

Cliffy's Gymnasium

(Online Gym Management System)

A mini-project report submitted for
Internet Programming (Semester V)

by

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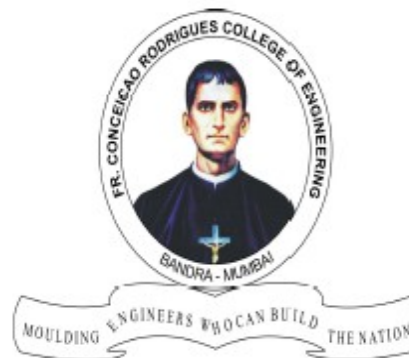
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(7th October 2019)



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1. _____

2. _____

Date:

Place:

Abstract

The purpose of this project is to create a web app or website for a gymnasium. Nowadays fitness is a must and people strive for a healthy life in every way possible. Almost every fitness center or gym charges you for using their facilities even for a trial of a week. This project website provides the users with all the basic fitness information, the services and other facilities before taking up a membership. The website offers different views for customers, trainers and the admin so that all the three entities are connected through this online platform. The customers even get a first week free trial which provides them enough time to get comfortable with our gym environment. The customers have freedom to review and submit feedback to the admin in charge itself.

Keywords : website, gymnasium, customer, employee, admin.

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8.3	Certificate of any web related course done (if any)	

ITC502.1: Design interactive web page(s) using HTML, CSS and JavaScript.

Rubrics for the assessment:

Indicator	Very Poor	Poor	Average	Good	Excellent
Timeline (2)	More than a session late (0)	NA(0.5)	NA(1)	NA(1.5)	Early or on time (2)
Code design(4)	NA (0)	Very poor code design with no comments and indentation(1)	Poor code design with very comments and indentation (2)	Design with good coding standards (3)	Accurate design with better coding standards (4)
Dynamic Web pages in the website (4)	Website does not have dynamic web pages (0)	Very few pages are dynamic pages (1)	Very few pages are dynamic with event handling mechanisms(2)	Appropriate use of event handling for making web pages dynamic (3)	Sufficient number of dynamic web pages along with appropriate event handling mechanisms (4)

ITC502.2: Design a responsive web site using HTML5 and CSS3.

Rubrics for the assessment:

Indicator	Very Poor	Poor	Average	Good	Excellent
Timeline (2)	More than a session late (0)	NA(0.5)	NA(1)	NA(1.5)	Early or on time (2)
Code design(4)	NA (0)	Very poor code design with no comments and indentation(1)	Poor code design with very comments and indentation (2)	Design with good coding standards (3)	Accurate design with better coding standards (4)
Responsiveness of the website (4)	Website is not responsive (0)	Few parts of the website are responsive and scale well on few devices(1)	Many parts of the website are responsive but work on few devices (2)	Many parts of the website are responsive and work on majority of the devices (3)	Almost all parts of the website are responsive and work on almost all devices (4)

ITC502.3: Develop Rich Internet Application.

Rubrics for the assessment:

Indicator	Very Poor	Poor	Average	Good	Excellent
Timeline (2)	More than a session late (0)	NA(0.5)	NA(1)	NA(1.5)	Early or on time (2)
Code design(4)	NA (0)	Very poor code design with no comments and indentation(1)	Poor code design with very comments and indentation (2)	Design with good coding standards (3)	Accurate design with better coding standards (4)
RIA on the website (4)	Website does not have RIA(0)	Many errors in the AJAX code(1)	Few errors in the AJAX code (2)	AJAX code with minimal errors(3)	Error free AJAX code performing the desired task (4)

ITC502.4: Build Dynamic web site using server side Programming and Database connectivity.

Rubrics for the assessment:

Indicator	Very Poor	Poor	Average	Good	Excellent
Timeline (2)	More than a session late (0)	NA(0.5)	NA(1)	NA(1.5)	Early or on time (2)
Code design(4)	NA (0)	Very poor code design with no comments and indentation(1)	Poor code design with very comments and indentation (2)	Design with good coding standards (3)	Accurate design with better coding standards (4)
Server side Programming and database connectivity (4)	Website with no database connectivity(0)	Website with no validations from the database (1)	Website with database connectivity but poor database design (2)	Website with database connectivity with good database design (3)	Website with database connectivity with good database design and better performance(4)

Chapter 1

Introduction

This project aims for providing a better experience to the customers, employees and admin of the gym. The website has the option for new customers to register themselves and as well as pay their fees. The customers also have been provided with the freedom of selecting facility, time slot, membership and classes. The website also has an arrangement for a payment portal. The customers are able to view their profiles, give feedback about trainers and facilities.

The website also aims at providing equal convenience to the employees. The trainers are able to assign routines to the customers under them. They are also provided with a facility to view customer feedback. They are also provided with a unique profile on the site.

The admin has the privileges to view information about trainers, branches, users, feedback about trainers and facilities. The admin is also able to add and remove trainers.

The technologies used in creating this project are as follows: PHP, MySQL for the backend. HTML5, CSS3, Sass, Bootstrap, JavaScript, JQuery for the frontend.

The website similar to the project is Gold Gym. There are exclusive offers on memberships and training plans. The website has facilities to record individual user sessions and hence shows each user their personal details, membership details and plan details. The staff of the gym also own a blog for the gym where users can post their personal experience, reviews and feedbacks which proves to be beneficial for any customer before joining in. They also provide details on the history of the gym.

Chapter 2

Brief Explanation of the project

2.1 Design Process

The back end to front end design approach was used for this project. It started with creating the database and schema designing. The essential elements of the project for making the database were listed down. The relations of the data tables with each other were discussed. The key entities to be linked from table to table were decided. The number of PHP pages for the problem statement were calculated and accordingly the data tables were designed. The sql queries for accessing the database from the PHP pages were discussed. The process was completely trial and error based. Hence improvisations were made on a steady basis. The final design was rectified and optimised in terms of code and resources.

The frontend design initially consisted of static HTML pages. A free online template was used as a starter file. Multiple web pages were created as per the requirement of the project. Stylesheets were written in Sass which were later compiled down to normal CSS. All CSS was written in Bootstrap syntax. The necessary JavaScript scripts were included for eg: Google Maps API, BMI calculator and other basic scripts. JQuery was used for inserting animations. The finalised HTML pages were converted to .php files in the end.

2.2 Front end Design

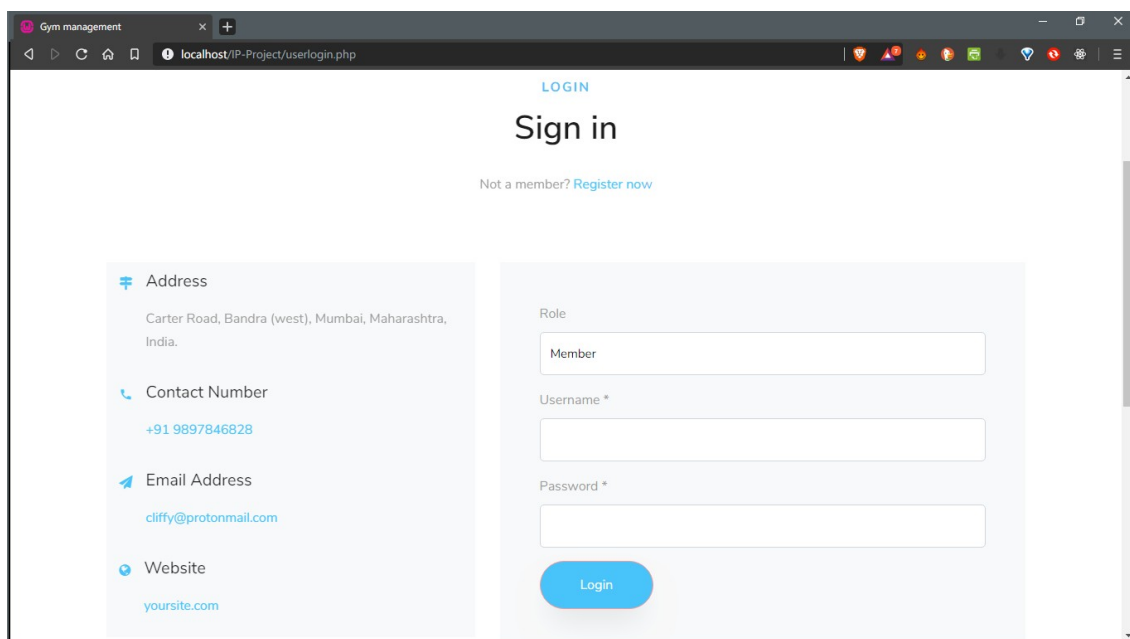


Fig 1 : Usual webpage design

Frontend design follows a specific sequence of Navbar, body and footer throughout all the web pages and the details of each part keeps varying as per the page you are currently viewing. The web pages have a white background with a subtle grey background for each section on the webpage. The above illustrated image describes the login page where the user will be required to enter their role among member, trainer and admin and their usernames and passwords in the following fields.

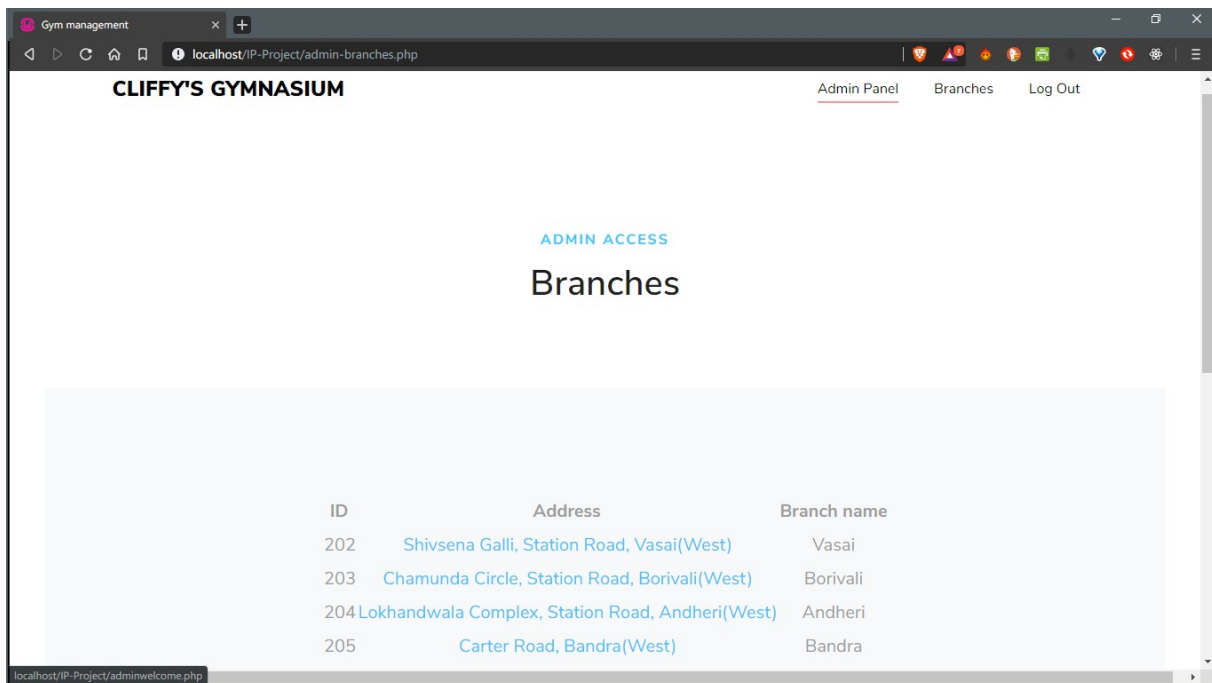


Fig 2 : Navbar of the webpage

The navbar is a fixed navbar using the CSS fixed positioning attribute which composes of the name of the gym that itself serves as a link to the landing page of the website. There are other links to various pages in the navbar in the form of tabs. These links and pages vary as per the current user's role in the gym.

