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Of

Computing and Information Sciences

Master of Science in Information Sciences and Technologies

Project Approval Form

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Project Title: Free Fitness Mantra for Everyone through Pandemic and Post Pandemic including Clothing Finder and Diet Tips

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Free Fitness Mantra for Everyone through Pandemic and Post Pandemic including Clothing Finder & Diet Tips

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Project submitted in partial fulfillment of the requirements for the
degree of Master of Science in **Information Sciences and
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Rochester Institute of Technology

**B. Thomas Golisano College
of**

Computing and Information Sciences

Department of Information Sciences and Technologies

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Free Fitness Mantra for Everyone through Pandemic and Post Pandemic including Clothing Finder & Diet Tips

Abstract

The aim of this project is to provide a free fitness website to all the end users throughout the globe. The user will enter their name on the Home Page and sign into the website. On signing in, the user will be redirected to the Workouts & Diet Page. The landing page consists of a spread of exercises to choose from. For e.g., Yoga, High Intensity Interval Training, Cycling/Spinning, and Dumbbell workouts. In addition to this, the website consists of diet options which includes four meals a day and a clothing finder for all the exercises mentioned on the website. The website stores the Home Page information in local storage. To verify if the data is stored correctly, the website fetches username from the local storage and displays it on all the pages of the website after signing in. Also, the website provides validation checks on submitting null values and alerts users with an appropriate message. Users have the flexibility to navigate back and forth the pages, also they can reset all the values to restart the selection of choices. All the choices will appear dynamically based on the user's previous selection. At any given point of time, users can make changes to the second level of choices and the outputs for the third level will change based on the new second level choices. Similarly, it can be done for the first level. The website contains an easy layout to make it more interesting and user-friendly. The exercise videos will be embedded on the website from YouTube by giving proper owner credits. Lastly, on clicking the Home Page, it would act like a signed-out functionality and the user would be logged out of their

session activity. In addition to that, this will be a scalable website which means if the dataset is replaced it can work for any other same structured dataset and the website will work smoothly. For e.g., Fitness website dataset is replaced with Restaurant café menu then the website turns into a restaurant website.

Keywords

COVID-19, Pandemic, Dynamic Website, Local Storage, Dataset, Choices Synchronization, Fitness, Workout, Exercise, YouTube

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1. Introduction

The Physical Activity Department of the United States of America commended all the adults including chronic conditions should inculcate 150 to 300 minutes [1] of medium intensity exercises per week. According to the latest study exercising reduces the respiratory syndrome which is the root cause of death for COVID-19 patients. All the front-line workers in the health care department are recommending physical activity to their patients during the time of social distancing.

Although gym and work out classes are providing communal as well as individualized sessions the usage of common surface area increases the transmission rate of infection. Places like these are following the rules and regulations provided by Centers for Disease Control and Prevention (CDC)'s department of Occupational Safety and Health Administration (OSHA). According to OSHA's policy, a limited number of people are allowed to avail the services at a time. Also, 37% [3] of decline was observed globally in studios, in – person fitness classes and gyms. Whereas in Ontario, Canada, the gym's capacity is reduced by 50% [2]. This restricts the remaining 50% of the people to avail basic amenities like gym and workout classes.

Therefore, to overcome situations like these, the project Free Fitness Mantra is the solution that fits all. It is the most ideal solution for the following reasons:

1) Flexible Timings

The user can now exercise according to their availability with the help of this website. For e.g., Gyms observe timings which may be not suitable for everyone according to their

schedules. However, one can now exercise at 5 am in the morning or late in the night without worrying if the gym is open now.

2) Safe

Exercising at home or in the backyard makes an individual feel safer and also gives them a peace of mind. Herein, the user is more aware of things such as absolutely no contact with unknown personnel, or who used the equipment last, when was it last clean, etc. They have the entire control of the environment in which they are working out. This assures them of safety from getting infected with the omicron or delta variant of COVID-19.

3) Variety

When a user enrolls for a gym membership or a workout class, they will have to follow only one form of exercise. If they want to switch to some other form of exercise, they will have to pay the fees separately for every type of exercise they switch to. However, if the user signs in into this website they get a variety of exercises all under one roof. In addition to that they have the flexibility to choose the exercise form they feel like doing on that particular day. For e.g. A user at the age of 50 logs in into the website, on the first day they did Spinning. They felt it was too intense for them. So, on the second day the same user can switch to Yoga which is more of a relaxed form. Similarly, if a certain user's age falls into the range of 18 years to 35 years, they might be looking for something more challenging. So now they can select High Intensity Interval Training or Dumbbells over slow paced exercise like Yoga. Hence, using this website to try and switch between online classes for free is more flexible

and convenient. Also, the user gets a variety of exercises to choose from over the in-person classes at no cost at all.

4) Ad Hoc Exercises

In workout classes the exercises performed are usually full body exercises. Since it is done with a group of people, a specific exercise may not be required to one's body type over the other person's body type. For e.g., A person with an inverted triangle needs to concentrate more on upper body workouts like arms, chest, shoulders and back. While in workout classes, the user is going through a full body workout process which shows delayed progress for the targeted areas. However, with the help of a fitness mantra website the user can now focus only on the exercises which their body type needs. For e.g., A user with triangle body shape can refer to the lower body exercises specifically using our website. This helps the user to work out on the body part which they want to bring in shape vs mandatorily doing the full body exercises.

5) Saves Time

With in-person classes, the user takes an extra time off from their schedule to travel back and forth to the gym or to the workout class. However, with the help of using our website free fitness mantra, the user can now perform all the exercises at home. This saves the overall time required in traveling back and forth and/or time required to get gym ready. Therefore, the user stays energetic and active and can utilize this saved time for doing something better.

6) Diet Plan

Gyms or workout classes provide diet plans by charging extra to the consumer. However, the fitness mantra provides a diet for everyone that is too free of cost. So, this is an additional benefit of using Fitness Mantra website over gym or workout classes. Also, the majority of the existing apps that have exercise plans also do not have a diet plan. This makes the fitness mantra website more unique. Our website offers four meal plans:

1. Breakfast
2. Lunch
3. Snack
4. Dinner

Every meal plan comes with options to choose from. Now, this gives a user the liberty to choose their choice of food from the given four to six options per meal. This will help them to pick the food options which caters to their needs.

7) Clothing Finder

Many times the outfits that we buy are not appropriate for a particular form of exercise but more suitable for the other form of exercise. For e.g, Yoga includes a lot of stretching therefore the leggings used in the gym cannot be used for yoga. It is because the gym leggings are skin tight on the other hand yoga pants are loose and stretchable. Hence, one needs to buy Yoga pants which are comfortably loose but not excessively loose because that may cause the entanglement. So, to overcome situations like these our website provides a

section that suggests clothing for a particular form of exercise. For every form of exercise in the workout section the user can browse for a respective clothing in the clothing finder section.

2. Problem Statement

There are ample fitness programs, workout classes and gym brands available in today's world. Firstly, the real challenge is how safe it is to work out in an environment which is not in your control with the situations like increase in omicron, delta and stealth variant cases. In addition to that, is it affordable for everyone to pay the big fat fees that gym and workout classes are charging? Cost being one of the major reasons why people are reluctant towards health and avoid joining gym or any exercise sessions. Thirdly, there are numerous fitness websites, but they only concentrate on forms of exercise and the user needs to keep track of more than one website if they are involved in more than one activity.

The solution to this problem statement is developing a free fitness website which not only helps the user in assuring safety at their comfort level but also doesn't cost a cent to gain their fitness back. Instead of enrolling for different websites for different types of workouts, what if a user can find multiple forms of exercises all under one roof. Yes, you read it right, this website provides four types of exercises for both male and female separately. As male's body type is different from the female's body type, the website ensures each form of exercise is specifically catered according to their needs. In addition to that, the website also covers the point of safety, pocket friendliness, and diversity.

3.Project Goal & Objectives

Goal:

The goal of this project is to make the world a better place by increasing the good health ratio of millions of users by sharing this fitness mantra for free.

Objectives:

1. Research and incorporate most widely used types of exercises (E.g., High Intensity Interval Training, Yoga, etc.).
2. To ensure fast and better results to the end user add a section consisting of information on healthy diet.
3. To spread awareness of comfortable clothing during workouts, suggest clothing tips for all forms of exercises mentioned in the workout section.
4. For clients focusing on certain areas of body parts, provide exercises that focus on certain areas.
5. To motivate the user to exercise regularly, give the liberty of flexible choices, so that the user can change to any form whenever they like instead of quitting.
6. To make website user friendly incorporate workout videos from YouTube, this will provide the same video controls that are familiar to the user.
7. To provide diet plans that are quick to cook with easily available ingredients and are also healthy at the same time.

8. Lastly, make the clothing and workout section dynamic so that the user can freely go back and change their previous selections whenever they feel like.

9. Literature Review

Exercising has many benefits, however, economy and social issues prevent elderly from exercising. In addition to that many community centers cannot afford to hire a personal trainer for the individuals. Therefore, supporting senior citizens with online exercises to boost their physical confidence, skills, and mental well-being. These online classes consist of cognitive workouts, sleep well workout, physical exercises and socializing exercises. With the online sessions, the workouts were planned in such a way which could be easily replicated at home. The data of the online exercises was stored locally. This helped in performing experiments on large scale participations.

As per CDC guidelines an adult must get a minimum 30 mins activity. This should be performed 5 days of a week, including medium intensity cardio and muscle strengthening. It is mandatory to enroll in a gym for muscle training exercises but in doing so it becomes difficult to manually track the number of calories burned and all the activities performed in a day. In addition to that, people prefer indoor exercises over outdoor exercises. To overcome this situation a strength training app was developed which was integrated with a wearable device such as Samsung Smart Watch. It recommended indoor exercises which concentrated on chest, biceps, triceps, lower body and chest.

Exercising renders positive effects on living a healthy and quality of life. However, the majority of old age people have limited access to exercising facilities or knowledge to exercise at home. In order to render an engaging environment for fitness activities, a fitness application is developed. Unlike other apps it doesn't engage in exercises which are meant only for the younger generation but also for senior citizens. This application guides on how to browse through the playlist of exercises videos, records performance and renders feedback on the movements performed. The goal of this project is to increase strength, flexibility and balance by slowly and steadily performing daily exercising activities.

