



PORTAL FOR FITNESS AND SPORTS USING JAVASCRIPT TECHNOLOGIES

Daksh Raj Singh Solanki
Computer Science Department
Geetanjali Institute of Technical Studies, Dabok
Udaipur, Rajasthan, India
dakshrajsinghsolanki.drs@gmail.com

Dr. Mayank Patel (HoD)
Computer Science Department
Geetanjali Institute of Technical Studies, Dabok
Udaipur, Rajasthan, India
mayank999_udaipur@yahoo.com

Md. Farhat Mansoori
Computer Science Department
Geetanjali Institute of Technical Studies, Dabok
Udaipur, Rajasthan, India
mdfarhat998@gmail.com

Ms. Monika Bhatt (Assistant Professor)
Computer Science Department
Geetanjali Institute of Technical Studies, Dabok
Udaipur, Rajasthan, India
monikabhatt10@gmail.com

Abstract: Many peoples are concern about their health and fitness. They move towards the health and fitness applications (apps) can be used now digitally. This paper reflects on health and fitness app development. checks the condition how your health then fitness app, Fitnesshub®, by the healthcare industry and end-users dealing with chronic disease management. The use of Fitnesshub® is analyzed from an end-user perspective. The website is available and free to use and the research presented is based on data collected from social sites and GA over a period of 7 months. The paper also discusses how Fitness hub portal could be distributed in the near future, as well as, the use of Personal Health Record (PHR) systems such as Wifit band, and the impact of regulations on the future of Fitnesshub. It provides better services and resources according to location to make must use of the resources to the user. There are two kinds of roles which can be assigned to a user – 1] An Admin can create, edit, view, replace or delete any resources data. He/She is the person who monitors all the availability of resources or trainer as a user/client requires. Only an admin has the power to create, edit or delete a resource and products. 2] User / Client can only view respective details. He/She does not have a power to edit his/her profile. In web development, 'client side' means that everything in a website that is displayed or takes place on the client side. This describes that what the user sees, such as text, images, and the rest of the User Interface, whenever any actions that an application performs within the user's browser. Client performs some operations which are interact with the databases of the resources and hit to the Admin (Server-side) to buy or used the resources according to the availability. The conclusion highlights the challenges and opportunities for Gym trainers and dieticians in the Health industry.

Keywords : Google Analytics, Wifit band, Personal Health Record(PHR), chronic disease management, Gym trainers and dieticians, Admin, client side, User Interface.

1 Introduction

The main role of the web portal to interconnect sports and fitness with each other and thus to overcome this problem, Fitnesshub is developed. It is simple to understand and can be used by anyone who is not even familiar with a using online shopping or social media. It is user friendly and user can perform operations to reach the final stage and selective their choices easily. It's provided many activities such as sports academy , personal training and Gym . It's major aim is:

- Provide employment to trainer
- Easy to find the resources
- Availability of All trainer and dieticians
- Use API and available all location based
- Dynamic Website

To manage resources and equipments to use better by the client to get best outputs as follows :

- To provide resources through well-attended sessions.
- To get exciting offer which will help you to get more saving.
- To access of the best venues and environment.

- To employee professional session leaders with a fair wage and fair contracts In addition to the features of this application, the technologies used are also futuristic and interactive in nature.

It connects admin and client and thus easy to maintain. Now admin can easily keep track records of the resources consumed or available.

Sports Academy, Gym, Fitness trainer and Dieticians they all are internally connected with each other but there is no platform or website where they all are group in same bucket. **“YOUR HEALTH HAS ALWAYS BEEN OUR NUMBER ONE PRIORITY.”**

Sometimes this all have same motive and similar aim but no one take all these all in same wagon wheel. Fitnesshub provides proper prescription based on their requirement which based on the diet plans and physical fitness plans as per the client requirement provide by the same platform don't need to move one place to another for different things. This is designed to assist in strategic planning, and will help ensure that the organization is equipped with the right level of human resources for their future goals. This system is also apt for busy executives as it provides remote access features and cross platform functionalities. Another important feature is time tracking of clients which saves both time and money of the organization. Another important characteristic is that the application is economically efficient as no need to require to pay for the unnecessary things you need to pay only for those services you uses. Website simply works on the two modules as follows; First module is admin which has the right for creating and managing any new/existing users. Second module is handled by the user/client. User has the right of making their choices by reviewing all the resources.

