (DEFAULT,'$insertSSN', '$date');
```

API

GYM API

Introduction

This API collection holds all the back end API methods for interacting with accounts, classes, facilities, memberships, schedules, and shifts

Overview

To run these API's you will need to open the XAMPP apache and my sql server with the gym database

Error Codes

Users can expect HTTP response error codes 404 indicating that the request was unsuccessful and HTTP response code 200 indicating that the request was successful

Note full documentation for the GYM API can be acquired from
https://documenter.getpostman.com/view/20196276/Uyr5nyTD

Note Postman results for the request from the website can be acquired from
https://documenter.getpostman.com/view/20196276/Uyr5nyXV#intro

Note all sample request will be requested with Curl based on Postman documentation

API Endpoints

Account

GET Get all accounts

> http://localhost/471Project/api/account/account.php
> Get all accounts in the database
>
> Sample request:
>
> curl --location --request GET 'http://localhost/471Project/api/account/account.php'

Sample response:


```
{
   "body": [
      {
         "username": "trainer1",
         "firstname": "Victor",
         "lastname": "Bill",
         "startdate": "2022-04-14",
         "accounttype": "1",
         "vaccination": "1",
         "birthdate": "1990-04-12",
         "certification": "CPR",
         "ssn": "123",
         "password": "password"
      },
      {
         "username": "janitor1",
         "firstname": "Brendan",
         "lastname": "Bob",
         "startdate": "2022-04-14",
         "accounttype": "2",
         "vaccination": "1",
         "birthdate": "2005-04-12",
         "certification": "CPR",
         "ssn": "321",
         "password": "password"
      },
      {
         "username": "client2",
         "firstname": "Kevin",
         "lastname": "Cool",
         "startdate": "2022-04-14",
         "accounttype": "0",
         "vaccination": "1",
         "birthdate": "2022-04-12",
         "certification": "",
         "ssn": "654",
         "password": "password"
      },
      {
         "username": "manager1",
         "firstname": "Samantha",
         "lastname": "House",
         "startdate": "2022-04-14",
```

```
        "accounttype": "3",
        "vaccination": "1",
        "birthdate": "2001-04-12",
        "certification": "CPR",
        "ssn": "741",
        "password": "password"
    },
    {
        "username": "client1",
        "firstname": "Anthony",
        "lastname": "Pit",
        "startdate": "2022-04-14",
        "accounttype": "0",
        "vaccination": "0",
        "birthdate": "0200-04-12",
        "certification": "",
        "ssn": "789",
        "password": "password"
    },
    {
        "username": "client3",
        "firstname": "Deane",
        "lastname": "Gale",
        "startdate": "2022-04-14",
        "accounttype": "0",
        "vaccination": "0",
        "birthdate": "1999-12-25",
        "certification": "",
        "ssn": "856",
        "password": "password"
    },
    {
        "username": "client4",
        "firstname": "Kim",
        "lastname": "Possible",
        "startdate": "2022-04-16",
        "accounttype": "0",
        "vaccination": "1",
        "birthdate": "2005-05-29",
        "certification": null,
        "ssn": "4567",
        "password": "password"
    }
],
```

```
    "itemCount": 7
}
```


GET Get an account

http://localhost/471Project/api/account/account-single.php?SSN=
Get a specified account from the database

Sample request:

curl --location --request GET
'http://localhost/471Project/api/account/account-single.php?SSN=123'

Sample response:


```
{
  "body": [
    {
      "username": "trainer1",
      "firstname": "Billy",
      "lastname": "Smith",
      "startdate": "2022-04-14",
      "accounttype": "1",
      "vaccination": "1",
      "birthdate": "2022-04-12",
      "certification": "CPR",
      "ssn": "123",
      "password": "password"
    }
  ],
  "itemCount": 1
}
```


POST Update account

http://localhost/471Project/api/account/account-update.php?SSN=&Firstname=&Lastname=&VaccinationStatus=&Password=
Updates an account

PARAMS

SSN: The account SSN (INT)

Firstname: First name of account holder (STRING)

Lastname: Last name of account holder (STRING)

VaccinationStatus: Vaccination status of account holder (0 for false, 1 for true)

Password: Password of account holder (STRING)

Sample request:

curl --location --request POST 'http://localhost/471Project/api/account/account-update.php?SSN=123&Firstname=Victor&Lastname=Bill&VaccinationStatus=1&Password=password'

Sample response:


```
[
 {
  "username": "trainer1",
  "firstname": "Victor",
  "lastname": "Bill",
  "startdate": "2022-04-14",
  "accounttype": "1",
  "vaccination": "1",
  "birthdate": "2022-04-12",
  "certification": "CPR",
  "ssn": "123",
  "password": "password"
 }
]
```


POST Create account

http://localhost/471Project/api/account/account-create.php/

Creates an account

BODY Raw


```
{
  "Username": "",
  "FirstName":"",
  "LastName": "",
  "AccountType":"",
  "VaccinationStatus": "",
  "BirthDate": "",
  "Certification":"",
  "SSN": "",
```

```
    "Responsibilities": "",
    "password": ""
}
```

Sample request:

```
curl --location --request POST 'http://localhost/471Project/api/account/account-update.php?SSN=123&Firstname=Victor&Lastname=Bill&VaccinationStatus=1&Password=password'
```

Sample response:

```
{
  "msg": "Account created",
  "status": true
}
```

DEL Delete account

http://localhost/471Project/api/account/account-delete.php/?SSN=
Deletes an account

Sample request:

```
curl --location --request DELETE 'http://localhost/471Project/api/account/account-delete.php/?SSN=625'
```

Sample response:

```
{
  "message": "Account with SSN: 625 deleted",
  "status": true
}
```

Class

GET Get all classes

http://localhost/471Project/api/class/class.php

Sample request:

```
curl --location --request GET 'http://localhost/471Project/api/class/class.php'
```

Sample response:

```
{
```

```
 "body": [
  {
   "ClassID": "8",
   "Name": "Hot Yoga",
   "Time": "09:00:00",
   "NumParticipants": "25",
   "RoomNum ": "2"
  },
  {
   "ClassID": "9",
   "Name": "Hot Yoga",
   "Time": "09:00:00",
   "NumParticipants": "23",
   "RoomNum ": "1"
  },
  {
   "ClassID": "10",
   "Name": "Power Lifting",
   "Time": "09:00:00",
   "NumParticipants": "7",
   "RoomNum ": "4"
  },
  {
   "ClassID": "13",
   "Name": "Cycling",
   "Time": "09:00:00",
   "NumParticipants": "3",
   "RoomNum ": "2"
  },
  {
   "ClassID": "15",
   "Name": "Zumba",
   "Time": "15:00:00",
   "NumParticipants": "0",
   "RoomNum ": "1"
  }
 ],
 "itemCount": 5
}
```


POST Create class

http://localhost/471Project/api/class/class-create.php

BODY raw

```
{
    "Name":"",
    "Time": "",
    "NumParticipants":"",
    "RoomNum": ""
}
```

Sample request:

```
curl --location --request POST 'http://localhost/471Project/api/class/class-create.php' \
--data-raw '{
    "Name":"Rowing",
    "Time": "12:00:00",
    "NumParticipants":"0",
    "RoomNum": "2"
}'
```

Sample response:

```
{
  "msg": "Class created",
  "status": true
}
```

DEL Delete a class

http://localhost/471Project/api/class/class-delete.php?ClassID=
PARAMS
ClassID : Class ID of class to be deleted (INT)

Sample request:

```
curl --location --request DELETE
'http://localhost/471Project/api/class/class-delete.php?ClassID='
```

Sample response:

```
{
  "message": "Class with ClassID : 16 deleted",
  "status": true
}
```

GET Get single class

http://localhost/471Project/api/class/class-single.php?ClassID=
PARAMS
ClassID : Class ID of class to acquire (INT)

Sample request:

curl --location --request GET 'http://localhost/471Project/api/account/account.php'

Sample response:

POST Update class

http://localhost/471Project/api/class/class-update.php?ClassID=&Name=&Time=&RoomNum=
PARAMS
ClassID: Class ID of class to update (INT)
Name: Name of class (STRING)
Time: Time of class (TIME)
RoomNum: Room number for the class (INT)

Sample request:

curl --location --request POST 'http://localhost/471Project/api/class/class-update.php?ClassID=8&Name=Hot Yoga&Time=10:00:00&RoomNum=3'

Sample response:


```
{
  "message": "Class updated",
  "status": true
}
```


Facility

GET Get all facilities

http://localhost/471Project/api/facility/facility.php

Sample request:

curl --location --request GET 'http://localhost/471Project/api/facility/facility.php'

Sample response:


```
{
  "body": [
    {
      "RoomNum": "1",
      "MaxOccupancy": "50",
      "Cleaned": "1",
      "FacilityName": "Gym 1"
```

```
    },
    {
      "RoomNum": "2",
      "MaxOccupancy": "50",
      "Cleaned": "0",
      "FacilityName": "Gym 2"
    },
    {
      "RoomNum": "3",
      "MaxOccupancy": "50",
      "Cleaned": "0",
      "FacilityName": "Gym 3"
    },
    {
      "RoomNum": "4",
      "MaxOccupancy": "50",
      "Cleaned": "0",
      "FacilityName": "Weight Room"
    }
  ],
  "itemCount": 4
}
```


GET Get a facility

http://localhost/471Project/api/facility/facility-single.php?RoomNum=

Sample request:

curl --location --request GET 'http://localhost/471Project/api/facility/facility-single.php?RoomNum=3'

Sample response:


```
{
  "body": [
    {
      "RoomNum": "3",
      "MaxOccupancy": "50",
      "Cleaned": "0",
      "FacilityName": "Gym 3"
    }
  ],
  "itemCount": 1
}
```

Membership

GET Get all memberships

http://localhost/471Project/api/membership/membership.php

Sample request:

curl --location --request GET 'http://localhost/471Project/api/membership/membership.php'

Sample response:


```
{
  "body": [
    {
      "MembershipID": "123",
      "SSN": "789",
      "PaymentDate": "2022-04-13"
    },
    {
      "MembershipID": "365",
      "SSN": "654",
      "PaymentDate": "2022-04-15"
    },
    {
      "MembershipID": "2357",
      "SSN": "678",
      "PaymentDate": "2022-04-15"
    }
  ],
  "itemCount": 3
}
```


GET Get a membership

http://localhost/471Project/api/membership/membership-single.php?MembershipID=

Sample request:

curl --location --request GET 'http://localhost/471Project/api/membership/membership-single.php?MembershipID=123'

Sample response:


```
{
  "body": [
    {
      "MembershipID": "123",
```

```
      "SSN": "789",
      "PaymentDate": "2022-04-13"
    }
  ],
  "itemCount": 1
}
```


POST Create membership

http://localhost/471Project/api/membership/membership-create.php

BODY Raw


```
{
    "SSN":""
}
```


Sample request:

```
curl --location --request POST 'http://localhost/471Project/api/membership/membership-create.php' \--data-raw '{
"SSN":"856"}'
```

Sample response:


```
{
  "msg": "Membership created",
  "status": true
}
```


Schedule

GET Get all bookings

http://localhost/471Project/api/schedule/schedule.php

Sample request:

```
curl --location --request GET 'http://localhost/471Project/api/schedule/schedule.php'
```

Sample response:


```
{
  "body": [
    {
      "BookingID": "48",
      "ClassID": "10",
      "RoomNum": "1",
      "ScheduleUsername": "client3"
    },
```

```
    {
      "BookingID": "49",
      "ClassID": "10",
      "RoomNum": "1",
      "ScheduleUsername": "client2"
    },
    {
      "BookingID": "110",
      "ClassID": "15",
      "RoomNum": "1",
      "ScheduleUsername": "client2"
    }
  ],
  "itemCount": 3
}
```


GET Get a booking

http://localhost/471Project/api/schedule/schedule-single.php?BookingID=
PARAMS
BookingID: Booking ID of booking to get (INT)

Sample request:

curl --location --request GET
'http://localhost/471Project/api/schedule/schedule-single.php?BookingID=48'

Sample response:


```
{
  "body": [
    {
      "BookingID": "48",
      "ClassID": "10",
      "RoomNum": "1",
      "ScheduleUsername": "client3"
    }
  ],
  "itemCount": 1
}
```


DEL Delete booking

http://localhost/471Project/api/schedule/schedule-delete.php?BookingID=
PARAMS

BookingID: Booking ID of booking to get (INT)

Sample request:

curl --location --request DELETE
'http://localhost/471Project/api/schedule/schedule-delete.php?BookingID=111'

Sample response:

```
{
  "message": "Booking with Booking ID: 111 deleted",
  "status": true
}
```

POST Create booking

http://localhost/471Project/api/schedule/schedule-create.php
BODY Raw

```
{
    "ClassID":"",
    "RoomNum":"",
    "ScheduleUsername":""
}
```

Sample request:

```
curl --location --request POST
'http://localhost/471Project/api/schedule/schedule-create.php' \
--data-raw '{
    "ClassID":"15",
    "RoomNum":"1",
    "ScheduleUsername":"client2"
}'
```

Sample response:

```
{
  "msg": "Booking created",
  "status": true
}
```

Shift

GET Get all shifts

http://localhost/471Project/api/shift/shift.php

Sample request:

curl --location --request GET 'http://localhost/471Project/api/shift/shift.php'

Sample response:


```
{
  "body": [
    {
      "ShiftID ": "1",
      "SSN": "123",
      "Date": "2022-04-15",
      "StartTime": "09:00:00",
      "EndTime": "17:00:00",
      "RoomNum ": "2"
    },
    {
      "ShiftID ": "5",
      "SSN": "123",
      "Date": "2022-04-16",
      "StartTime": "09:00:00",
      "EndTime": "17:00:00",
      "RoomNum ": "2"
    },
    {
      "ShiftID ": "6",
      "SSN": "123",
      "Date": "2022-04-17",
      "StartTime": "09:00:00",
      "EndTime": "17:00:00",
      "RoomNum ": "2"
    },
    {
      "ShiftID ": "7",
      "SSN": "456",
      "Date": "2022-04-17",
      "StartTime": "09:00:00",
      "EndTime": "17:00:00",
      "RoomNum ": "2"
    },
    {
      "ShiftID ": "10",
      "SSN": "321",
      "Date": "2022-04-18",
      "StartTime": "09:00:00",
      "EndTime": "16:30:00",
```

```
  "RoomNum ": "3"
},
{
  "ShiftID ": "11",
  "SSN": "321",
  "Date": "2022-04-14",
  "StartTime": "09:00:00",
  "EndTime": "12:00:00",
  "RoomNum ": "3"
},
{
  "ShiftID ": "12",
  "SSN": "321",
  "Date": "2022-04-15",
  "StartTime": "09:00:00",
  "EndTime": "12:00:00",
  "RoomNum ": "1"
},
{
  "ShiftID ": "13",
  "SSN": "321",
  "Date": "2022-04-16",
  "StartTime": "09:00:00",
  "EndTime": "12:00:00",
  "RoomNum ": "1"
},
{
  "ShiftID ": "14",
  "SSN": "321",
  "Date": "2022-04-15",
  "StartTime": "12:00:00",
  "EndTime": "17:00:00",
  "RoomNum ": "2"
},
{
  "ShiftID ": "15",
  "SSN": "321",
  "Date": "2022-04-16",
  "StartTime": "12:00:00",
  "EndTime": "17:00:00",
  "RoomNum ": "2"
},
{
  "ShiftID ": "18",
```

```
      "SSN": "123",
      "Date": "2022-04-18",
      "StartTime": "09:00:00",
      "EndTime": "13:30:00",
      "RoomNum ": "3"
    }
  ],
  "itemCount": 11
}
```


GET Get a shift

http://localhost/471Project/api/shift/shift-single.php?ShiftID=
PARAMS
ShiftID: Shift ID of shift to get (INT)

Sample request:

curl --location --request GET 'http://localhost/471Project/api/schedule/schedule-single.php?BookingID=48'

Sample response:


```
{
  "body": [
    {
      "ShiftID ": "5",
      "SSN": "123",
      "Date": "2022-04-16",
      "StartTime": "09:00:00",
      "EndTime": "17:00:00",
      "RoomNum ": "2"
    }
  ],
  "itemCount": 1
}
```


DEL Delete shift

http://localhost/471Project/api/shift/shift-delete.php?ShiftID=
PARAMS
ShiftID: Shift ID of shift to get (INT)

Sample request:

curl --location --request DELETE
'http://localhost/471Project/api/shift/shift-delete.php?ShiftID=20'

Sample response:


```
{
  "message": "Booking with Booking ID: 111 deleted",
  "status": true
}
```


POST Update shift

http://localhost/471Project/api/shift/shift-update.php?ShiftID=&Date=&StartTime=&EndTime=&RoomNum=
PARAMS
ShiftID: Shift ID of shift to upate (INT)
Date : Date of shift (DATE)
StartTime: Start time of shift (TIME)
EndTime: End time of Shift (TIME)
RoomNum: Room number of the shift which the employee works at (INT)

Sample request:

curl --location --request POST
'http://localhost/471Project/api/shift/shift-update.php?ShiftID=20&Date=2022-04-18&StartTime=09:00:00&EndTime=16:30:00&RoomNum=3'

Sample response:


```
{
  "message": "Shift updated",
  "status": true
}
```


POST Create shift

http://localhost/471Project/api/shift/shift-create.php
BODY Raw


```
{
    "SSN":"123",
    "Date":"2022-04-30",
    "StartTime":"09:00:00",
    "EndTime":"17:00:00",
    "RoomNum":"4"
}
```

Sample request:

```
curl --location --request POST 'http://localhost/471Project/api/shift/shift-create.php' \
--data-raw '{
    "SSN":"123",
    "Date":"2022-09-05",
    "StartTime":"09:00:00",
    "EndTime":"17:00:00",
    "RoomNum":"3"
}'
```

Sample response:

```
{
  "msg": "Shift created",
  "status": true
}
```

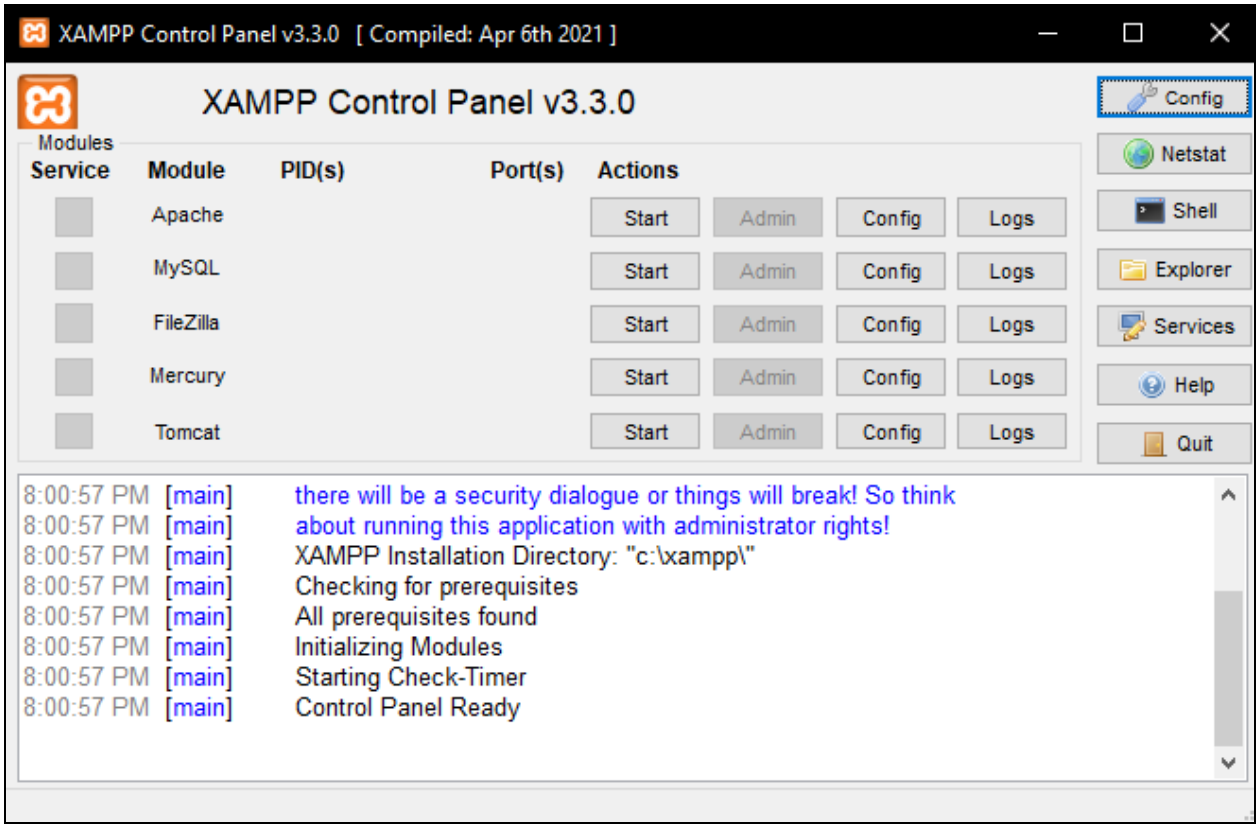
User guide

Setup

System requirements:

Users will need to have XAMPP installed on their computer. There has been issues with the newest version of XAMPP so version 7.4.28 is preferred and can be found through the link XAMPP'S download page below.
https://www.apachefriends.org/download.html

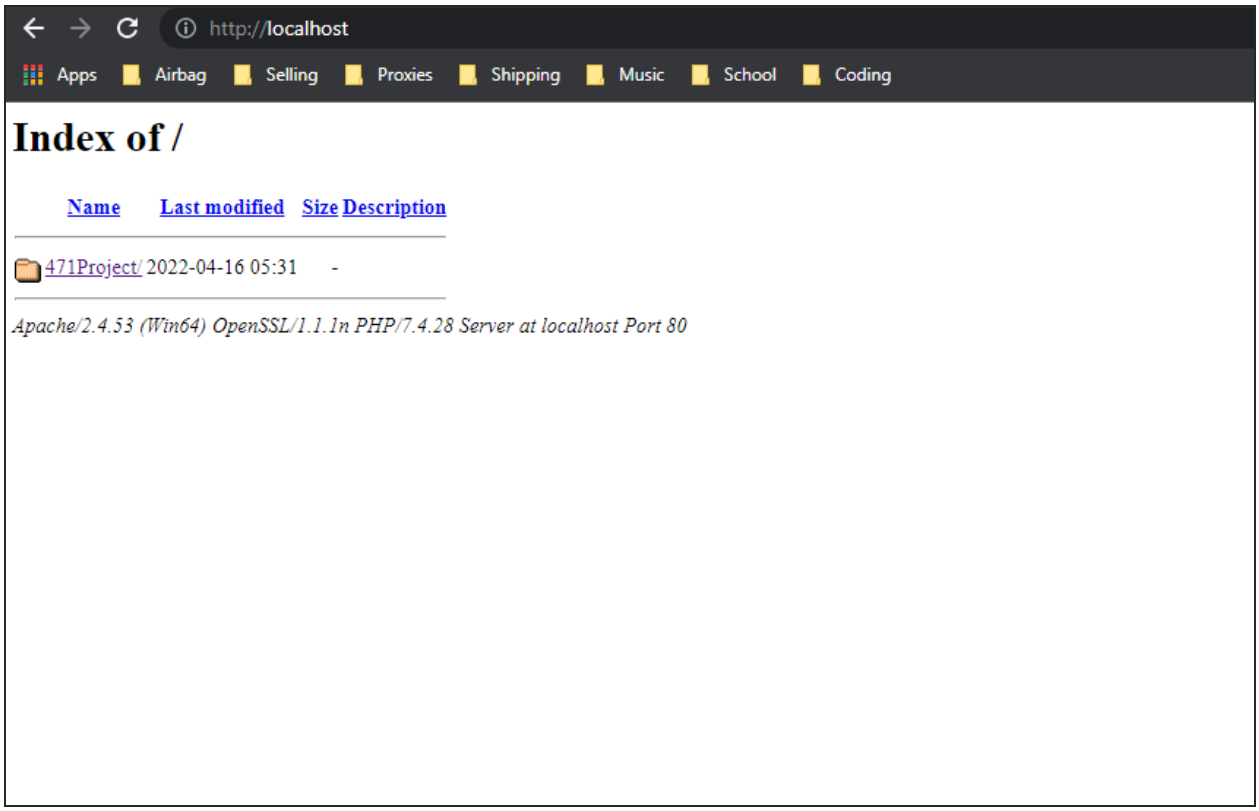
Upon installing XAMPP users will need to start the Apache server and MySql server by clicking on the start button



Users can now open their browser and go http://localhost/phpmyadmin/ in which they can import the gym database by creating a new database located on the left side of the page and then clicking import and selecting the database file

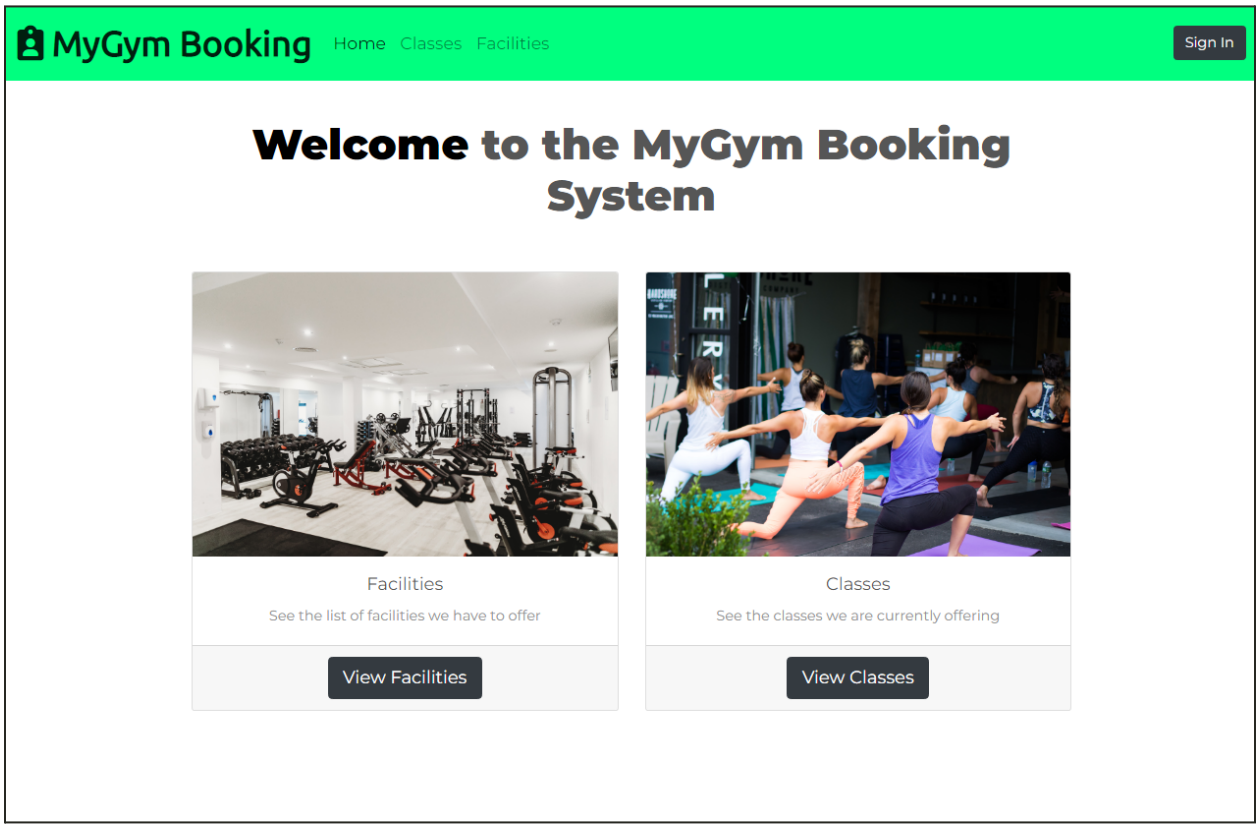
After uploading the database, users will need to place all the folder containing their source code in XAMPP's htdocs folder located at C:\xampp\htdocs (path can vary)

After placing the folder their, the user can access the website through the link http://localhost/ and needs to select the folder in which it is located in.

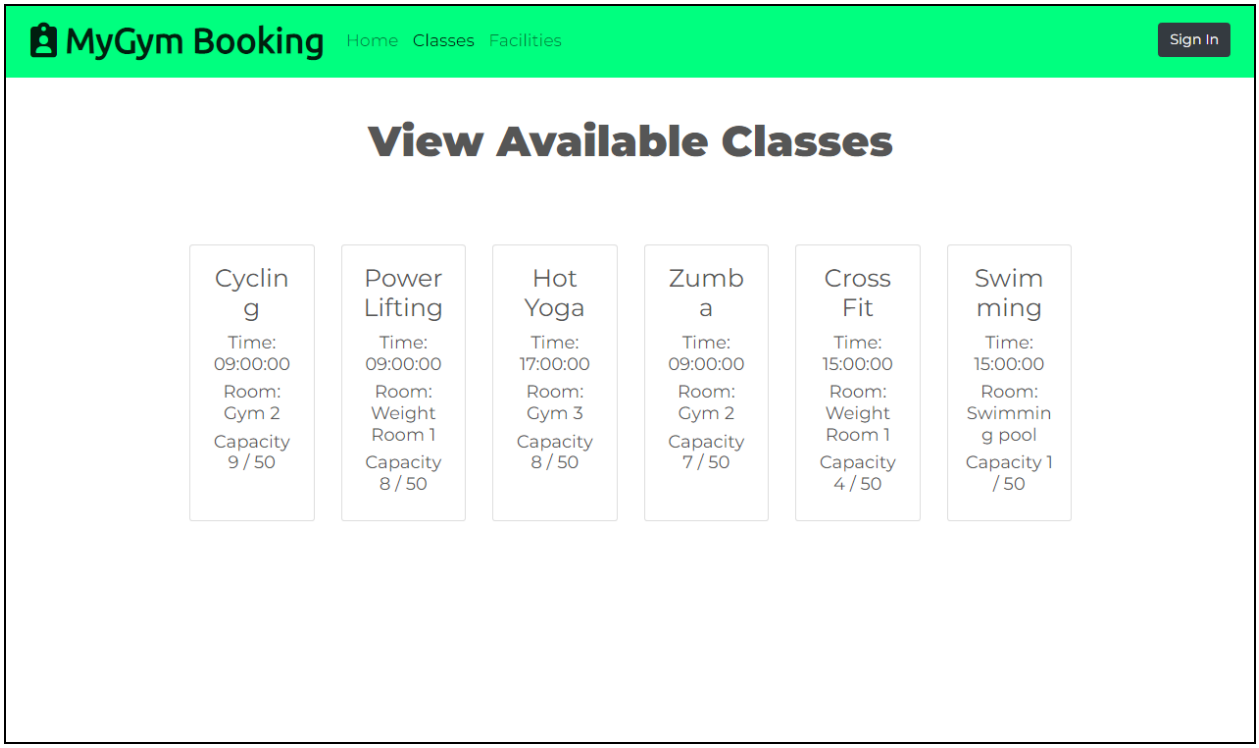


The user will now be greeted with the home page of the website and can learn to navigate the website through the guide below

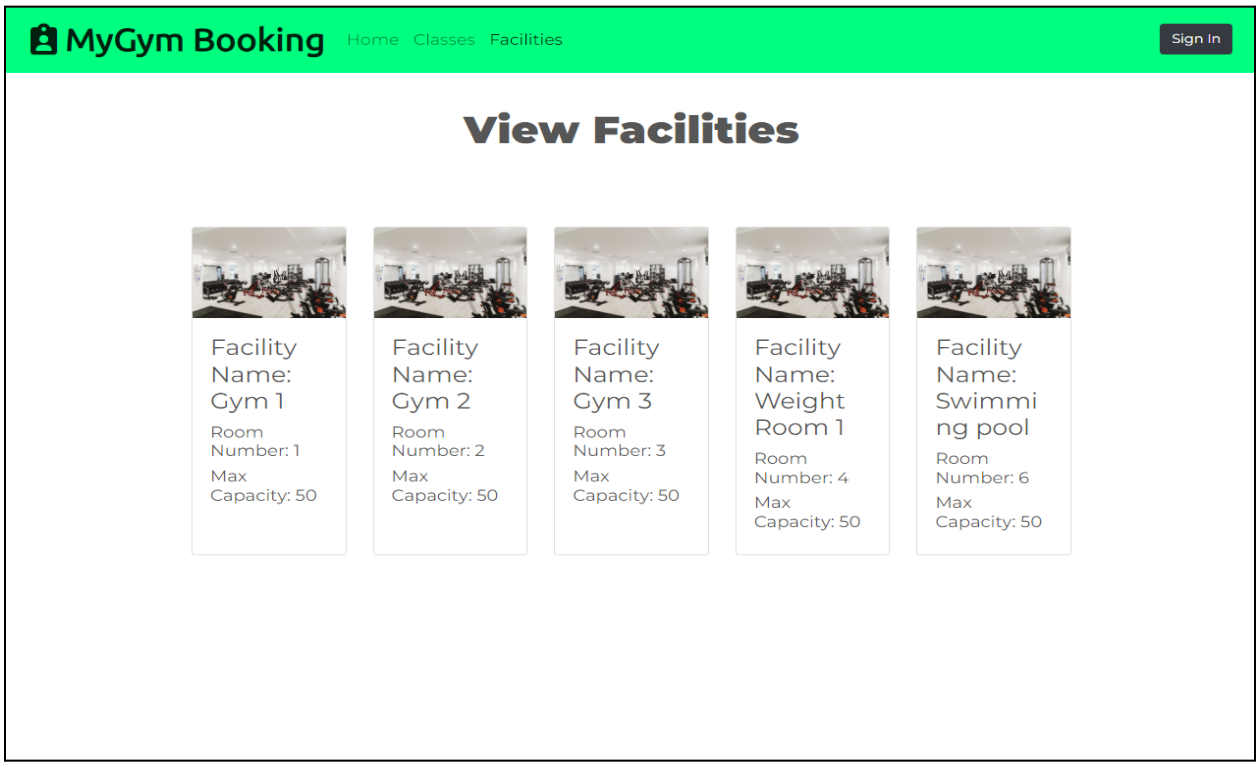
Pre-login



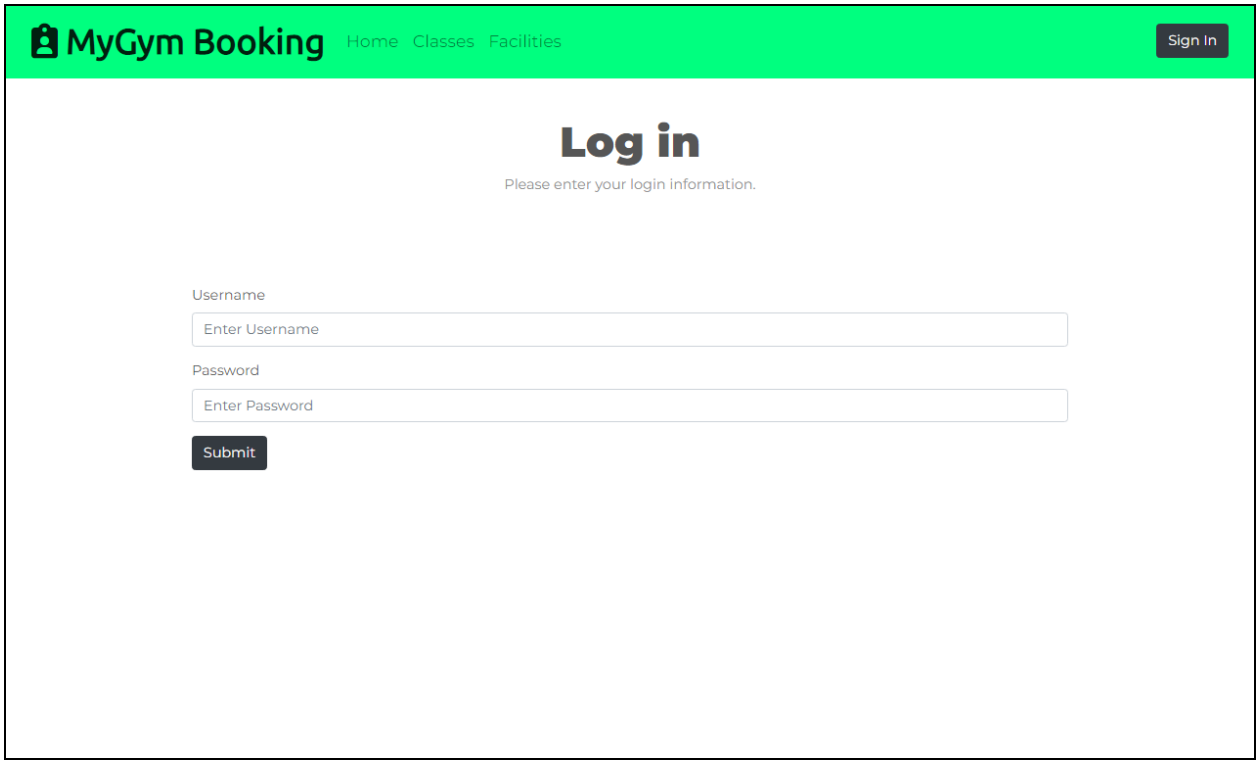
Upon logging in, users will be greeted with the landing of the website and can navigate through the various options. The users can view available classes by clicking view classes. The “Classes” on the navigation bar and the “View Classes” will both lead you to the view available classes as shown below