4. Methodology

This project is completed in three phases which are as follows:

Phase 1:

1. Literature Review:

Study and gather information on types of exercises, diet plans and types of fitness clothing types for various workout forms

2. Data Collection

Draw a tree structure diagram to understand what form of exercise falls under which type of category. Similarly, use the same approach for clothing finders to analyze the type of exercise to its respective wear. Establish parent child hierarchy at each level.

There are various types of fitness apparel both different for men and women in the top wear and bottom wear section so gather only those that match our workout section. Research and collect information on 4 meal diet plans to represent in the diet section of the website. Therefore, try to keep a generic diet so that people with special dietary needs can still stick to the diet by replacing or eliminating the item they are allergic to. The diet should be simple and easy to follow ranging from teenager to a senior citizen. Lastly, as Male and Female bodies are different, this website particularly takes that into consideration by showing all videos of Male Exercises performed by Male Representative and all videos of Female Exercises performed by Female representative. In this way, the representatives can share tips and tricks for the targeted audience depending on their body type. Also, it will be easy for the user to follow and connect with the representative.

3. Dataset Creation

In this third step of Phase 1 actual dataset creation will take place. The dataset will be in json format. It will be the exact replica of the tree structure drawn in step 2 of phase 1. All the three steps will take around two weeks' time frame.

Phase 2:

1. Retrieve Dataset Values

The dataset created in Phase 1 step 3 would now be fetched in Phase 2 step 1 of this project. This will be done with the help of JavaScript. The time required for this task would be around 1 week.

2. Retrieve Data from Local Storage

This project's Home Page will have a section to enter user details like First Name and Last Name. The information entered on the Home Page will be then stored in the local storage. Those credentials will then be retrieved from the local storage and displayed on all the pages of the website. This will be helpful to represent a successful storage and retrieval process.

3. Dynamic selection

In this step, the user will have an option of going back and changing the previous selections they made at any point of time. Based on the latest selection the drop-down values for the next choice changes. This functionality of dynamic selection will be completely handled using JavaScript. Based on this coding functionality the entire website can be transformed into another website with matching dataset syntax.

4. CSS

The website will contain CSS to enhance the look and feel of the website. Using CSS the website can be developed in a more user-friendly manner.

Phase 3:

1. Clothing Finder

The website would have a section wherein all the information would be provided to the user. Since the website provides the spread of workout form therefore the clothes (like tops and bottoms) required to perform those exercises would be mentioned on the website itself. This will help the user to get going and can act as a point of reference to look back before doing any shopping. Also, a new addition to this approach is that the Clothing Finder section is made dynamic just like the Workout section on the Workout Page. This is also developed entirely with the help of JavaScript.

2. Dieting Section

Exercise and dieting goes hand-in-hand. Therefore, to see better results in a small span of time one must follow a diet. Hence, this website is trying to be one point for all workout, clothing and dieting websites. Right from providing exercises, to giving clothing suggestions, and lastly giving diet tips this website has all of it that one could ask for a healthy lifestyle journey.

3. Code Refining

Optimizing the sections in the code and adding comments to the code. Performing unit as well as integration testing. Incorporating changes suggested by professors.

Making revisions to the website.

4. Defense & Final Report

At the end of the semester the capstone project is ready to appear for defense by including all the changes recommended by professors. On receiving a go ahead, the drafting of final report drafting would begin.

5. Deliverables

By the end of this project following deliverables will be submitted to the MyCourses drop box:

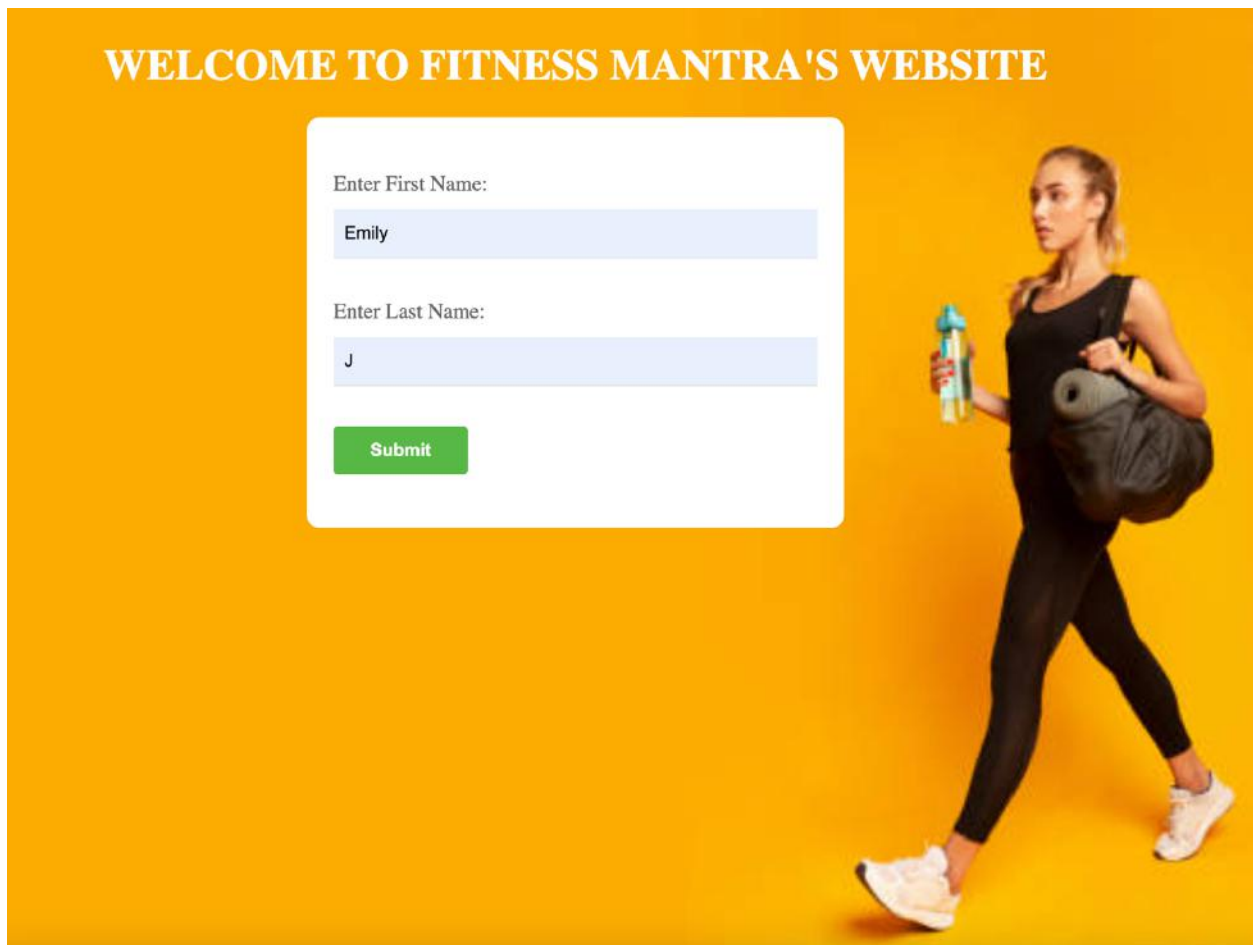
1. Project Final Report
2. Entire project's zip file including:
 - Presentation
 - Images required for the website
 - Videos required for the website
 - Capstone Proposal (.docx)
 - Project Code (Dataset Files, Styling Files, Script Files and HTML Files)

6. Results

Free Fitness Website consists of three pages which are as follows:

1. Home Page
2. Workouts & Diet Page
3. Clothing Finder Page

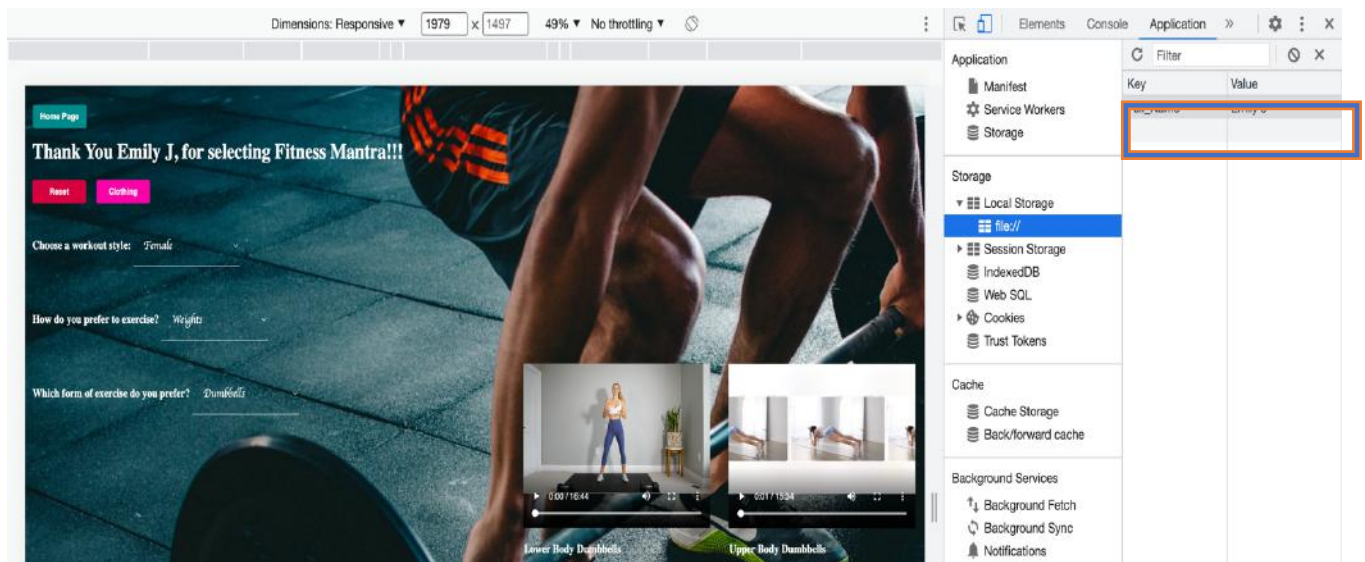
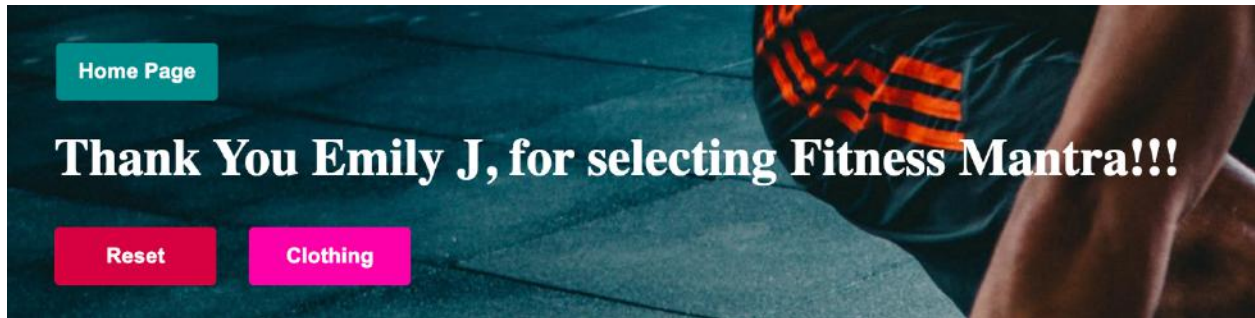
The user will enter their First Name and Last Name on the Home Page. On clicking the Submit Button the user is redirected to the Workouts & Diet Page.



