

University of Petroleum and Energy Studies



Internship – Final Report

on

Host Dynamic Website on AWS

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1. Background

1.1 AIM

Dynamically host a multi-utility website by leveraging the AWS Services viz. EC2 instance, VPC, Security Groups, Remote Desktop along with php, sql database.

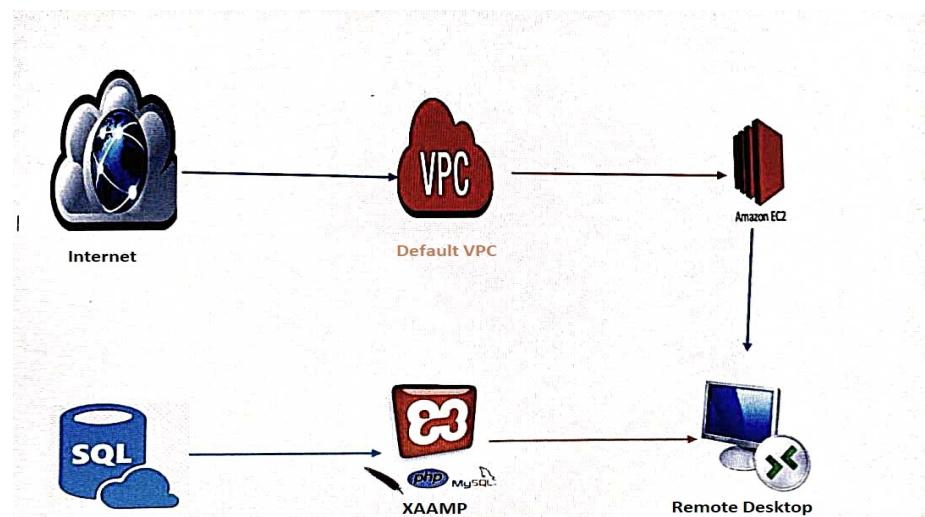
1.2 Technologies

AWS, PHP, SQL

1.3 Hardware Architecture

1. Processor: Minimum 1 GHz.
2. Memory (RAM): Minimum 2 GB.

1.4 Software Architecture



2. System

2.1 Requirements

2.1.1 Functional Requirements

- Manage Members
- Gym Equipment
- Attendance
- Payments
- Staff Managements
- Reports
- Manage Customer Progress

2.1.2 User Requirements

- Login Credentials
- Membership

2.1.3 Environmental Requirements

- XAAMP Software

Recommended Operating Systems.

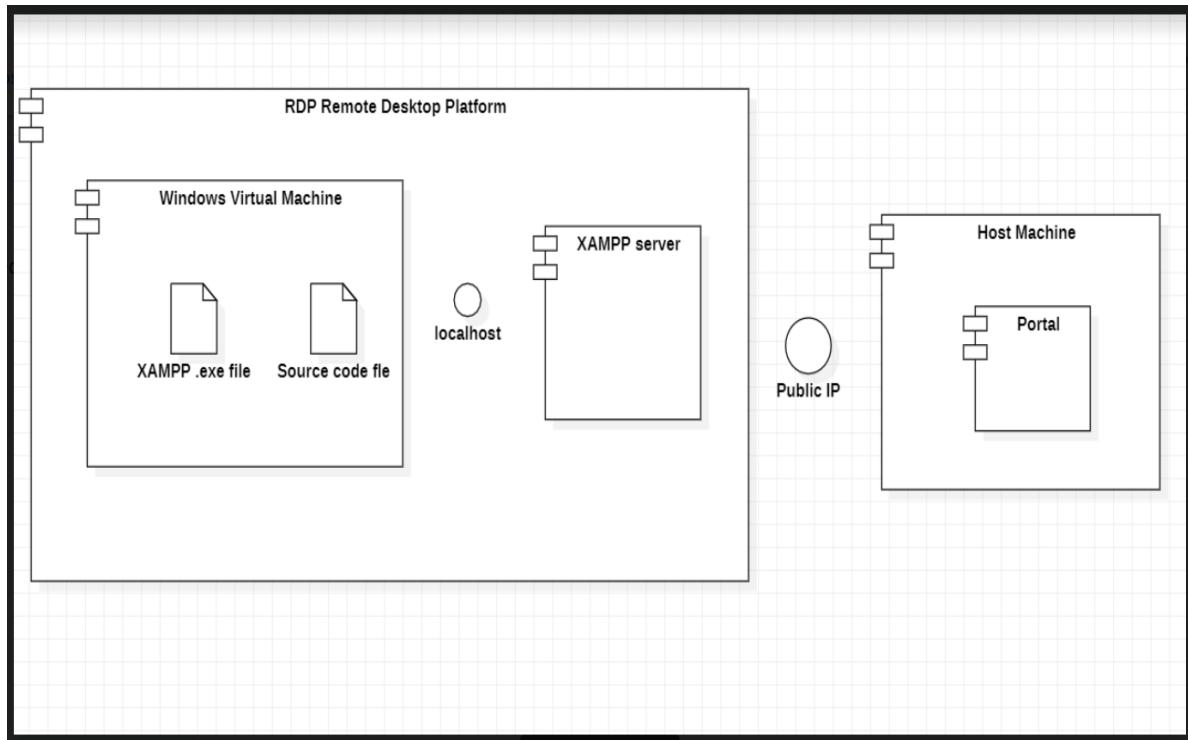
1. Windows 7 or later.
2. Linux
3. Mac-OS

Recommended Browser

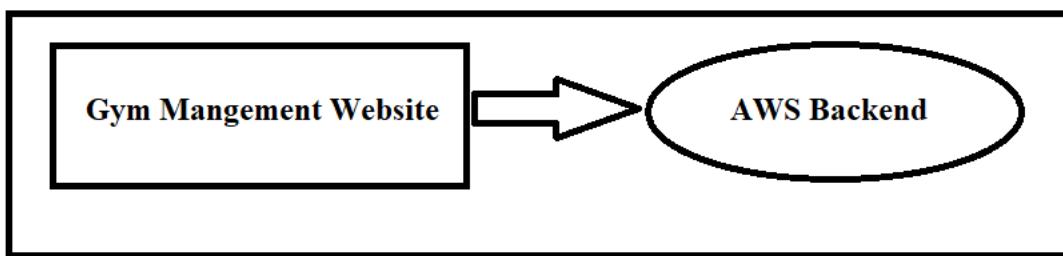
1. Chrome
2. Edge

2.2 Design and Architecture

Design:



2.3 Implementation

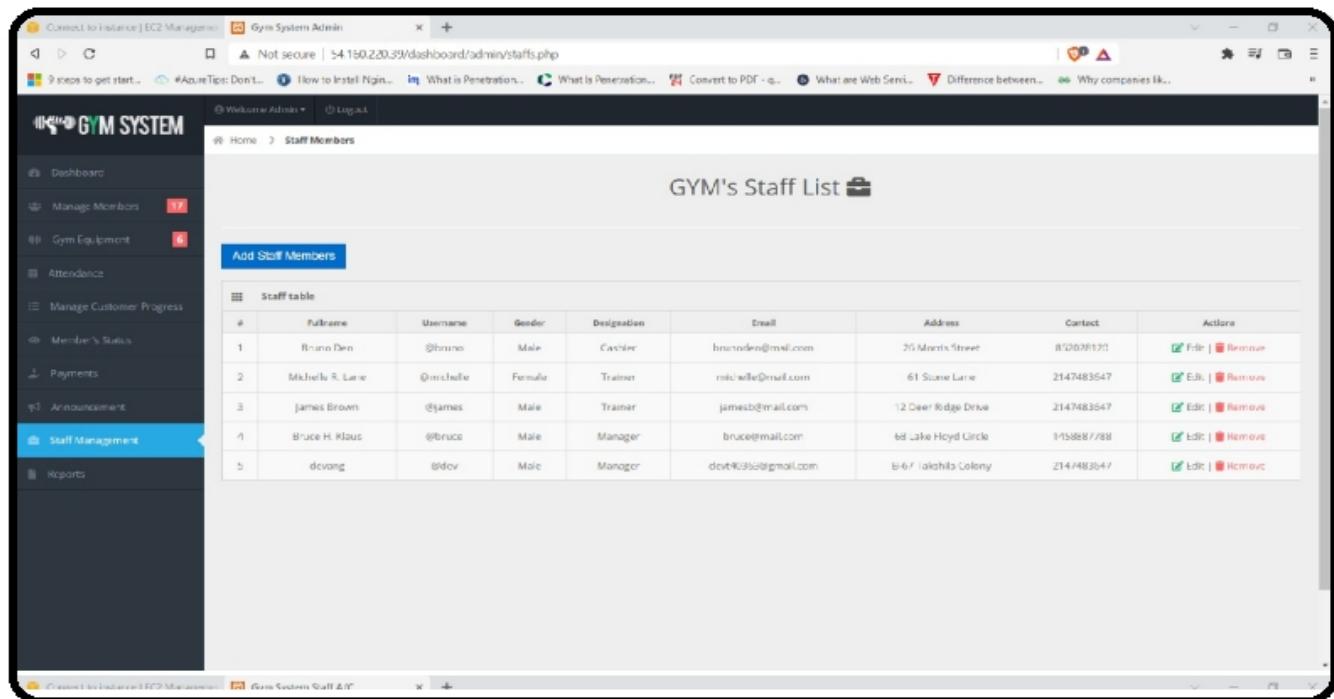


2.4 Testing

2.4.1 Test Plan Objectives

1. Ensure the Application Under Test conforms to functional and non-functional requirements
2. Ensure the AUT meets the quality specifications defined by the client
3. Bugs/issues are identified and fixed before go.

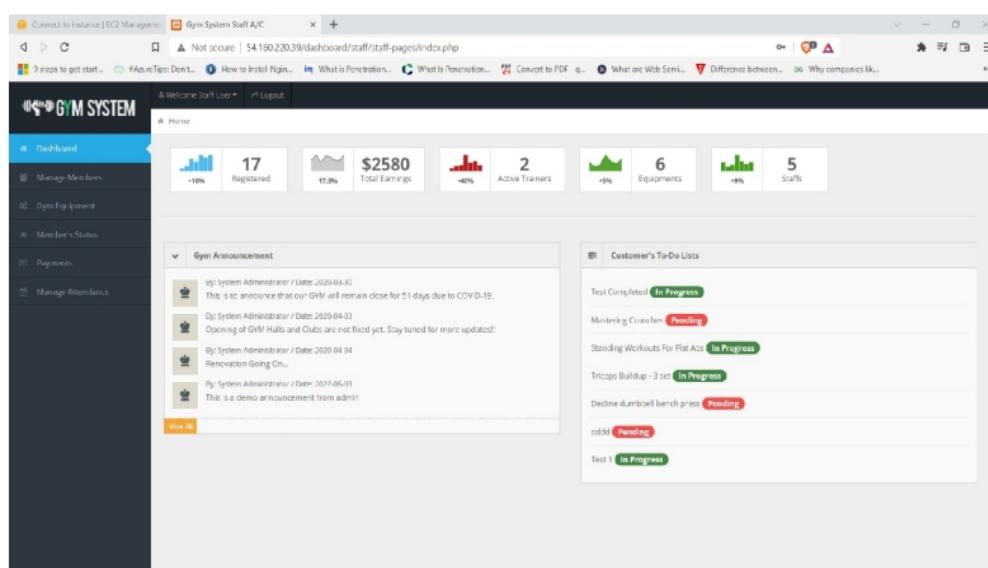
1. Data Entry



The screenshot shows the Gym System Admin interface with the following details:

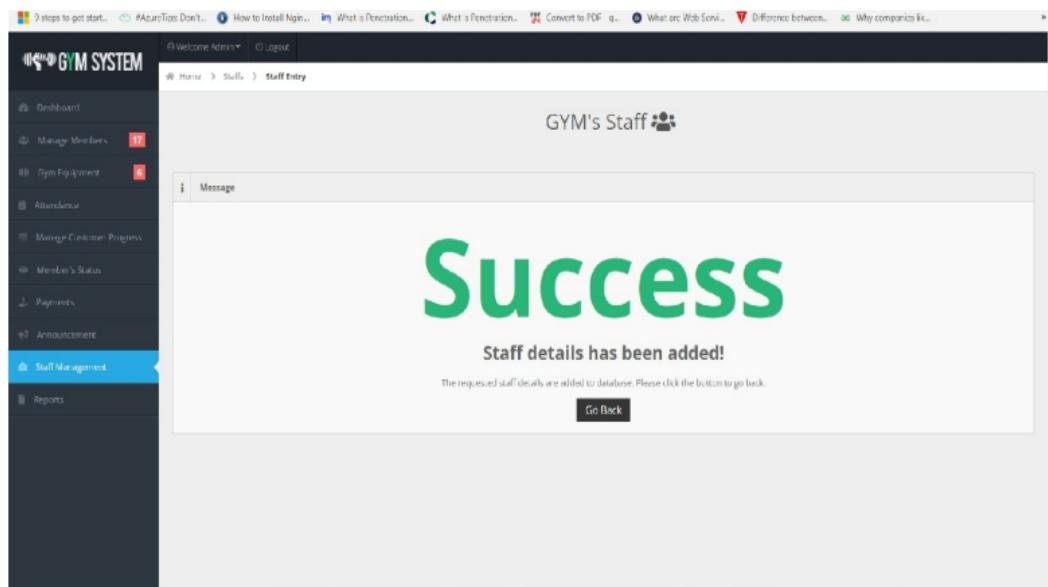
- Header:** Welcome Admin, Logout
- Breadcrumbs:** Home > Staff Members
- Title:** GYM's Staff List
- Table:** Staff Table (5 rows)

#	Fullname	Username	Gender	Designation	Email	Address	Contact	Actions
1	Rhuno Den	@rhuno	Male	Cashier	rhunden@gmail.com	25 Morris Street	812081372	
2	Michelle R. Lane	@michelle	Female	Trainer	michelle@gmail.com	61 Stone Lane	2147483547	
3	James Brown	@james	Male	Trainer	jamesb@mail.com	12 Deer Ridge Drive	2147483547	
4	Bruce H. Klaus	@bruce	Male	Manager	bruce@mail.com	68 Lake Hoyd Circle	9158887788	
5	devang	@devov	Male	Manager	devt@911sol@gmail.com	B-67 Takshila Colony	2147483047	



The screenshot shows the Gym System Staff A/C interface with the following details:

- Header:** Welcome staff User, Logout
- Breadcrumbs:** Home
- Dashboard Metrics:**
 - 17 registered
 - 17.8% Total Earnings
 - 2 Active Trainers
 - 6 Equipments
 - 5 stars
- Gym Announcement:**
 - By System Administrator / Date: 2020-04-01: This is to announce that our GYM will remain close for 51 days due to COVID-19.
 - By System Administrator / Date: 2020-04-03: Opening of Gym Halls and Clubs are not fixed yet. Stay tuned for more updates!
 - By System Administrator / Date: 2020-04-04: Renovation Going On...
 - By System Administrator / Date: 2020-04-05: This is a demo announcement from admin.
- Customer's To-Do Lists:**
 - Test Completed - In Progress
 - Mstering Crunsh - Pending
 - Standing Workouts For Flat Abs - In Progress
 - Triceps Buildup - 3 set - In Progress
 - Decline dumbbell bench press - Pending
 - odd - Pending
 - Test - In Progress



Data entry for the above dataset is working.

2. Security.

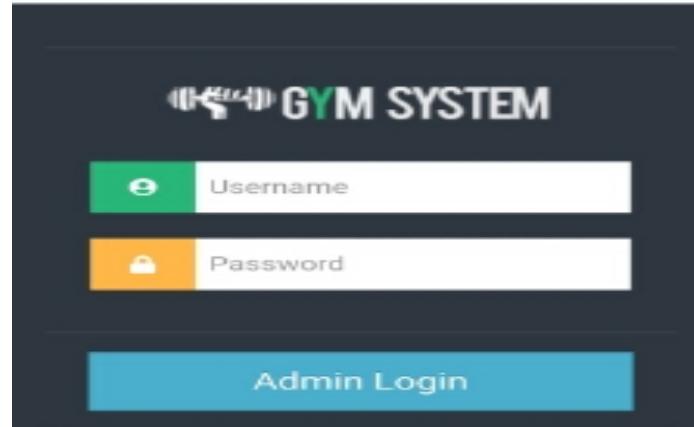
Testing Authorization

client is permitted to perform an action and also receive the services



Authentication



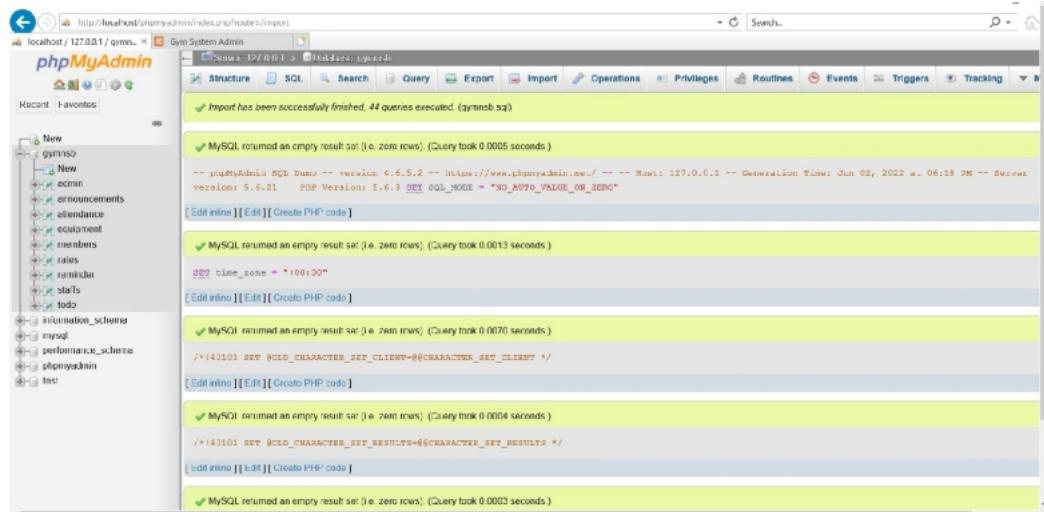


System Test

The screenshot displays the phpMyAdmin interface for the "Gym System Admin" database. The left sidebar shows the database structure with tables like "members", "attendance", and "equipment". The main area shows the "members" table with the following data:

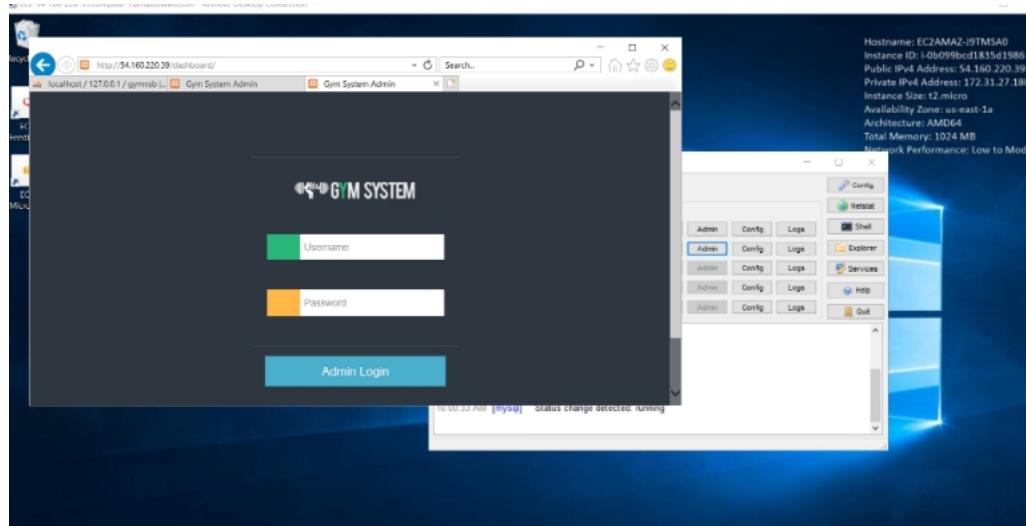
ID	First Name	Last Name	Gender	Date of Birth	Age	Join Date	Membership Type	Active Status
2954	Robinson	478545002	Male	1988-02-19	35	2022-06-02	Cardio	Active
73	Setters	999555444	Female	1995-05-18	27	2022-06-01	Sauna	Active
1	45 Bill	3545785540	Male	1995-12-12	27	2022-05-30	Fitness	Active
6	87 Harry	7396507458	Female	2022-06-02	0	2022-06-02	Fitness	Active
90	Takutria	0725261135	Male	02/11/12 03	10	0300 00 00 0	Cardio	Active
30	Devang Tyagi	da@12345	Male	02/11/12 03	10	0300 00 00 0	Fitness	Active

Below the table, there are buttons for "Check all", "With selected", "Edit", "Copy", "Delete", and "Export". The bottom of the screen shows standard browser controls and a status bar indicating the connection is via Remote Desktop Connection.

