# Study for Fitness and Health website

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**Abstract:** *There are many Health and fitness related websites out there for the people interested in fitness. People use these sites for learning exercises, workout-routines, nutrition, etc. But there's no site which covers all the aspects of health and fitness. This project is about the website for every aspect of health and fitness. This paper will discuss the making of website which covers all the features and aspects of fitness and fundamental technologies used to create it.*

*Keywords:* **Fitness, Health, Nutrition, Health-calculators, Web application**

## 1. INTRODUCTION

Earlier, many Indian population did not think about fitness as a priority. Mostly financially successful people, celebrities, athletes, etc. were used to think about fitness seriously. But along with time, interest of people towards fitness is increasing. People are now treating fitness as their priority over many things. With the growth of the internet, education about fitness is spreading at good rate. People are now understanding the importance of fitness in life, resulting the increasing number of websites related to health and fitness. Many people who are in fitness field or interested in fitness, mostly beginners are looking for sites which can help them learn workouts, nutrition, fitness. Many websites help them in this but mostly they have to struggle to use those. Websites specifically focus on particular topics. Some are just for the calculations or nutrition. Few of them only focus on workouts. So, people are always changing the sites for their needs. Also, most of the websites are mostly suitable for western world. The idea is to create a website which can cover all the topics from fitness like workouts, yoga, cardio, fitness tools, muscle and body information, nutrition, diet, recipes, etc. to Health like hormonal changes, diabetes, body care, etc. So that people will find everything they need at same place. People can learn about Workouts, diets, health at same place and implement in their life.

### A. Exercises

When we talk about workouts, it's a different experience for everyone according to their body and structure. Also, workouts are different according to every sport. Most of the beginners find it difficult to learn this

exercises or to choose them. Their weird names make it difficult to remember too. But if there's a website where they can find exercises according to muscle groups or by choosing their sport, it makes easy for a user to learn them. Same goes with every other form of workout. Most of the sites provides search boxes to search the exercises in their database, arranges in random order. Beginners find it difficult as they didn't know much about them. So, if a site provides such a UI where user can find them filtered according to particular criteria, it makes them easy to use. Using html, CSS, JS ReactJS, we can create a simple, minimal and easy to use interface for a user.

### B. Food/Nutrition

Nutrition is the field, where many Indians lack. According to a survey done by "Indian Market Research Bureau" in 2017, Indians are lacking in protein and 84% of Indian vegetarians and 65% Indian non-vegetarians are protein deficient. It shows a huge number of populations is unaware of Nutritional knowledge leading to many health problems in future. Almost 73% of Indian women's think that source of protein is fruits and about 70% of urban Indian population believe that leafy vegetables are source of protein.
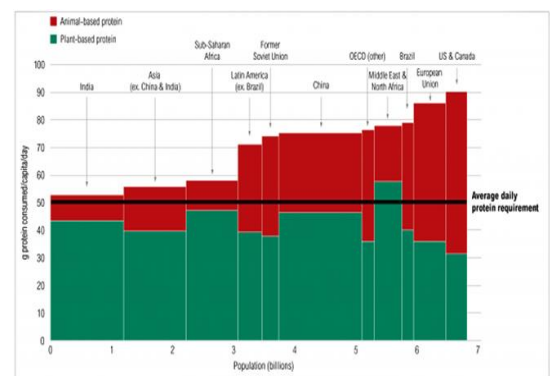


**Source:** Ranganathan, J. et al. 2016. "Shifting Diets for a Sustainable Food Future." Working Paper, Installment 11 of Creating a Sustainable Food Future. Washington, DC: World Resources Institute

Designing a good diet is a skill and it can help reduce almost 50% of health problems. So, if a website can provide a set of diets for many kinds of situations like for muscle gain, fat loss, Athletic goals, etc. it will be a great help. Also, a database where people can search about nutritional information of any food, that will be really

handy. Also, many people are looking for Quick healthy recipes and products.

### C. Calculating yourself

In your fitness journey, calculating yourself and keeping your track is important. Your BMI Your calorie intake levels, Macro's intake, etc. matters in your fitness. Knowing how much should be your protein intake, what's your body-fat level is very important. There are many calculators people find on internet. But if people can use them at the same place will be really easy experience. Many calculators can find your diabetes level, sugar intake, pregnancy dates, etc. So, including this all at one place will be really useful.

With these calculations, people will be able to manage their diets or design their workout programs or keep track of their progress.

### D. Health

Making health your one of the top priorities is always a good decision. Theirs saying, "you are what you eat". So, your health is a direct result of your eating habits or workouts. Also, your body-care routines and changes in body after particular situations is important to know. Entering in fitness leads to many changes in your routine. But along with many benefits, there are many other bad effects people face when they do some mistakes or bad decisions which are very common in fact. So, dealing with these things like muscle soreness, dehydration, protein-urea, stretch marks, etc. are tough for many people. Also, many health problems or situations and lead to different effects like weight gain after pregnancy, low sugar levels for athletes, etc.

## 2. DEVELOPMENT OF WEB PAGES

Creating web pages such that it will provide user a better experience is very important as it grabs the eyes of users first. Although Many pages are static in such a website as they show the data, but still, it can affect. Choosing a good technology for frontend can provide many different benefits like easy to use and high speed etc. We used ReactJS which a frontend library for JavaScript. Using its components in reactJS, its lot easy and fast.

We used HTML, CSS, JS, ReactJS, php mySql for designing front end and backend.