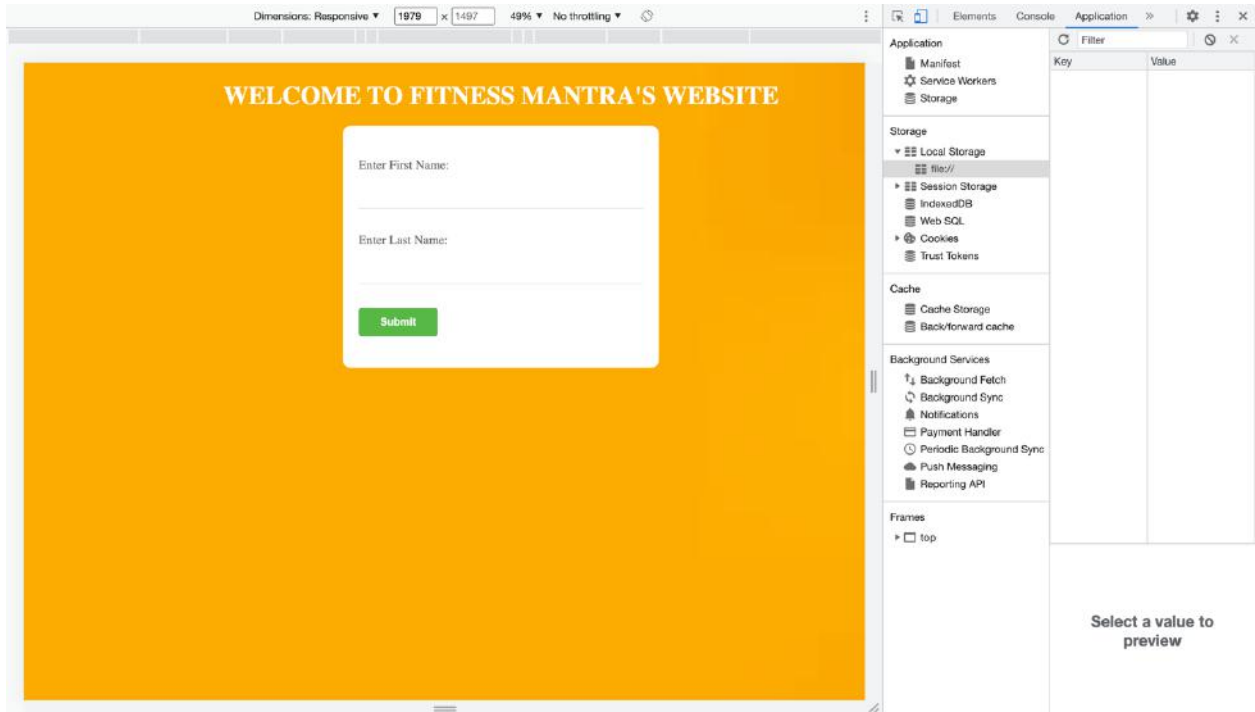
The user is invited with a statement “Thank You Full Name, for selecting Fitness Mantra!!!”.

The Full Name is the combination of First Name and Last Name. In this case Emily is the First Name and J is the Last Name. Therefore, it appears combined on the Workout Page and is also

stored together in the Local Storage.



The Home Page Button above the Thank You statement redirects the user to the Home Page. All the fields on the Home Page and in the Local Storage are cleared.



The user then starts answering the first question, “Choose a workout style:”. It has two options

1. Male
2. Female



If the user selects “Male”, then the next question appears “How do you prefer to exercise?” This question also has two options

1. With Equipment

2. Without Equipment



If the user selects “With Equipment”, then the last question pops up asking “Which form of exercise do you prefer?” This also has two options:

1. Dumbbell

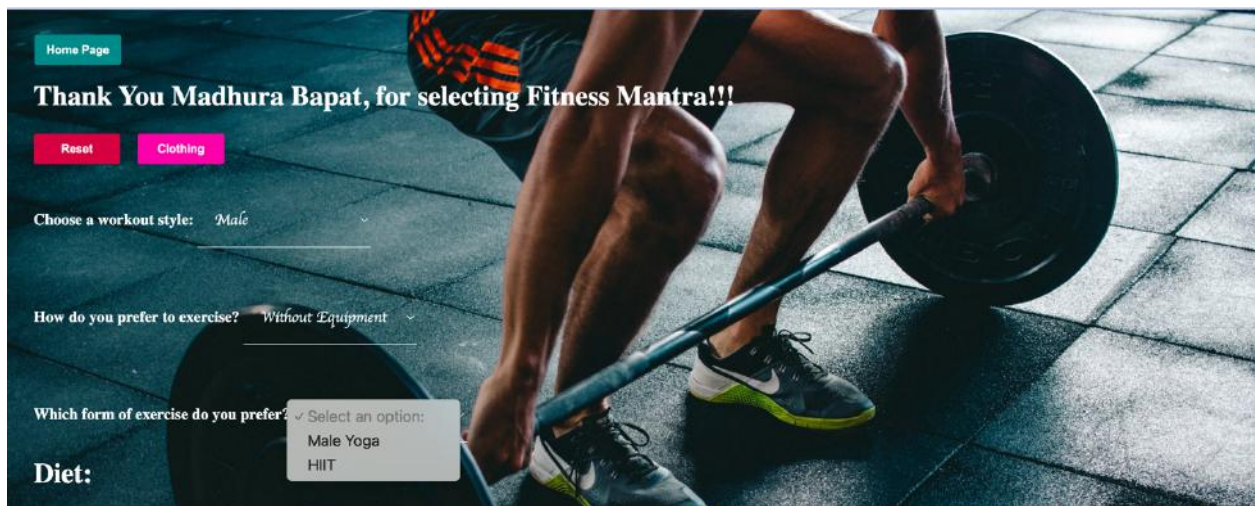
2. Cycling



However, if the user goes back and selects “Without Equipment” for the second question, then the last question would still remain the same but its option would change. Now, this is called Dynamic Selection. So now the options for the last question are rendered as:

1. Male Yoga

2. HIIT



Similarly, if the user now changes its mind and wants to check the content on the Female side. Then the user must directly select Female for the First Question.



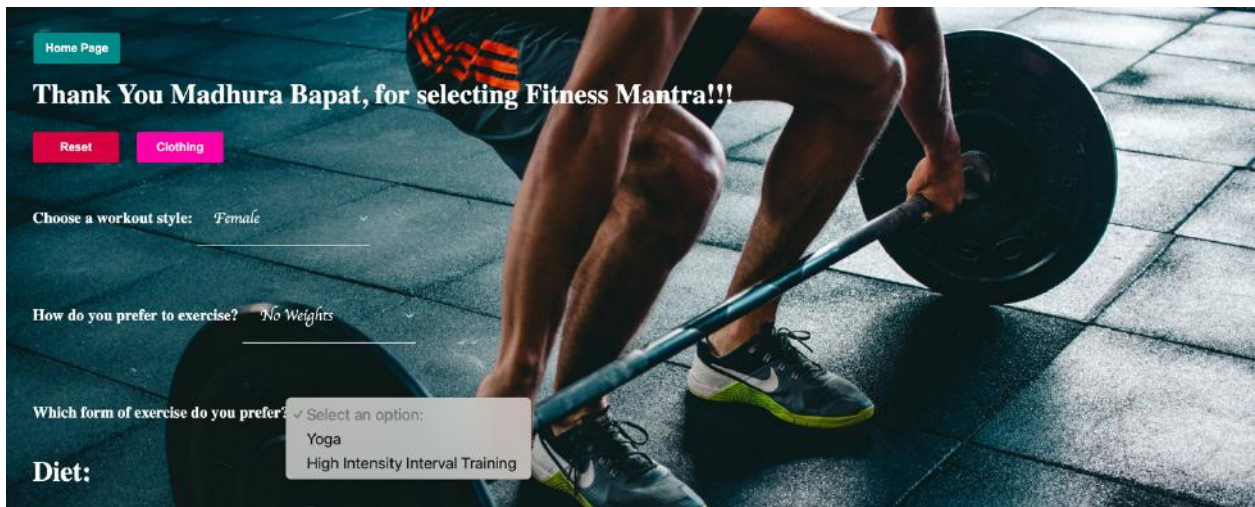
After selecting the Female, the second question renders below, although the second question is exactly same (as per Good UI practice), their options have changed which are shown in the below image:



Now, depending on the option selected for the second question, the last question renders exactly same as the male's last question, but you can see there is change of options for last one question well which is as follows:



If the user doesn't feel like working out with the "Weights", the user can go back and select the "No Weights" option. Now, the user gets new pair of choices for the last question as represented in the below image:



If the user clicks on the Reset Button, then, all of the choices made by the user for all of the questions get cleared. Therefore, the user now must restart answering all of the questions right from the top i.e., the first question onwards.