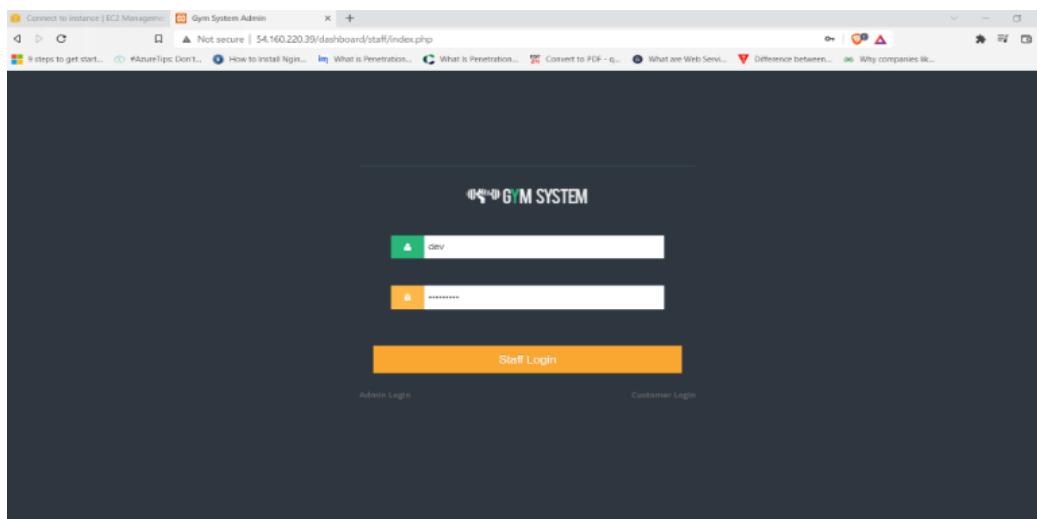


Screenshots of the application tested to most common browser

Microsoft Edge

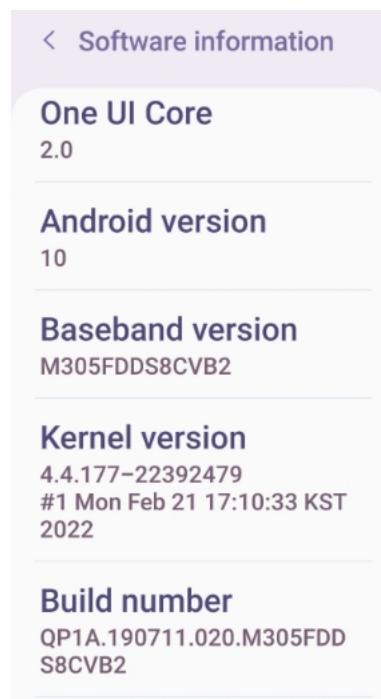


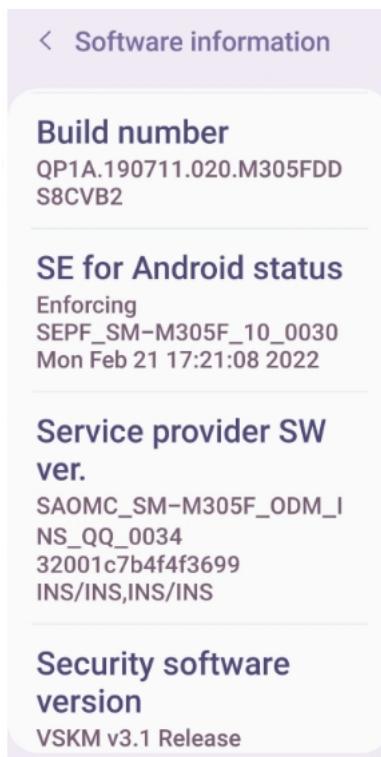
Chrome



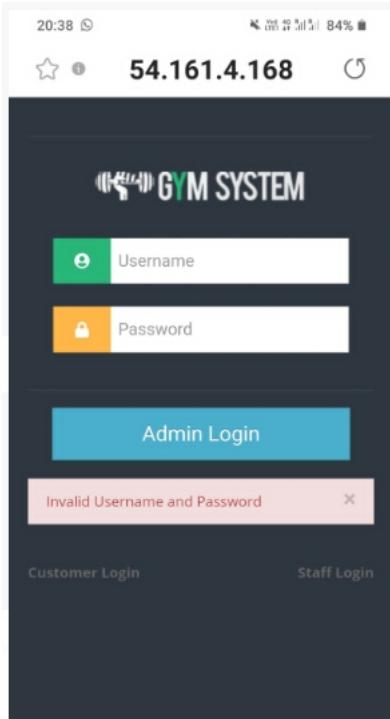
Android Phone

With following specification :





Screenshot of the website up and running:-:

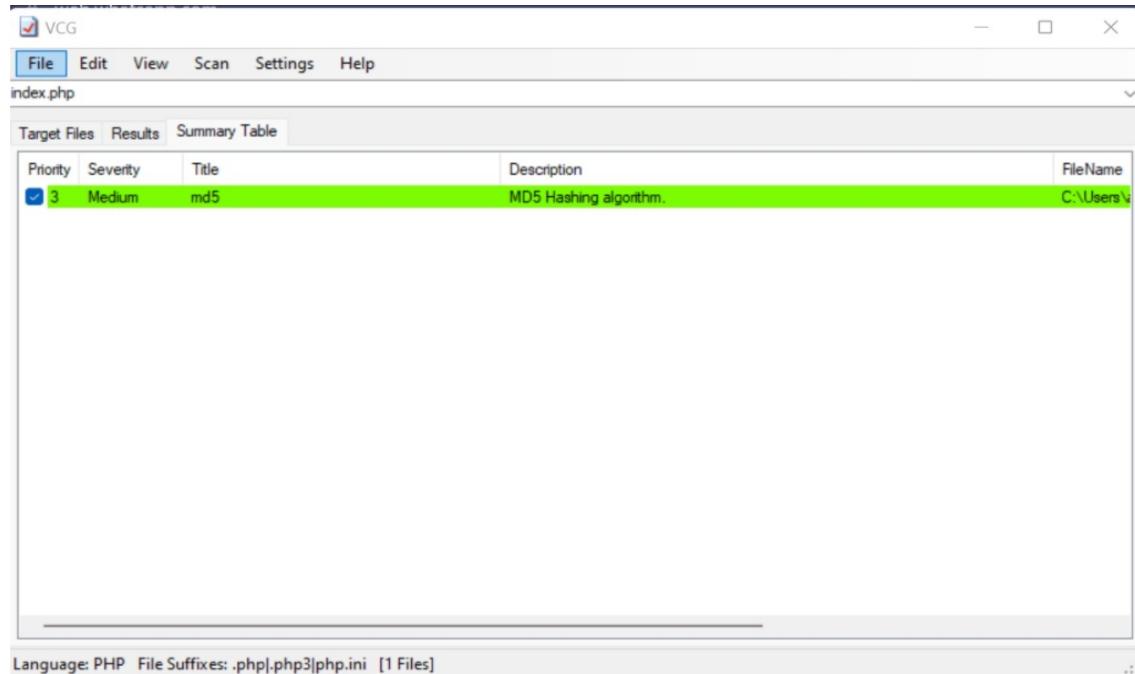


Testing was successful and no compatibility issues were found.