The user can view classes that are currently offered by the gym and notice that the user has no option to join a class as that feature will require the user to log in.



Users can click “Facilities” on the navigation bar to view available facilities. Note this button will direct you to this page which is the same as the “View Facilties” button on the home page.



Users can click the “Sign In” button which will lead you to the sign in page in which users can log in. This application will have 4 different types of users that they can sign in as.
These different type of users are: Client, Manager, Janitor and Trainer.

The user will have 4 accounts to log in with:
User: client1 Password: password
User: client2 Password: password
User: client3 Password: password
User: client4 Password: password

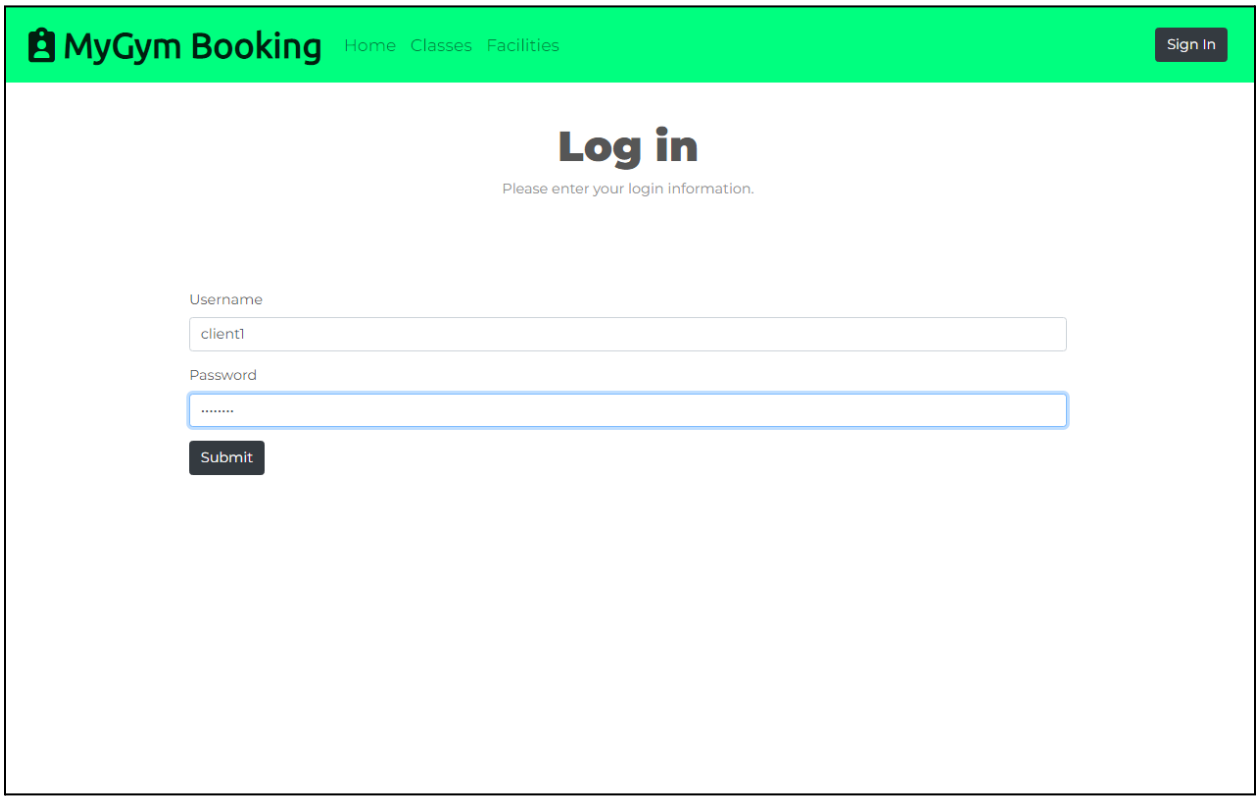
The manager can log in with:
User: manager1 Password: password

The Janitor can log in with:
User: janitor1 Password: password

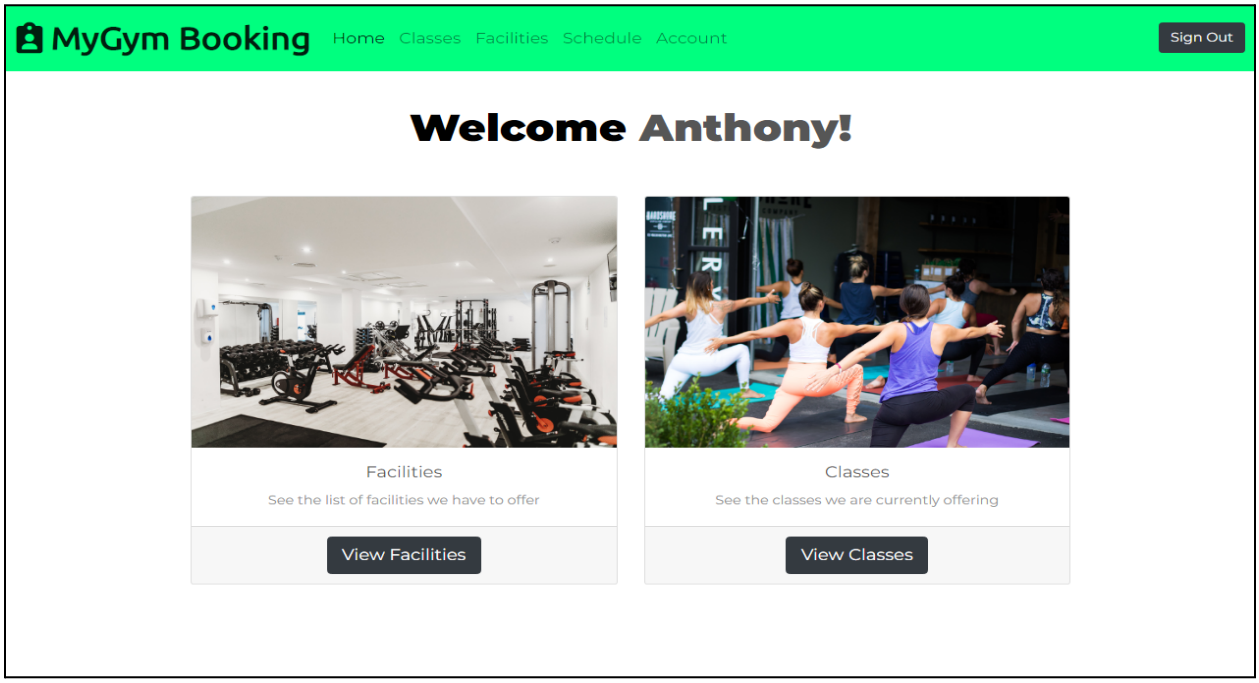
The Trainer can log in with:
User: trainer1 Password: password

Demonstrated below is the process that each user can go through with the various account types.

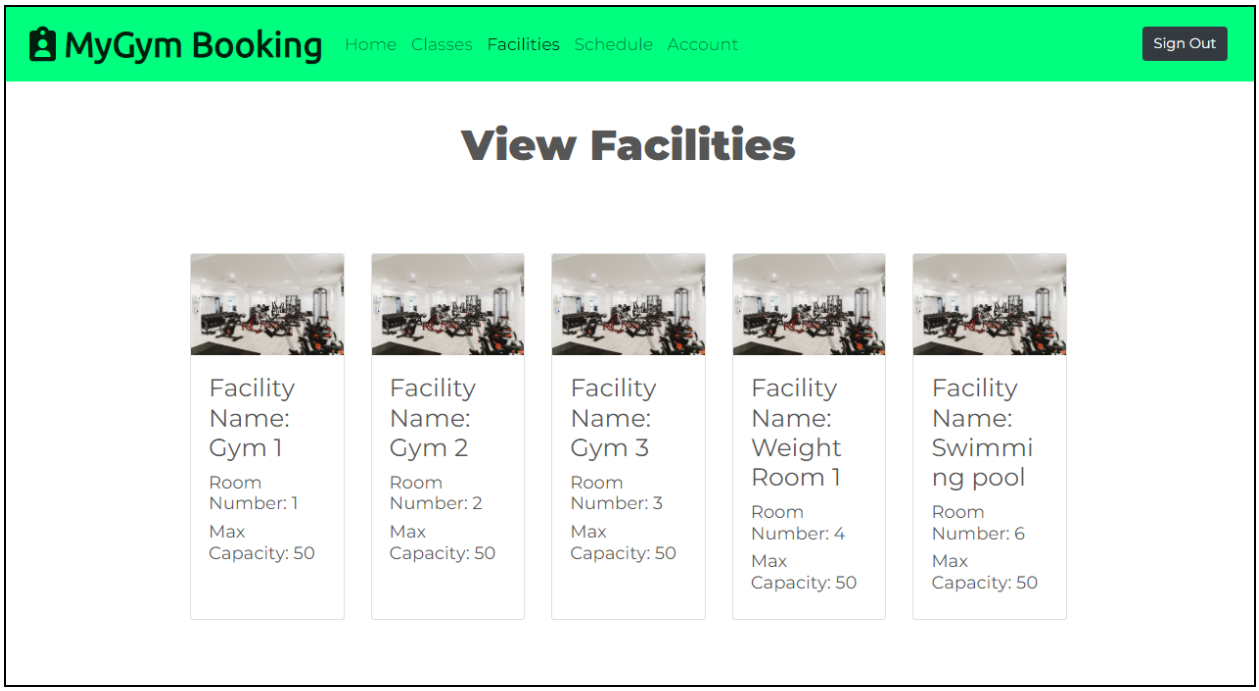
Client



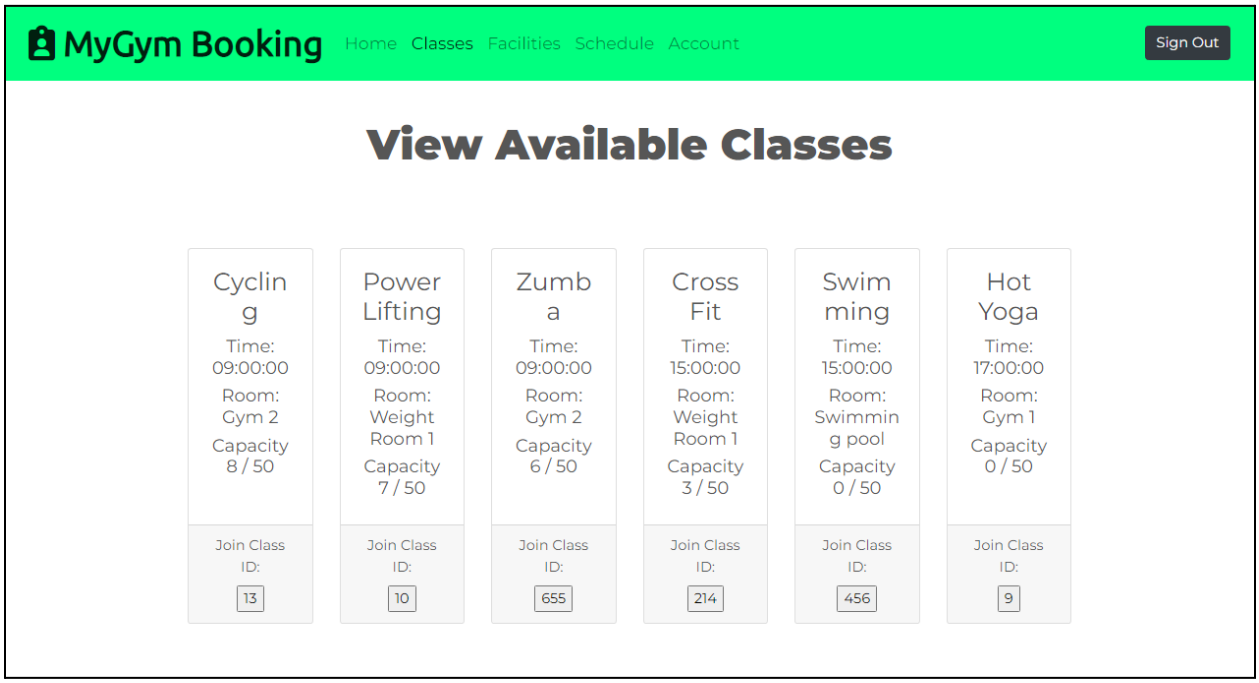
Users can log in with one of the accounts list above.



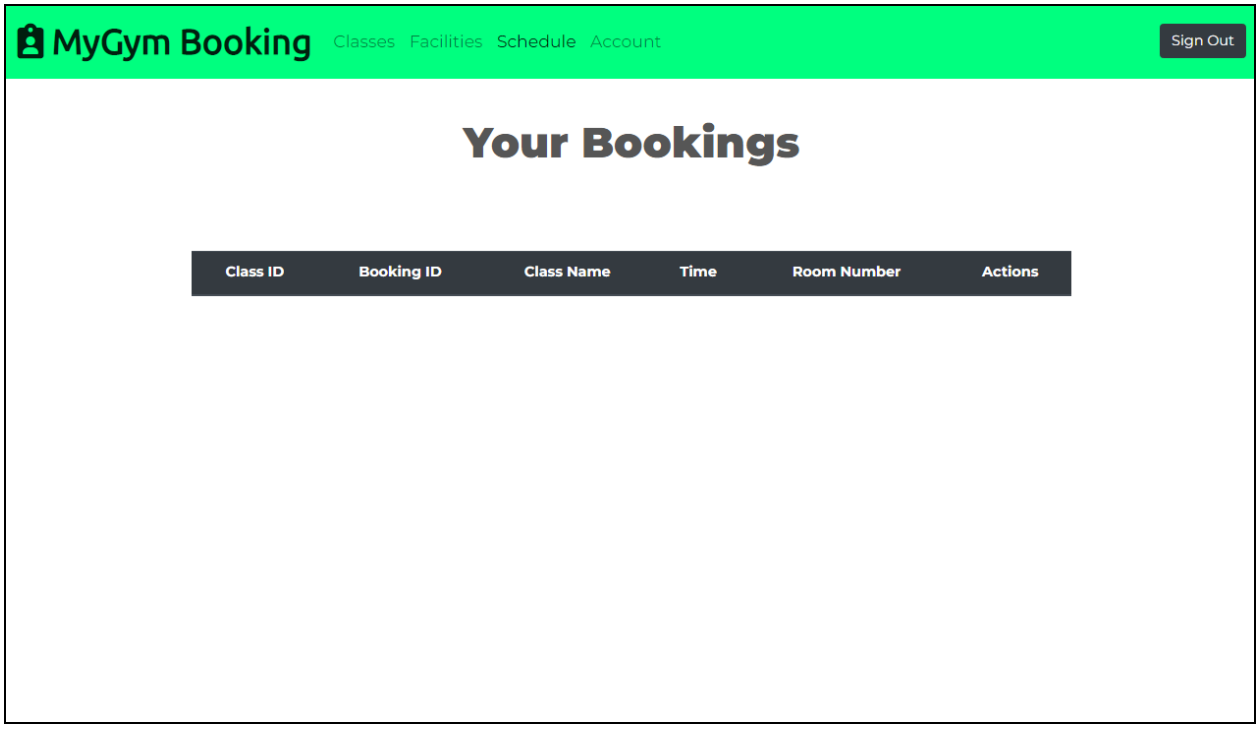
Upon logging in they will be greet with the landing page again. The user can click facilities to view the available facilities offered by the gym.



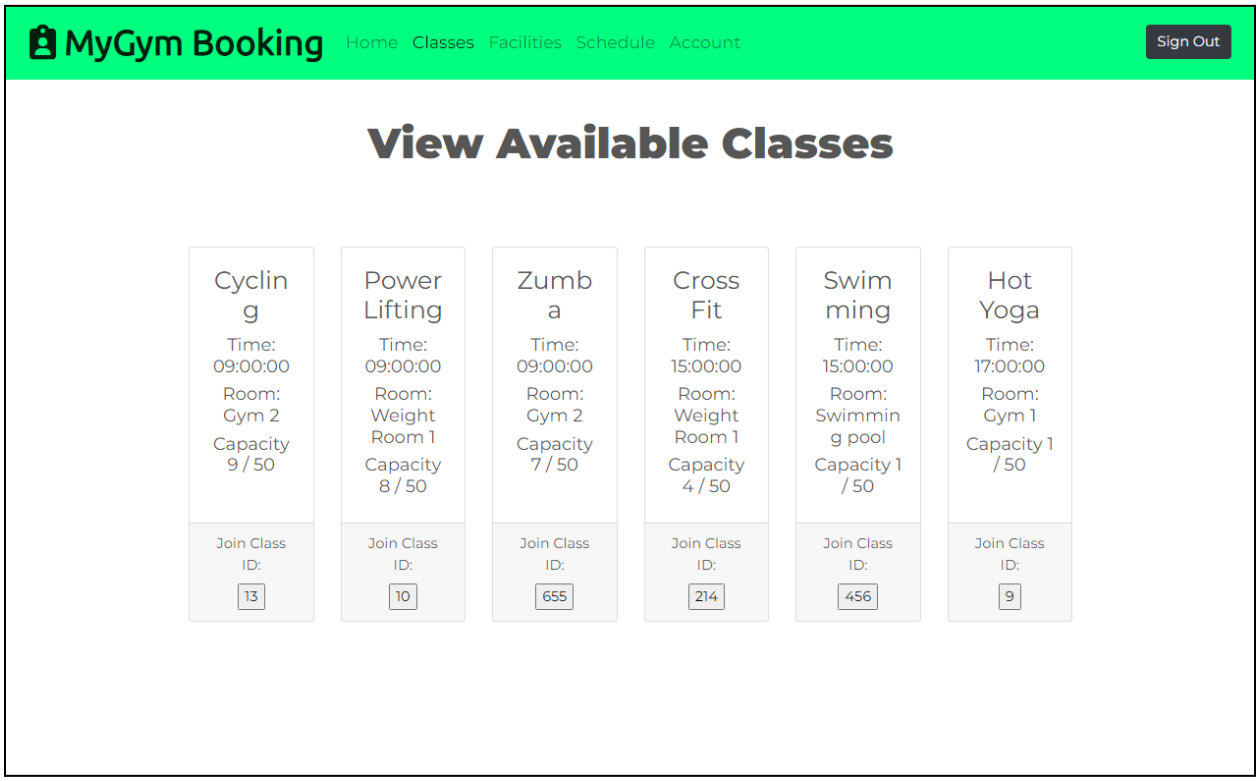
Users can see information for each facility along with the capacity and room number.