7. Conclusion

The aim of this project is to develop a website which renders a dynamic list of choices for the users, and render images or videos based on the user selection. While working on this project I faced a few challenges with encrypted email functionality, unequal weights tree, cannot create a one page website, finding an alternative to Pelton cycles and then selecting two choices for the alternative cycle. The solution to these challenges is that encrypted email functionality can be done using PHP as the whole project is in JavaScript, I shifted this email functionality as a future scope. Next, I replaced an equally unweighted tree with a balanced Binary tree (refer appendix for the binary tree diagram). I created a three page website because there was a lot of content to be displayed on a single page. However, an alternative to this is developing this entire project into React/Angular framework for a single page website. Lastly, as a replacement to

Pelton Workout Cycles I searched an alternative as Basic Workout Cycle which can be easily found in almost every household and to provide two options for it to exercise was to exercise in two levels i.e. Basic Cycling and Advanced Cycling. This is how I overcame the challenges and provided additional solutions which can be implemented as the Future Scope of this project. I also performed a casual user testing to understand their sense of understanding about the website and gathered some feedback. On the workouts page the first question had two options, subconsciously the user trained their mind to expect the next question would also have the same number of options. After answering all the three questions in the workout question they were expecting the exact format for the clothings page. Either the number of questions or the number of options were increased; they thought the two pages of a website were inconsistent. Hence, both Workout and Clothings Page had equal number of questions and equal number of options. Also, the structure of asking questions was always observed on the left hand side and their final results were always generated on the right hand side. Lastly, to work towards the goal of increasing good health ratio for millions of users by sharing this fitness website for free. I achieved the objectives as follows: 1) Researching and inculcating most used exercises,, 2) Incorporating Diet Section, 3) Clothing section, 4) Ad Hoc Exercises, 5) Variety, 6) UI friendly, 7) Making Workout and Clothing Section Dynamic.

8. Future Scope

Saving and retrieving information databases on to the internet is known as Cloud Computing. Recently, cloud technology is in boom amongst the majority of fitness industry around the globe. Lately, cloud computing has been proved as a boon to the fitness industry by progressing towards the digitalization era. The fitness data has been recorded onto the cloud and in the same way it can also be retrieved as and when needed. Additionally, utilizing cloud technology will render data encryption and block the unauthorized attacks on the database. In comparison to the legacy method of documenting data into the files, a password protected data system is used to ensure the highest level of security. Cloud computing follows the same concept in human wearable devices such as smart watches to save the individual's information. Devices like smart watches, computers, laptops, tabs, mobile phones can download these applications to interact with the data with the flexibility of using wired cables or wirelessly. All the data that has been recorded can be synchronized synchronously or asynchronously using manual intervention. With the help of these new inventions, the user now can track their progress by visiting a website or the application over the period.

Cloud technology has been recently updated; therefore, it provides the latest features and services. The technology features two major aspects:

1. Data Upload: All the collected data is uploaded to the cloud technology from any remote system.
2. Data Download: The upload data then can be downloaded from the cloud service on any remote device.

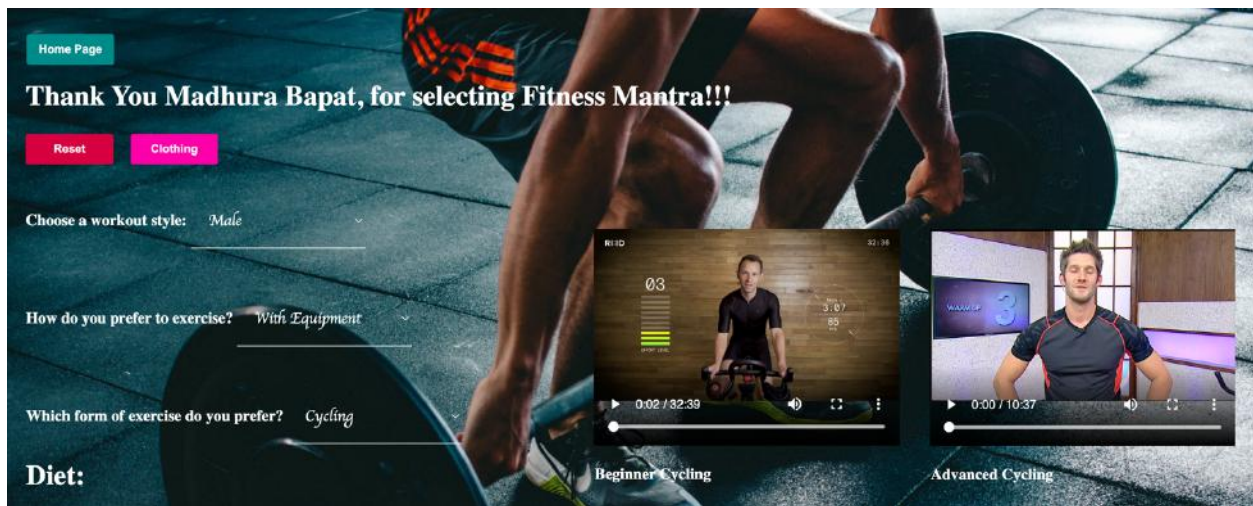
The cloud technology follows major protocols analytical thinking, adapting to the optimized network speed, information transmission, information security, fastest upload and download technology, data size compression technology, service monitoring the cloud health technology and data health technology which comprises data encryption and authentication services that block unauthorized access.

The future scope of this project is to create a mobile application (android or iOS operating system based) that provides all the forms of exercises for free. This project can also be taken up by an HCI student by integrating a smartwatch that synchronizes with the Fitness Mantra website. This can synchronize all the data to the user's smart device in addition to the cloud computing and comprehensive usability testing. In addition to that this website is fully flexible which means it is possible to convert this website into a completely different website by just swapping with the matching dataset format.

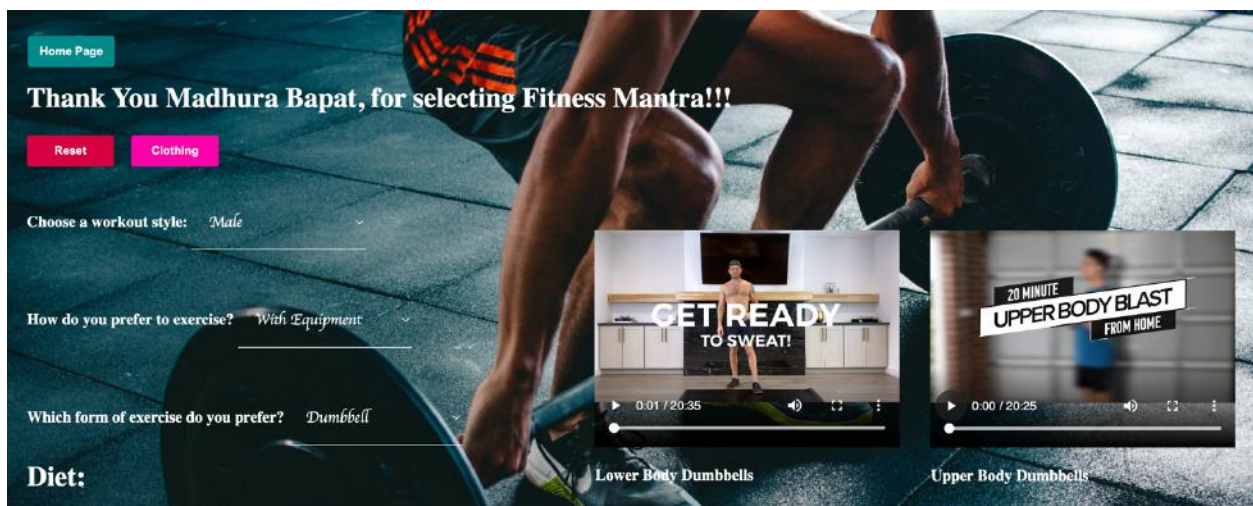
9. Media Screenshots:

1) Workout Choices

A) Male -> With Equipment -> Cycling



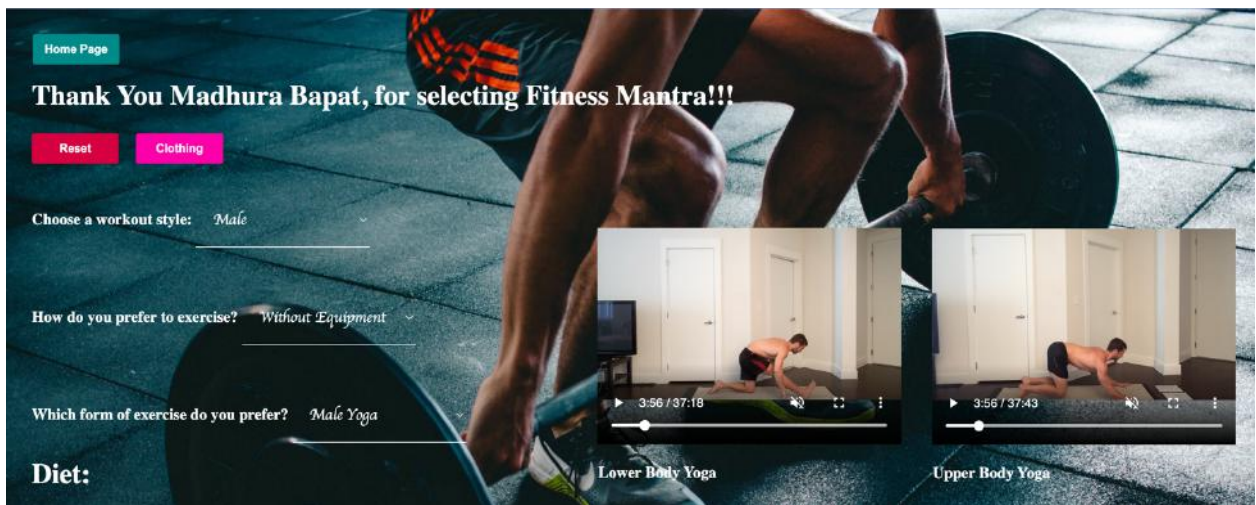
B) Male -> With Equipment -> Dumbbells



C) Male -> Without Equipment -> High Intensity Interval Training (HIIT)