2.5 Graphical User Interface (GUI) Layout 2.6 Customer testing 2.7 Evaluation

1.Static Code Analysis



VCG

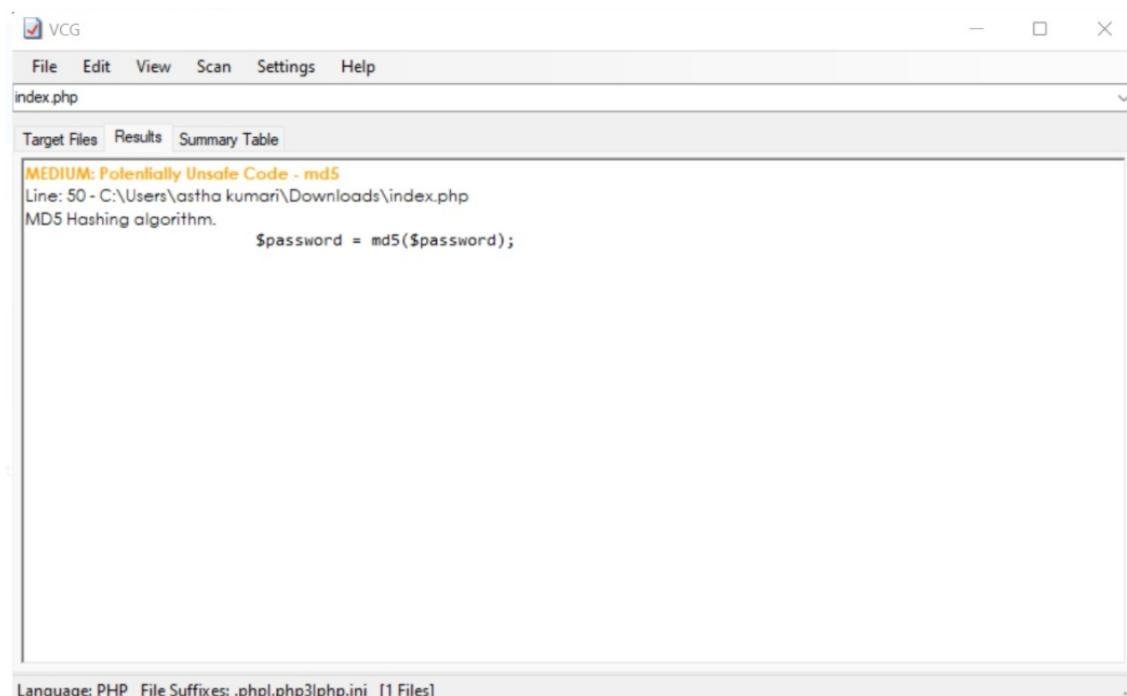
File Edit View Scan Settings Help

index.php

Target Files Results Summary Table

Priority	Severity	Title	Description	FileName
3	Medium	md5	MD5 Hashing algorithm.	C:\Users\astha kumari\Downloads\index.php

Language: PHP File Suffixes: .php|.php3|.php.ini [1 Files]



VCG

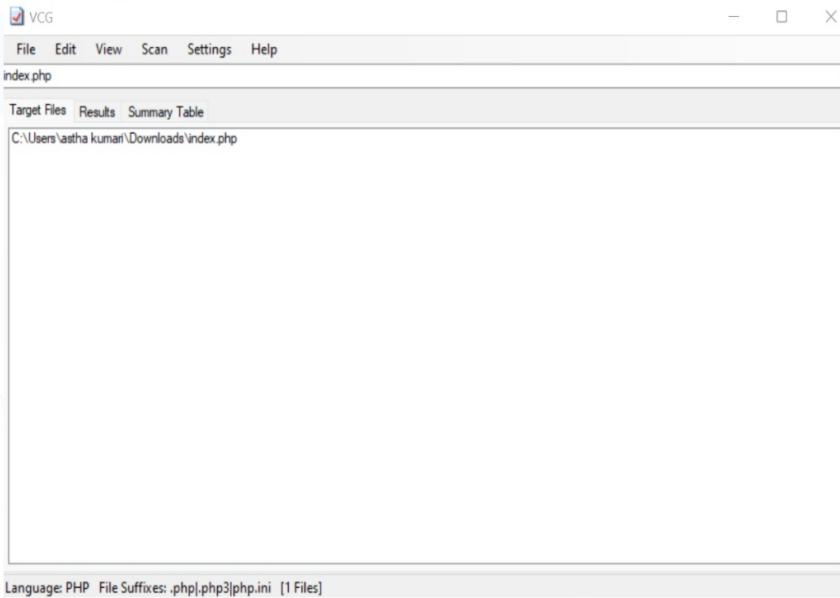
File Edit View Scan Settings Help

index.php

Target Files Results Summary Table

MEDIUM: Potentially Unsafe Code - md5
Line: 50 - C:\Users\astha kumari\Downloads\index.php
MD5 Hashing algorithm.
\$password = md5(\$password);

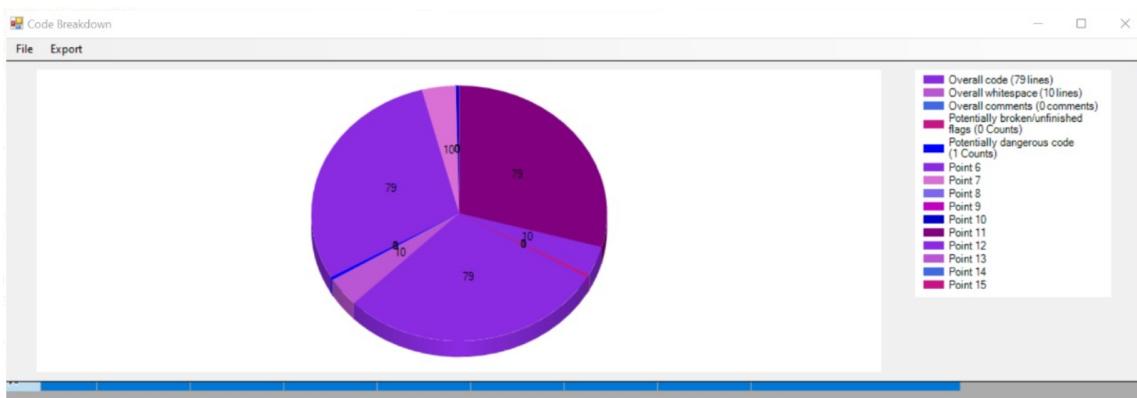
Language: PHP File Suffixes: .php|.php3|.php.ini [1 Files]



```

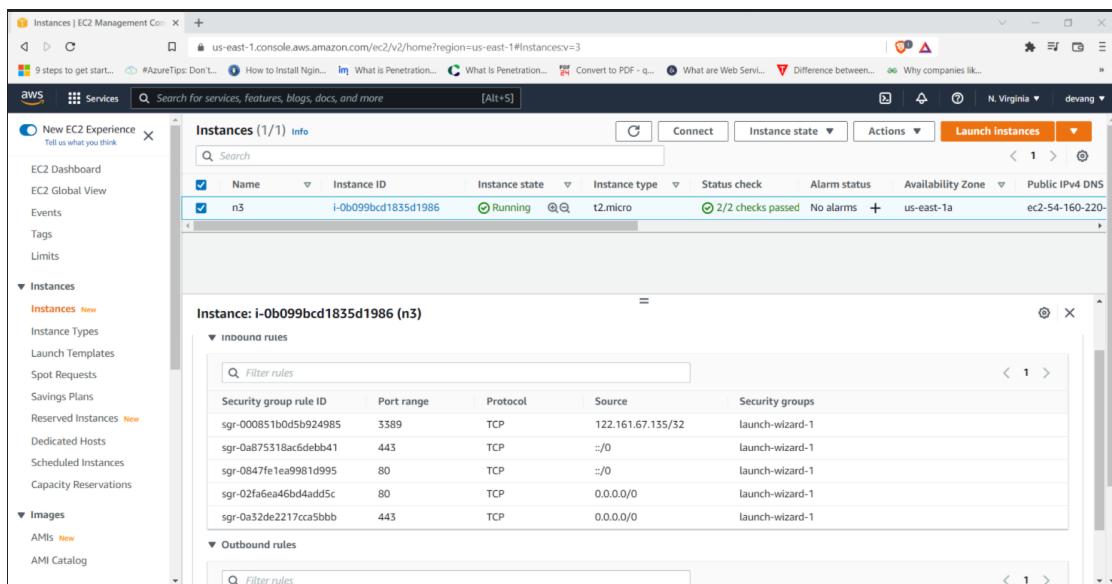
C:\> Users > astha kumari > AppData > Local > Temp > Temp1_ezyzip.zip > Gym-System > index.php
1  <?php session_start();?
2  include('dbcon.php');?>
3  <!DOCTYPE html>
4  <html lang="en">
5  |   <!-- Visit codeastro.com for more projects -->
6  <head>
7  |       <title>Gym System Admin</title><meta charset="UTF-8" />
8  |       <meta name="viewport" content="width=device-width, initial-scale=1.0" />
9  |       <link rel="stylesheet" href="css/bootstrap.min.css" />
10 |       <link rel="stylesheet" href="css/bootstrap-responsive.min.css" />
11 |       <link rel="stylesheet" href="css/matrix-style.css" />
12 |       <link rel="stylesheet" href="css/matrix-login.css" />
13 |       <link href="font-awesome/css/fontawesomme.css" rel="stylesheet" />
14 |       <link href='font-awesome/css/all.css' rel='stylesheet' type='text/css' />
15 |       <link href='http://fonts.googleapis.com/css?family=Open+Sans:400,700,800' rel='stylesheet' type='text/css' />
16
17 </head>
18
19 <body>
20
21     <div id="loginbox">
22         <form id="loginform" method="POST" class="form-vertical" actions="#">
23             <div class="control-group normal_text"> <h3></h3></div>