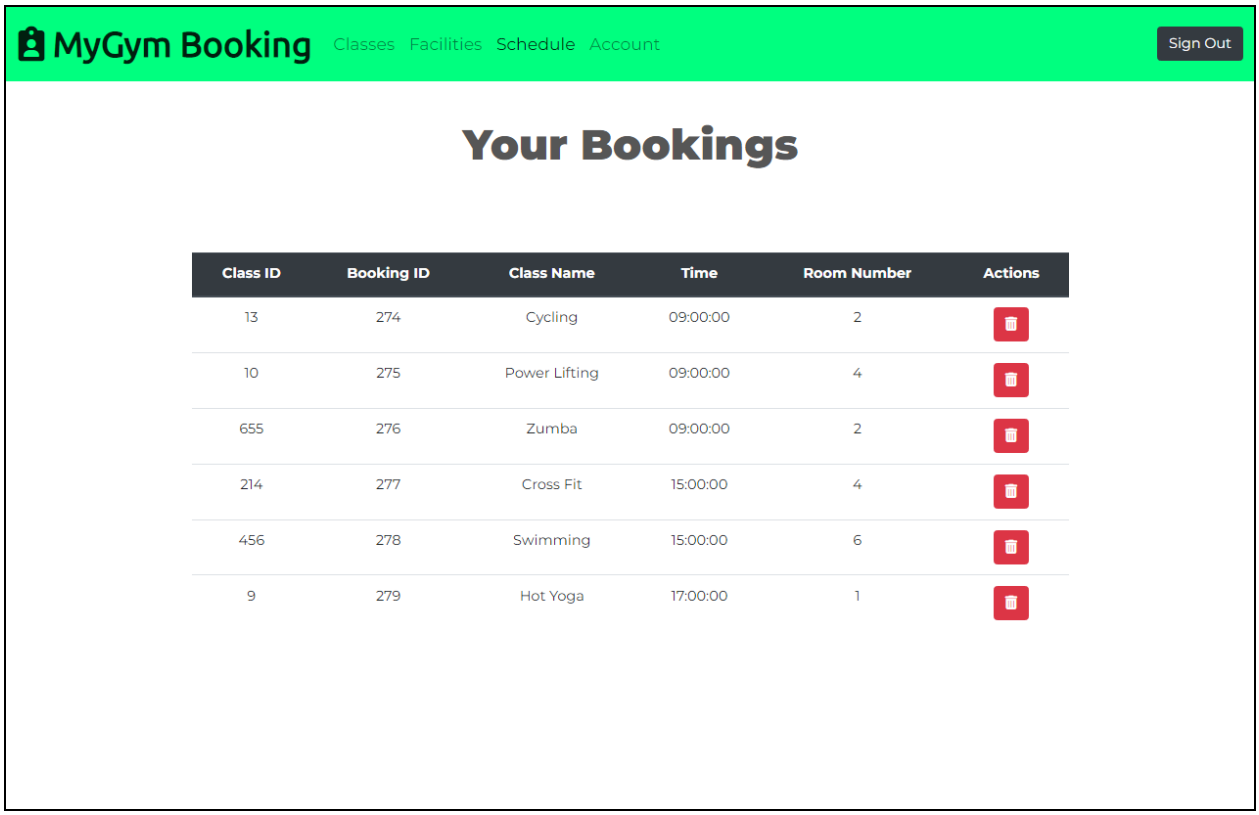
Users can now click the “Classes” button or navigate back to the home page and click “View Classes” in which they will be greeted with the available classes page.



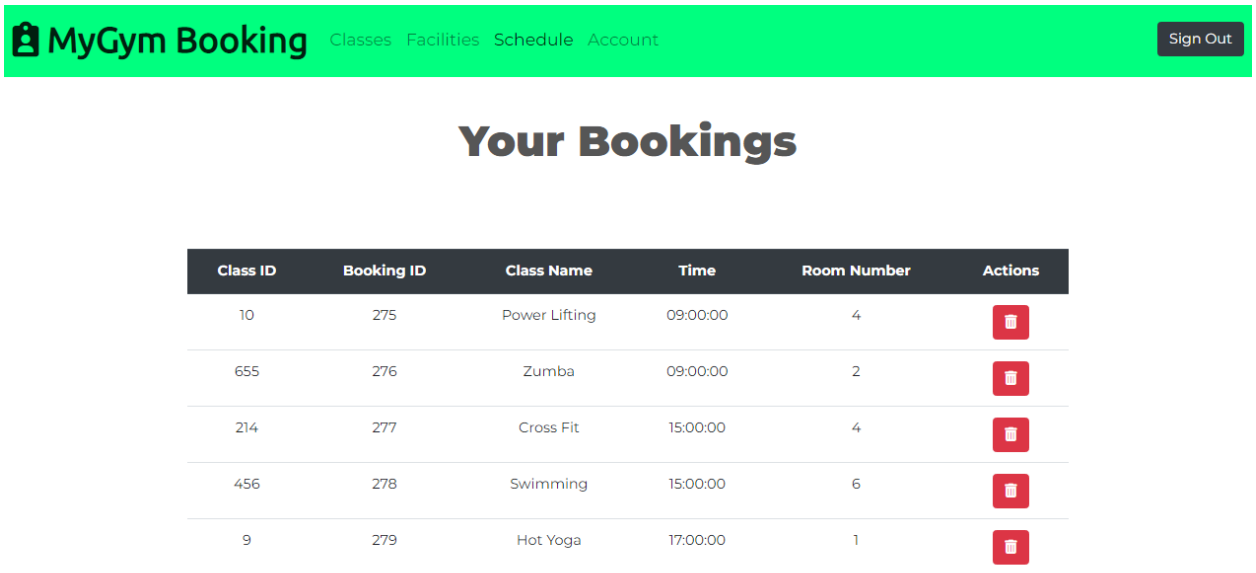
Users can click “Schedule” to view the classes they are currently enrolled in.



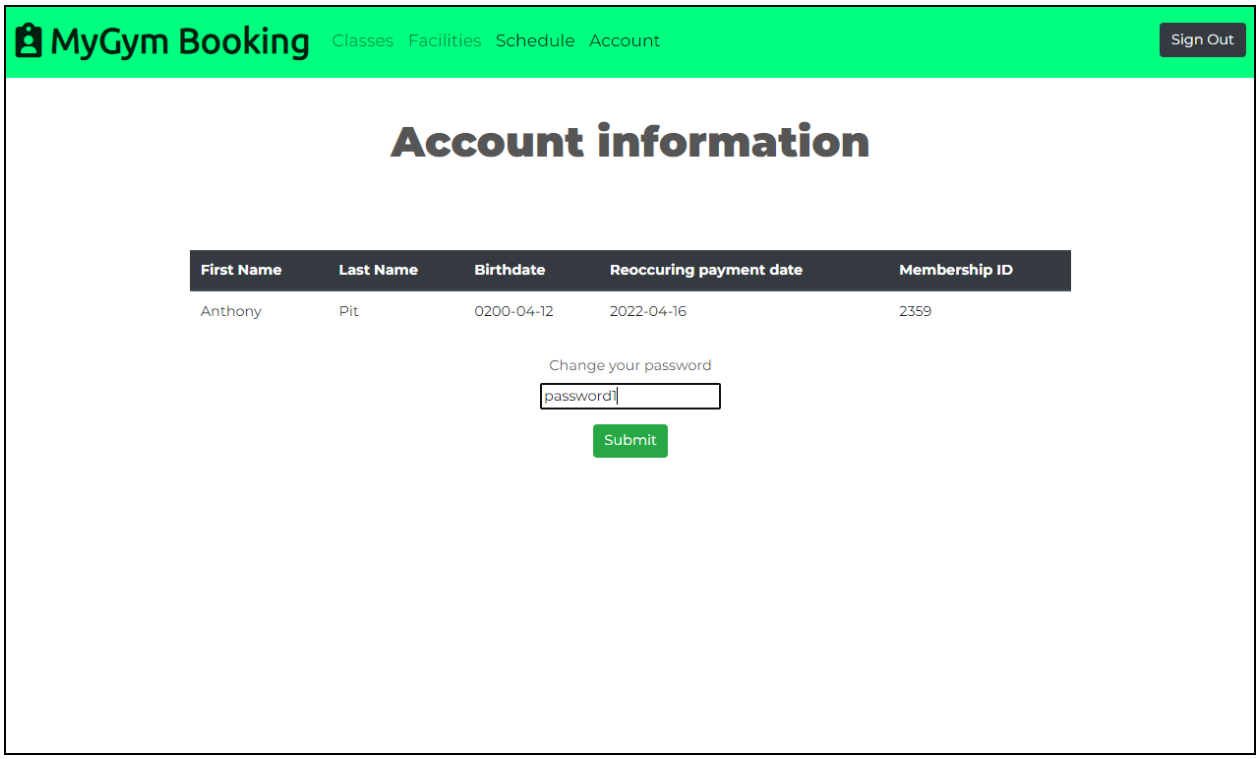
Users can now navigate back to the available classes page and join the classes they desire by clicking on the class ID. In this case, our users joins all the classes.



Users can now click “Schedule” to view the classes they enrolled in.

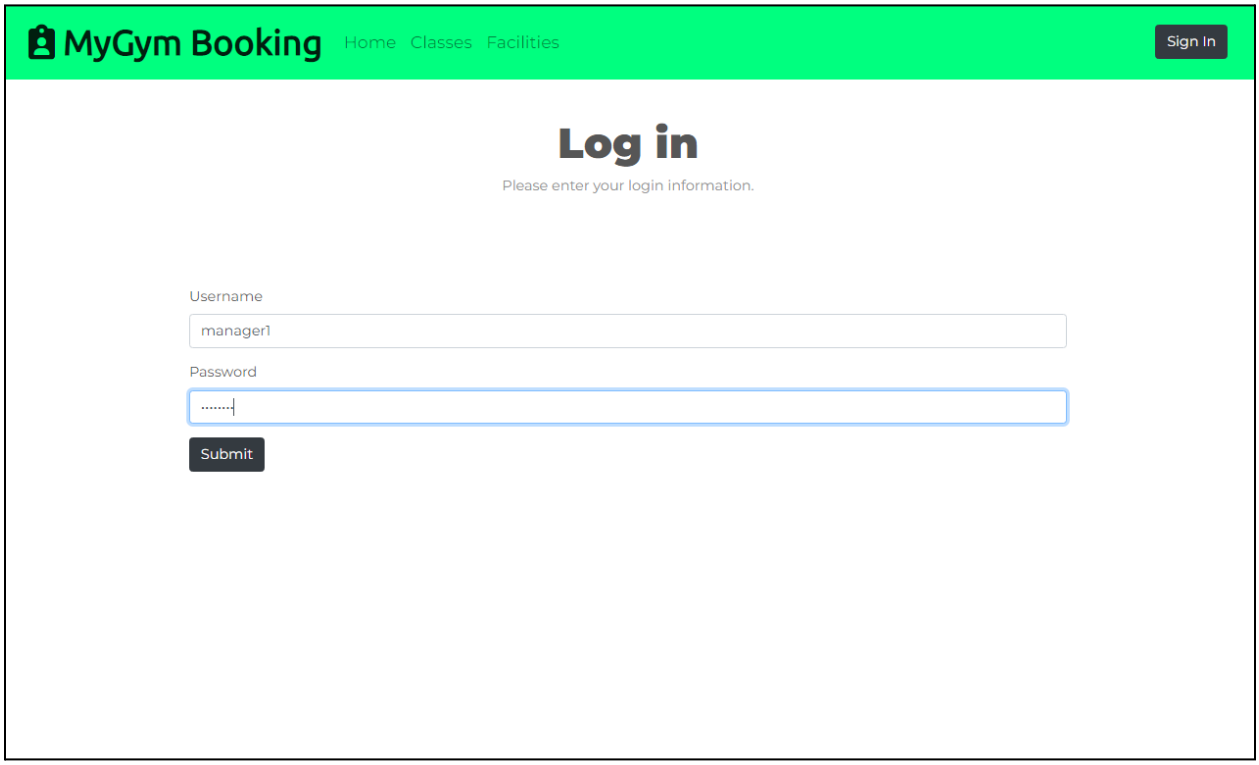


Users can unenroll in a class by clicking on the red trash can button.

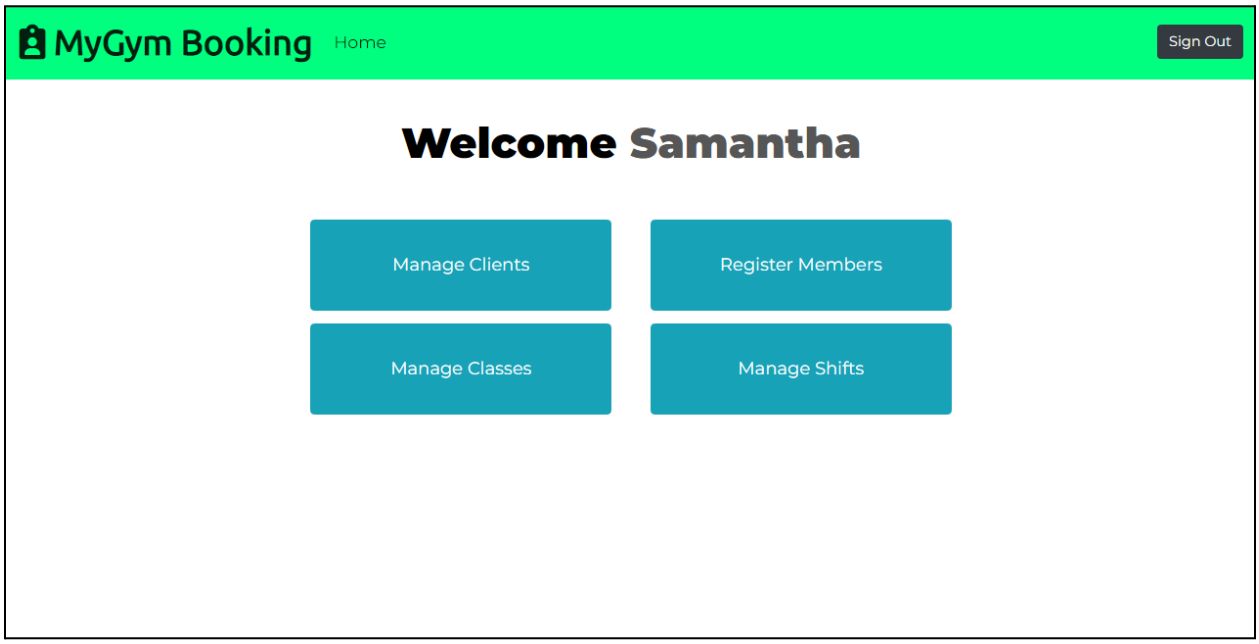


Users can navigate to view their account information by clicking on the “Account” button on the navigation bar in which they can change only their password as they do not have admin privileges. Editing other information will require a manager account.

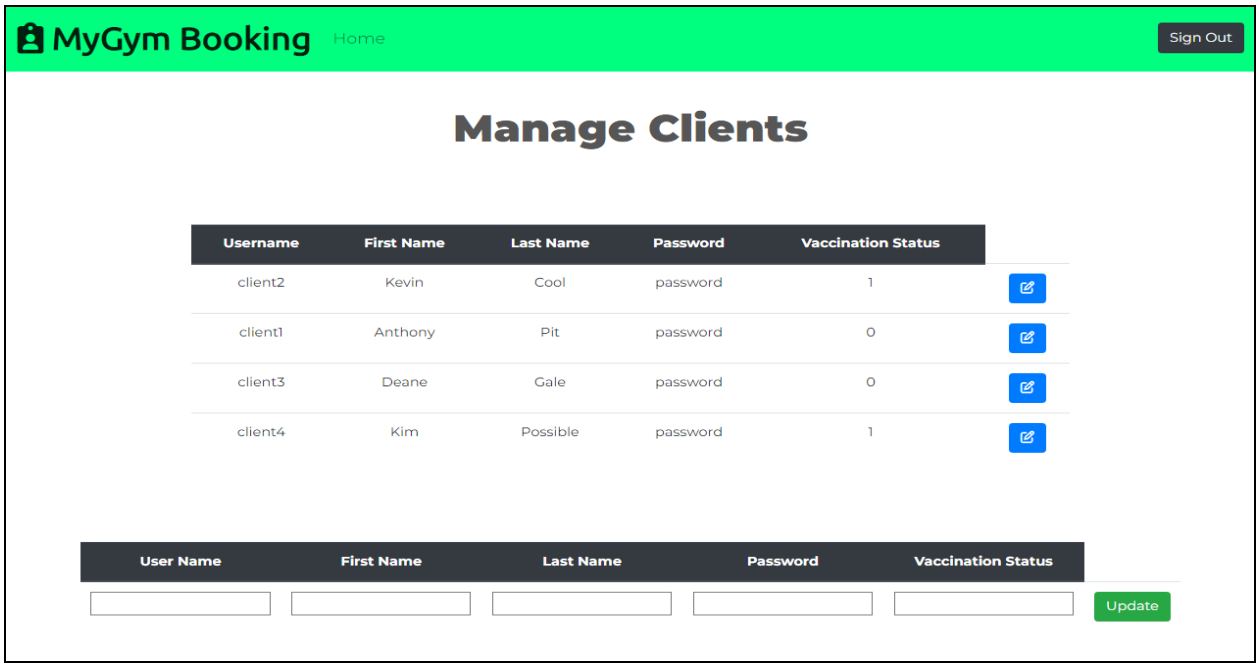
Manager



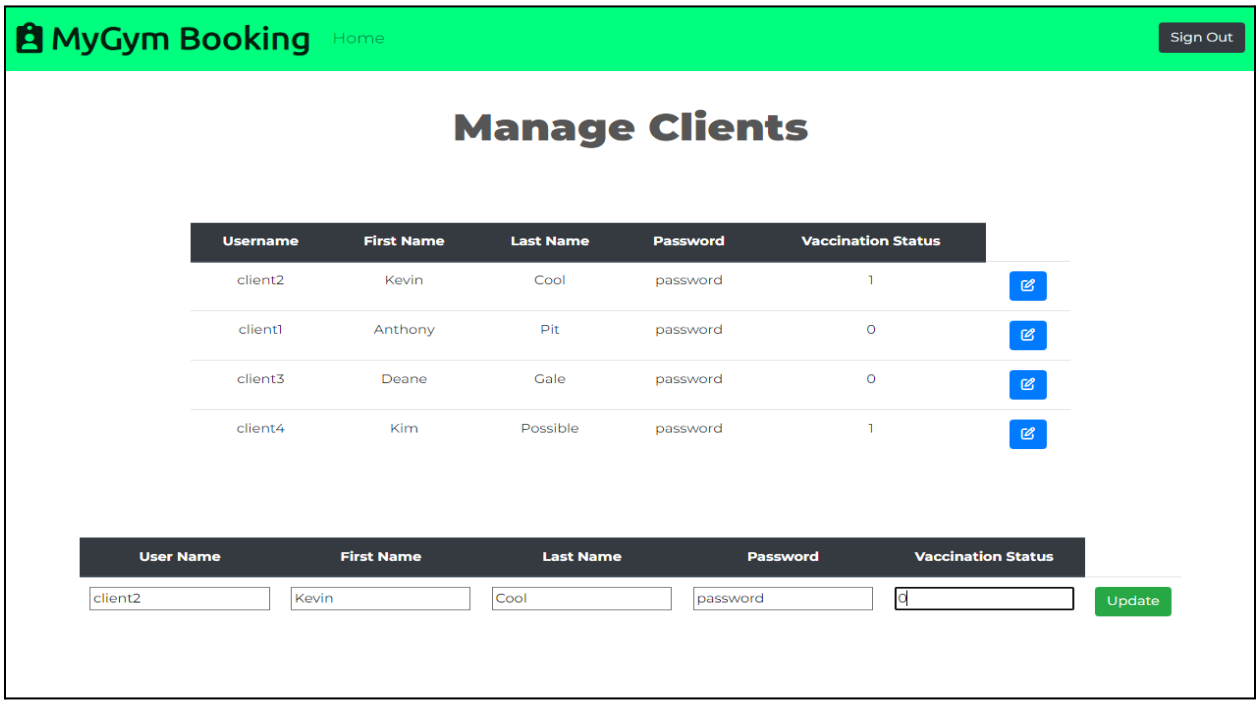
The manager can log in with the manager log in.



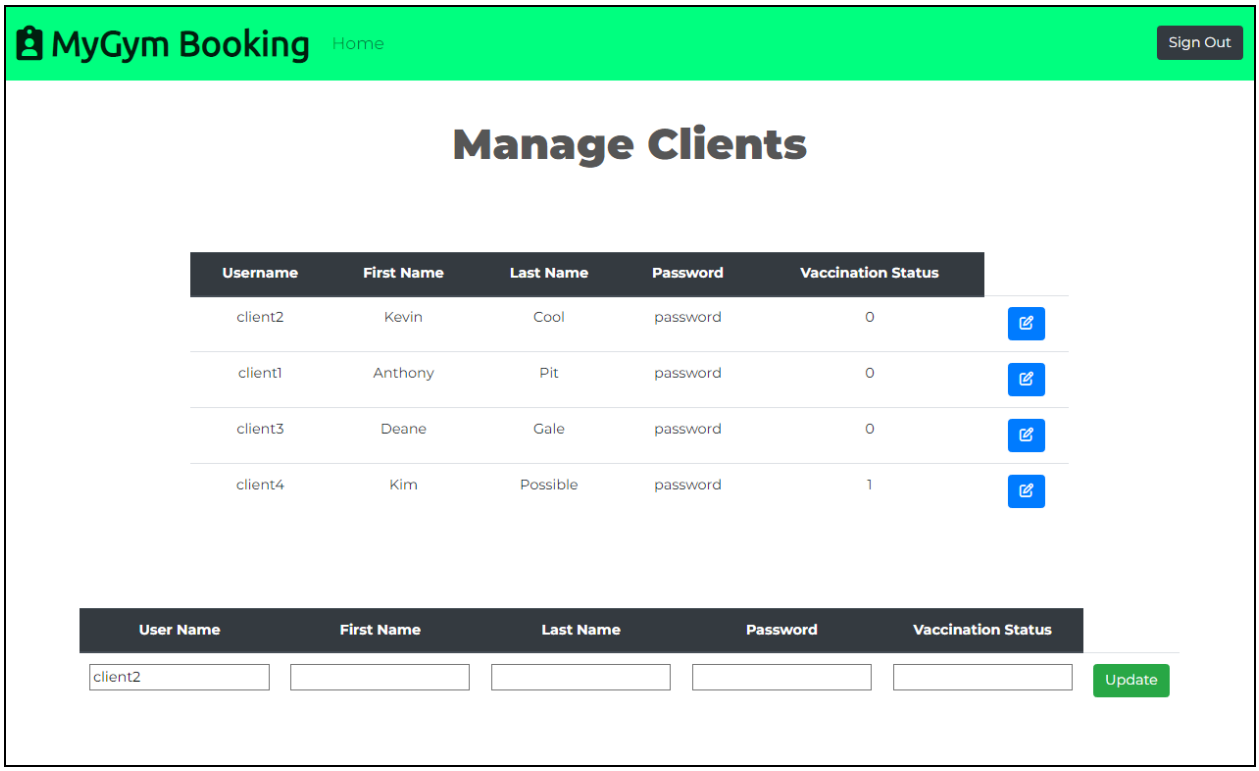
Upon logging in, they will be greeted with the manager landing page and can select the various options.



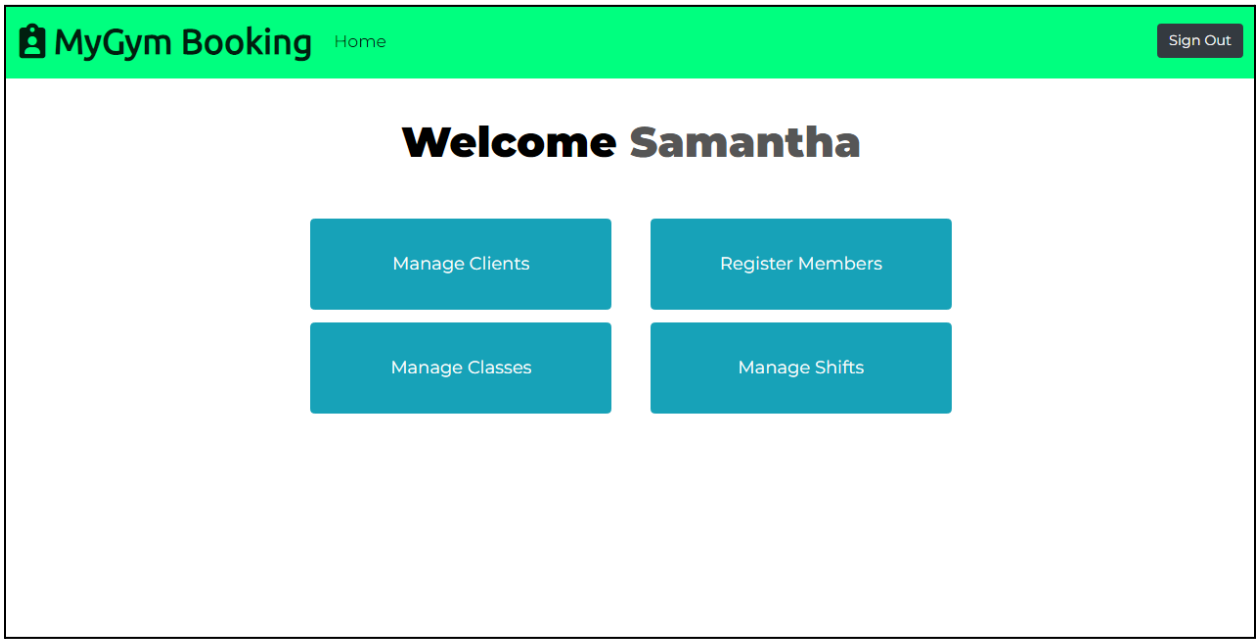
If the manager selects the “Manage Clients” button, they will be greeted with a screen in which they can update client information and can expedite the process by clicking on the blue edit button to auto fill the information into the field below



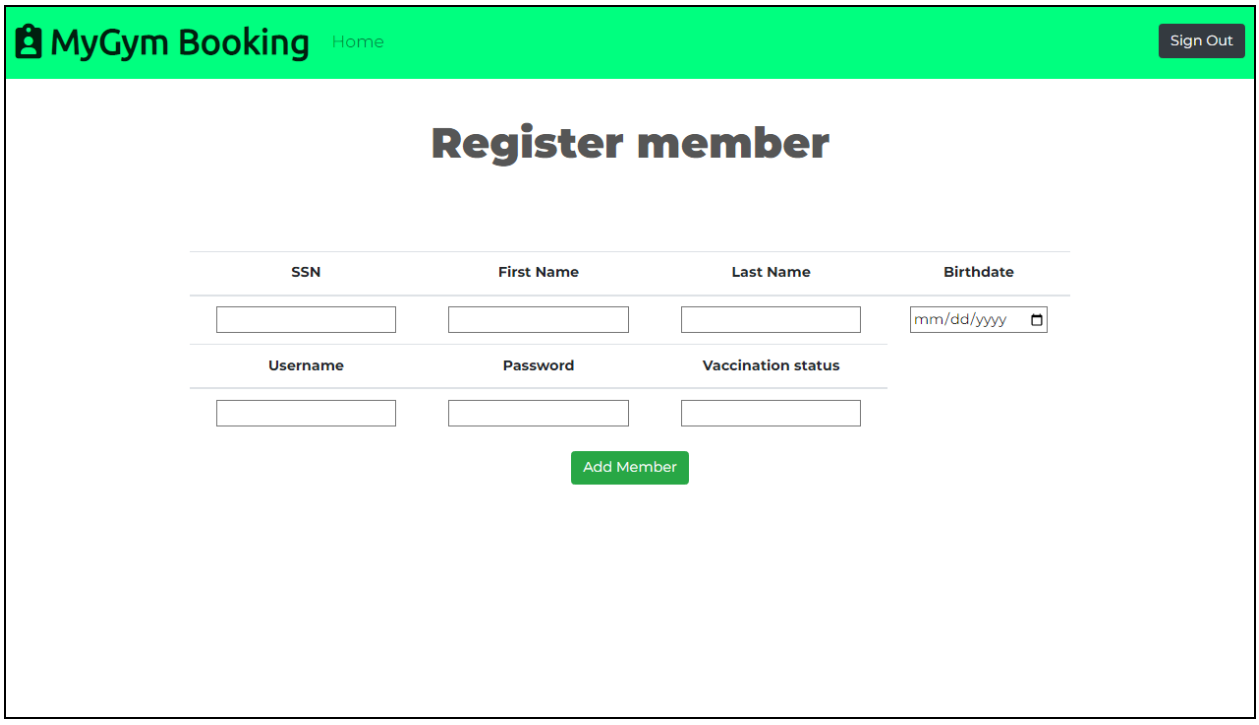