The body of the page contains relevant information about the tab that you select. In general it consists of a title in blue specifying the specific section of the user's role followed by a subtitle. The main content of the body is fetched from the database. It can be just user details or tables of entries or input from another page being displayed as output.

ADMIN ACCESS

Trainers

ID	Name	Salary	Branch	Time
501	Aaron Maruino	4000	Carter Road, Bandra(West)	Morning 501
502	Mr. Khan	4000	Lokhandwala Complex, Station Road, Andheri(West)	Noon 502
504	Venture Higgins	3000	Shivsena Galli, Station Road, Vasai(West)	Evening 504
505	Brett Maverick	4000	Carter Road, Bandra(West)	Noon 505
506	Calvin Hobbs	5000	Carter Road, Bandra(West)	Afternoon 506
507	Callum Scott	4000	Carter Road, Bandra(West)	Evening 507
508	Howard Stark	5000	Lokhandwala Complex, Station Road, Andheri(West)	Morning 508
509	Atif Abdul	4000	Lokhandwala Complex, Station Road, Andheri(West)	Afternoon 509

Fig 3 : Body of the webpage

The last section of the web pages include a common footer. This includes details about the gym, links to various useful sections, contact details etc.

CLIFFY'S GYMNASIUM

Admin Panel Branches Log Out

About CLIFFY'S GYMNASIUM.

Help you find your starting point to build your path to success.

[Twitter](#) [Facebook](#) [Instagram](#)

Links

- Home
- About
- Services
- Coaches
- Contact

Services

- Gym Fitness
- Crossfit
- Yoa
- Aerobics

Have a Questions?

📍 Carter Road, Bandra (west), Mumbai, Maharashtra, India.

☎ +91 9897846828

✉ cliffy@protonmail.com

Fig 4 : Footer of the webpage

2.3 Back end Design

Initially the relational model of the database was produced on paper. The links to the individual tables and primary and foreign keys were discussed and decided . The schemas were reduced and refined with time. The important and essential elements of the relational model were identified according to which the individual tables were linked efficiently.

The tables are as follows admin, customer, customer-payment, customer-routine, plan, trainer and some other dependent ones. The relations of different entities with each other were finalised. The necessary dependent tables were created for example : customer-feedback. This ensured non-cluttering of too many attributes in one single table and maintaining consistency with similar types of relations.

During the development phase of the database, the backend script which would drive the entire backend system was also considered. Since php integrates with MySQL very well, we created a stand alone backend with minimal styling just for testing purposes. The real front end was added later. Thus development was divided into back end and front end construction within the team. The stand alone back end consisted of all php files which would be interfaced in the future.

Applications of backend and data storage/retrieval : Submitting php forms that contain Input fields, Radio buttons, Check boxes, Text areas. Retrieval from database would be displayed in the page using dynamic loading techniques.

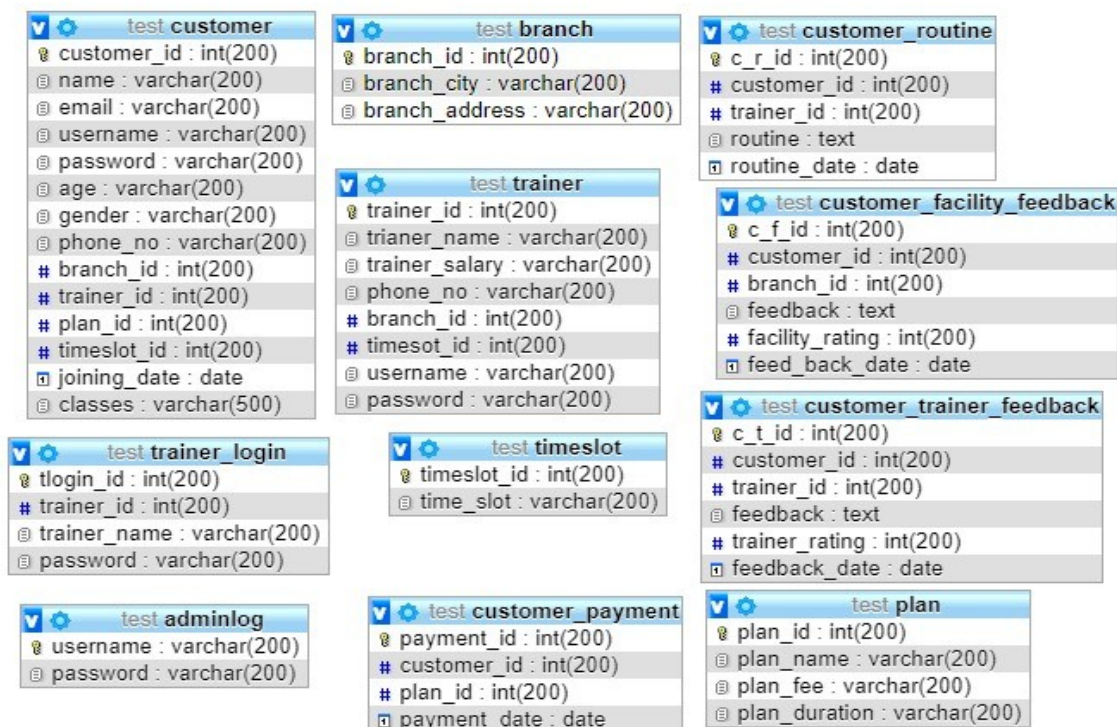


Figure 5 : Database structure/design

Chapter 3

Process used to make website responsive

Various Bootstrap elements were used since Bootstrap follows a unique process of stacking elements in columns across the entire screen and when the screen resolution is changed, it stacks these columns vertically, from left to right as top to bottom.

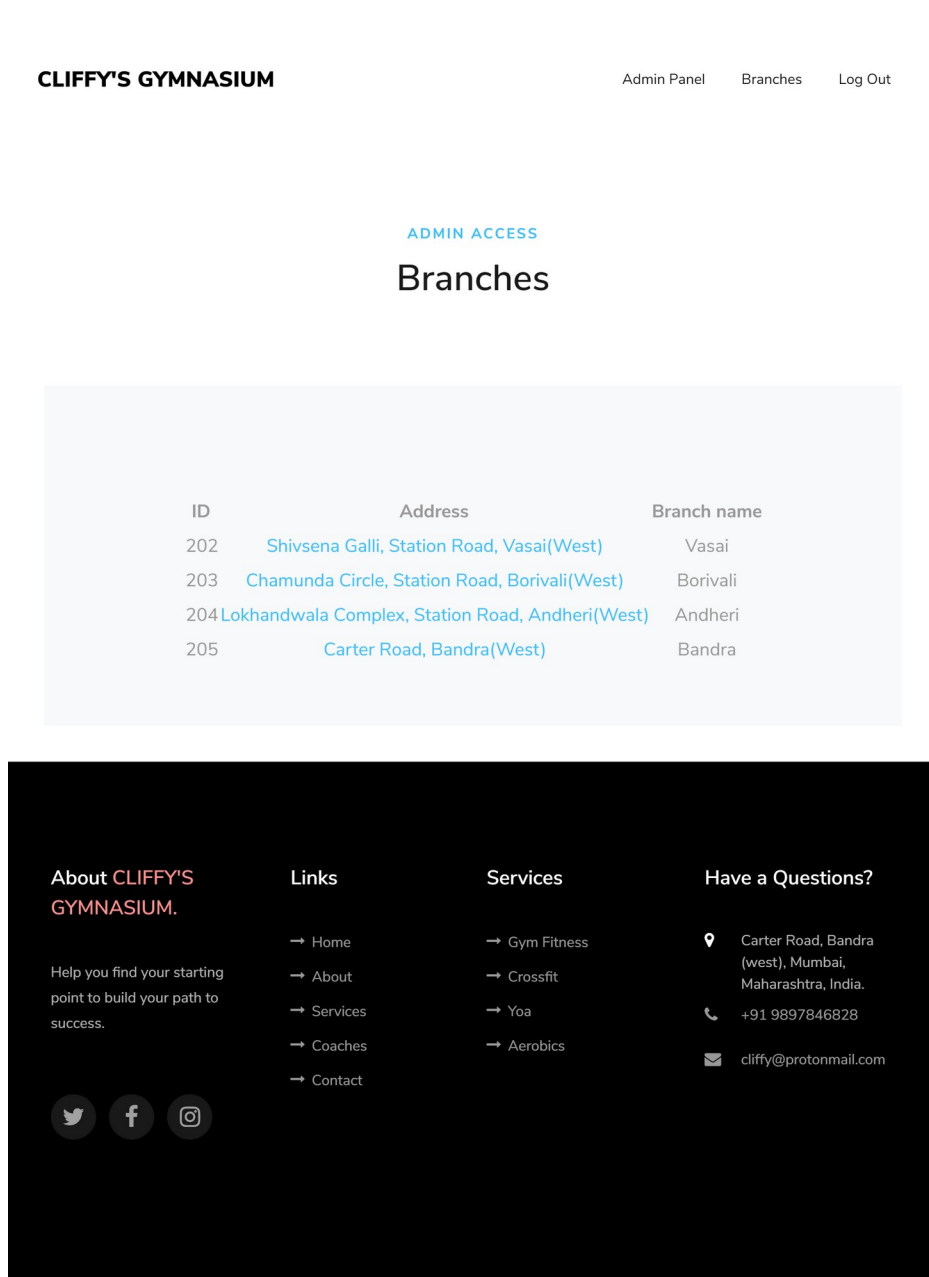


Fig 6 : iPad pro screenshot

Media queries were the most effective way to make the webpages responsive.