```





Snapshots:



Instances (1/1) Info

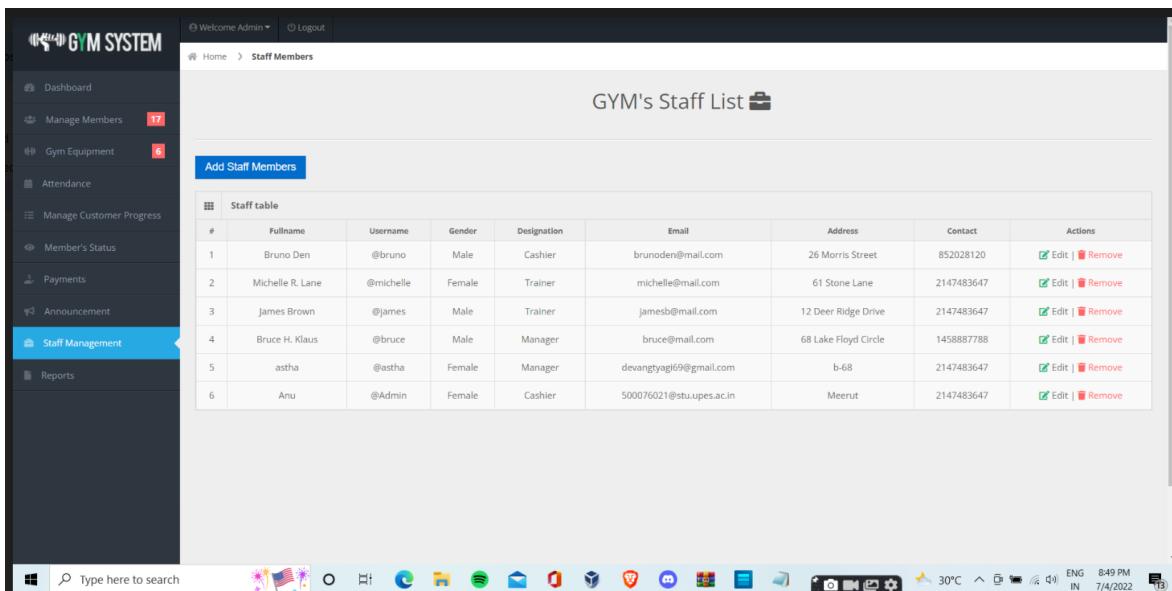
Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS
n3	i-0b099bcd1835d1986	Running	t2.micro	2/2 checks passed	No alarms	us-east-1a	ec2-54-160-220-138

Inbound rules

Security group rule ID	Port range	Protocol	Source	Security groups
sgr-000851b0d5b924985	3389	TCP	122.161.67.155/32	launch-wizard-1
sgr-0a875318ac6debb41	443	TCP	::/0	launch-wizard-1
sgr-0847fe1ea9981d995	80	TCP	::/0	launch-wizard-1
sgr-02fa6ea46bd4add5c	80	TCP	0.0.0.0/0	launch-wizard-1
sgr-0a32de2217cca5bbb	443	TCP	0.0.0.0/0	launch-wizard-1

Outbound rules

Filter rules



Welcome Admin | Logout

Home > Staff Members

GYM's Staff List

Add Staff Members

#	Fullname	Username	Gender	Designation	Email	Address	Contact	Actions
1	Bruno Den	@bruno	Male	Cashier	brunoden@mail.com	26 Morris Street	852028120	
2	Michelle R. Lane	@michelle	Female	Trainer	michelle@mail.com	61 Stone Lane	2147483647	
3	James Brown	@james	Male	Trainer	jamesb@mail.com	12 Deer Ridge Drive	2147483647	
4	Bruce H. Klaus	@bruce	Male	Manager	brucci@mail.com	68 Lake Floyd Circle	1458887788	
5	astha	@astha	Female	Manager	devangtyagi69@gmail.com	b-68	2147483647	
6	Anu	@Admin	Female	Cashier	500076021@stu.upes.ac.in	Meerut	2147483647	

Type here to search



This launch experience will soon be reaching end of life. We've introduced a new launch experience with new and updated features. You can opt in now by choosing Opt in to the new experience. Currently, you can opt out to the old experience at any time. Please send us your feedback about the new experience so that we can continue to improve it.