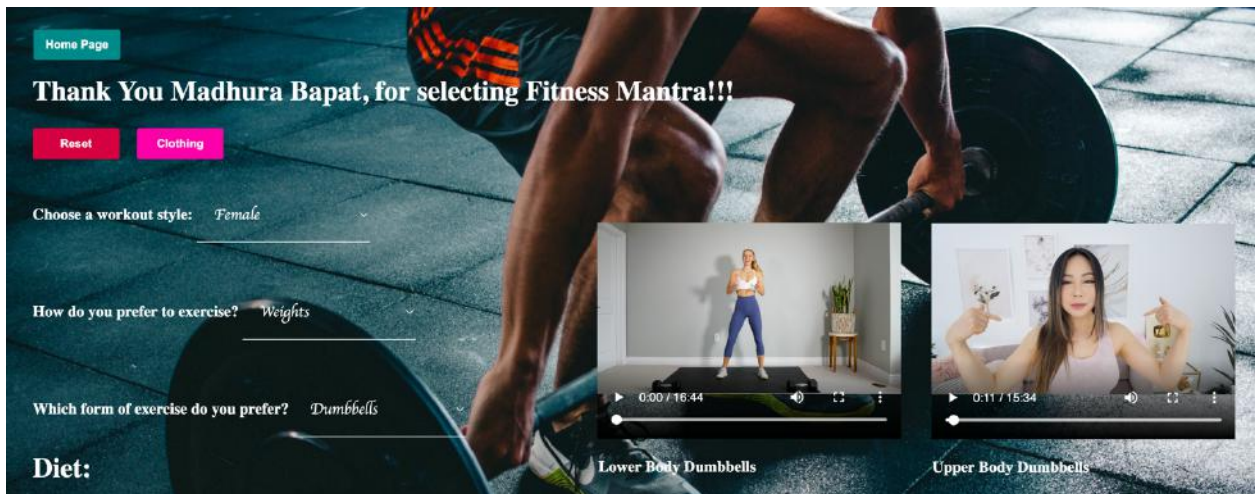
D) Male -> Without Equipment -> Yoga



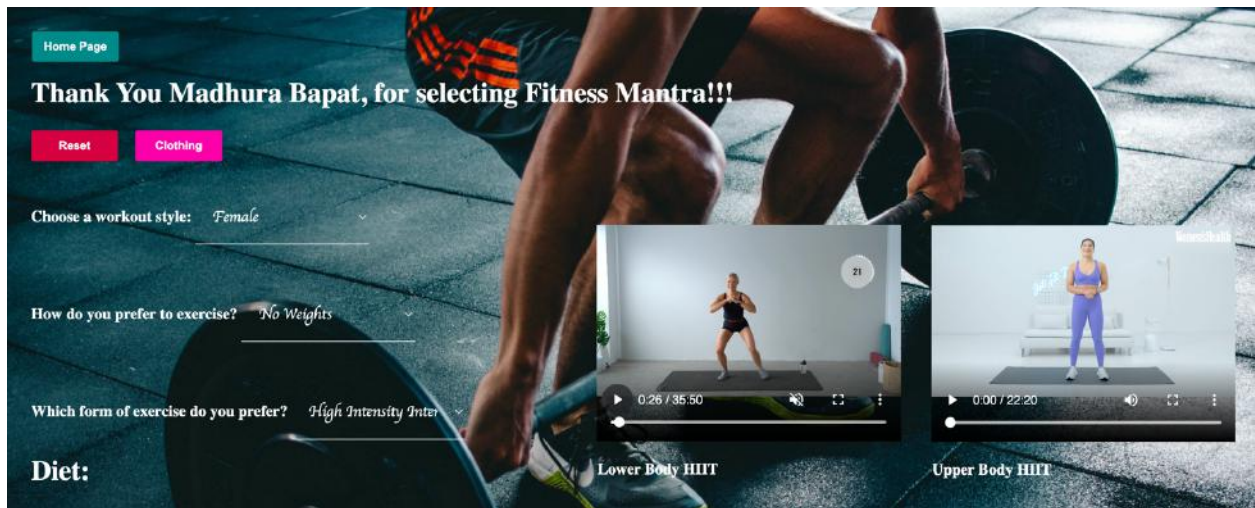
E) Female -> Weights -> Spinning



F) Female -> Weights -> Dumbbells



G) Female -> No Weights -> High Intensity Interval Training (HIIT)