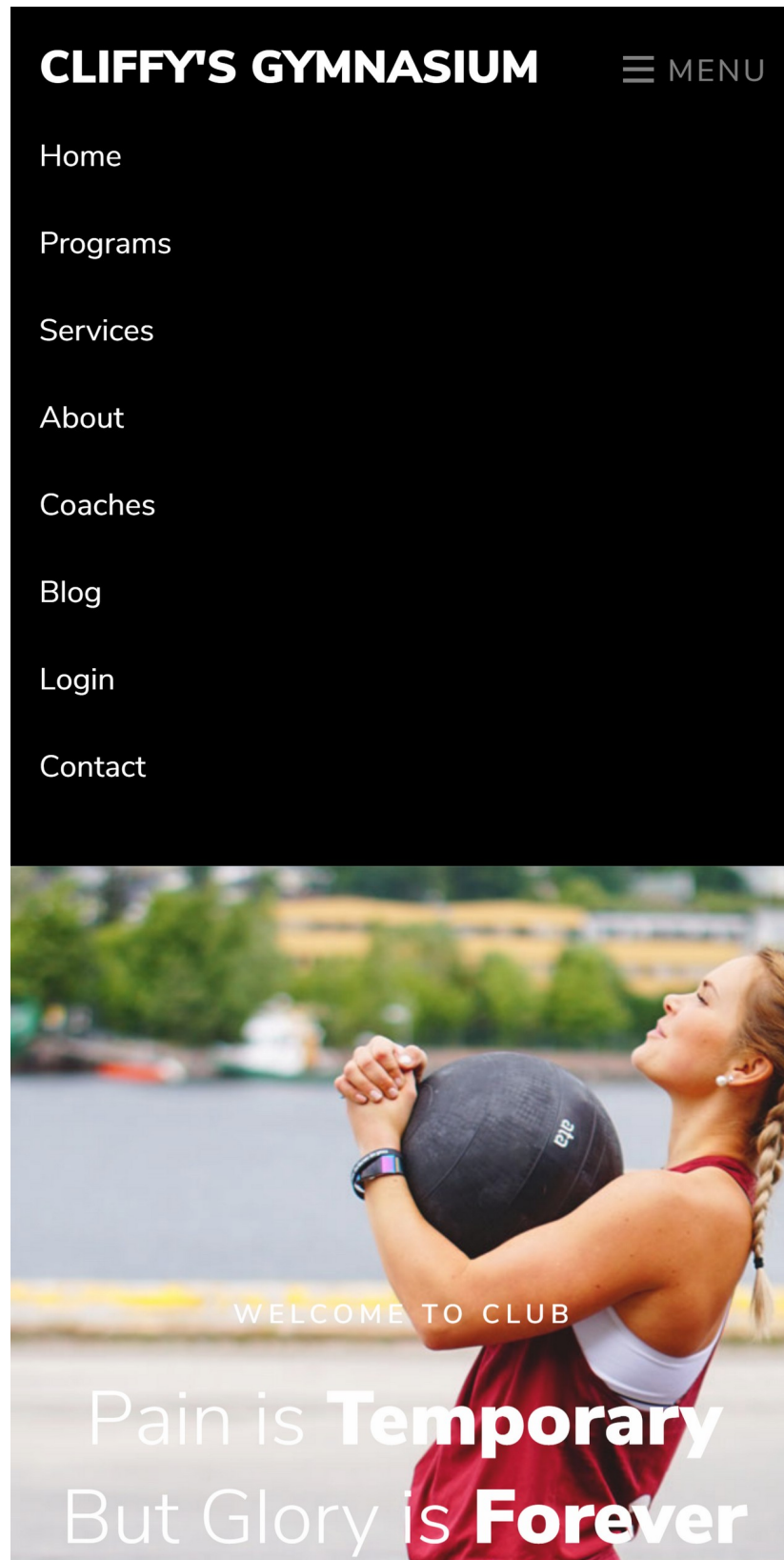


Fig 7 : Pixel 2XL screenshot

Chapter 4

Process used to include RIA to website

AJAX was used in the registration form part 2 wherein the customer chooses his preferred branch and time on the basis of which a list of all the available trainers is generated. The list consists of radio buttons alongside the name of the trainer. The available trainers will have an enabled radio button while the unavailable ones would have it disabled to indicate their non-availability. Other than AJAX dynamic content loading techniques were used based on triggering an event, mostly a button.

Case 1 : selecting branch and time slot (Fig 8)

The image displays two screenshots of a web application for 'CLIFFY'S GYMNASIUM'. The browser address bar shows 'localhost/IP-Project/DynamicReg1.php'.

Top Screenshot: The registration form is shown with the following fields and options:

- Choose your branch/city : ***: A dropdown menu with 'Carter Road, Bandra(West)' selected.
- Choose a timeslot ***: Radio buttons for Morning, Noon, Afternoon, and Evening. 'Morning' is selected.
- Choose your classes : ***: Checkboxes for Muscle Building, Cardio Exercise, Power Yoga, Aerobics program, Crossfit program, and Basic Exercise and Stretching. 'Muscle Building', 'Cardio Exercise', and 'Aerobics program' are checked.
- Choose a membership plan ***: Radio buttons for 1 month (300/-), 3 month (750/-), and 6 month (1350/-). '1 month' is selected.

Bottom Screenshot: The form is shown after the 'Check available trainers' button is clicked. The 'Basic Exercise and Stretching' checkbox is selected. The membership plan remains '1 month' (300/-). Below the 'Get Trainer' label, a red button labeled 'Check available trainers' is visible. Below it, a radio button is selected next to the name 'Aaron Marulino'. At the bottom, a red button labeled 'Register' is visible.

Case 2 : selecting branch and time slot (Fig 10)

The screenshot shows a web browser window with the URL `localhost/IP-Project/DynamicReg1.php`. The page header for "CLIFFY'S GYMNASIUM" includes navigation links: Home, Programs, Services, About, Coaches, Blog, Register, and Contact. The main form area contains the following sections:

- Choose your branch/city : ***
A dropdown menu is set to "Shivsena Galli, Station Road, Vasai(West)".
- Choose a timeslot ***
Four radio button options: Morning, Noon (selected), Afternoon, and Evening.
- Choose your classes : ***
Five checkboxes: Muscle Building (checked), Cardio Exercise (checked), Power Yoga (unchecked), Aerobics program (checked), and Crossfit program (unchecked). Below these is the option "Basic Exercise and Stretching" (unchecked).
- Choose a membership plan ***
This section is partially visible at the bottom of the form.

Available trainers (Fig 11)

This screenshot shows the lower portion of the registration form. The visible sections are:

- Continuation of the "Choose your classes" section with checkboxes for Crossfit program, Basic Exercise and Stretching, and the previously mentioned classes.
- Choose a membership plan ***
Three radio button options with associated costs:
 - 1 month: 300/-
 - 3 month: 750/- (selected)
 - 6 month: 1350/-
- Get Trainer**
A red button labeled "Check available trainers".
- A list of available trainers, currently showing "Joshua Gomes".
- A red button labeled "Register" at the bottom.

Chapter 5

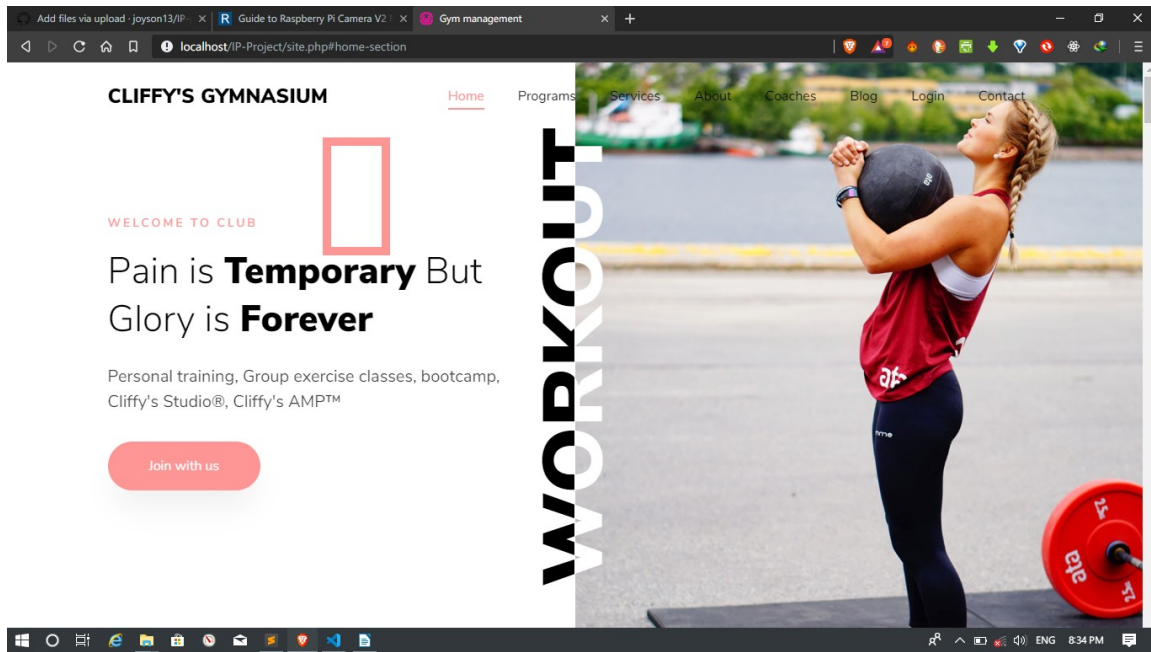
Process of interfacing front end with the back end

As described in earlier sections, we used the backend to frontend approach in which static HTML pages were converted to dynamic PHP webpages. The backend initially had its own stand-alone HTML frontend before applying custom CSS. Code snippets for navbar and footer were packed together for their re-usability. The body section was configured neatly to flow along the theme and colors of the template used. Ordering of php scripts and frontend elements was necessary to prevent undesired server side errors. Since multiple CSS files being imported, the order of imports was made sure to not cause any undesired overriding of CSS.