Now the user can change client information and by inputting the data into the fields and in this case, they are changing the vaccination status of Kevin Cool. Note that the SSN, Birthdate, Start date and account type cannot be changed as those are assigned during member registration and act as identifiers for the client.



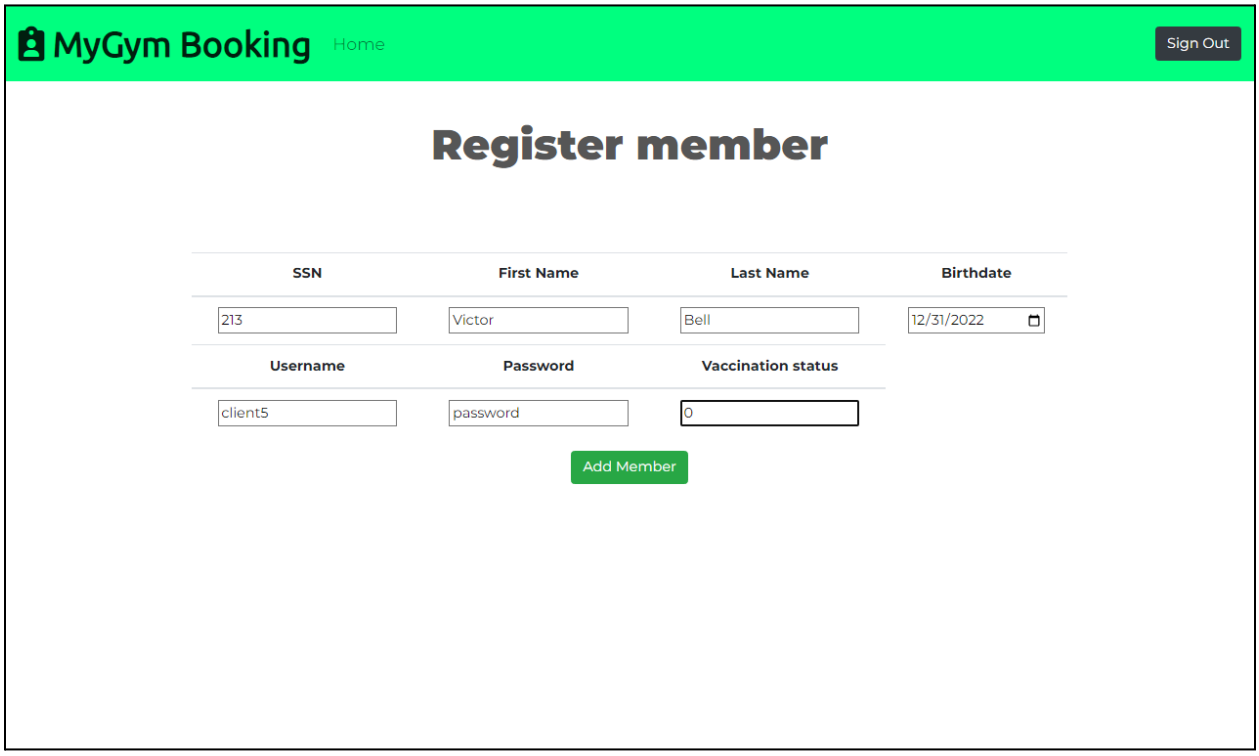
Upon hitting update, the user information will be updated



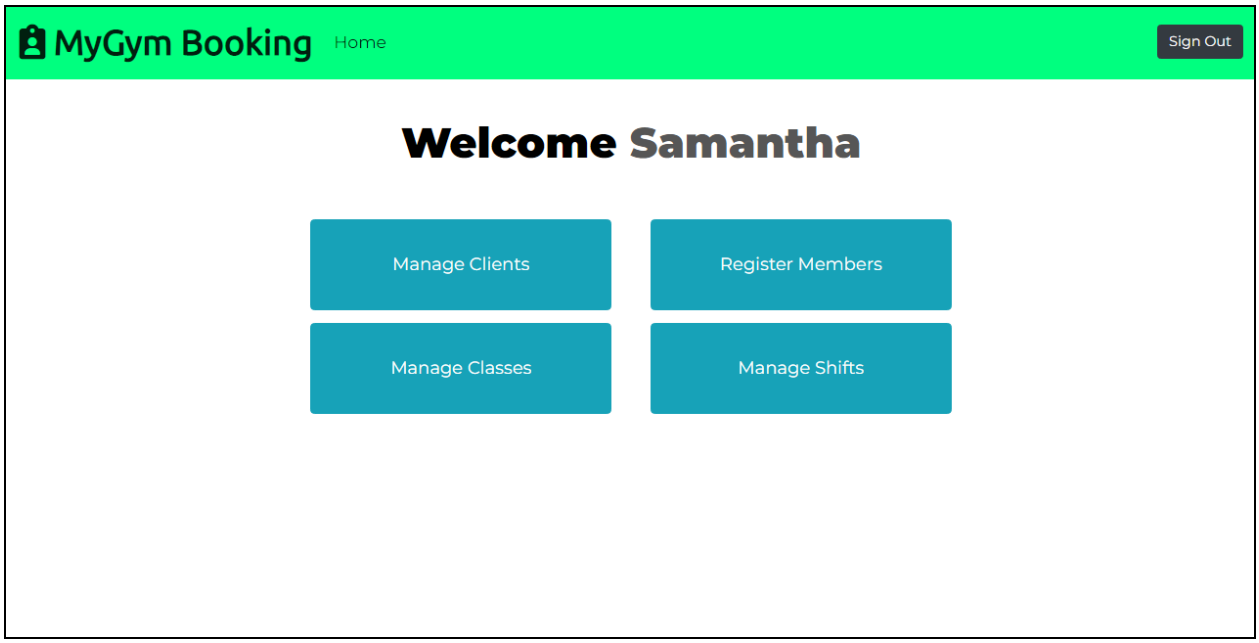
The user can navigate back to the manager landing page by clicking on the “Home” button on the navigation bar.



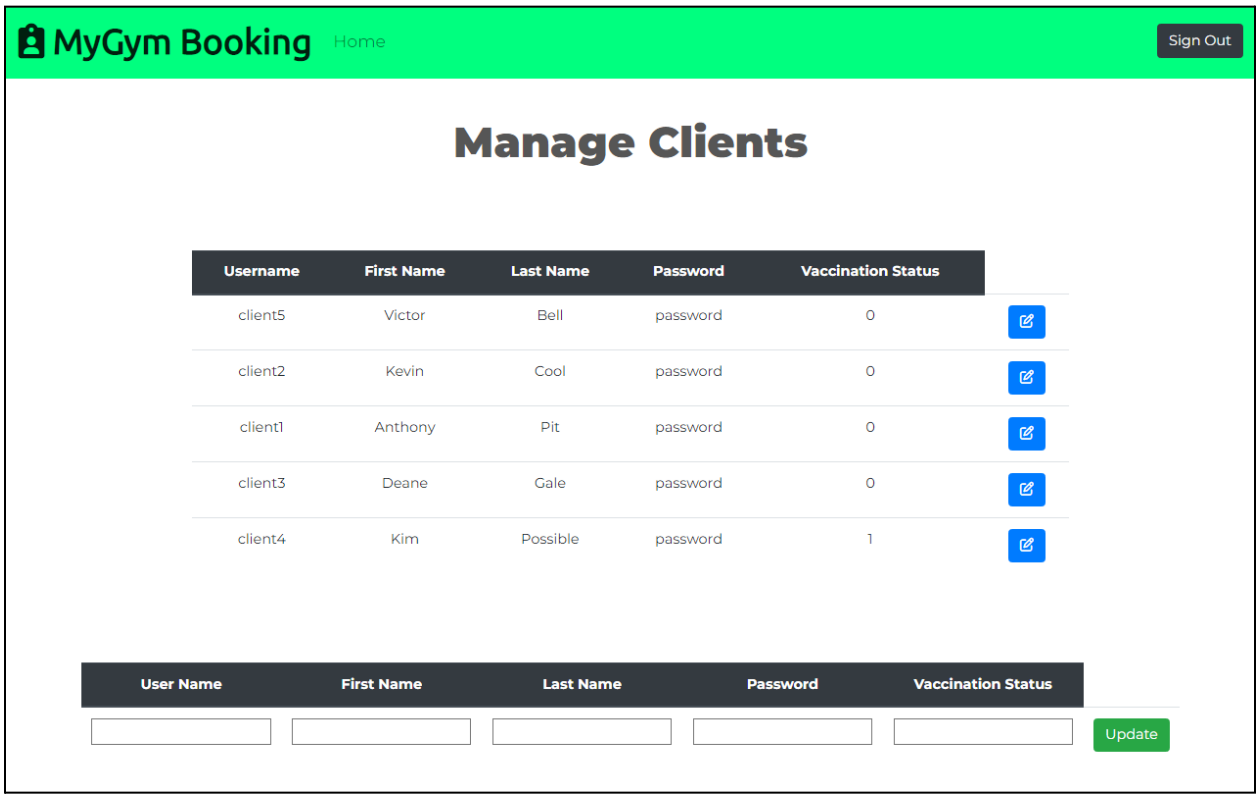
The user can navigate to the register member page by clicking on the “Register Members” button and be greeted with a screen to register new members of the gym. Here they can input the user information.



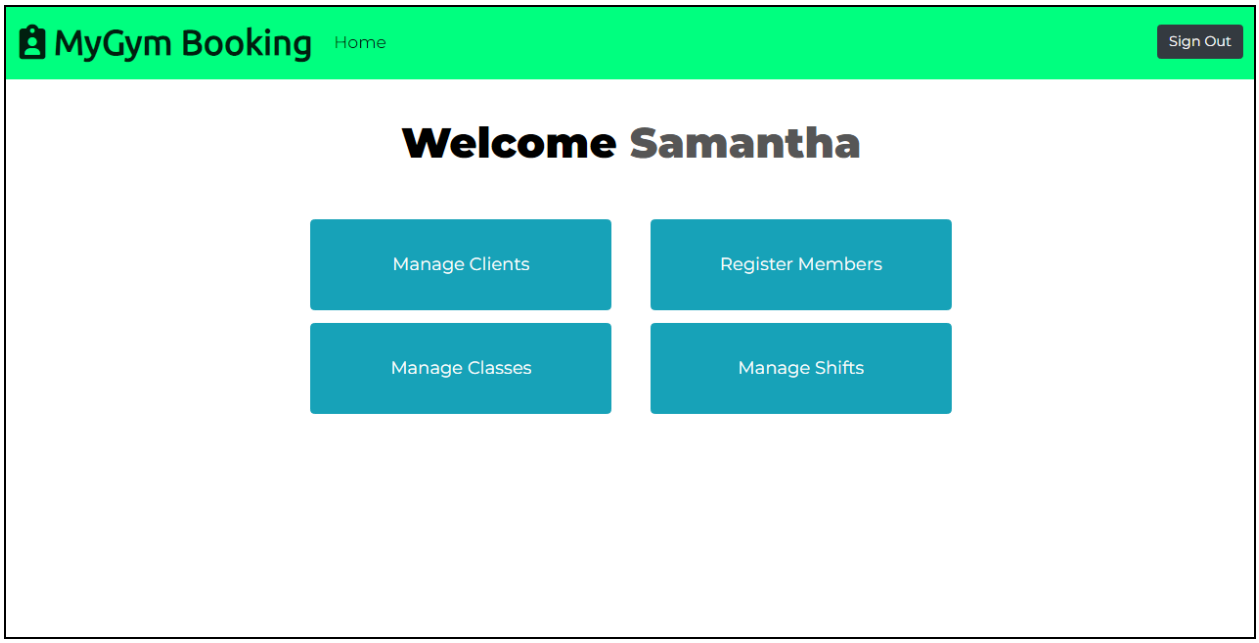
The manager will now input the new clients details and hit add.



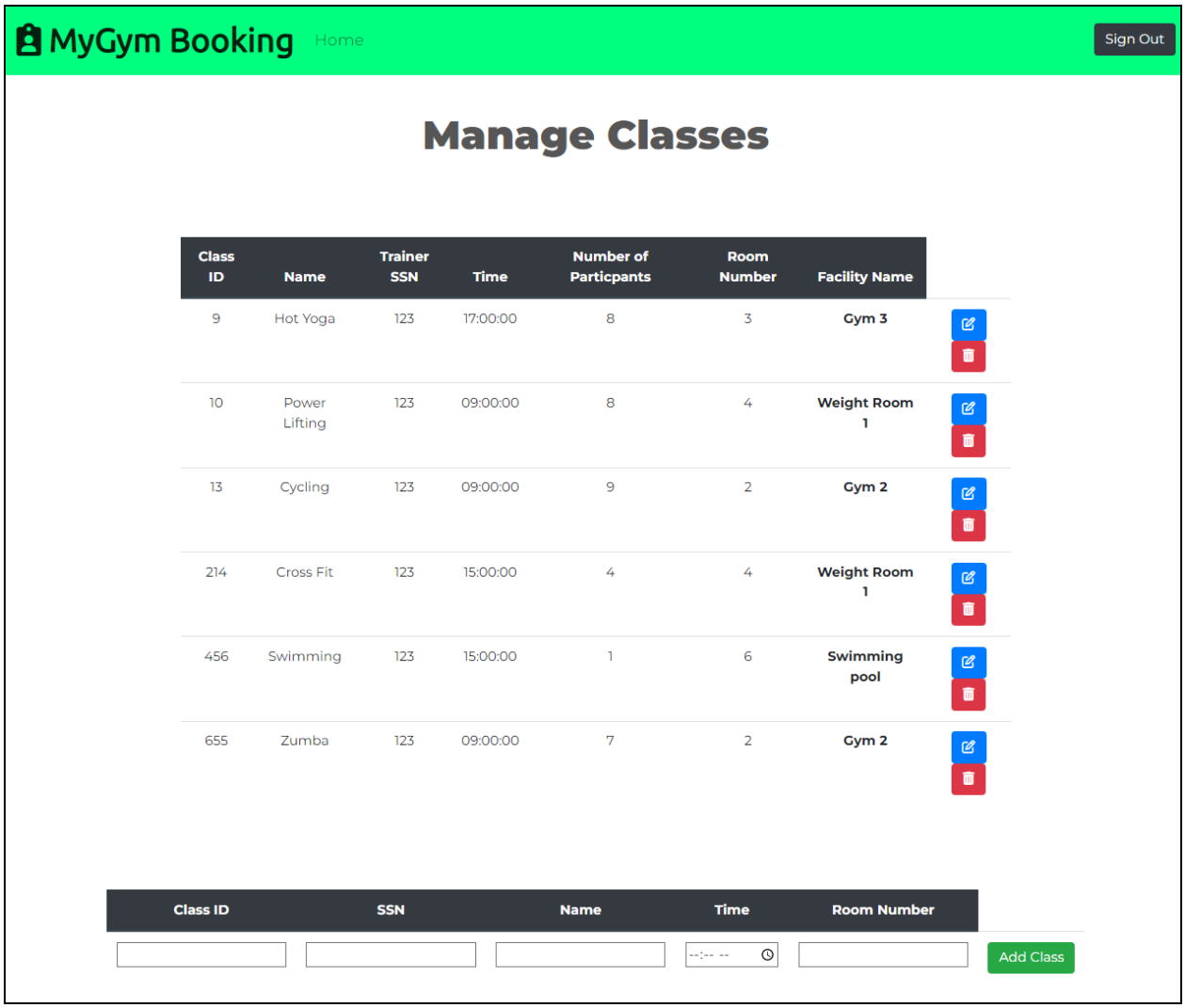
The user can navigate back to the manager landing page by clicking on the “Home” button on the navigation bar.



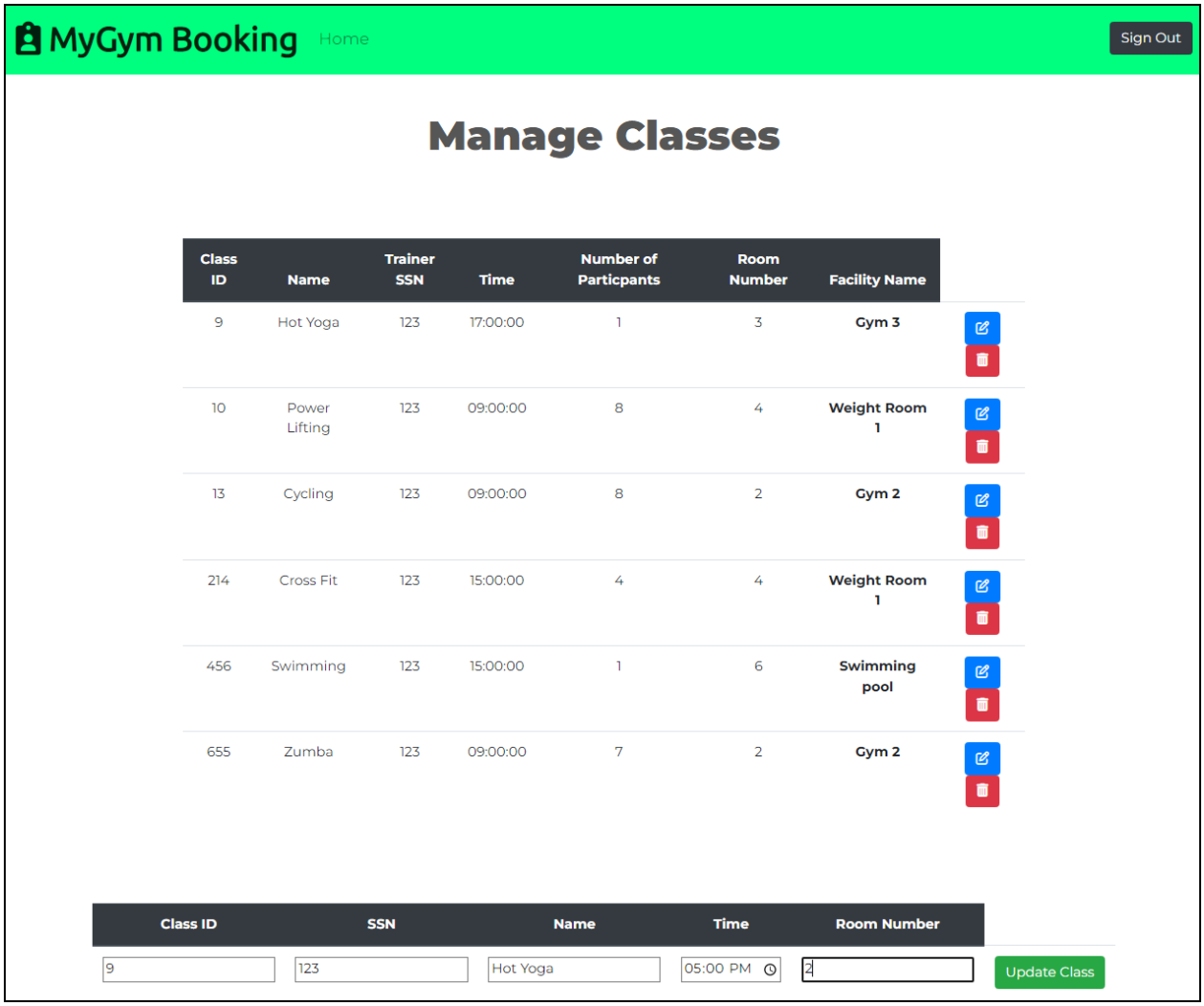
They can navigate back to the manage clients page to view the new user they have added.



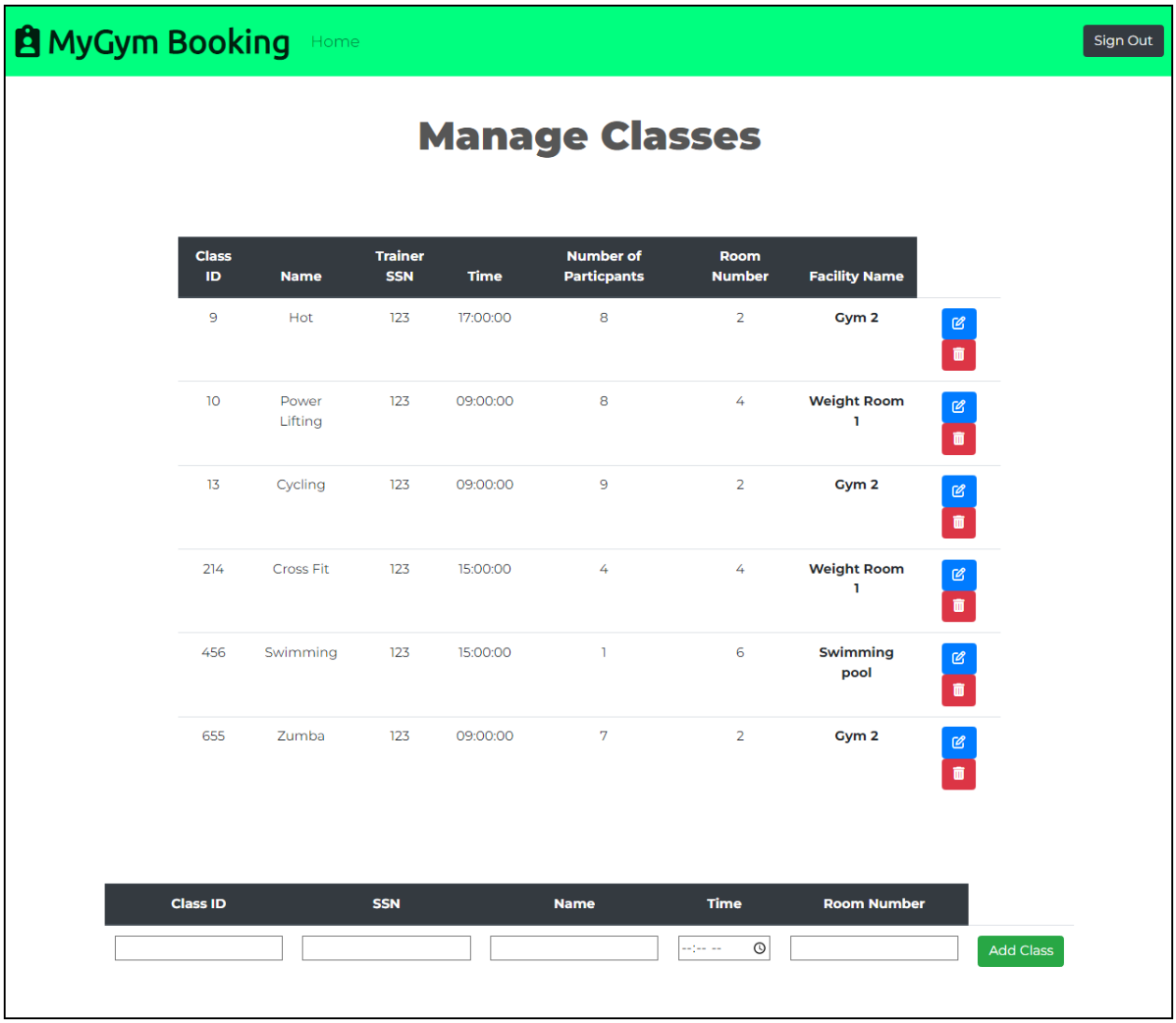
The user can navigate back to the manager landing page by clicking on the “Home” button on the navigation bar.



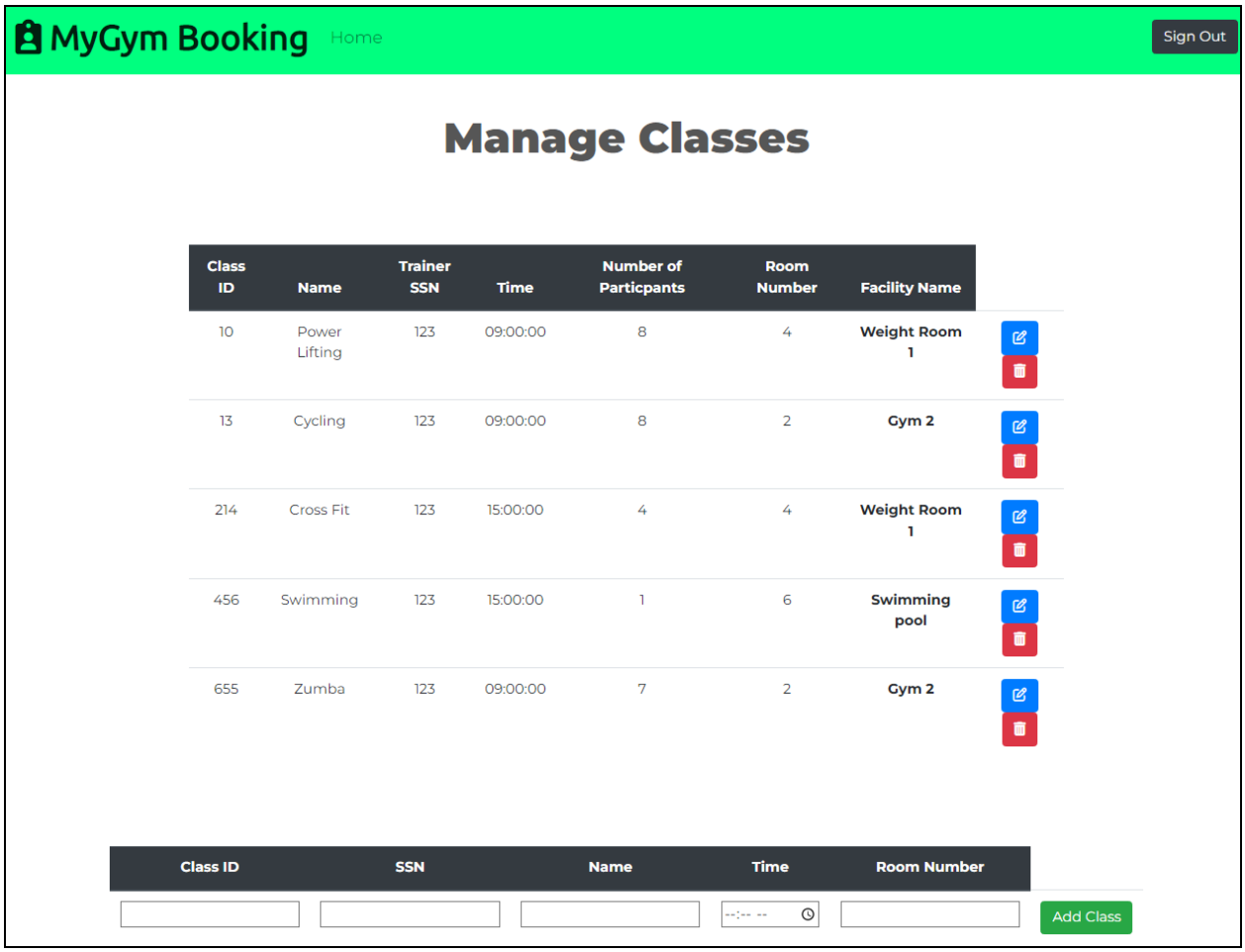
The manager can navigate to the manage classes page in which they view all the classes they currently offer by clicking on the “Manage Classes” button on the manager home page.



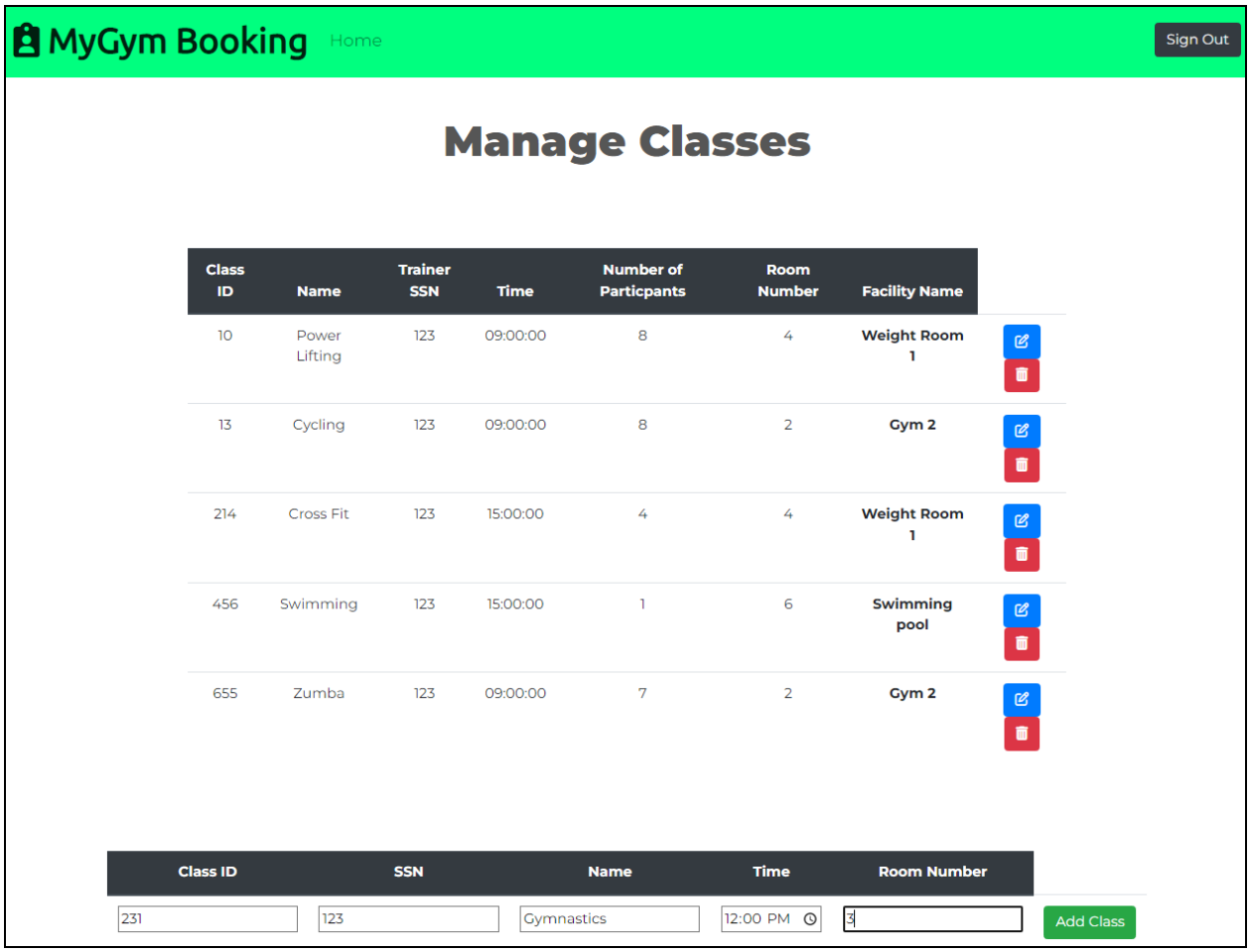