## 3. LITERATURE SURVEY

### 3.1 Evaluation of the choose health: food, fun, and fitness 3rd- to 6th-grade curriculum: changes in obesity-related behaviors

In 2021 Wendy S Wolfe published a research paper on a project which was Choose health: food, fun and fitness. This project aimed 3rd to 6th graders and used experimental learning, food preparation etc. to learn about obesity related behaviors in childhood. A quasi-experimental design with delayed intervention was used. The final study of this experiment included 561 youths. 58% youth were white, 25% black, and 17%other. All four dietary intake scores improved significantly more after CHFFF than during control period. Compared to control period, when they received CHFFF, they showed significant improvement in multi-item dietary scores. This study helped us to understand childhood obesity behaviors.

### 3.2 Performance Optimization using MERN stack on Web Application

This research paper was published by Sourabh Mahadev Malewade and Archana Ekbote in 2021. This was a project to create an easy Interface and provide access to various products and to set up an application where a user is provided with excellent web application. It will also help to understand the technologies to make such a web application.

It showed the implementation of MERN stack and how it helps in developing web pages. How the Technologies like mongoDB, express js, reactJS and nodejs are used to create eye catching frontend and effective backend is showed. Also, it helped us to understand the user demands and how to fulfill them. It showed that the current web application provided the critical review in the field of e-business and the review of methodologies used in this.

### 3.3 Fitness Applications for Home-based Training

In 2016, Iman khaghani far, Svetlana Nikitina and Macros Baez presented a paper about review of Fitness applications for Home-based Training.

This was the review about the many fitness applications available of different kind of app stores. There are many opportunities for developing such applications which provides the features for home based training. It showed that few applications rely on virtual coaches instead of human coaches. Also, it showed that most of such applications are based on Home based training. Their investigation showed that the home fitness has many ideas and applications which offer many different techniques and methods. But the current solutions concludes that its good for general population but not for advanced level. Very few of them are able to find advanced solutions in fitness.

### 3.4 HTML Architecture, a Novel Development System (HANDS): An Approach for Web Development

in 2014, Brian Carter published a paper on Architecture of HTM, a novel development system which was an approach for web development.

In this paper, they presented a very compelling proposition, a novel approach for web development. It was a hybrid of Single Page Application (SPA) and sever side application. The main aim was on HTML, JavaScript, Cascading Style Sheets and Node.js. Their architecture provided all the components of a beginner student so that they can start web developing. HANDS provided their pattern of design which was easy to pick up for students and start the foundation in web services. All the knowledge of HTML, CSS, JS and NodeJS with good examples and illustrations was provided.

## 4.2 Backend Database

| NAME OF PAPER | AUTHORS | YEAR | SELECTED FEATURES |
|---|---|---|---|
| Evaluation of the choose health: food, fun, and fitness 3rd- to 6th-grade curriculum: changes in obesity-related behaviors | Wendy S Wolfe | 2021 | Study on change in Obesity behaviours |
| Performance Optimization using MERN stack on Web Application | Sourabh Mahadev Malewade, Archana Ekbote | 2021 | Development of Web applications in MERN |
| Fitness Applications for Home-based Training | Iman khaghani far, Svetlana Nikitina , Macros Baez | 2016 | Fitness application reviews |
| HTML Architecture, a Novel Development System (HANDS): An Approach for Web Development | Brian Carter | 2014 | Basics of web development |

## 4. PROPOSED SYSTEM

There are many technologies for creating such a website. We can create it using simple HTML, CSS and Js for frontend and PHP mySql. But instead, we can use Advanced frameworks like ReactJs and Nodejs. We used ReactJs for developing the front end of the web application. And also using the MERN stack.

## 4.1 Frontend development

React.JS is the front-end library of the JavaScript programming language. We used React.JS for building our front end for the website because it is used for the single-page application development because it can render dynamically changing data at a high speed. We studied the virtual DOM objects in React.JS, which we also implemented in our project. We used JSX which is extention for javascript syntax. It made our code easier to write and simpler in React application. React.JS uses Components. Components are the building blocks of User-Interface. We started our react web application by first installing createreact-app using npm. npm install create-react-app global .create-react-app are the two commands for using npm or yarn respectively. After that, we created a new react app by using. create-react-app Fitmate. Then navigate into our app name folder and type cd Fitmate and npm start. We used react routers for navigation through pages.

PHP is the most popular scripting language for web development. It is free, open source and server-side (the code is executed on the server). MySQL is a Relational Database Management System (RDBMS) that uses Structured Query Language (SQL). For our database which stored the Nutritional information of all kind of food options, and user can search for them, we used MySQL database and we used Php for connecting it. Since PHP is a server-side scripting language it creates dynamic pages with customized features. Also, its easy to use and syntax can be easily parsed. Connecting to a database via PHP is an extremely important step because if your script cannot connect to its database, your queries to the database will fail. Also, for the registration, MySql database was important. Also, we used the Nodejs in backend.

## 4.3 code editor

Visual Studio Code is an integrated development environment made by Microsoft for Windows, Linux and macOS. Its features include support for debugging, syntax highlighting, intelligent code completion, snippets, code refactoring, and embedded Git. We used VS code as code editor to make this website as it is easy to use and provides many features and shortcuts. Many extensions helped to improvise.

## 5. DISCUSSION

The current work of this website is going on using technologies mentioned. This project is going to help the many fitness enthusiastic people specially beginners. We managed all the problems we faced during the

development. All the important discussion were made about how and what we are going to provide through this website as it was Necessary.

## 6. CONCLUSION

For now, this website is static and still in development and currently provide some functions and tools and all the data in field of fitness. We are working on more knowledge and technologies and tools which are going to help in future. Its going to grow more and help many people.

## 7. ACKNOWLEDGMENT

We owe our deep gratitude to college friends and our teachers for their support. Without everyone's contribution, this project would not have been possible.

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