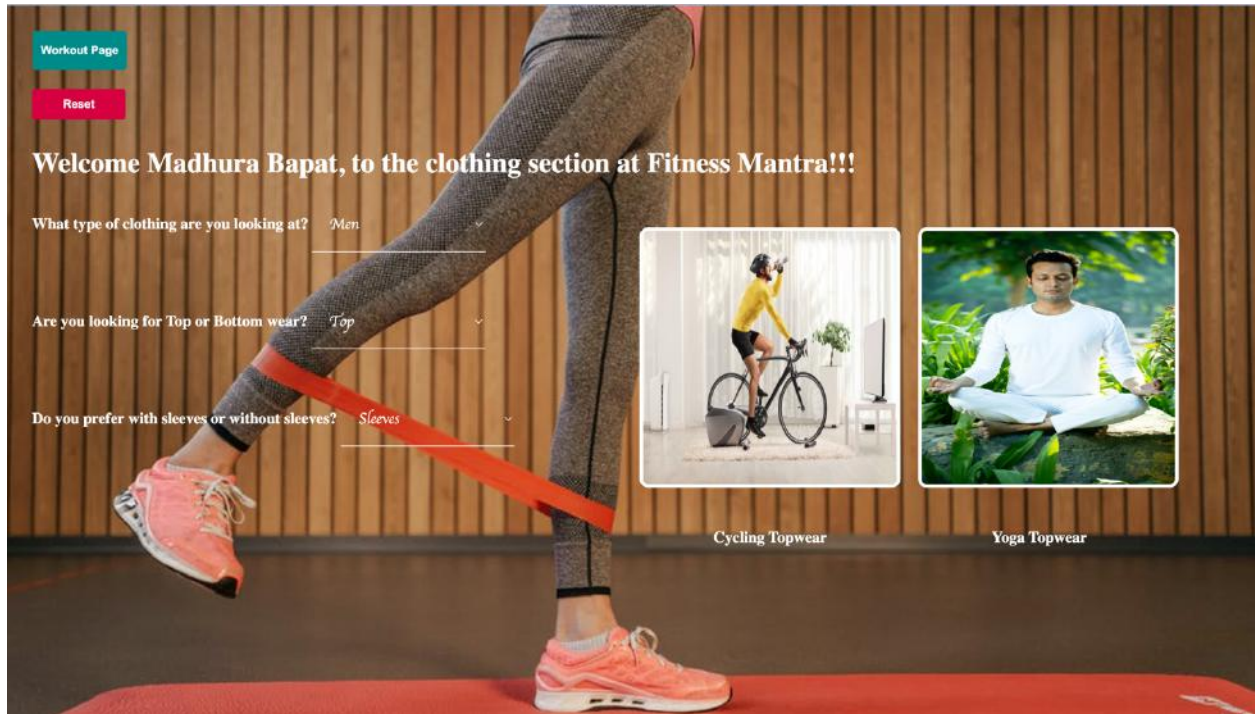


H) Female -> No Weights -> Yoga

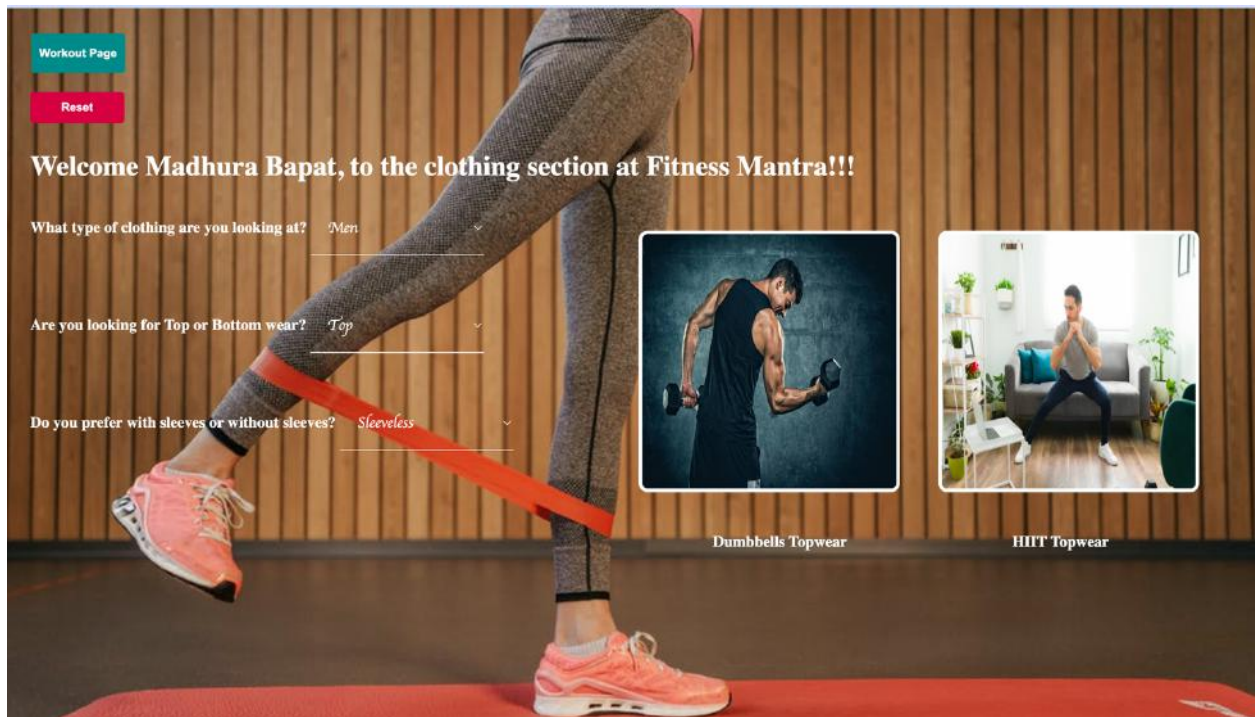


2) Clothing Finder

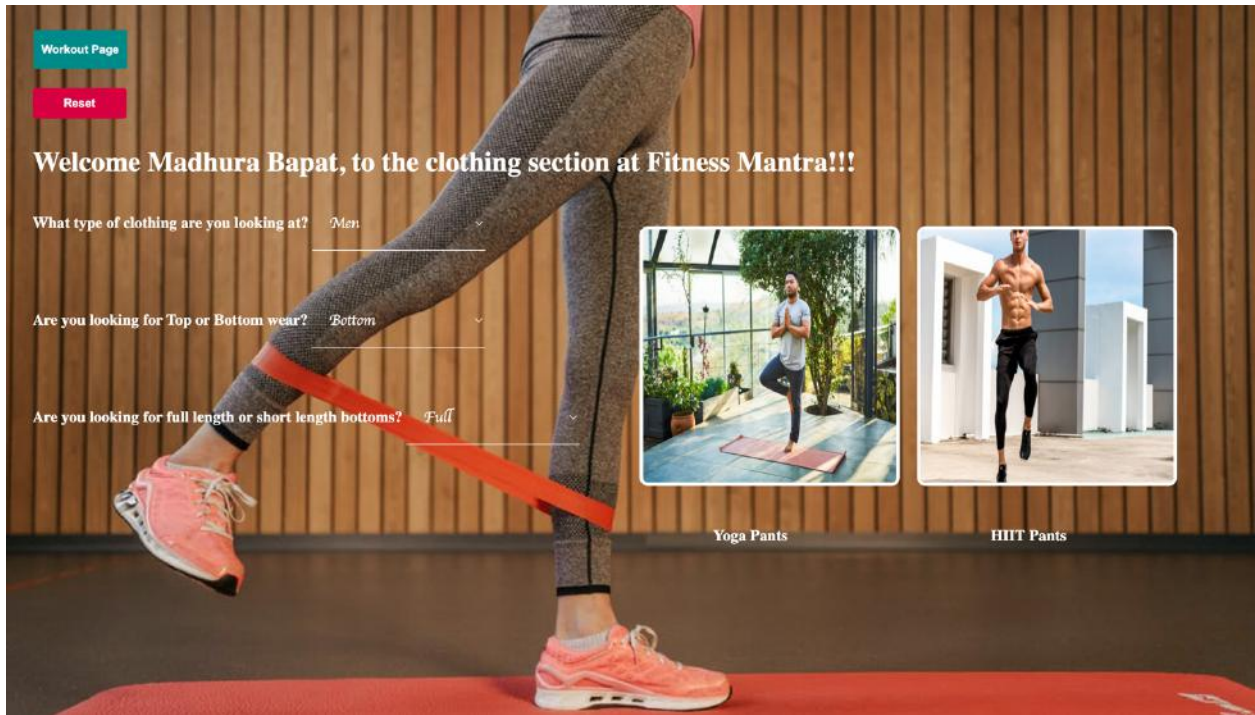
A) Men -> Top -> Sleeves



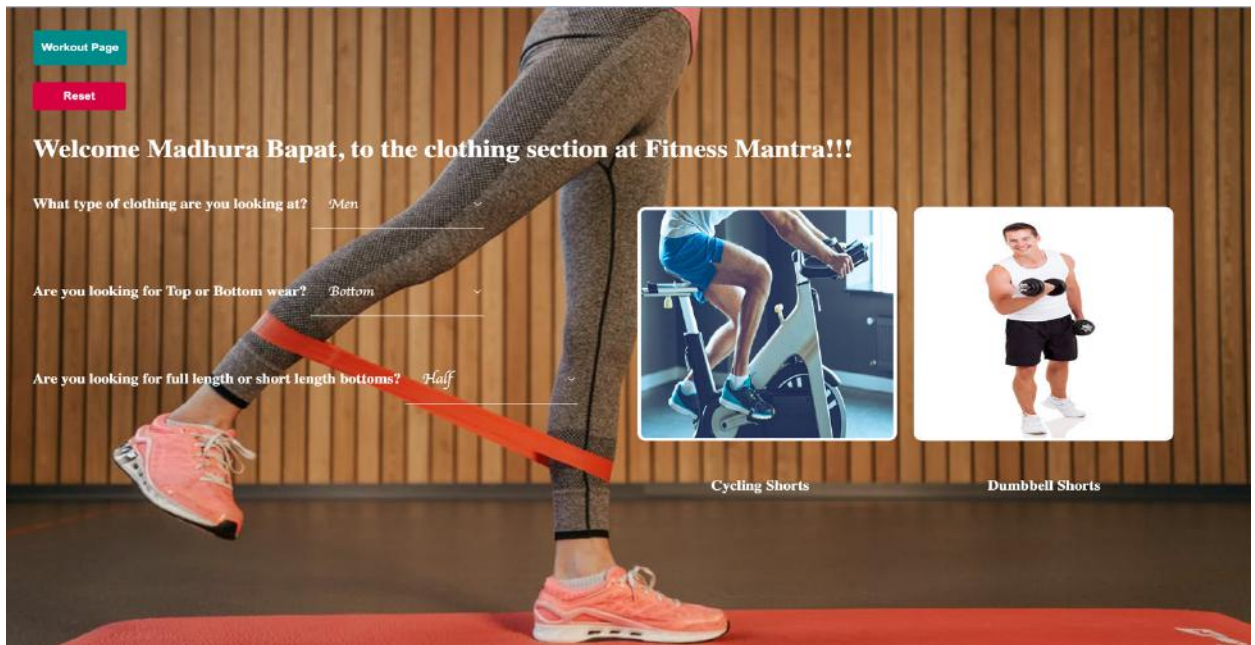
B) Men -> Top -> Sleeveless



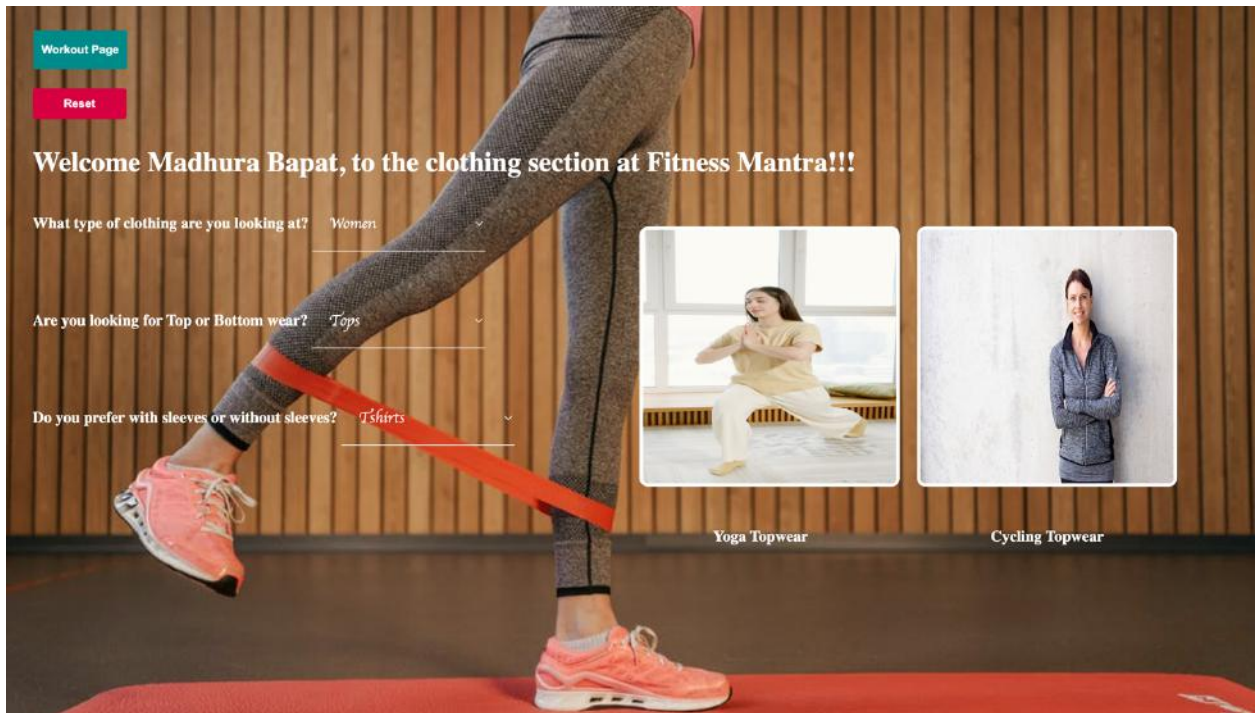
C) Men -> Bottom -> Full



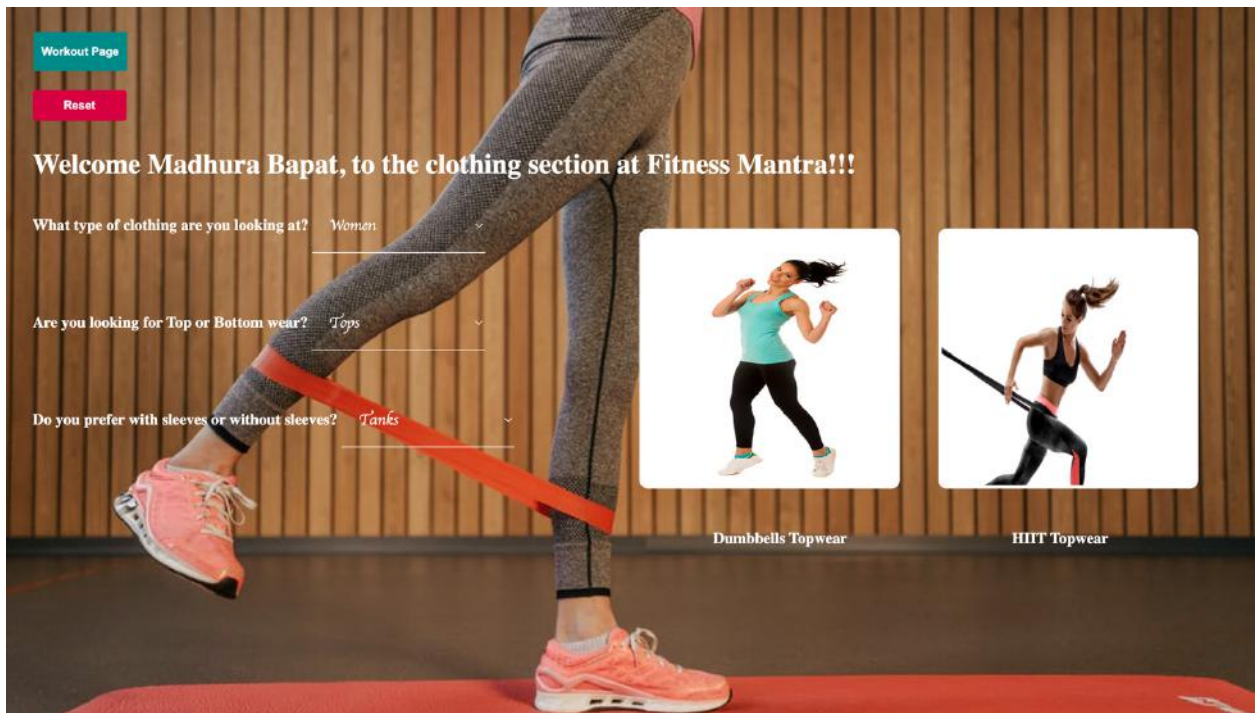
D) Men - > Bottom - > Half



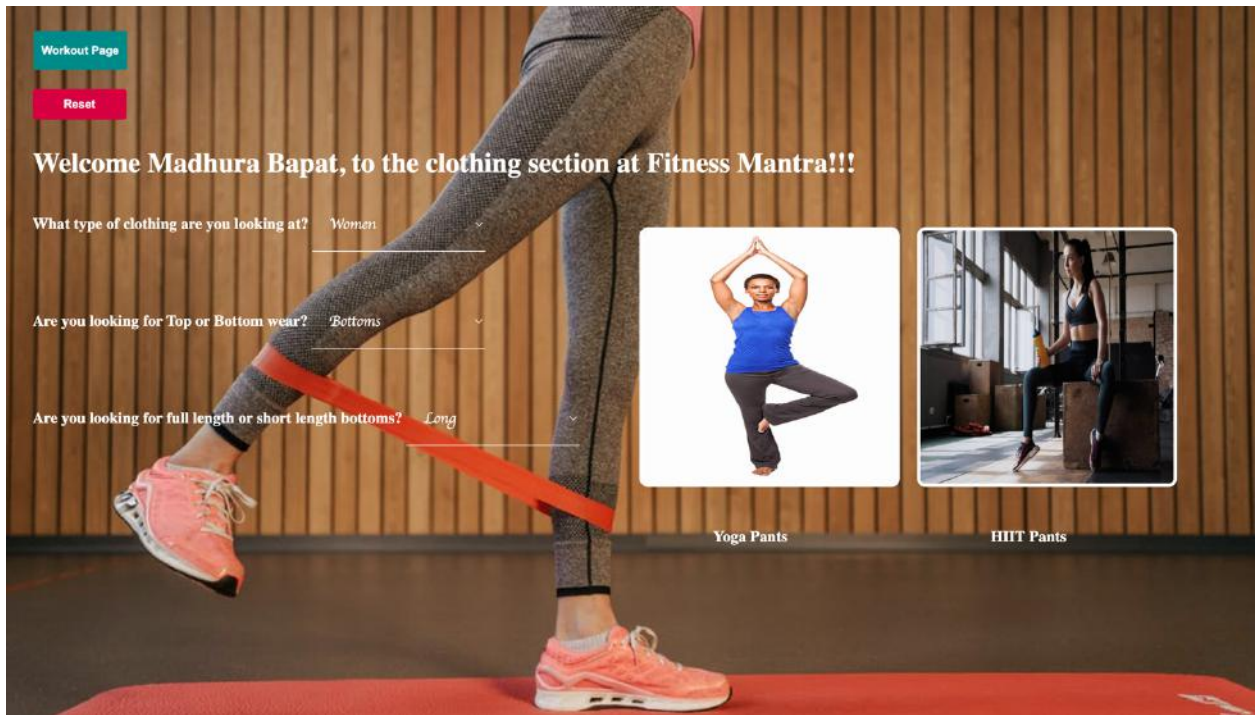
E) Women - > Tops - > Tshirts



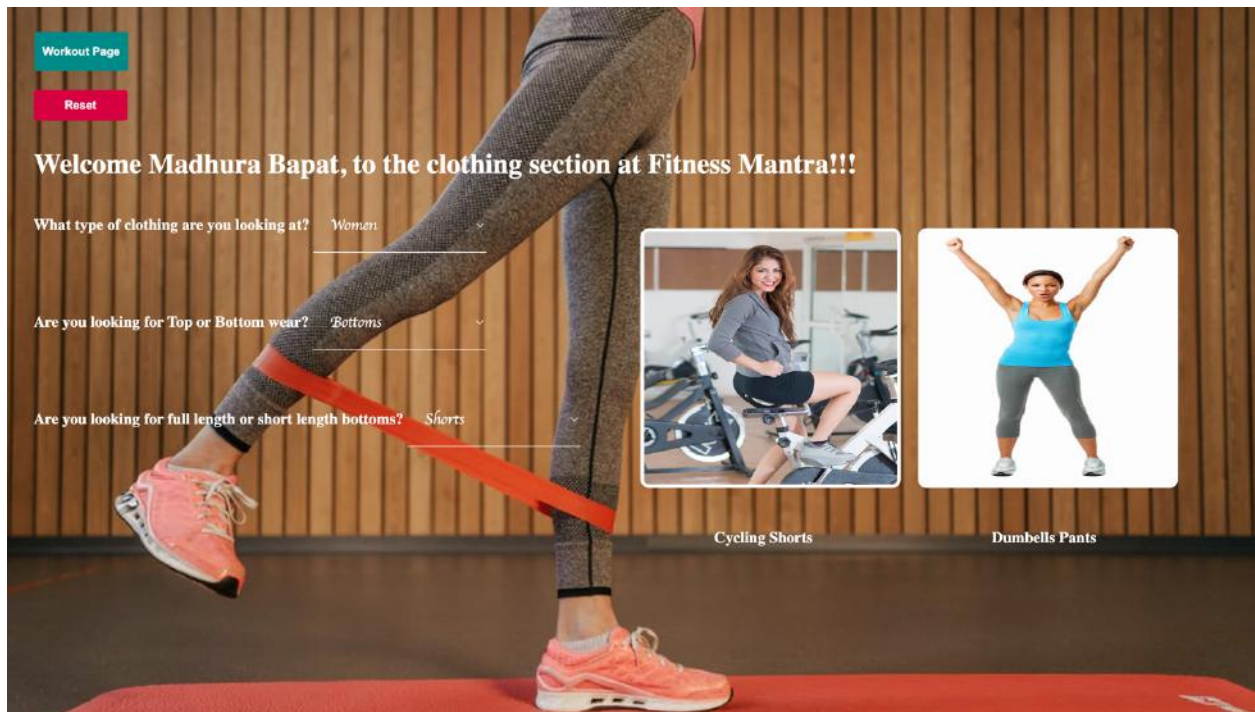
F) Women - > Tops - > Tanks



G) Women - > Bottoms - > Long



H) Women -> Bottoms -> Shorts