Step 1: Choose an Amazon Machine Image (AMI)

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

Free tier eligible

- Microsoft Windows Server 2019 Base - ami-041308c411c38a789**
Windows
Free tier eligible
Root device type: ebs Virtualization type: hvm ENA Enabled: Yes
- Debian 11 (HVM), SSD Volume Type - ami-09a41e26df464c548** (64-bit x86) / ami-0d51fb3c91fde05a2 (64-bit Arm)
Debian 11 (HVM). EBS General Purpose (SSD) Volume Type. Community developed free GNU/Linux distribution: https://www.debian.org/
Free tier eligible
Root device type: ebs Virtualization type: hvm ENA Enabled: Yes
- Microsoft Windows Server 2019 Base with Containers - ami-08bcc78f90ffddc4**
Windows
Free tier eligible
Root device type: ebs Virtualization type: hvm ENA Enabled: Yes

Cancel and Exit

64-bit (x86)
 64-bit (Arm)

Select

Feedback Looking for language selection? Find it in the new [Unified Settings](#). © 2022, Amazon Internet Services Private Ltd. or its affiliates. Privacy Terms Cookie preferences

GYM SYSTEM

Welcome Staff User ▾ Logout

Home > Manage Members > Add Members

Member Entry Form

Personal Info

Full Name : Devang Tyagi
Username : devang
Password : *****
Note: The given information will create an account for this particular member
Gender : Male
D.O.R : 12/03/2014
Date of registration
Plans: Three Month

Contact Details

Contact Number : 07252811356
(999) 999-9999
Address : B-67 Takshila Colony, Meerut

Service Details

Services : Fitness
 Sauna
 Cardio
Total Amount : \$ 500

Submit Member Details



Connect to instance | EC2 Management Gym System x +

Not secure | 54.160.220.39/dashboard/staff/staff-pages/add-member-req.php

9 steps to get start... #AzureTips: Don't... How to Install Ngin... What is Penetration... What Is Penetration... Convert to PDF - q... What are Web Servi... Difference between... Why companies lik...

GYM SYSTEM

Welcome Staff User Logout

Home > Manage Members > Add Members

Member Entry Form

Success

Member details has been added!

The requested details are added. Please click the button to go back.

Go Back

ec2-54-160-220-39.compute-1.amazonaws.com - Remote Desktop Connection

localhost / 127.0.0.1 / gymnsb Gym System Admin Database: gymnsb > Table: members

phpMyAdmin

Recent Favorites

- New
- gymnsb
- New
- admin
- announcements
- attendance
- equipment
- members
- rates
- reminder
- staffs
- todo
- information_schema
- mysql
- performance_schema
- phpmyadmin
- test

Browse Structure SQL Search Insert Export Import Privileges Operations Tracking Triggers

<input type="checkbox"/>	Edit Copy Delete	25	Raymond Ledesma	raymond	cac29d7a34687eb14b37068ee4708e7b	Male	1986-02-19	Cardio	480	2022-06-02	2022	12	2954	Robinson	4785450002	Active Lane
<input type="checkbox"/>	Edit Copy Delete	26	Mattie F. Maher	mattie	cac29d7a34687eb14b37068ee4708e7b	Female	1995-05-18	Sauna	420	2022-06-01	2022	12	73	Settlers	9995554444	Active Lane
<input type="checkbox"/>	Edit Copy Delete	27	Justin C. Lusk	justin	cac29d7a34687eb14b37068ee4708e7b	Male	1995-12-12	Cardio	40	2022-05-30	2022	1	45 Bell Street	3545785540	Active	
<input type="checkbox"/>	Edit Copy Delete	29	Kathy J. Glennon	kathy	cac29d7a34687eb14b37068ee4708e7b	Female	2022-06-02	Fitness	330	2022-06-02	0	6	87 Harry Place	7896587458	Active B-67	
<input type="checkbox"/>	Edit Copy Delete	30	Devang Tyagi	devang	do@12345	Male	0214-12-03	Fitness	500	0000-00-00	0	90	Takshila Colony	0725281135	Active	

Check all With selected: Edit Copy Delete Export

Show all Number of rows: 25 Filter rows: Search this table Sort by key: None

Query results operations

Print Copy to clipboard Export Display chart Create view

Bookmark this SQL query

Label: Let every user access this bookmark

Bookmark this SQL query

Further Development or Research:

Further the website can be made more scalable according to the client need.

Conclusion:

In its working, each member is issued a membership card which is valid for a fixed number of gym sessions, or for a particular period of time, or a combination of the two, totally based on the payment policy.

Once the time-frame or number of sessions expires, the machine notifies the member about the payment of

renewal. Hence, the system reduces hassle and any chances of quarrels between the members and the gym management.

It can also generate multiple reports like monthly, weekly, daily, session wise.

While developing this Fitness Management System project we have learnt a lot about HTML/CSS/AWS and working with database management, we have also learnt how to make the application user-friendly (easy to use and handle) by hiding the complicated parts of it from the users. During the development process, we studied carefully and understood the criteria for making software more demanding, we also realized the importance of maintaining a minimal margin for errors.

References

- [1]. Sam Alapati, Darl Kuhn, Arup Nanda AWS Certified Sys-Ops Administrator Associate
www.authorityofaws.com [online], July 2019.
- [2]. John Paul Mueller, Luca Massaron AWS For Admins For Dummies <https://www.amazon.com/Admins-Dummies-John-PaulMueller>, March 2016.
- [3]. Raoul Alongi [online] The Most Complete Guide to Amazon Web Services from Beginner to Advanced Level, May 2019.
- [4]. Julian Hunt, Amazon Web Services Beginners User Guide. The Ultimate Tutorial, July 2018.
- [5]. Kent Erickson, Pat Voulter, Henry-World, Guide for Beginner's. AWS Tutorial
<https://www.amazon.com/dp/>, Jan 2019.

Appendix

- AWS : The AWS service is provided by the Amazon that uses distributed IT infrastructure to provide different IT resources available on demand. It provides different services such as infrastructure as a service (IaaS), platform as a service (PaaS) and packaged software as a service (SaaS).
- AWS EC2 : Amazon EC2 is a web service that provides resizable compute capacity in the cloud.