The manager can click the blue edit button to update a class in which the green submit button will change to say update class and the information will be autofilled. Our manager wishes to change the facility to gym 2.



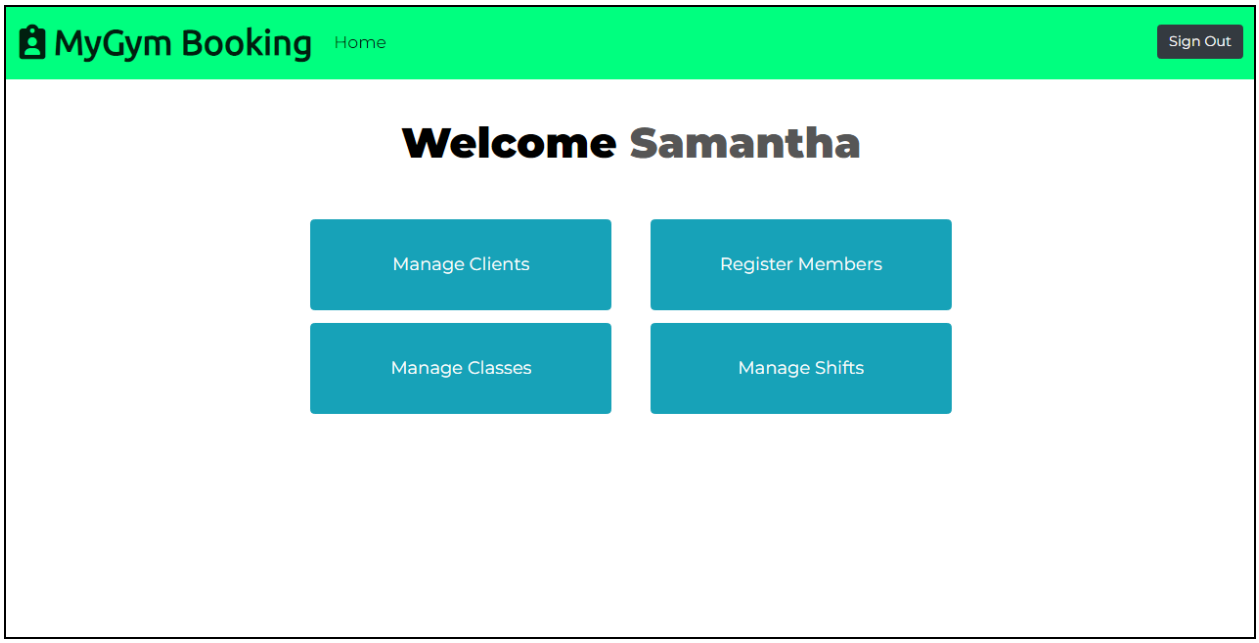
Upon clicking the update button, the class will be updated and the “Add class” button will reappear.



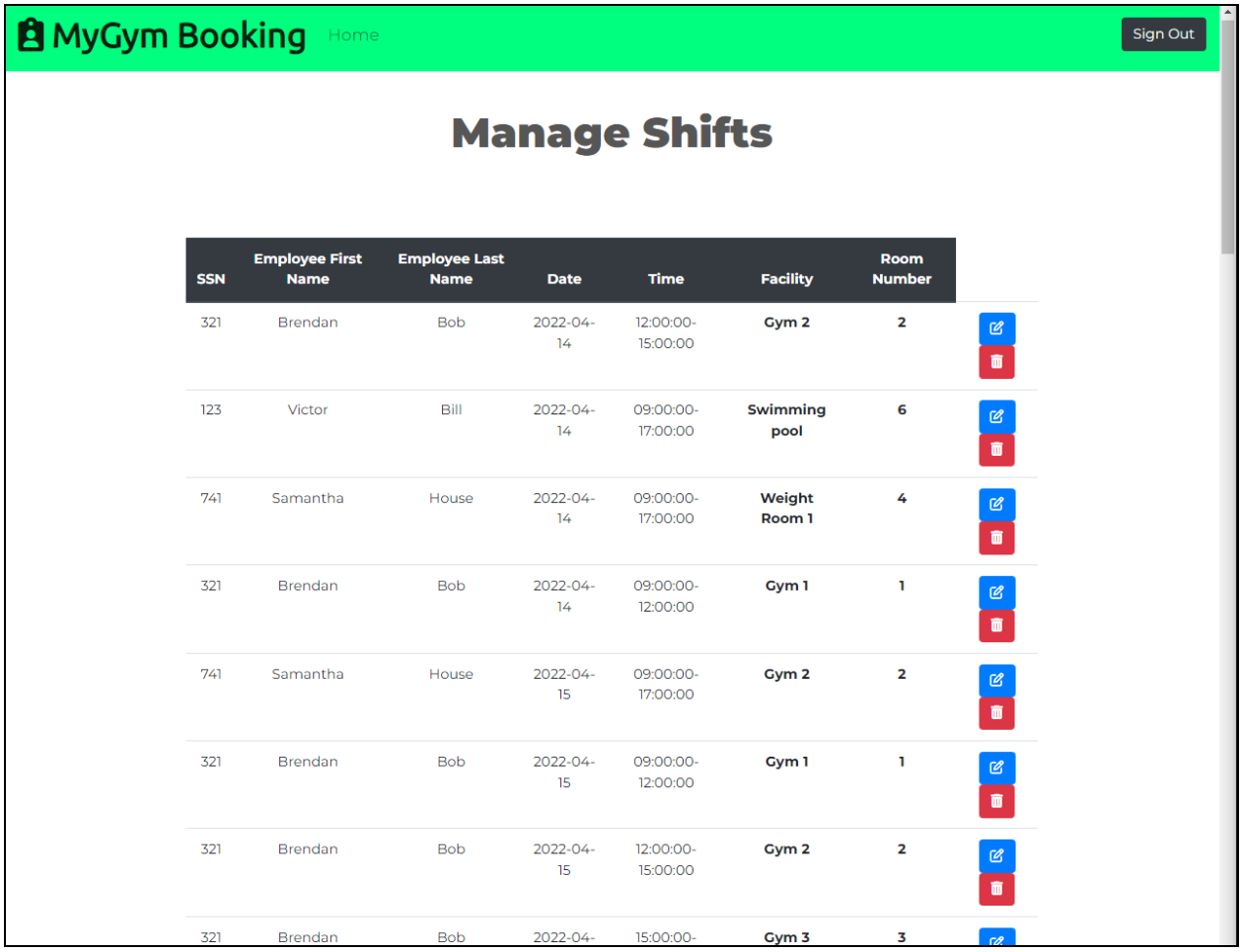
A Manager can also delete a class by clicking on the red trash can button. The page will auto refresh with the new list of classes available. In this case, the manager has deleted the class with ID 9.



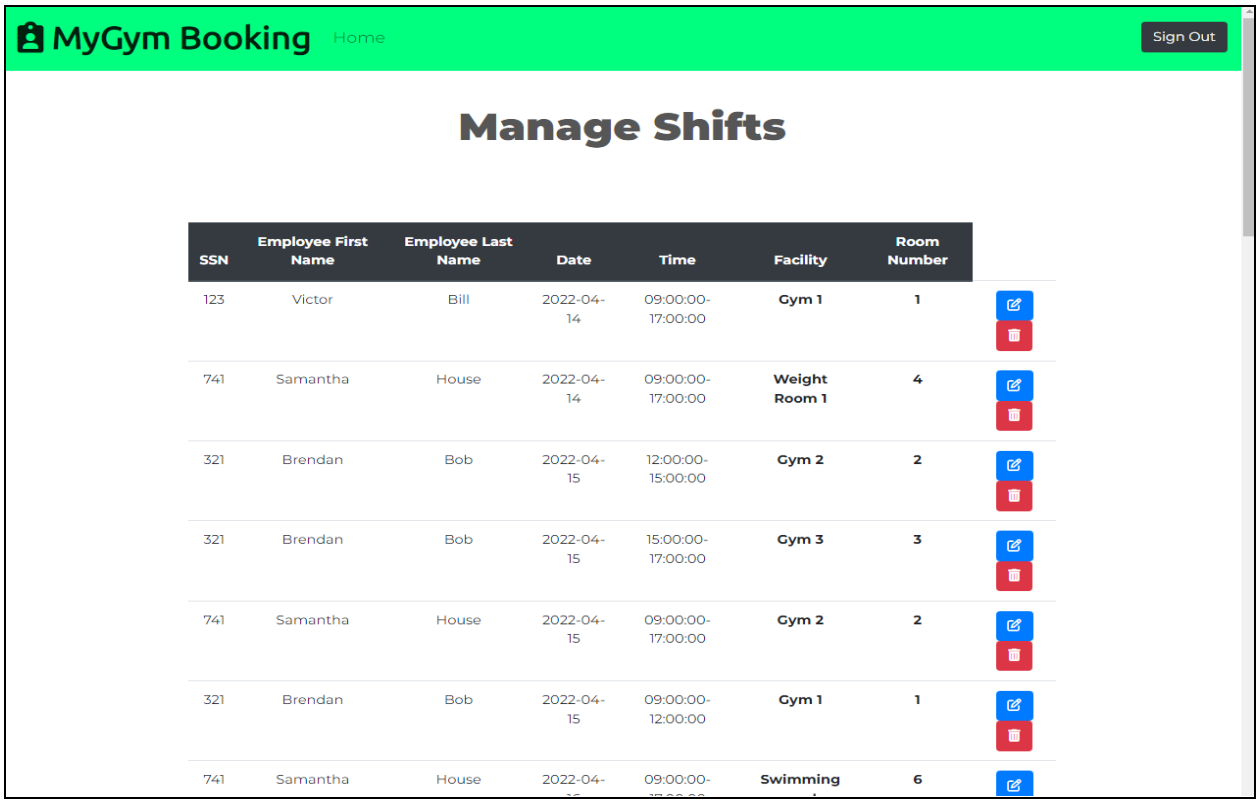
The manager can also add new classes to the gym by inputting the data into the fields. The manager will have to input the class ID, SSN of the trainer teaching it, name of the class, time and the room number for which it will be held in.



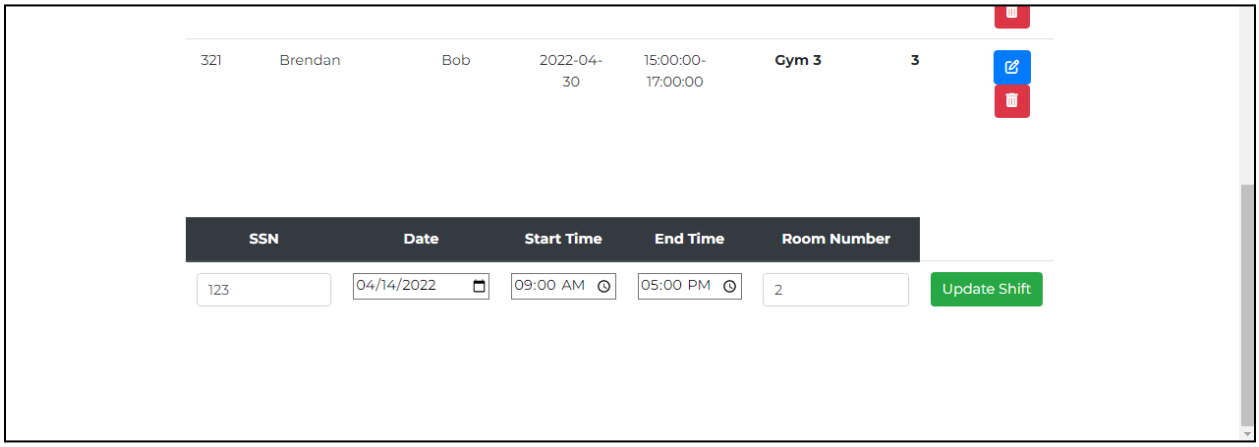
The user can navigate back to the manager landing page by clicking on the “Home” button on the navigation bar.



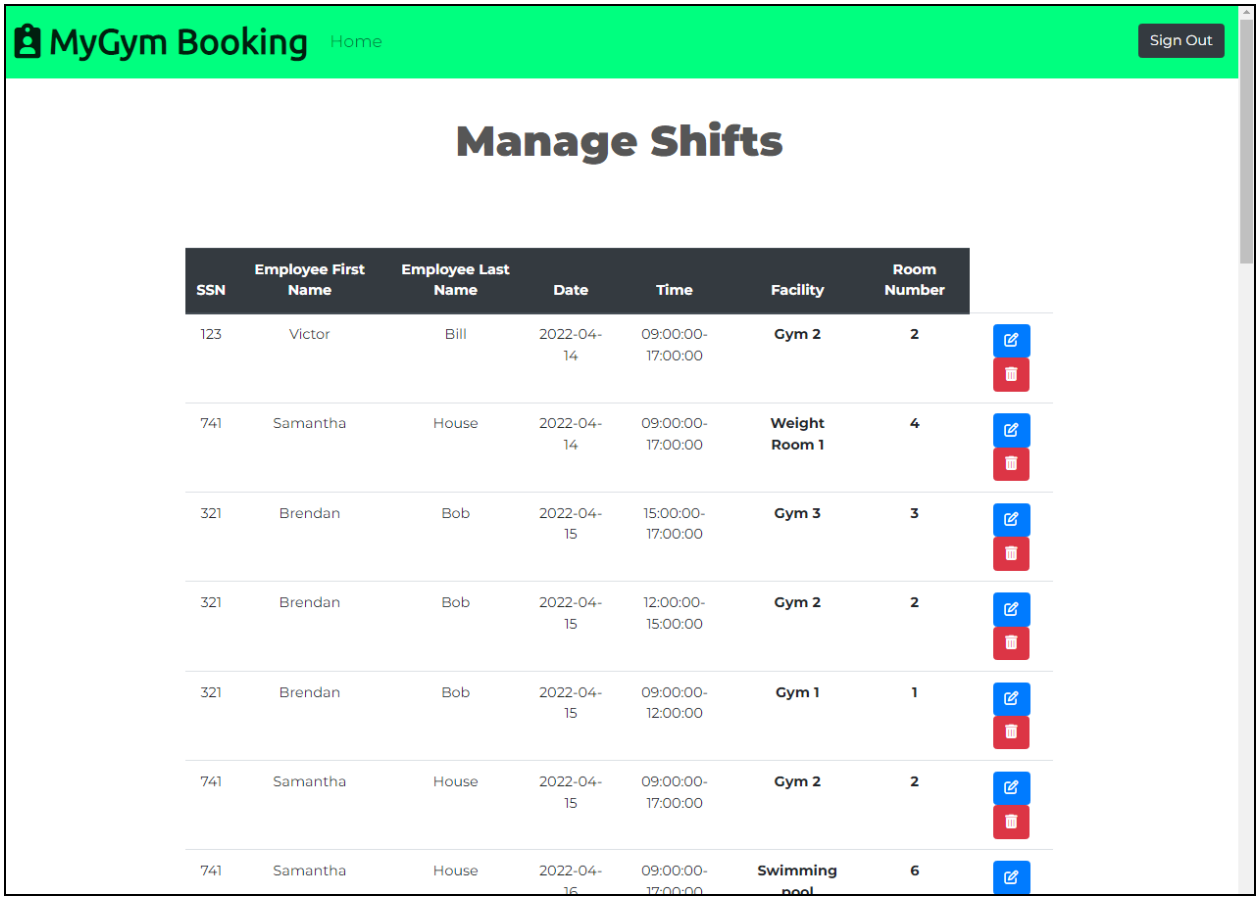
The manager can navigate to the manage shifts page by clicking on the “Manage Shifts” button. The manager can choose to update, delete or add shifts to a trainer or janitor.



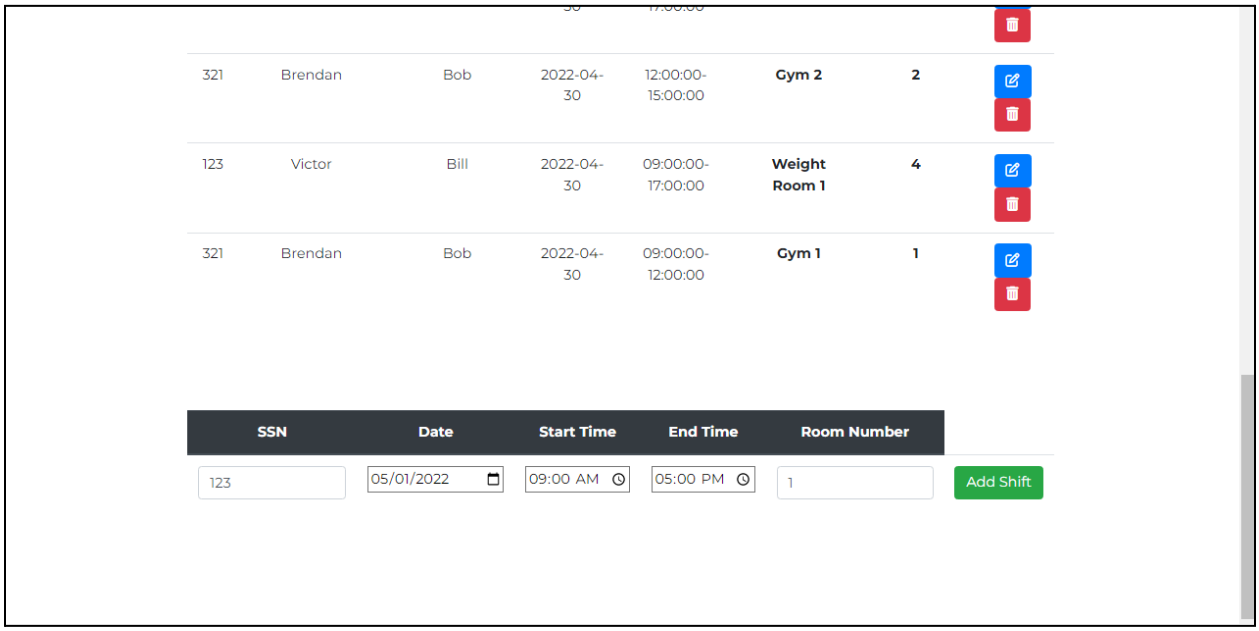
If the manager clicks the red trash can button, the shift will be deleted from the system as shown above with the employee Brendan Bob. They can also click on the blue button and update a shift.



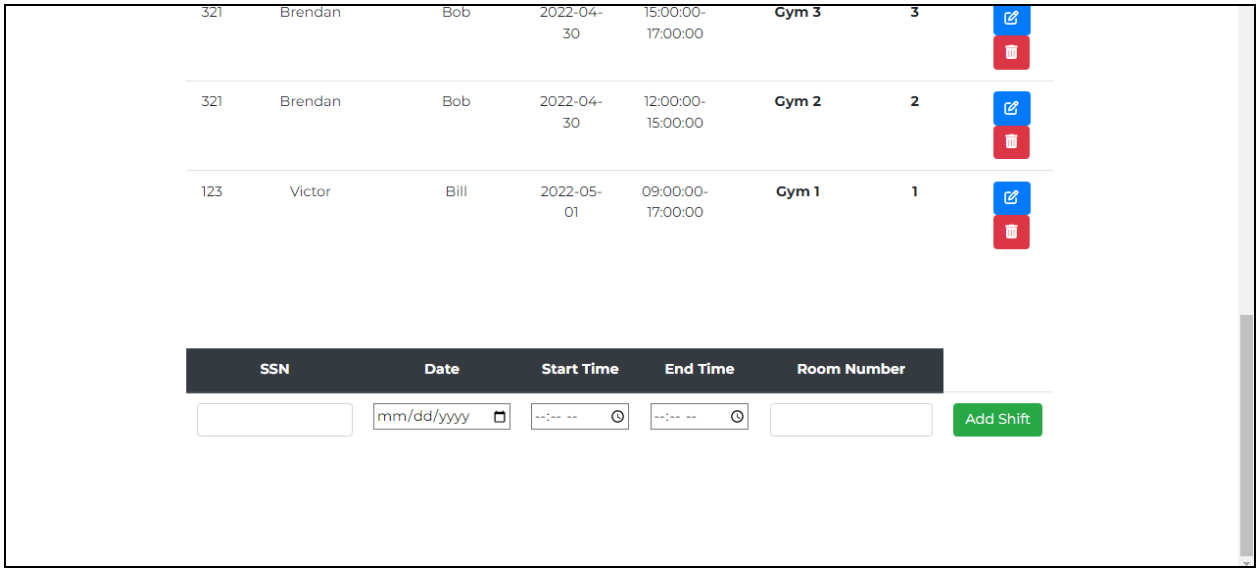
The manager has clicked on the edit button for Victor Bull's April 14th shift and the information is auto filled and the update shift button will appear. The manager has chosen to change the location of the shift to room 2.