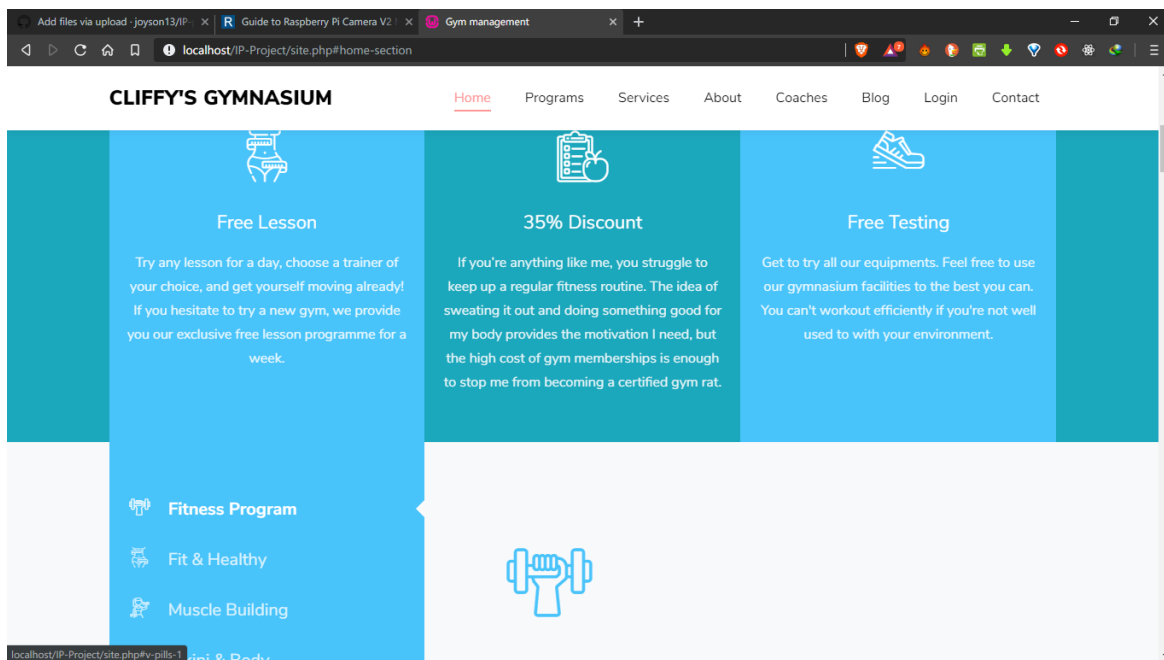
Chapter 6

Testing of the website

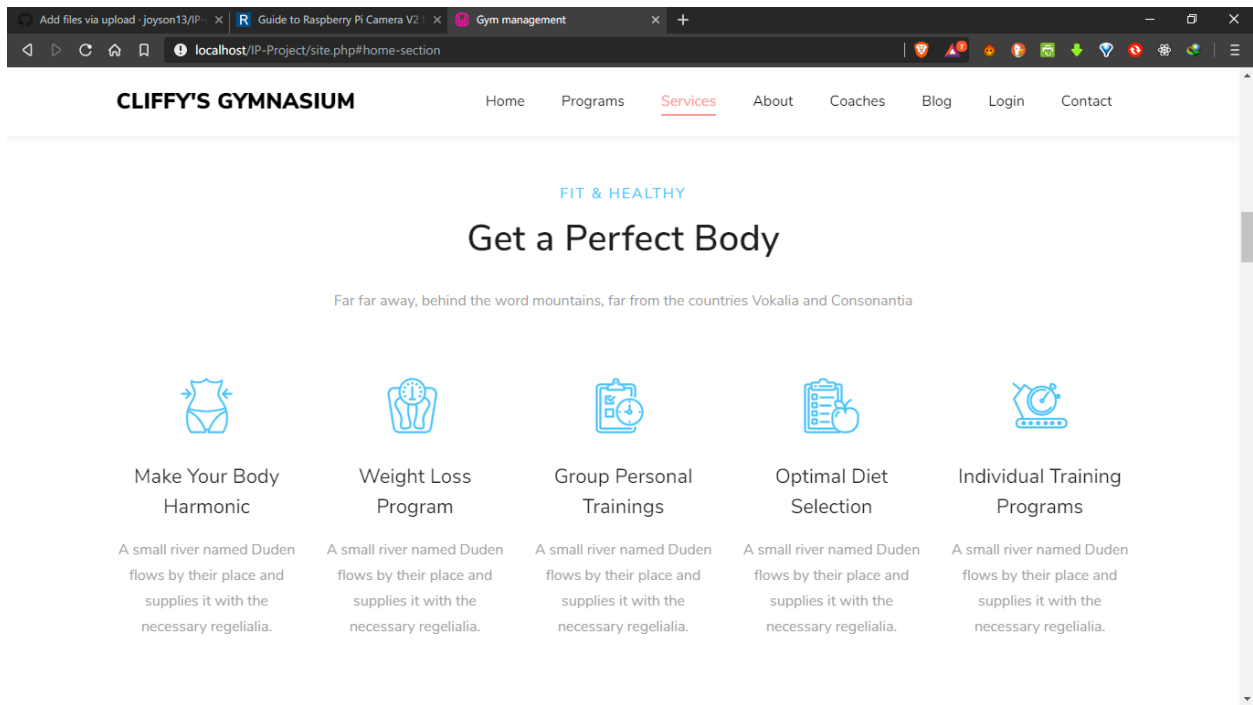
Landing page :



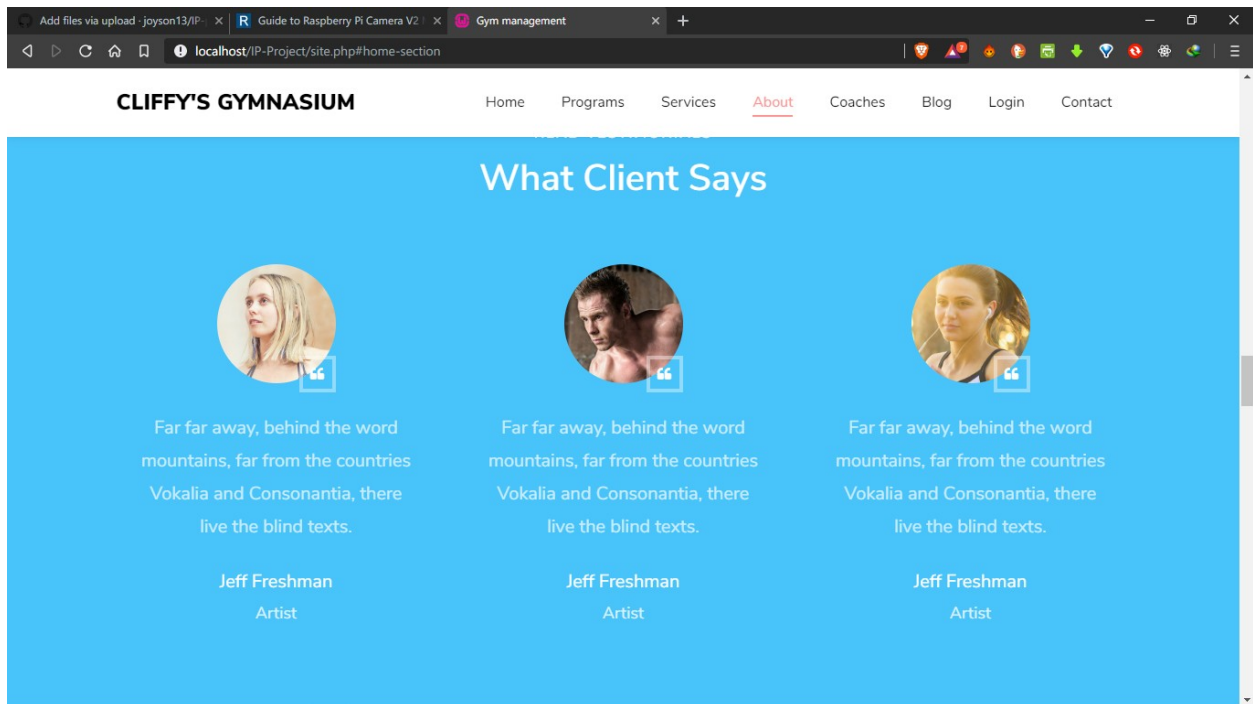
(Fig 12)



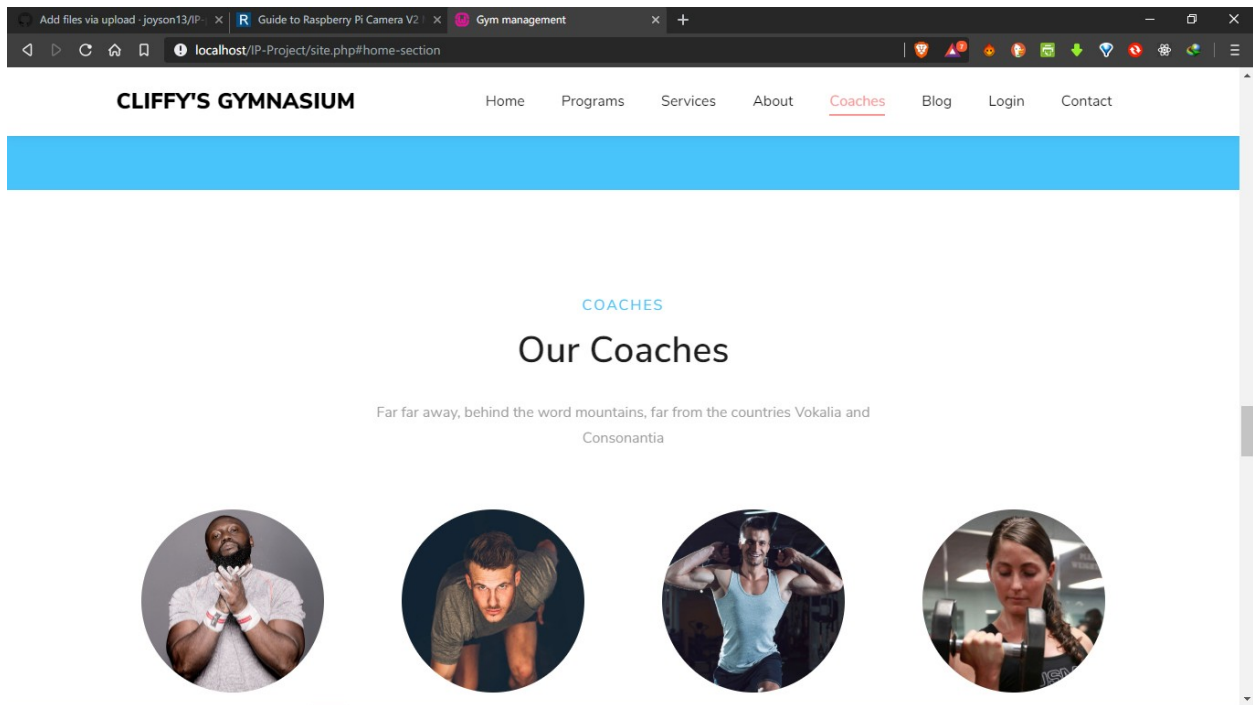
(Fig 13)



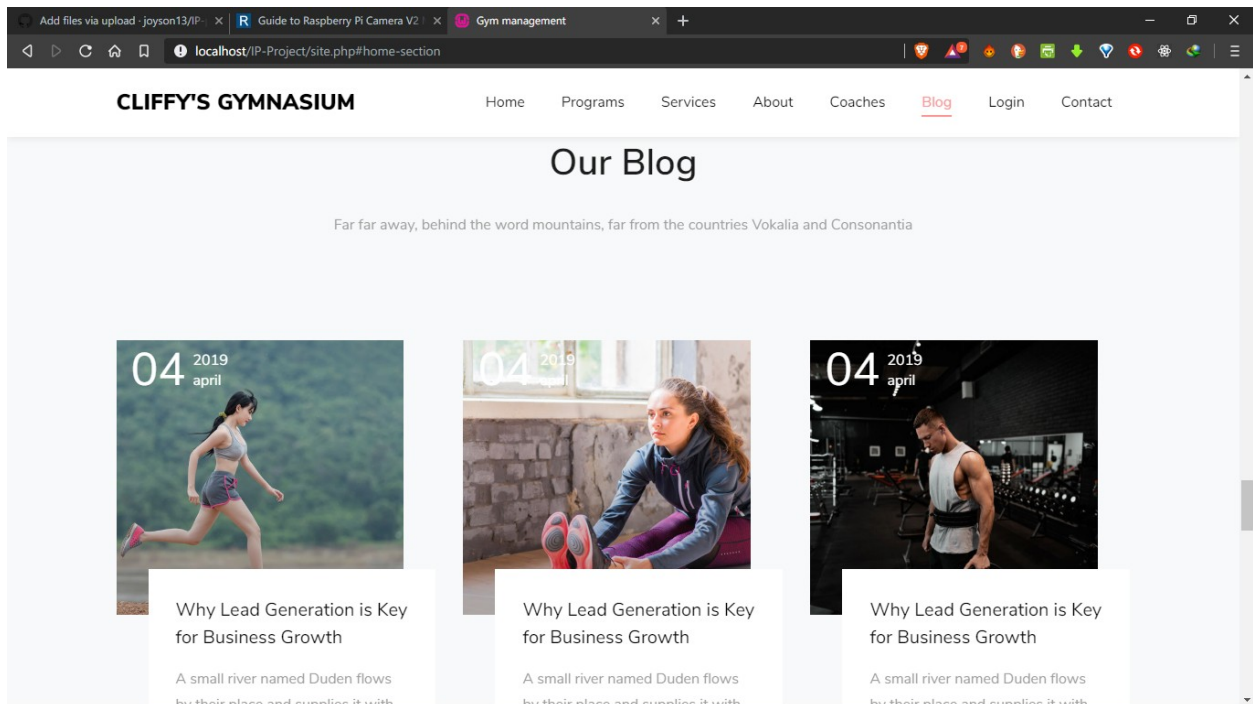
(Fig 14)