2 Literature Survey

1. “Fitness apps, a Valid Alternative to the Gym according to survey”, In this survey, a search was performed using the smartphone's “App Store” for relevant fitness apps. Some apps were found to fulfill the inclusion and exclusion criteria of the survey: Nike Training Club, Instant Fitness ,Stanza, Gorilla Workout Free, Step Set Go, etc.
2. “Exercise was then performed as per each app's guidance, and caloric intake and expenditure was measured using validated devices(Fitbit). The calorie measured was then compared with the control exercises routine, which included slow-speed jogging, cycling, WitFit Plus exercises, and RPM. One subject performed three trials of each exercise routine.
3. User's Perspective about Mobile Fitness Applications Sakitha Anna Joseph, Reshma Raj K., Sony Vijayan”, Over the past few years, the influence of app technology is increasing which affects the health care system very effectively. The large survey of fitness apps has enhanced vigorously since 2017 witnessing more than 56% increase in its usage within a period of seven months. As compared to other apps, the fitness apps grow 85% faster than others.
4. To understand user perspectives about fitness apps.
5. To understand the impact of fitness application on users.
6. To analyze the effectiveness of fitness application on improving user's fitness.
7. To study the impact of fitness application to optimize time and cost.
8. To understand whether fitness application is preferred over fitness centers.

3 Methodology

To accomplish our aim, we have taken a latest ongoing technologies which is suitable for the dynamic application. In proposed work we have made a connection between server and client side. This connection we have establish for changes done by admin shows to user interface. So that user can generalize that which of the resources are available to the current time period. In methodology part we will discuss few points that we have used in our proposed method.

3.1 Problem Statement:

Sports Academy, Gym, Fitness trainer and Dieticians they all are internally connected with each other but there is no platform or website where they all are group in same bucket. Moto: “Your Fitness has always been our number one priority.”

3.2 Scope of FitnessHub

The scope of the project is the fitness portal that is developed. the project is developed as a desktop/mobile application, and it will work for a particular organization. But later admin can edit it as per updation required as a avaiability of resources according current situation.

3.3 Need of FitnessHub

The need for developing to connect all the facilities with each other fitness trainer, dieticians and sports academy. To employ professional trainers and dieticians with a fair wage and fair contracts. To get exciting as compared to the other competitors in the market.

3.4 Requirement Analysis

Functional Requirements:

- Easy to keep track of resources
- Quick production of statistics
- Cross-platform functionality

Non-Functional Requirements:

• Performance

Easy tracking and updating of records. This includes two types of requirements: i. Static Requirements These requirements do not impose any constraints of the application on the execution characteristics of the system. They can be:

a) Number of Terminals The application makes use of an underlying database that will reside at the server, while the front end will be available to the users.¹¹

b) Number of Users The number of users may vary, as this application finds relevance in almost all departments of an organization. ii. Dynamic Requirements These specify constraints of the application on the execution characteristics of the system. They typically include response time and throughput of the system. Since these factors are not applicable to the proposed application, it will suffice if the response time is high or throughput is low.

• Reliability

The application will not be able to connect to the centralized database in the event that the server goes down due to hardware or software failure. The portal perform consistently without lagging use latest technology which prevents from lags and perform reliable and consistent.

• Availability

The application will be available to all existing user of a particular facilities while it is admin user or the client user it broadcast on the hosting services using EC2 services for proper hosting and available to the consumer which need of it. They can access the application wherever they want to but have hardware source is compulsory.

• Security

The software should be handled only by the administrator and used by the authorized users. Only the administrator has the right to create, delete or modify any new/existing user's data. Only users can access the application with the required credentials. Both Admin and user side have their different UI(User Interface)/UX.