10. References

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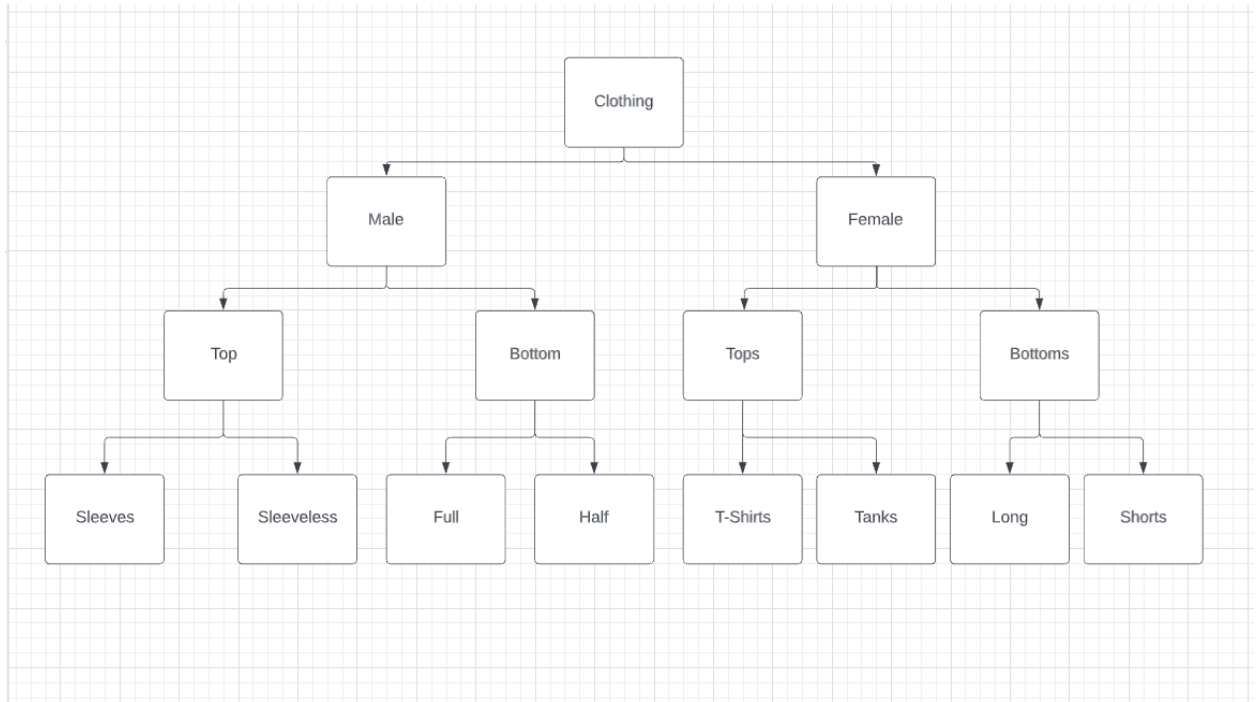
11. Links

1. <https://www.cdc.gov/coronavirus/2019-ncov/community/organizations/gym-employers.html>
- [2] <https://news.ontario.ca/en/release/1001366/ontario-further-strengthening-response-to-omicron>
- [3] <https://www.axios.com/omicron-threatens-new-years-gym-surge-a01ee2a4-9e66-403c-847c-e0608b32c53f.html>
- [4] https://covid.cdc.gov/covid-data-tracker/#county-view?list_select_state=all_states&list_select_county=all_counties&data-type=Risk&metric-cases=new_cases_week_over_week_percent_change