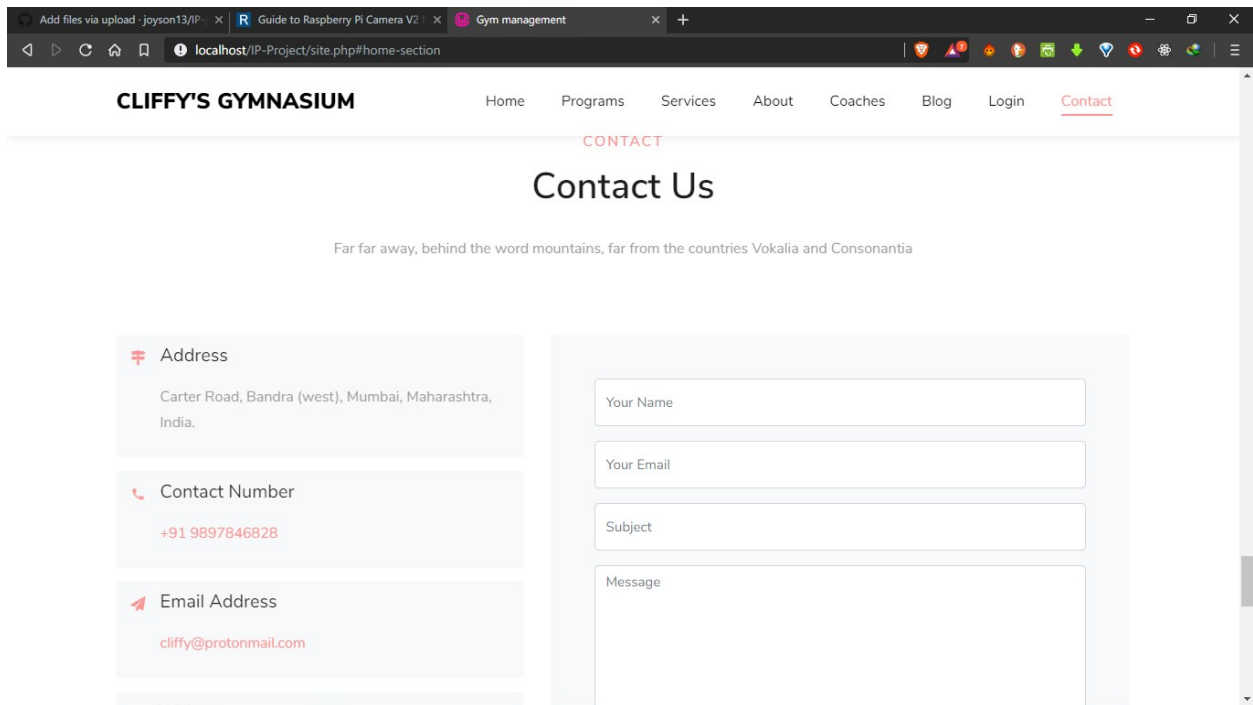
(Fig 15)



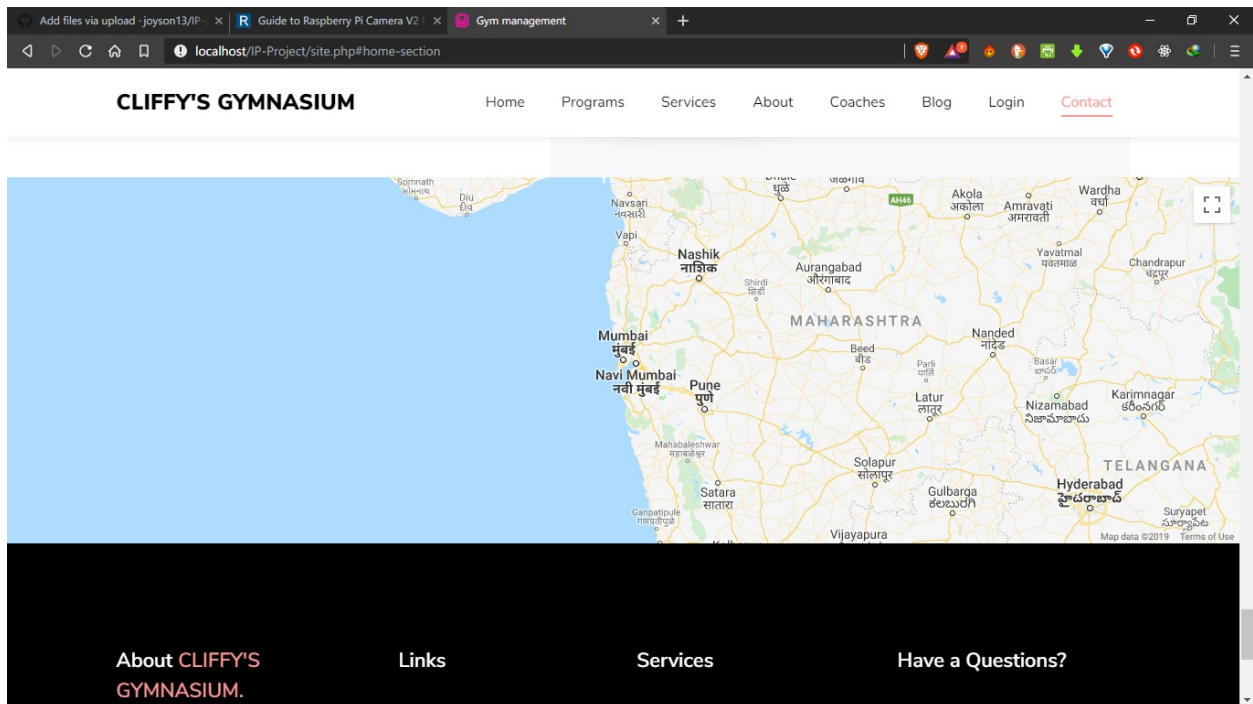
(Fig 16)



(Fig 17)



(Fig 18)



(Fig 19)

Customer view:

CLIFFY'S GYMNASIUM Home Programs Services About Coaches Blog Login Contact

Address
198 West 21th Street, Suite 721 New York NY 10016

Contact Number
+1235 2355 98

Email Address
info@yoursite.com

Website
yoursite.com

Name *
Julius Caesar

Username *
juliano

Email *
juliano123@gmail.com

Password *
.....

Confirm Password *
.....

Continue

(Fig 20)

CLIFFY'S GYMNASIUM Home Programs Services About Coaches Blog Register Contact

Choose your branch/city : *
Shivsena Galli, Station Road, Vasai(West)

Choose a timeslot *
☐ Morning
☒ Noon
☐ Afternoon
☐ Evening

Choose your classes : *
☒ Muscle Building
☒ Cardio Exercise
☐ Power Yoga
☒ Aerobics program
☐ Crossfit program
☐ Basic Exercise and Stretching

Choose a membership plan *

(Fig 21)

CLIFFY'S GYMNASIUM Back

Name : Julius Caesar

E-mail : juliano123@gmail.com

Password : qwertyuiop

Age : 19

Gender : Male

Trainer ID : 0

Branch ID : 205

Classes : Cardio Exercise,Power Yoga,Crossfit program

Plan ID : 301

[Confirm](#)

(Fig 22)

Billing Address **Payment**

Full Name
John M. Doe

Email
john@example.com

Address
542 W. 15th Street

City
New York

State
NY

Zip
10001

☒ Shipping address same as billing

Accepted Cards

Name on Card
John More Doe

Credit card number
1111-2222-3333-4444

Exp Month
September

Exp Year
2018

CVV
352

(Fig 23)

LOGIN

Sign in

Not a member? [Register now](#)

Address

Carter Road, Bandra (west), Mumbai, Maharashtra, India.

Contact Number

+91 9897846828

Email Address

cliffy@protonmail.com

Website

yoursite.com

Role

Member

Username *

juliano

Password *

.....

Login

(Fig 24)