• Maintainability

Backups for database should be available and the website is dynamic which is maintain particular time basis and admin already changes on the website according current situation and thus developers team already change according to loads or more user access at current patch up or access denied situation.¹²

• Portability

The application is cross-platform i.e. it can be used on a desktop as well as on a smart phone. Thus it is platform independent and operating system independent. Thus if you fulfill the hardware requirement then there will be no issue regarding the portability. Most of the application portal are portable there no need to worry about the particular location and resources.

• Design Constraints

This application provides security. The login form made safe and secure from the unauthorized user to the website. This application is also reliable and fault tolerant. The system is developed to handle invalid inputs. The administrator should know how to create, delete and edit the resources.

3.5 Development Plan

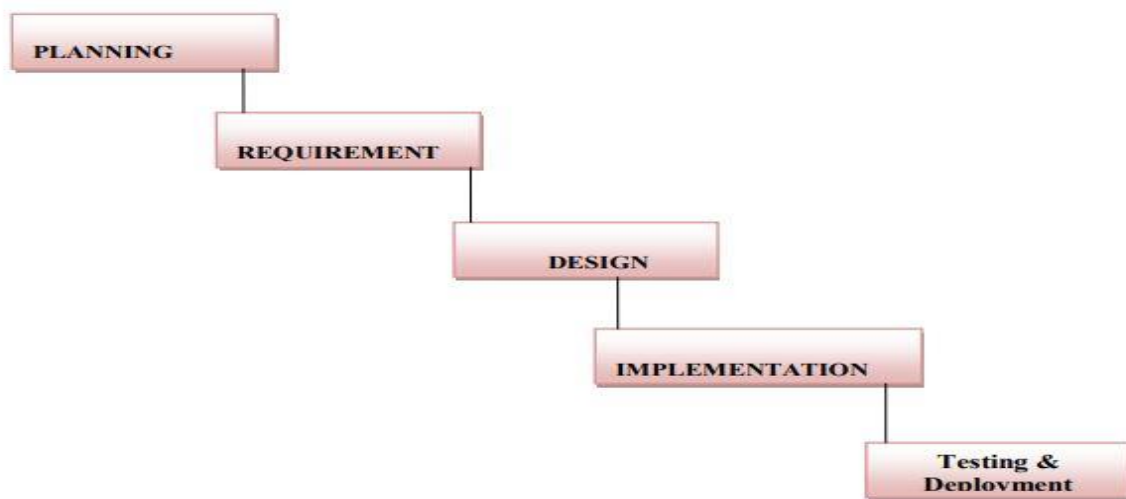
1. Identifying the general purpose and timeline of the project.
2. Creating the context and establishing all the features of the project.
3. Considering the "SMART" goals (Specific, Measurable, Achievable, Relevant and Time Bound) before starting the project.
4. Collection of all the resources (softwares, APIs etc.) required for the completion of the project.
5. Understanding the risks and finding out plausible solutions.
6. Segmenting the work into team members and checking the progress time to time.
7. Testing the project under all circumstances and debugging if required.
8. Removing bugs or errors (if any).

3.6 Process Model

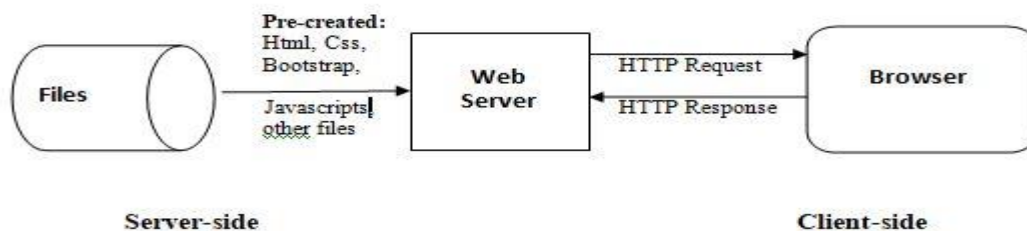
The design methodology employed for this application is the SDLC technique called **the Waterfall Model** which can also be denoted as **Linear Sequential Life Cycle**. This model is utilized in building, designing and preserving information on industrial systems and computer software's. It is very common and is the oldest software development architecture. This approach is very easy to understand something completely and mostly employed for minor projects in which their requirements are well-recognized.