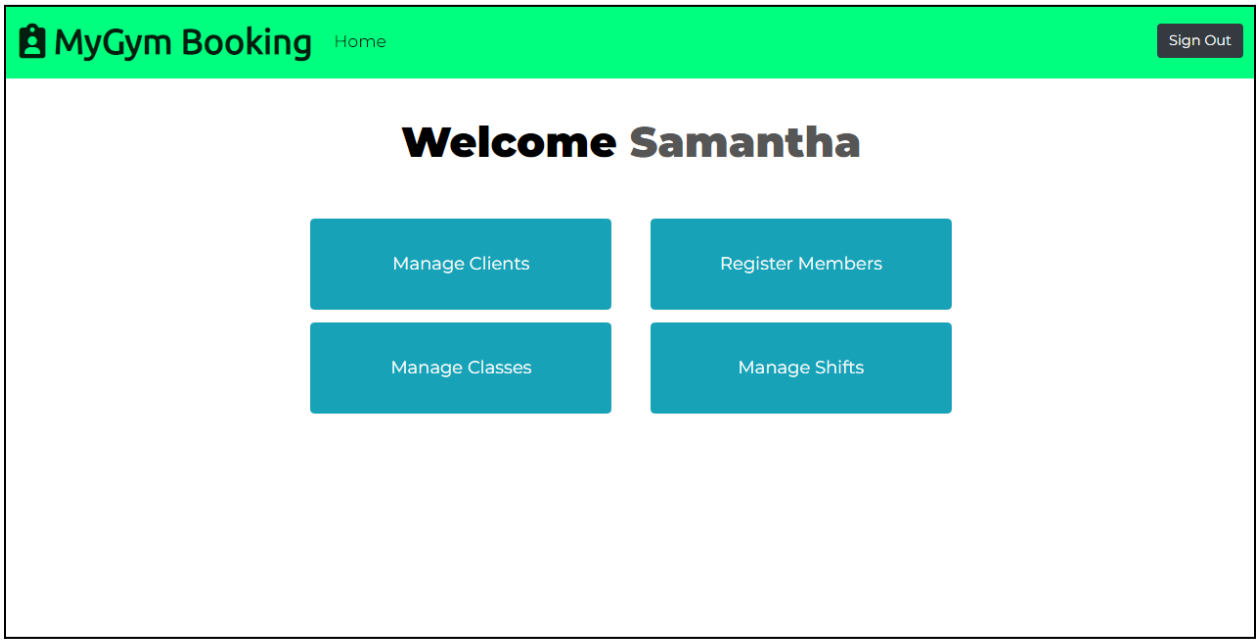
As seen in the picture above, Victor Bull's shift has been updated



Managers also have the option of adding a shift to by scrolling to the bottom and inputting the data and hitting "Add Shift"

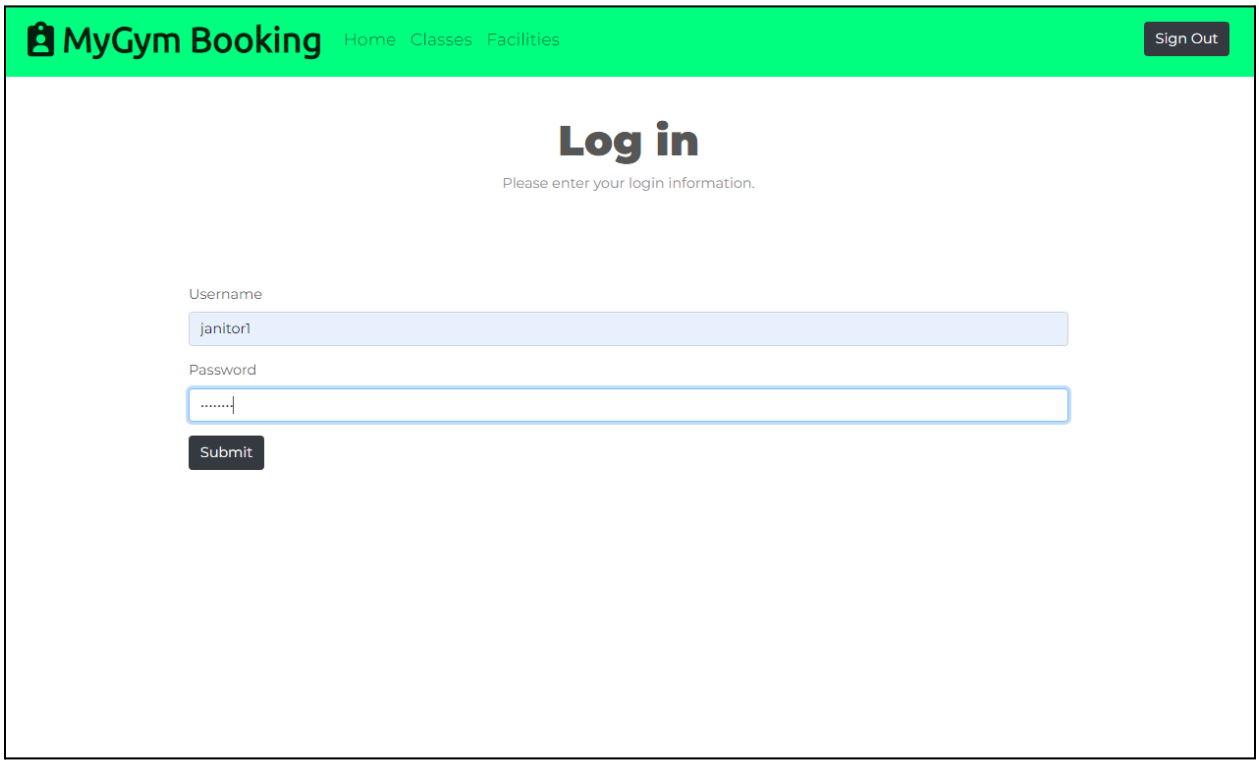


As seen, the shift has now been added.

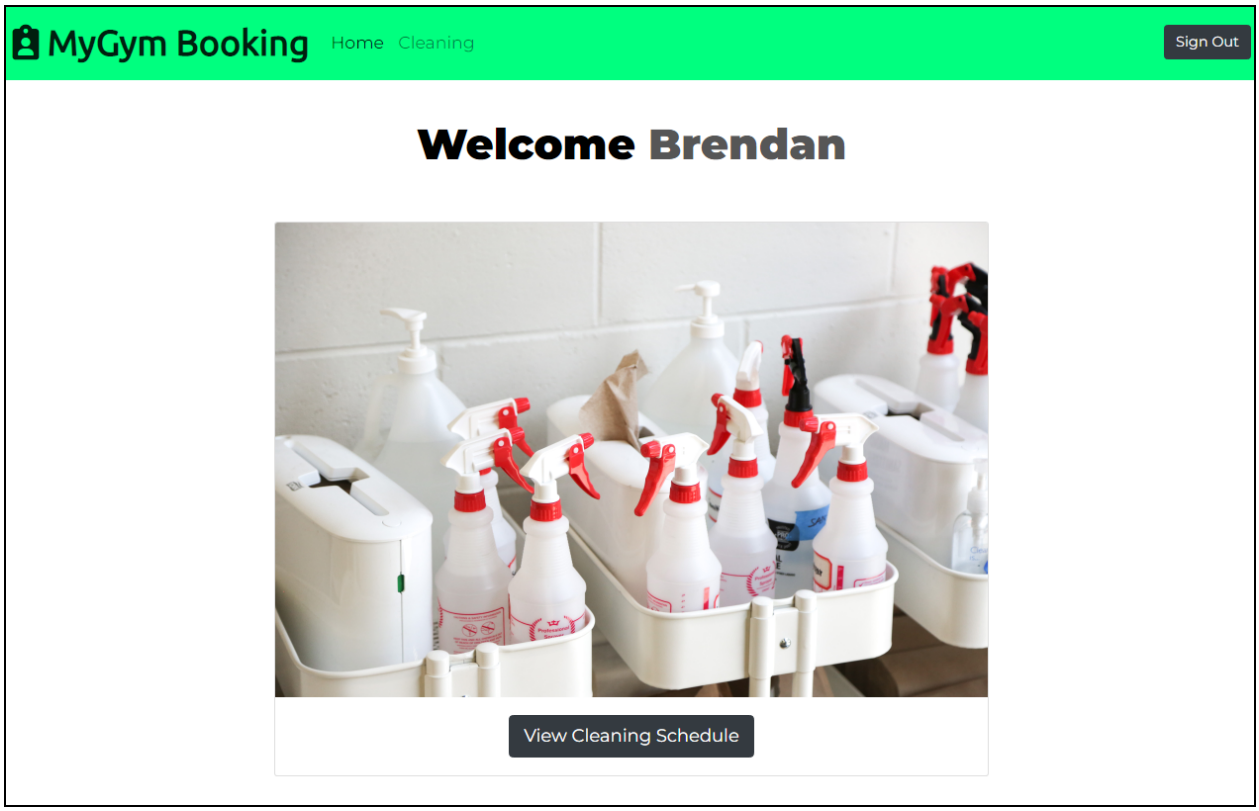


The user can navigate back to the manager landing page by clicking on the “Home” button on the navigation bar.

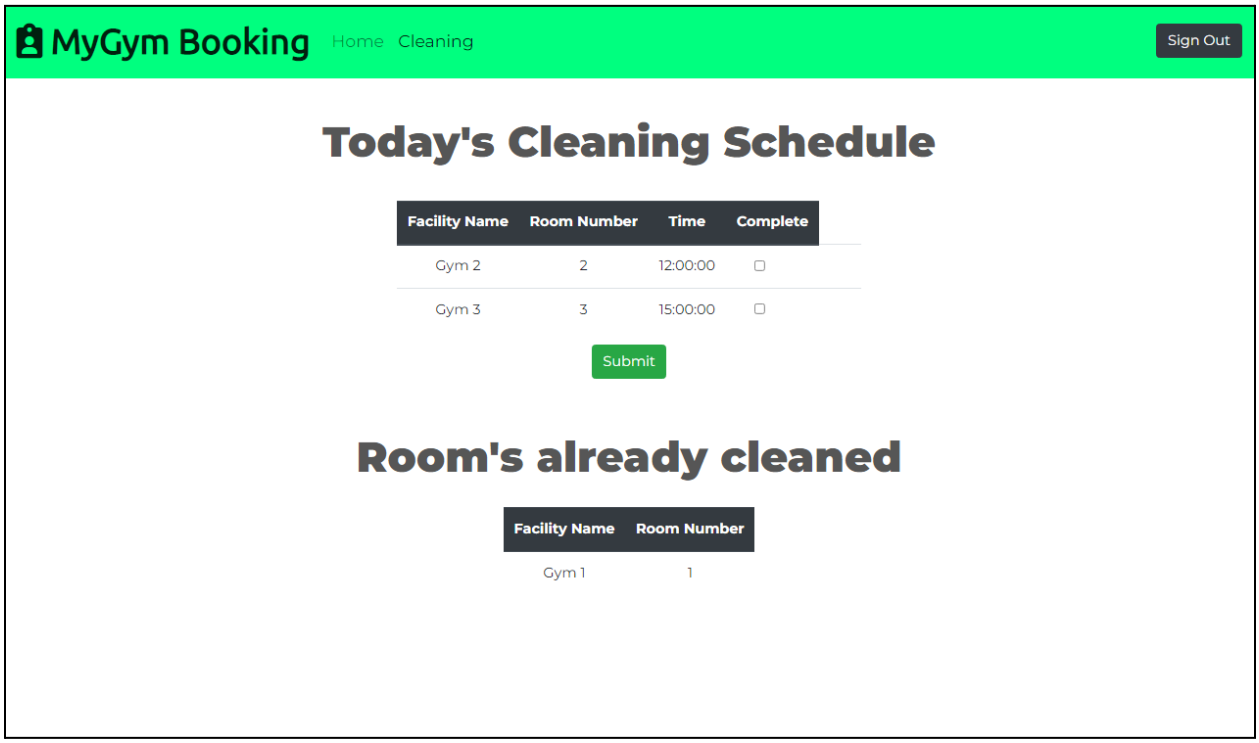
Janitor



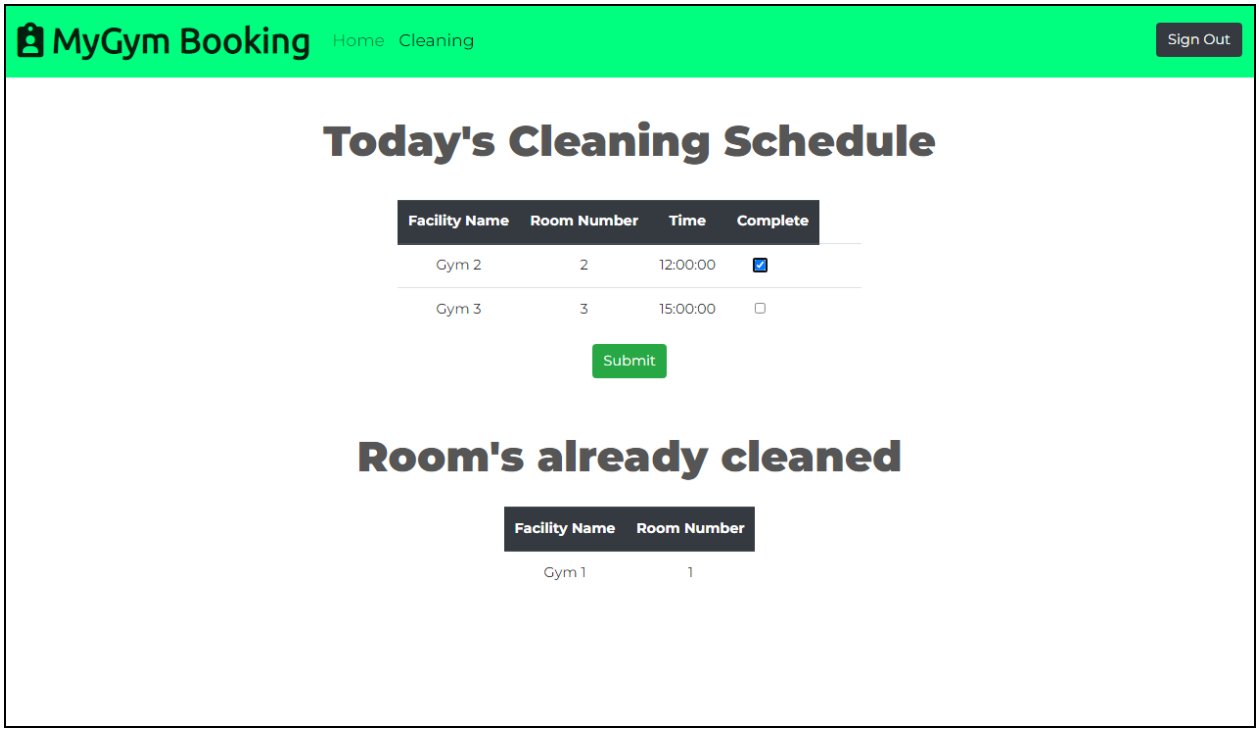
A Janitor can log in with the details provided above.



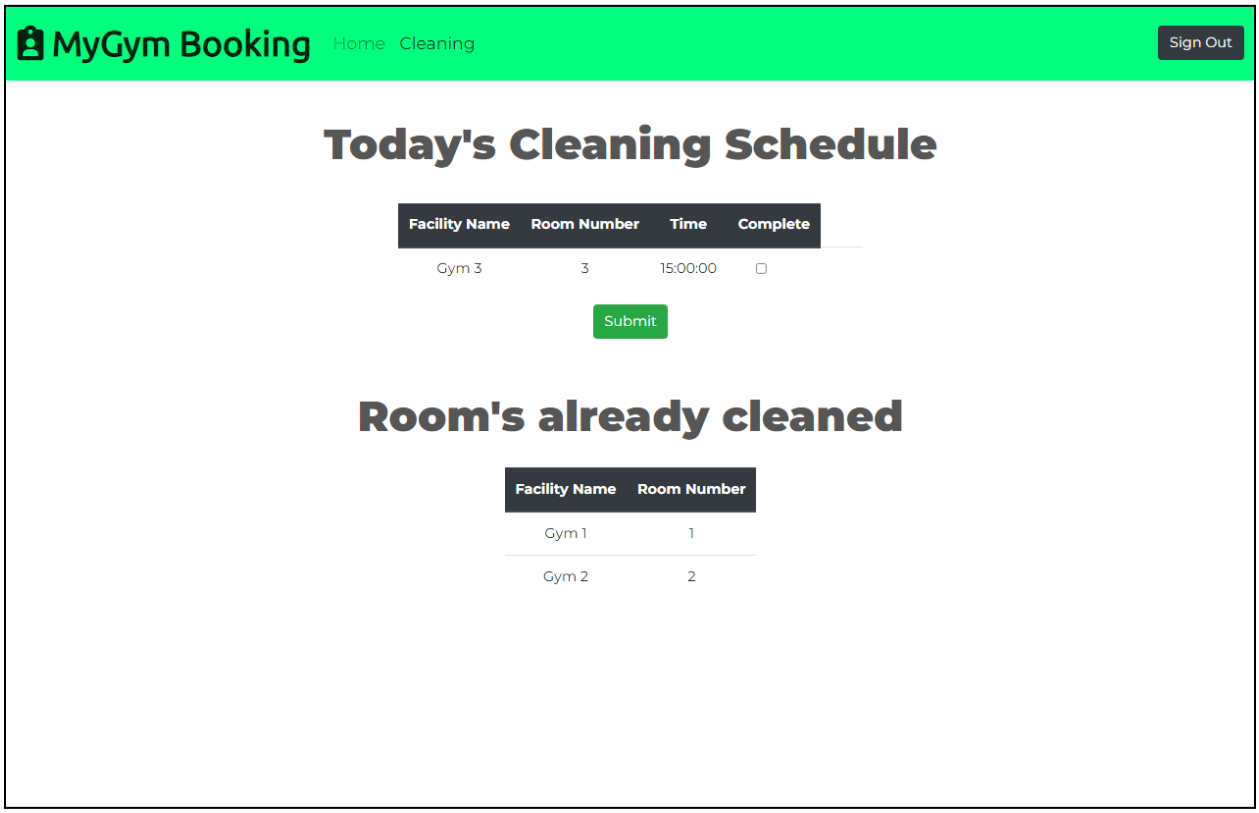
Upon logging in, the janitor will be greeted with their employee specific landing page.



A janitor can click the “View Cleaning Schedule” button or click the “Cleaning" button on the navigation bar to navigate to today's cleaning schedule screen.

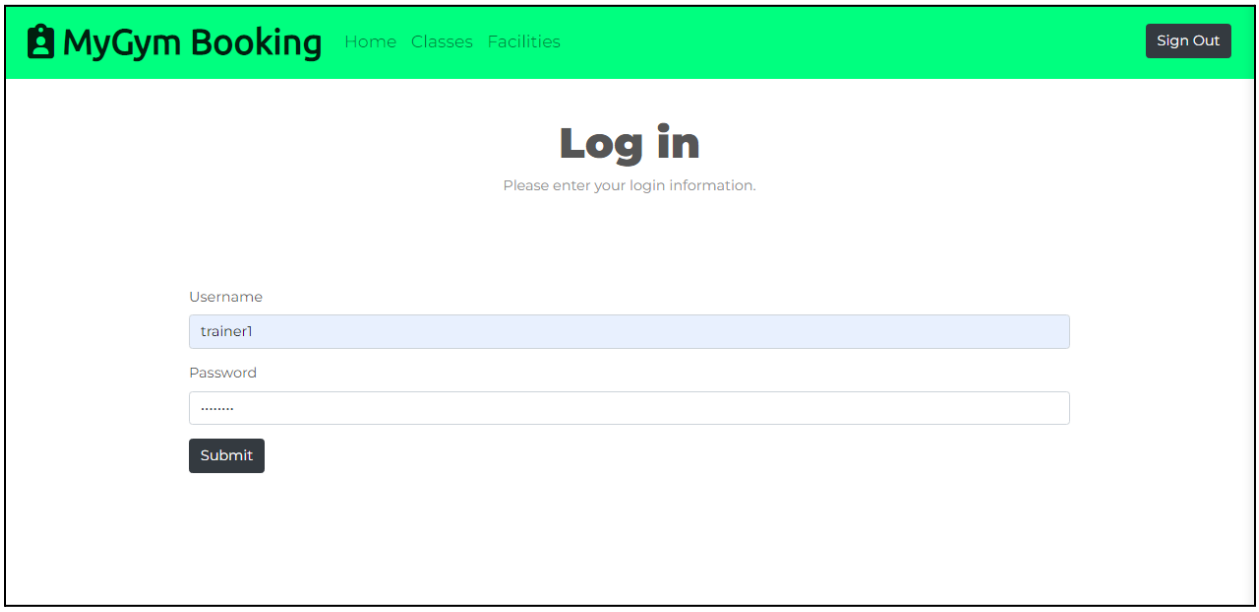


A janitor can hit the check boxes then submit to indicate that a room has been cleaned.

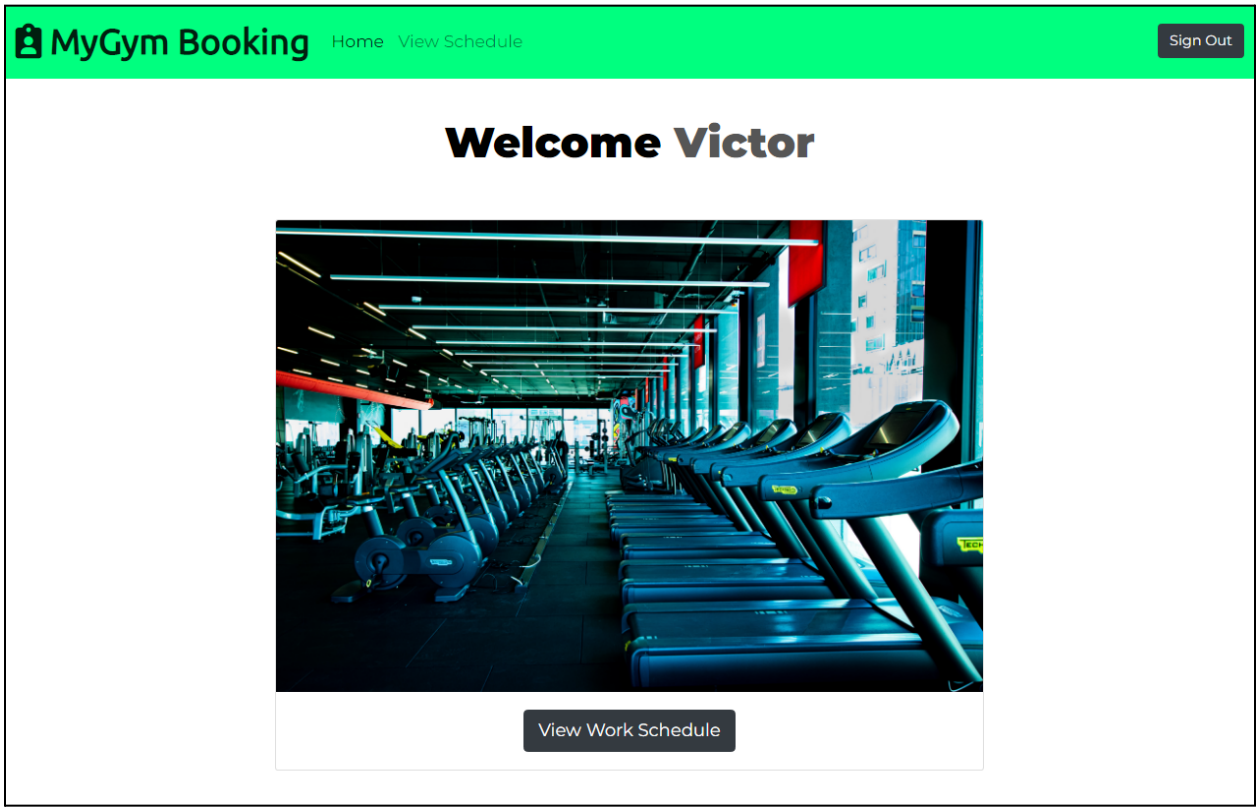


As seen above, the page has been updated to reflect these changes.

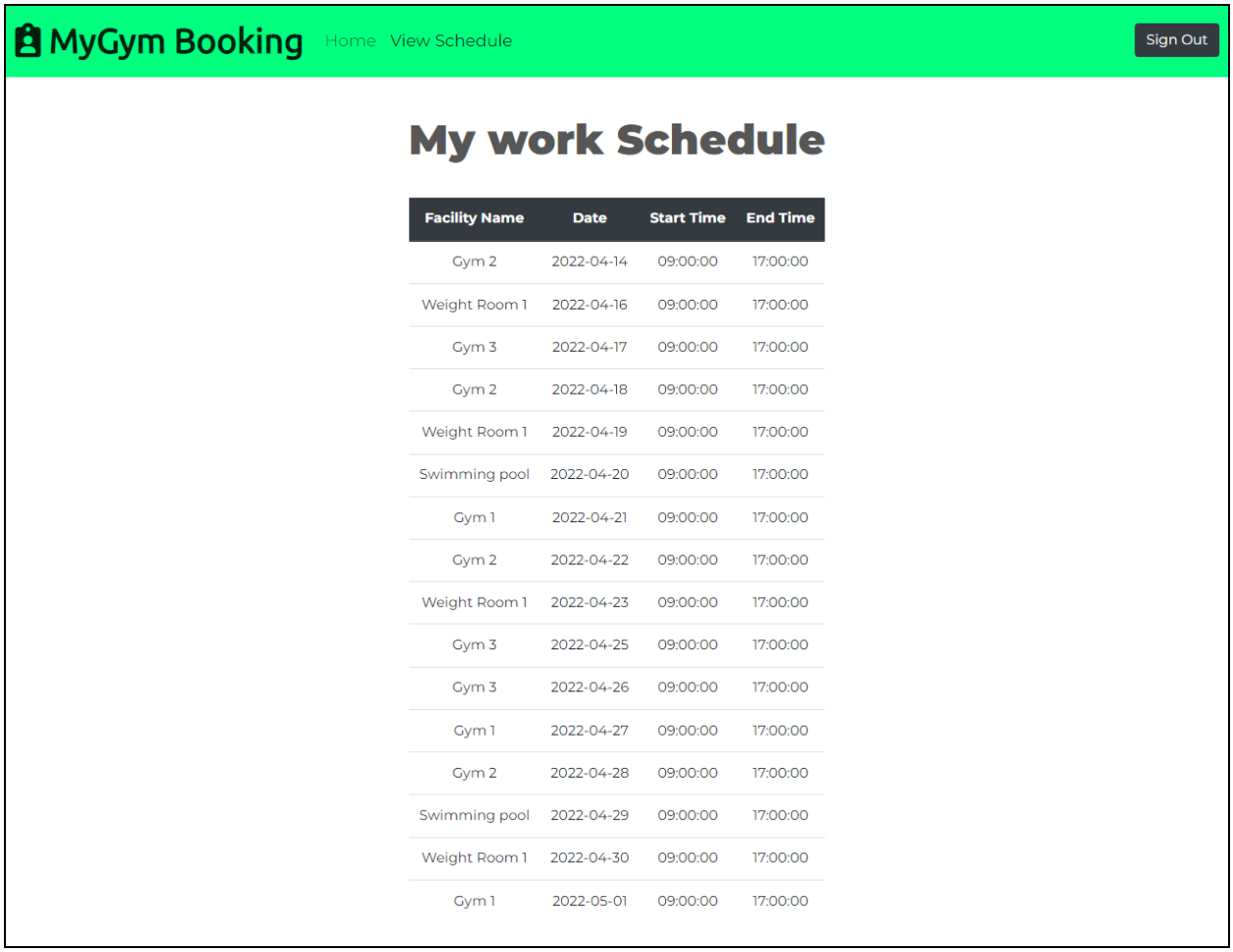
Trainer



A trainer can log in with the information provided in the Pre-login section.



The trainer will be greeted with the landing page and click on the “View Work Schedule” or “View Schedule” button on the navigation bar.



When the trainer clicks on one of the two buttons, they will be directed to a page in which they can view their schedule.

References:

Digamber, D. I. am, & Digamber. (2022, April 10). *Create PHP 8 CRUD REST API with MySQL & PHP PDO*. positronX.io. Retrieved April 16, 2022, from https://www.positronx.io/create-simple-php-crud-rest-api-with-mysql-php-pdo/

The University of Calgary. (n.d.). *Fitness Center Booking.* Retrieved January 31, 2022, from https://iac01.ucalgary.ca/CamRecWebBooking/default.aspx

ToThePointCode. (2021, May 19). PHP Crud Application FT mysql, JQuery. YouTube. Retrieved April 16, 2022, from https://www.youtube.com/playlist?list=PLk8gdrb2DmCjGHFH1iQxdJUTWsxyceSO0

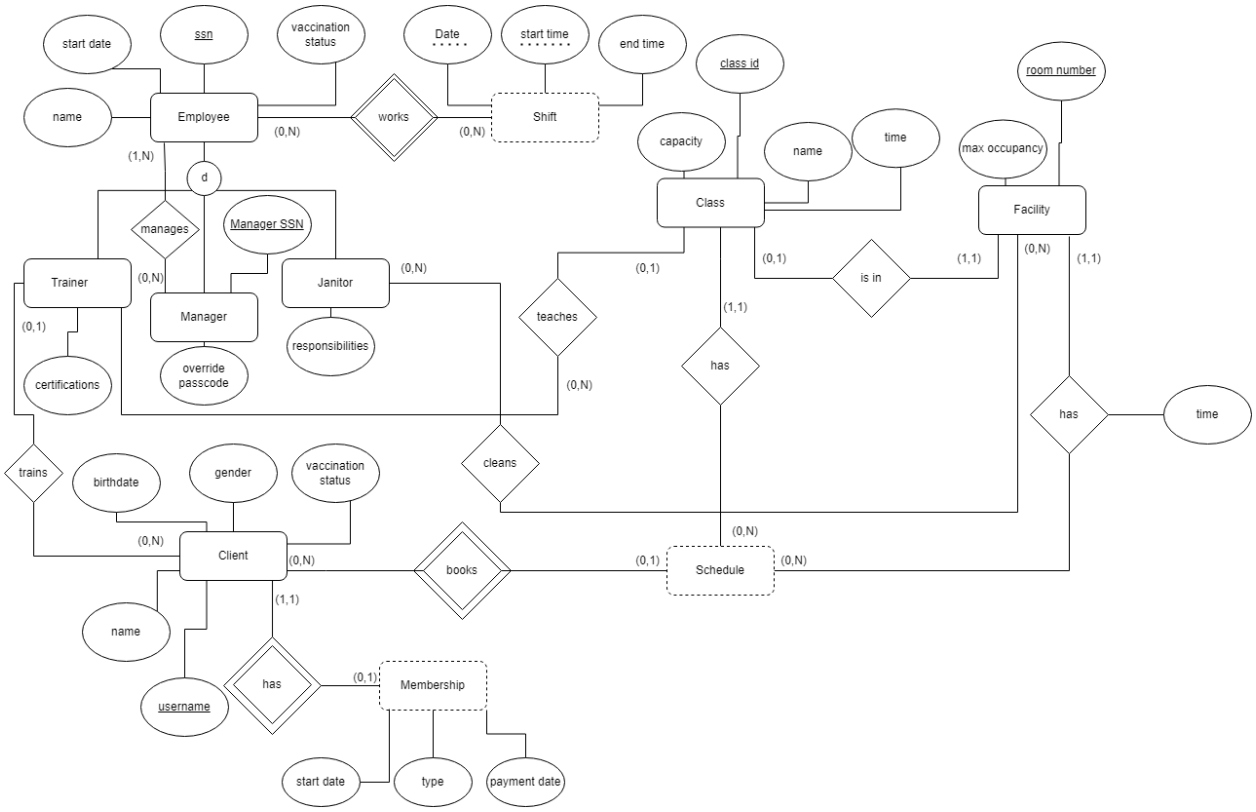
PHP tutorial. (n.d.). Retrieved April 16, 2022, from https://www.w3schools.com/php/default.asp

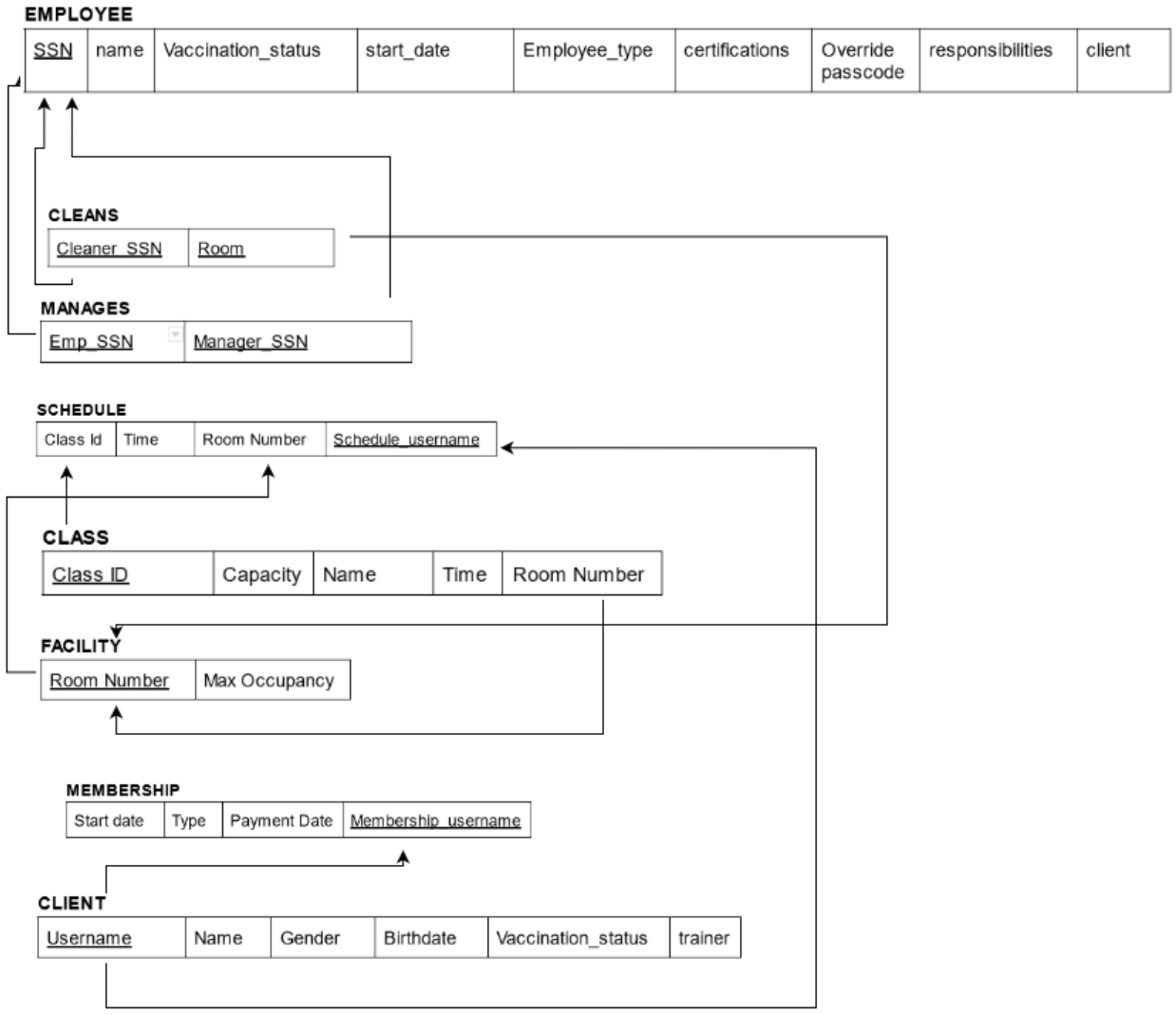
Some code was referenced from notes on D2L and Zoom videos

Tutorial_W09_API_Winter2022

Tutorial_W08_PHP_MySQL_Winter2022

Appendix


start date
ssn
vaccination status
Date
start time
end time
class id
room number
name
Employee
works
Shift
capacity
name
time
max occupancy
(1,N)
d
Class
Facility
manages
Manager SSN
Trainer
(0,N)
Janitor
(0,N)
(0,1)
(0,1)
is in
(1,1)
(0,N)
(1,1)
Manager
teaches
(1,1)
(0,1)
responsibilities
certifications
override passcode
has
(0,N)
has
time
trains
birthdate
gender
vaccination status
cleans
(0,N)
(0,N)
Client
(0,N)
books
(0,1)
Schedule
(0,N)
(1,1)
name
has
(0,1)
Membership
username
start date
type
payment date



Our project has changed since the presentation as we had some bugs in our code and issues with our api endpoints. They have since been fixed and the program is now fully functional along with our API end points. During our presentation we had some issues with the the functionality regarding the entity classes and have now been fixed.