CLIFFY'S GYMNASIUM

Profile Trainer Routine Membership Log Out

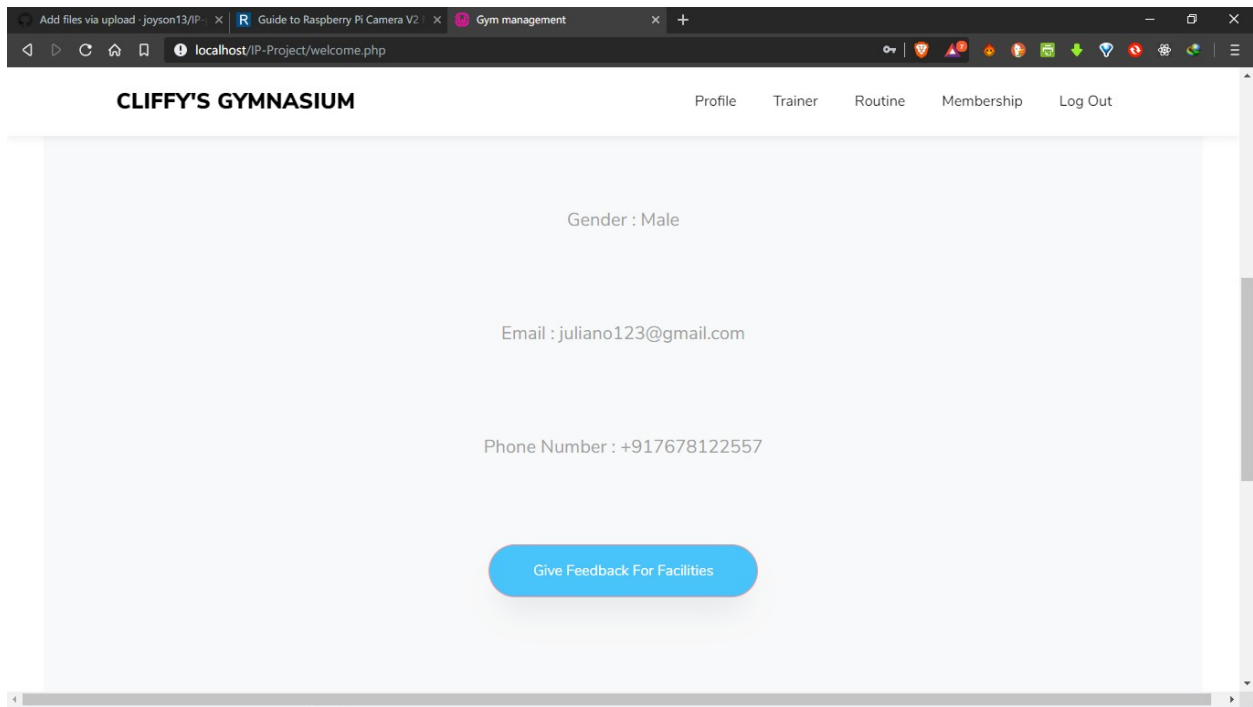
Julius Caesar

Age : 19

Gender : Male

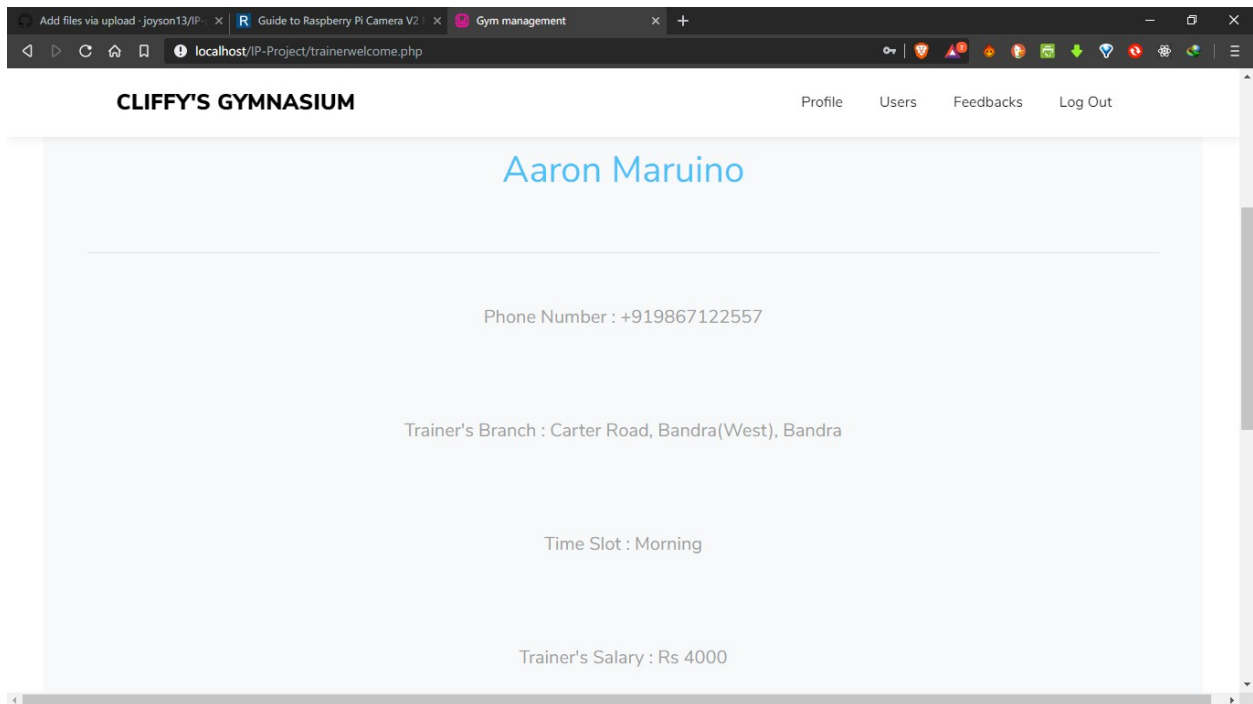
Email : juliano123@gmail.com

(Fig 25)

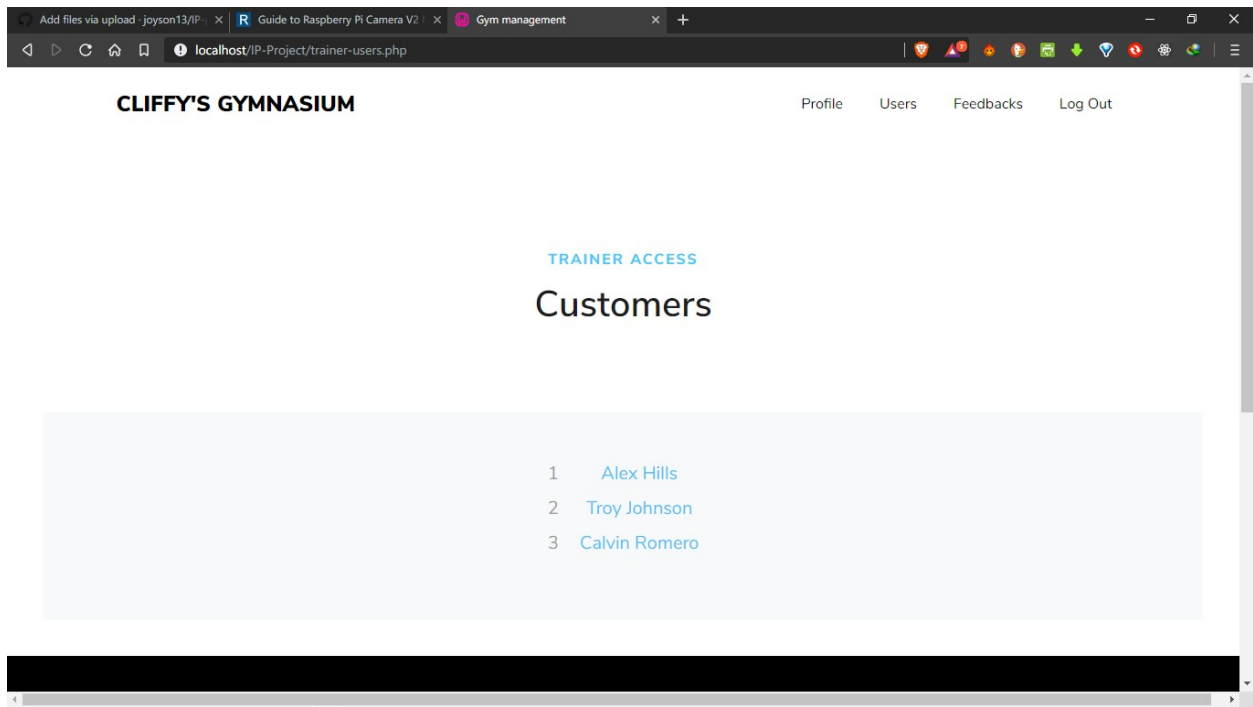


(Fig 26)

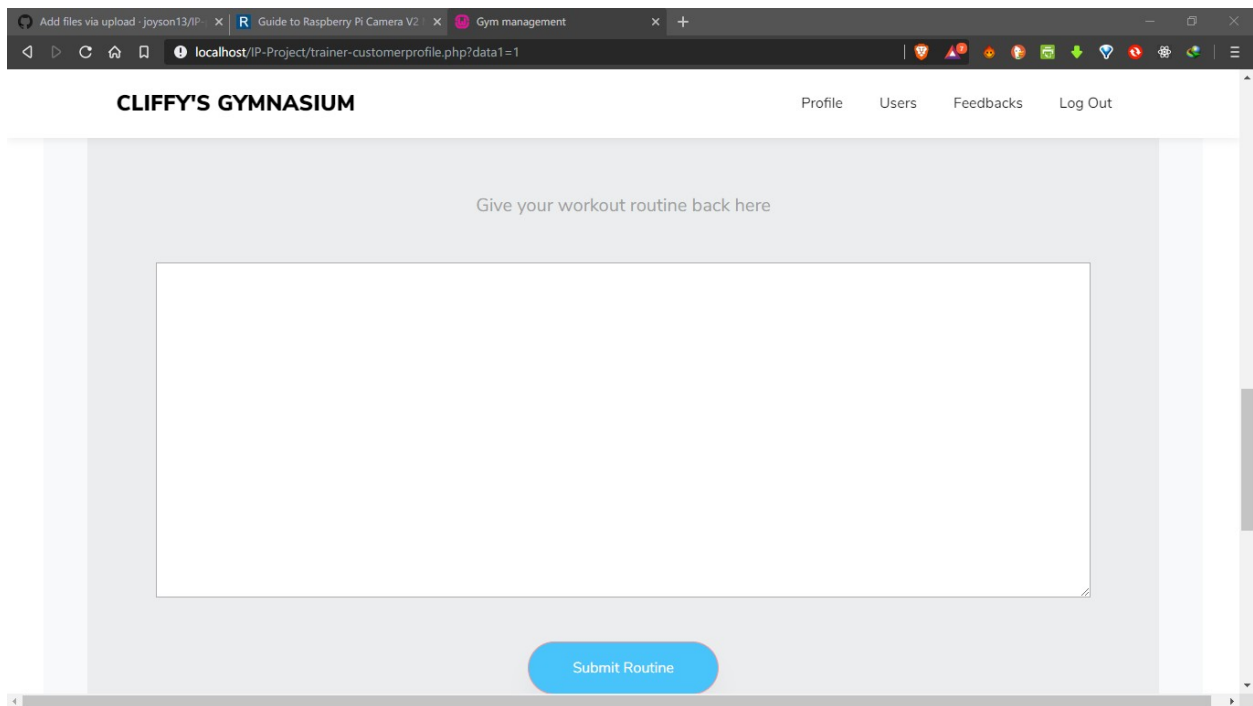
Trainer view:



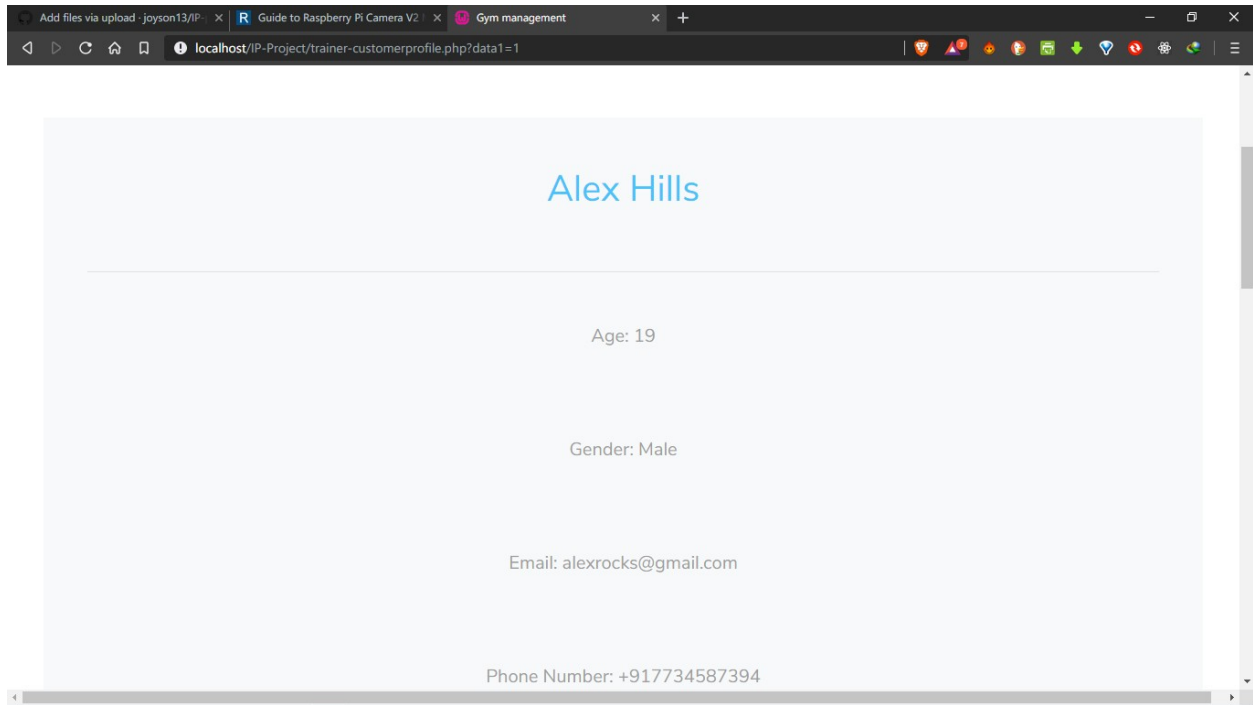
(Fig 27)