It involves various phases in which all are necessary to each other or one after the other given below:

- In the first phase (requirement phase), the end users, administrator and client are 13 interrogated to discover their aim and objectives, requirements, and expectations from the application.
- In the second phase (design phase), the application is designed to meet the end user's requirements. This Thesaurus the data flow diagram, context diagram and the use case diagrams.
- In the third phase (implementation phase), the graphical user interface of the system is designed with HTML, CSS, Angular, Bootstrap, Restful API's used as front-end tools, while build maven/Gradle, springboot were employed as back-end design in addition with APIs such as Wfit API, Fingerprint-AIO API and Google Maps JS API. The application interconnects with the database located on a remote server. It is to make sure that the application is mobile-responsive so as to make it easier for both the administrator and the employees to use the application.
- In the fourth phase (testing phase), the work of each component of the application designed was tested and is integrated into a system. JUnit for Backend Karma and Jasmine for Frontend and Selenium for Automation.
- Finally, in the last phase (deployment phase), we deploy the application we developed.



4 Tools and Technologies



Software Requirement:

Front-end:

- Angular CLI
- Html, CSS
- Bootstrap

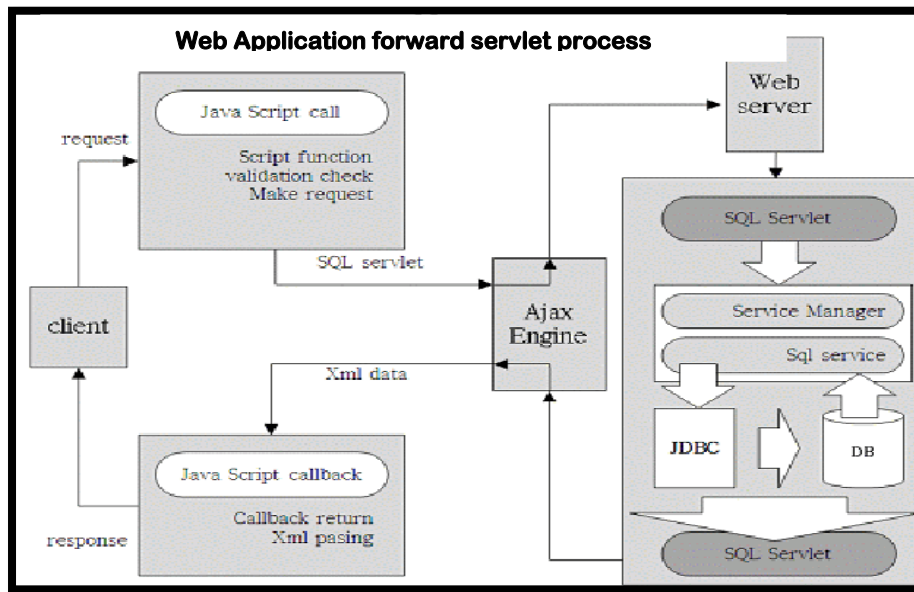
- Restful Web Services

Back-end:

- Firebase
- Angular

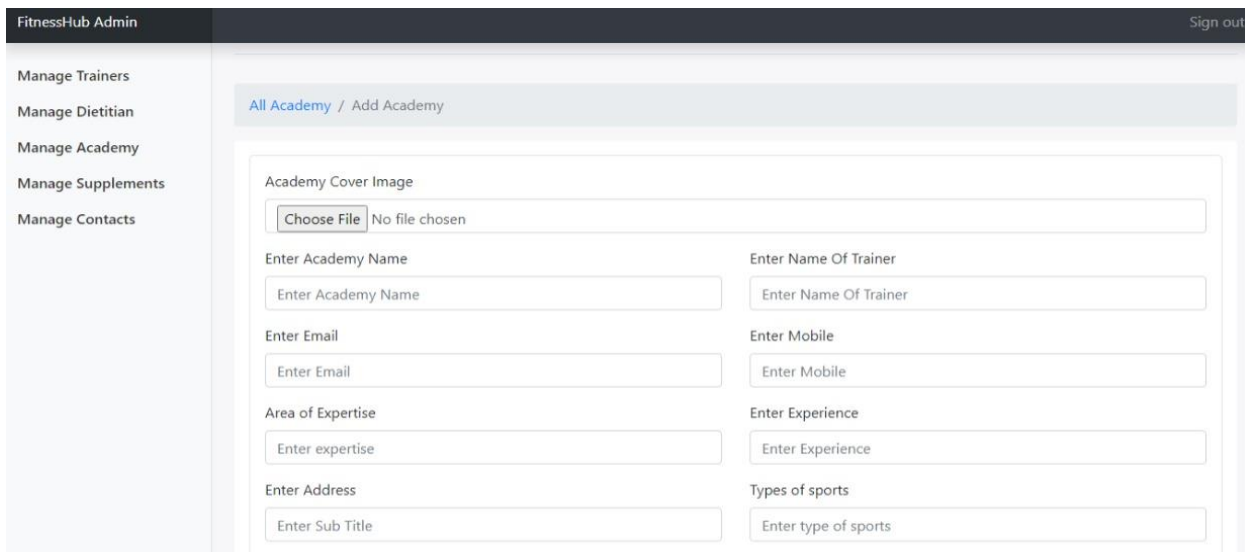
Databases:

- MySQL



5 Result

Scientific knowledge advances have created necessary opportunities for developing applications which support training from home, particularly for older adults that are often socially more isolated, physically less active, and chances of training in a gym according to their location. Dieticians also play important role in the training so this platform provide both features to the client at fair wages and professionals with more experienced. In this paper, we review the current fitness applications and their features alongside the design challenges and opportunities of fitness applications for trainees, dieticians and Gym or Sports academy.




FITNESS HUB Home Trainers Academy Dietitians Supplements Contact Us

Movati Athletic


★ star 4 | 4 Reviews

Most 2010-era health clubs offer group exercise classes that are conducted by certified fitness instructors or trainers. Group exercise classes are often considered the most important service in the centers for members' engagement.



Trainers MORE

Supplements MORE



MARINE COLLAGEN R. R. GREEN 100... GNC PRO PERFO... COLLAGEN PEPTI...

FITNESS HUB

We provide all the amenities with world class exercise machinery. We have the best dietitians. The trainers are well qualified and will assist you accordingly. Supplements are also available with respect to your membership program. We'll be glad to host you and your fitness lifestyle.

FITNESS HUB Home Trainers Academy Dietitians Supplements Contact Us

Contact us

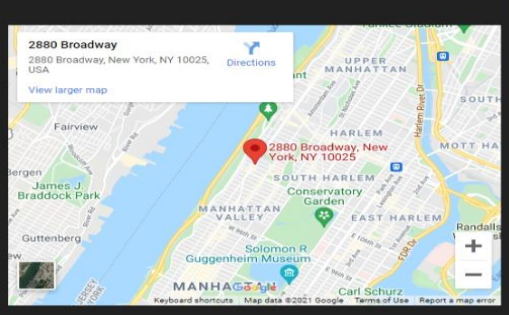
Enter Your Name

Enter Your Mobile

Enter Your Email

Enter Your Email

Write your message here...



Made By ❤️ Daksh And Farhat

FITNESS HUB

We provide all the amenities with world class exercise machinery. We have the best dietitians. The trainers are well qualified and will assist you accordingly. Supplements are also available with respect to your membership program. We'll be glad to host you and your fitness lifestyle.