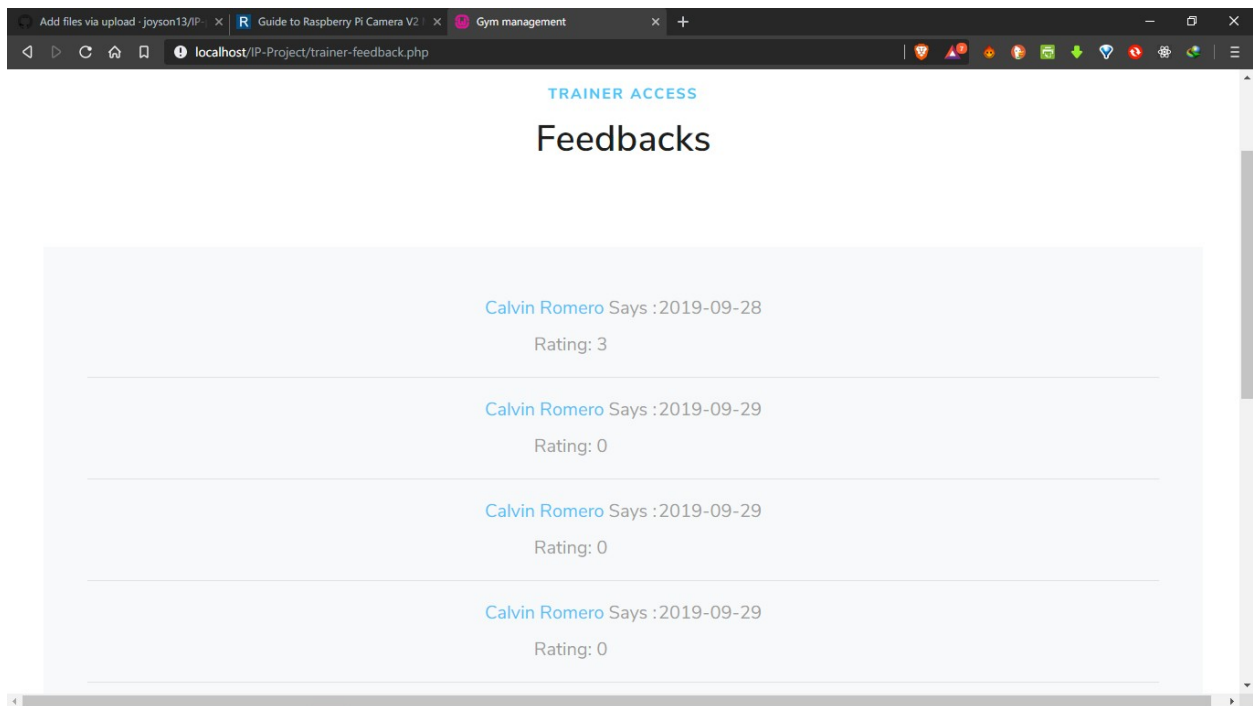
(Fig 28)



(Fig 29)

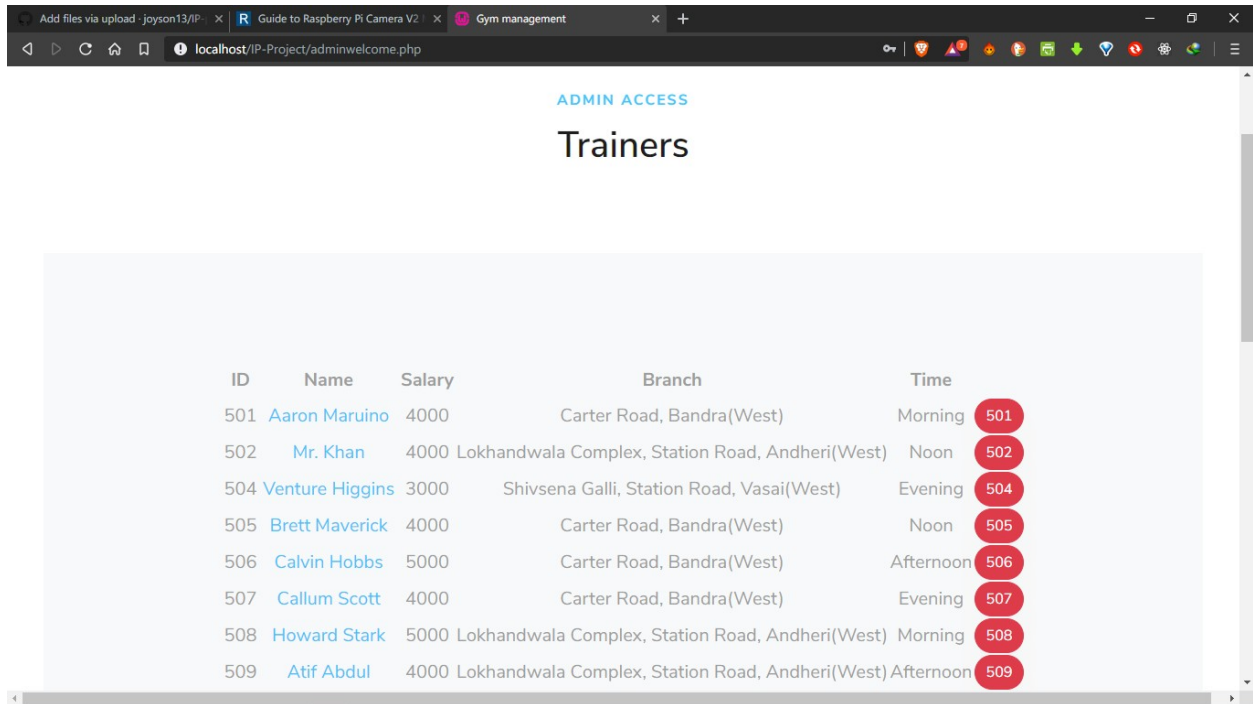


(Fig 30)



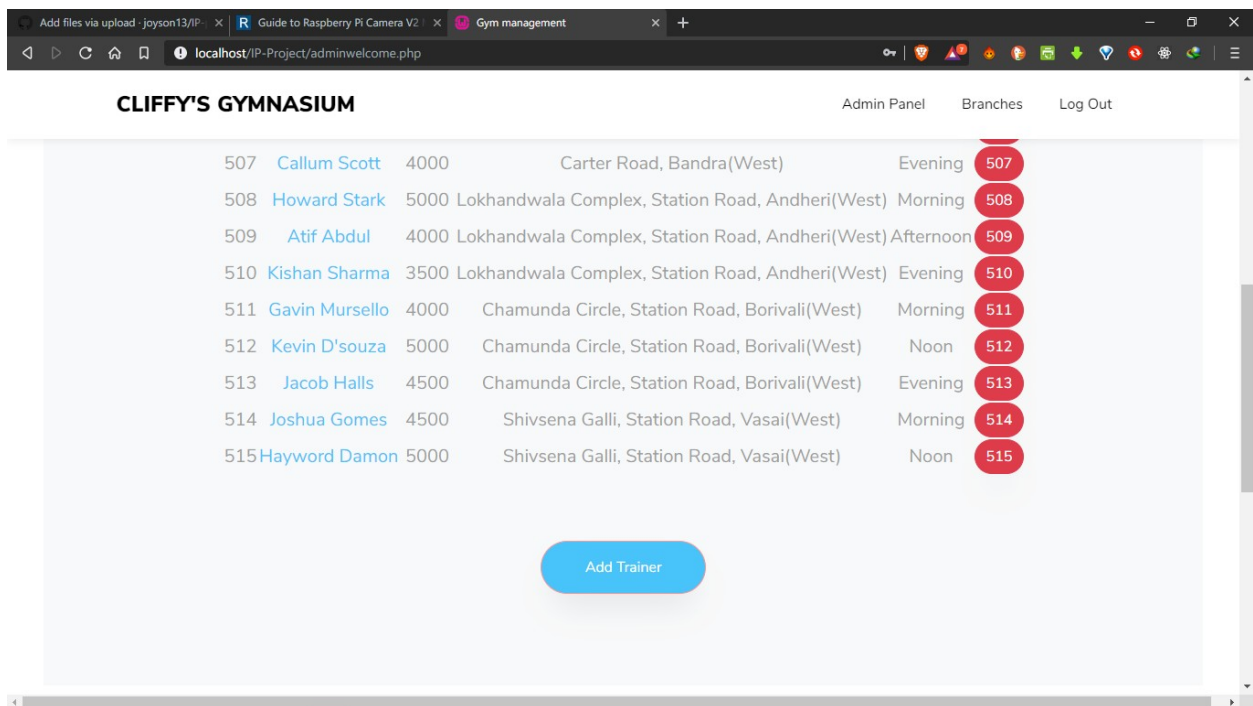
(Fig 31)

Admin view:



ID	Name	Salary	Branch	Time	
501	Aaron Maruino	4000	Carter Road, Bandra(West)	Morning	501
502	Mr. Khan	4000	Lokhandwala Complex, Station Road, Andheri(West)	Noon	502
504	Venture Higgins	3000	Shivsena Galli, Station Road, Vasai(West)	Evening	504
505	Brett Maverick	4000	Carter Road, Bandra(West)	Noon	505
506	Calvin Hobbs	5000	Carter Road, Bandra(West)	Afternoon	506
507	Callum Scott	4000	Carter Road, Bandra(West)	Evening	507
508	Howard Stark	5000	Lokhandwala Complex, Station Road, Andheri(West)	Morning	508
509	Atif Abdul	4000	Lokhandwala Complex, Station Road, Andheri(West)	Afternoon	509

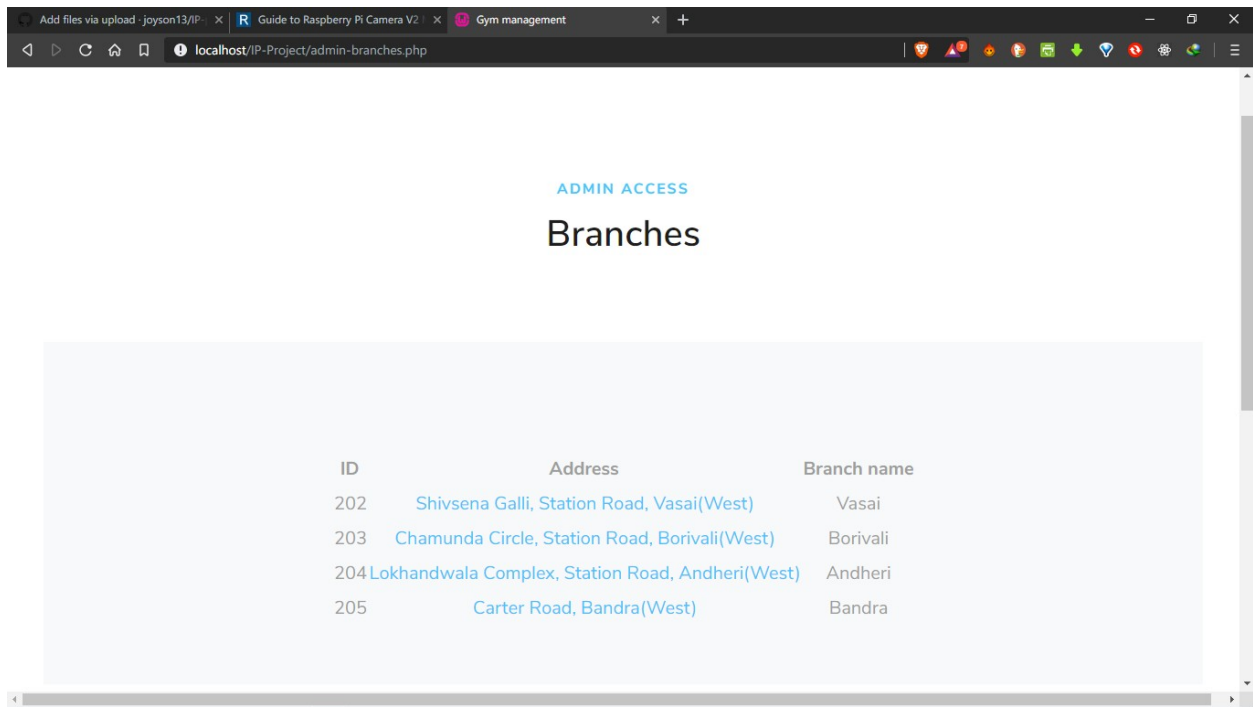
(Fig 32)