FitnessHub Admin Sign out

Manage Trainers Add Trainer

Manage Dietitian

Manage Academy

Manage Supplements

Manage Contacts

All Trainers

Sr. No.	Name	Email	Mobile	City	Gender	Expertise	Experience	Address	Edit	Delete
1	VIKASH	vikash@gmail.com	7894561230	Washburn	Male	Personal Trainer	0-5	312 Washburn Dr. Topeka, KS 66621		
2	GERRY	gerry@gmail.com	95753645659	MONTREAL	Male	Personal Trainer	0-6	10-123 MAIN ST MONTREAL QC H3Z 2Y7 CANADA		
3	Jonathan	ionathan@gmail.com	1234567890	Topeka	Male	Personal	0-6	1700 SW		

FitnessHub Admin Sign out

Manage Trainers

Manage Dietitian

Manage Academy

Manage Supplements Add Supplement

Manage Contacts

All Supplements

Sr. No.	Image	Title	Sub Title	Price	MRP	Availability	Edit	Delete
1		Marine Collagen	MuscleBlaze Marine Collagen, 0.44 lb, Pineapple	599	999	Available		
2		R. R. GREEN 100% VEGAN Plant Protein	The classic plant protein crafted using Pea & Brown Rice blend to give you 25 gm protein, 4.6 gm BCAA & 9.8 gm EAA in every scoop	899	1099	Available		
3		GNC Pro Performance Weight Gainer, 6.6 lb, Dark Chocolate	Our Instant Oats are milled Scottish oats in an ultra-fine powder, ready to be mixed with either water or milk – making breakfast time super-simple and nutritious.	2999	3500	Available		

FitnessHub Admin Sign out

Manage Trainers

Manage Dietitian

Manage Academy

Manage Supplements

Manage Contacts

Supplement Cover Image

No file chosen

Enter Product Title

Enter Product Sub Title

Price

MRP Price

Category

In Stock Out of Stock

Specification

Key	Value

6 Conclusion

The conclusion leads to the challenges and opportunities for the dietician and trainees in the health industry. The portal develop to provide employment to the trainee and client get easily all the resources and facilities at the same place. So here we design scenario and discuss about the problem faced by client which other sites not able to provide and overcome their problems. Sports and Fitness portal design in such a way that the portal should be dynamic webpages (*A dynamic webpage is a webpage that changes the content as per update by the admin for all users and changes based on user input. The Facebook homepage is a dynamic page; the Facebook login page is for the most part static.) that will helps the user interact with availability of resources according to the admin mention on the webpage. There are two kinds of roles which can be assigned to a user –

1] Admin

An Admin can create, edit, view, replace or delete any resources data. He/She is the person who monitors all the availability of resources or trainer as a user/client requires. Only an admin has the power to create, edit or delete a resource and products.

2] User / Client

An Client can only view respective details. He/She does not have a power to edit his/her profile. In web development, 'client side' means that everything in a website that is displayed or takes place on the client side. This describes that what the user sees, such as text, images, and the rest of the User Interface, along with any actions that an application performs within the user's browser. Client-side explains the environment to the location where processes run, while front-end mentions to the kinds of processes that run client-side. Client performs some operations which are interact with the databases of the resources and strike to the Admin (Server-side) to buy or used the resources according to the availability.

In future there some technical issues which lead to lagging in websites processing then developer can change frameworks which will lead to increase accessibility of the user at the same instance or time as compared to the time and condition. If possible connect all the sports facilities which will come in demand and developed.

7 References

1. For the usual languages stack, please, use the address: <https://www.w3schools.com/>
2. For the usual angular CLI, please, use the address: <https://material.angular.io/>
3. For the git and github, please, use the address: <https://git-scm.com/>
4. For the github branching, please, use the address: <https://www.tutorialspoint.com/git/index.html>
5. For the language description, please, use the address: <https://angular.io/>
6. For the software and requirement JKD 8, please, use the address: <https://oracle.com/>
7. For the languages stack, please, use the address: <https://www.javatpoint.com/angular-8>
8. For the firebase, please, use the address: <https://firebase.google.com/docs>
9. For the libraries, please, use the address: <https://docs.python.org/>
10. For the technologies backend stack, please, use the address: <https://nodejs.org/en/docs/>
11. For the api, please, use the address: <https://restfulapi.net/>
12. For the api and libraries, please, use the address: <https://api.voiceit.io>