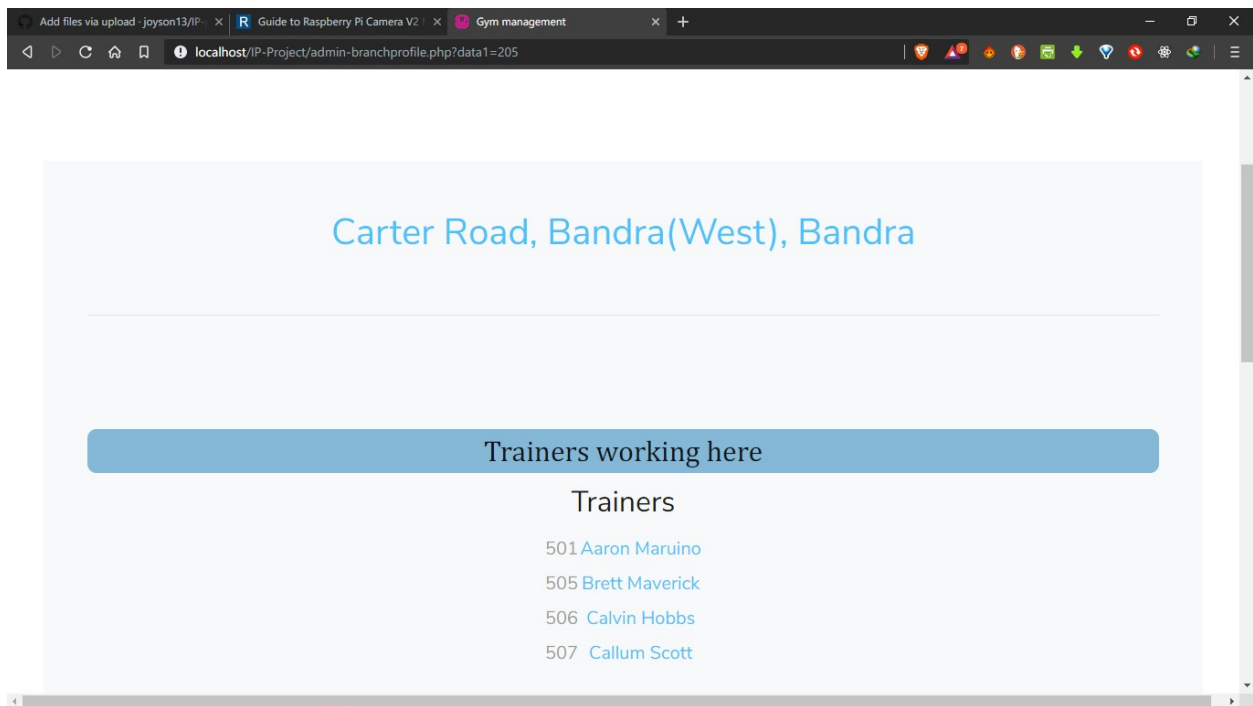
ID	Name	Salary	Branch	Time	
507	Callum Scott	4000	Carter Road, Bandra(West)	Evening	507
508	Howard Stark	5000	Lokhandwala Complex, Station Road, Andheri(West)	Morning	508
509	Atif Abdul	4000	Lokhandwala Complex, Station Road, Andheri(West)	Afternoon	509
510	Kishan Sharma	3500	Lokhandwala Complex, Station Road, Andheri(West)	Evening	510
511	Gavin Mursello	4000	Chamunda Circle, Station Road, Borivali(West)	Morning	511
512	Kevin D'souza	5000	Chamunda Circle, Station Road, Borivali(West)	Noon	512
513	Jacob Halls	4500	Chamunda Circle, Station Road, Borivali(West)	Evening	513
514	Joshua Gomes	4500	Shivsena Galli, Station Road, Vasai(West)	Morning	514
515	Hayword Damon	5000	Shivsena Galli, Station Road, Vasai(West)	Noon	515

Add Trainer

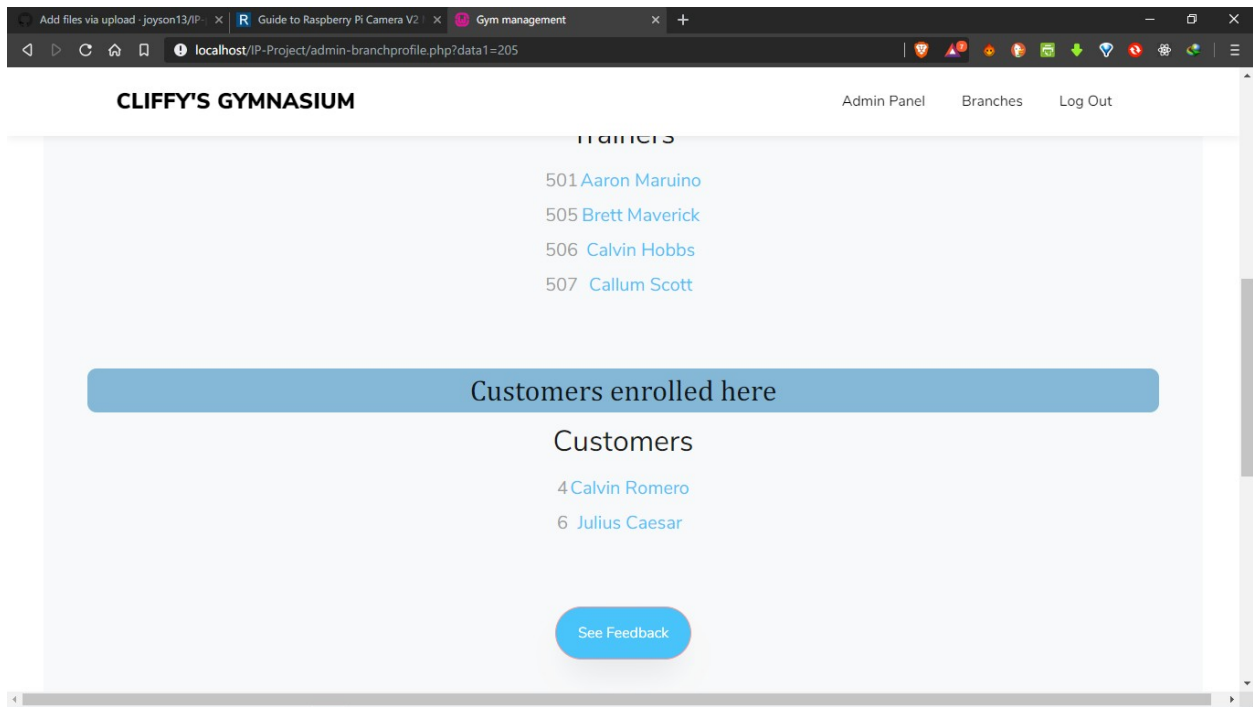
(Fig 33)



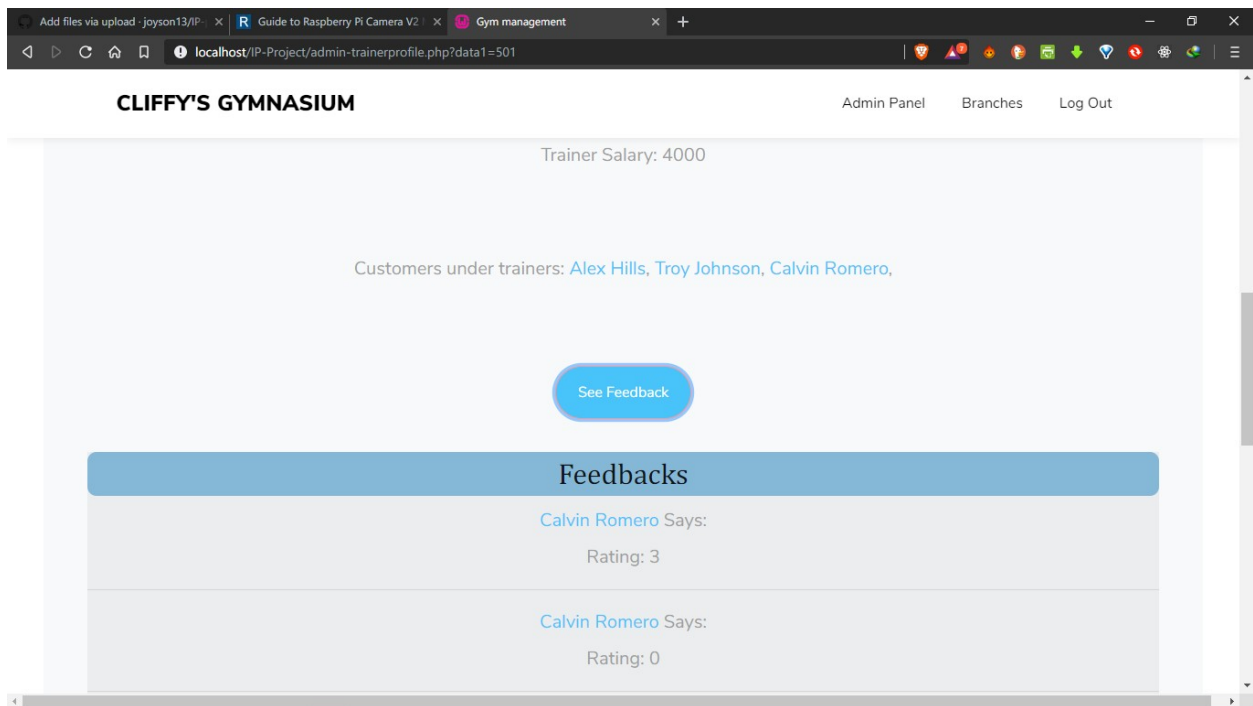
(Fig 34)



(Fig 35)



(Fig 36)



(Fig 37)

Chapter 7

Future Scope

The user profiles can be made more customisable. There can be an option to select and customise training routine and keep track of the training progress. The website can also include a forum where the users of a particular branch could interact and discuss topics. The website can also be made to include health calculator applications such as calorie burn calculator, body fat calculator. A FAQ section can be included where potential customers can ask their queries and questions. There can also be an outlet where the users can share their success stories to inspire others. The users could also link their gym profiles to other primary social media profiles where they could share their success stories and work out routines. The website can also be made to have a one day guest pass feature where potential customers can apply for a full day pass to work and try out the facilities before making any purchase decision. There can also be an additional section where news and recent events can be shared with customers.

Appendix

Assignment 1 with rubrics (refer page 26)

Assignment 2 with rubrics (refer page 41)