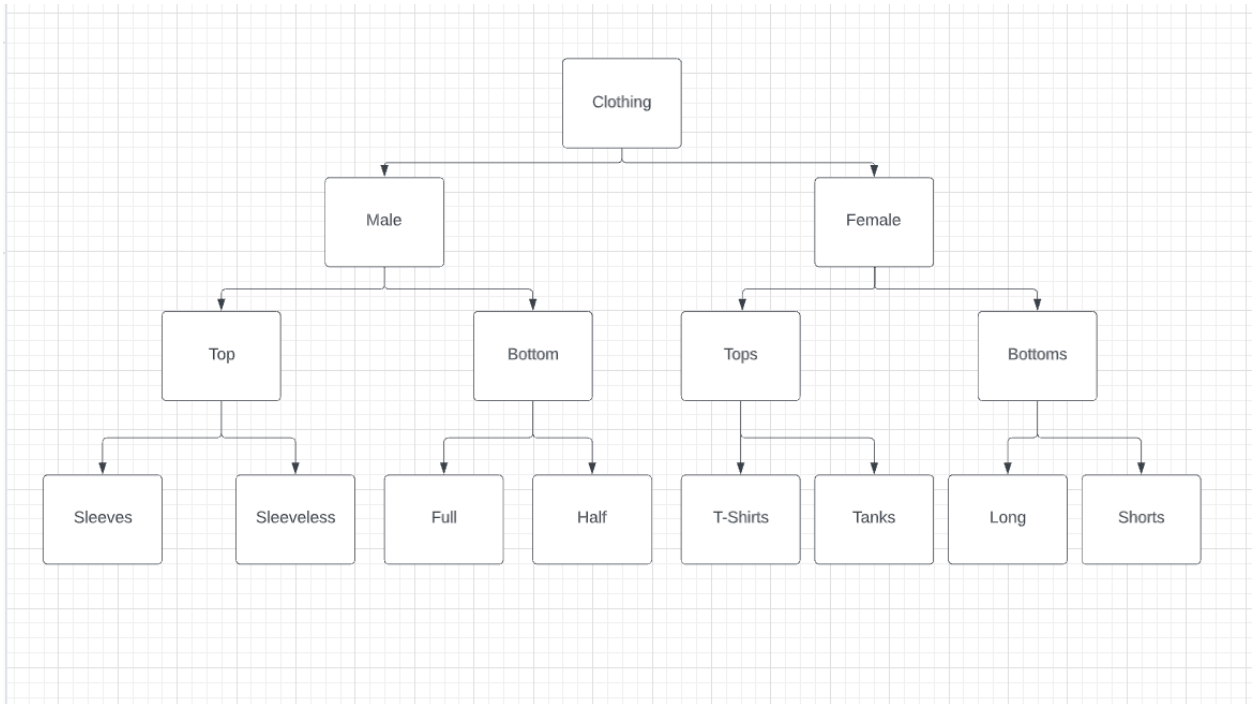
12. Appendix

1. Charts

1) Clothing Flow



2) Workout Flow



2. Dataset

1) Clothing Dataset


```
const clothingData = {
  "options" : [
    {
      "key": "Clothings",
      "option_1": "Men",
      "option_2": "Women",
      "description": " What type of clothing are you looking at? ",
      "depth":0
    },
    {
      "key": "Men",
      "option_1": "Top",
      "option_2": "Bottom",
      "description": " Are you looking for Top or Bottom wear? ",
      "depth":1
    }
  ],
}
```

2) Workout Dataset

```
const exerciseData = {
  "exercises": [
    {
      "key": "Workouts",
      "option_1": "Male",
      "option_2": "Female",
      "description": "Choose a workout style: ",
      "depth":0
    },
    {
      "key": "Male",
      "option_1": "With Equipment",
      "option_2": "Without Equipment",
      "description": "How do you prefer to exercise? ",
      "depth":1
    }
  ],
}
```

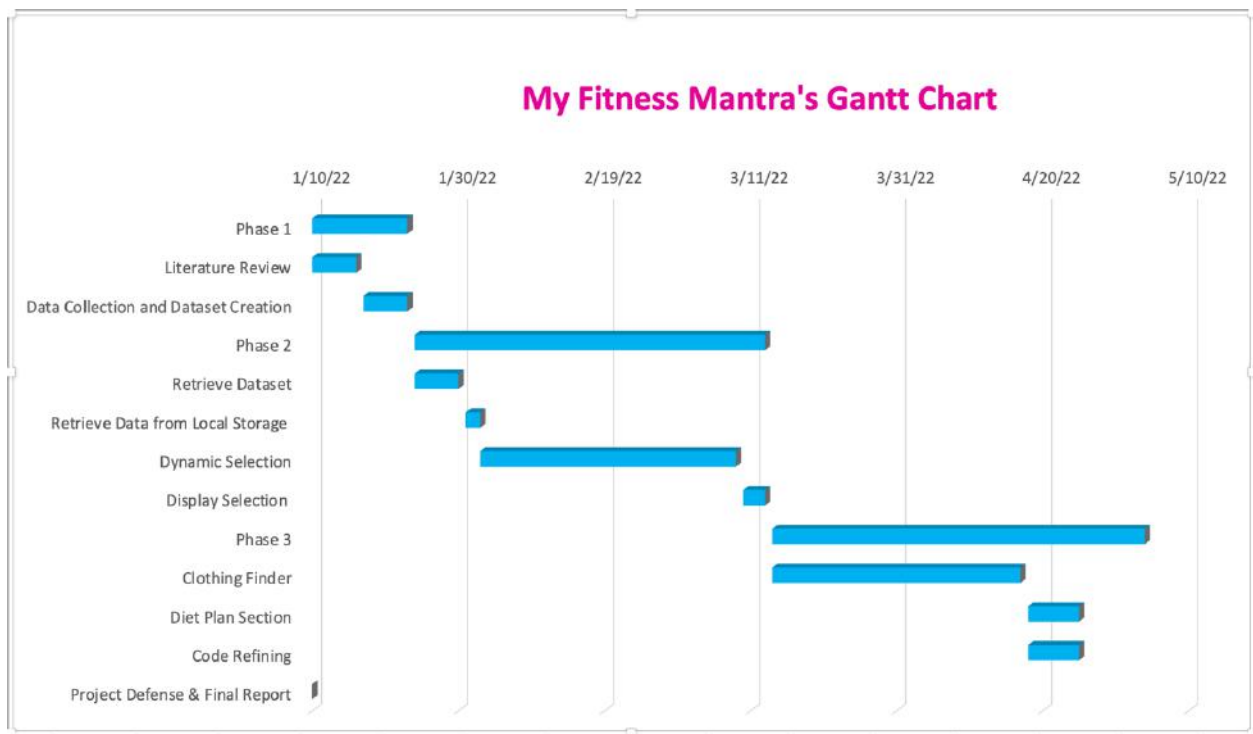
The backbone of this entire website is the dataset. The reason behind writing this line is because this website is completely dynamic, by dynamic it means it is easily convertible. The quick and easy transition feature made me choose JSON over other dataset options. It is easy to pick up by any developer who plans to work on this website furthermore. The transformation happens purely based on the dataset used. To make this happen seamlessly, the data set is created in JSON format. Herein, the very first thing in the dataset is the constant object, it stores all the information in key value pairs. This object remains unchangeable for any form of website the developer wants to change it to. For example, A fitness website can be converted to a restaurant website. It can be done by changing only the dataset values. To have a smooth transition the developer needs to observe the binary tree structure. As in, every key and value pair should be equally distributed for all the levels (i.e., depth) of the tree. This makes it equally weighted on both sides. Hence, rendering all the drop-down values appear correctly. Initially I had faced this challenge of rendering disrupted drop down values. Later, on researching I discovered unequally weighted trees are the root cause of this problem. To overcome this problem, I balanced out my tree at all the levels which overcame the disruption challenge.

3. Timeline

The following is the estimated timeline for this project:

Task Name	Start Date	End Date	Weeks
Phase 1	01/10/2022	01/23/2022	Week 1 – Week 2
Literature Review	01/10/2022	01/16/2022	Week 1
Data Collection and Dataset Creation	01/17/2022	01/23/2022	Week 2
Phase 2	01/24/2022	03/13/2022	Week 3 – Week 8
Retrieve Dataset	01/24/2022	01/30/2022	Week 3
Retrieve Data from Local Storage	01/31/2022	02/02/2022	Week 4
Dynamic Selection	02/02/2022	03/09/2022	Week 4
Display Selection	03/10/2022	03/13/2022	Week 8
Phase 3	03/14/2022	05/04/2022	Week 9 – Week 15
Clothing Finder	03/14/2022	04/17/2022	Week 9
Diet Plan Section	04/18/2022	04/25/2022	Week 14

Code Refining	04/18/2022	04/25/2022	Week 14
Project Defense & Final Report	04/26/2021	05/02/2021	Week 15



4. Minutes of the Meeting

1. The very first meeting of the Capstone was about discussing the project idea, what kinds of papers I come across, and how different my project is with respect to the ideas in the research paper. I also explained the project flow in detail and about what the website would look like and its functioning.

2. In the second meeting I showed the work I've done so far with data collection and dataset creation. I had also started working with fetching the dataset but I faced a challenge while displaying the values in an orderly manner. Therefore, I came up with a solution where I redesigned the Workout tree and made it equally weighted like a Binary Tree.

3. In this meeting I showed successful dataset retrieval and data display was as expected. Herein, my committee professors suggested me to search an alternative to the Pelton workout Cycle because not everyone could afford it

4. In this meeting I came up with an alternative to the Pelton Workout Cycle which was a Basic Workout that can be easily found in most households. The reason for searching Basic Cycle was that it doesn't come with any dumbbells. Therefore, now I had also changed the exercises that showed up for Cycling and Spinning classes. I came up with the two forms of exercises for both Male & Female which are as follows:

A) Basic Cycling

B) Advanced Cycling

5. By this time I had made the Clothing Finder Section Dynamic as well. The initial plan was to make the Workout Section Dynamic and to keep Clothing Finder and Diet Section static. However, on doing research I found out that there's a spread of clothes that are used for each form of exercise. Therefore, I immediately updated this big change that I'm doing to my website by making it more challenging to work on. On displaying both the workout and the clothing finder section, my committee professors suggested that I add some sort of instructions in order to differentiate between Workout and Clothing section Dropdowns. There's a possibility that the end user might get confused and think they might have to answer all the questions of the workout section in order to reach the clothing section.

6. To avoid the confusion, I developed Workout Page and Clothing Page differently so that it answers the following questions:

1) Are Workout and Exercise dropdowns linked to each other in any way? No

2) Is it mandatory to answer Workout dropdowns for a user to go through Fitness dropdowns? No

7. By this stage I had completed the dynamic selection and showed the code to the professors in Inspect Element as well as on the website. On this the professors suggested to remove the underscore in Options of Select and add the underscore to the Value, so that the website becomes more user friendly for visually impaired users and

also looks like nice more aesthetically but at the same time doesn't disturb the logic written for the Options of Select.

8. I incorporated the above feedback and displayed the dynamic dropdowns with the videos changing dynamically as well. To this I received feedback by the committee to add text below videos to represent what is the name of that exercise.

9. I incorporated the above feedback as a best practice not only for the Workout section but also for the Clothing Finder and the Diet Section.

10. By now I had three pages for my website which are as follows:

- 1) Home Page
- 2) Workout Page
- 3) Clothing Page

So, I had added the three buttons on workout and Clothing Page which are as follows:

1. Back Button
2. Clothing Button
3. Reset Button

To which my professors suggested me to change the Back button as Home Page Button, Workout Button that shows you are currently on the Workout Page and Clothing.

11. I incorporated all of the above feedback and then I received additional feedback on dividing the header section of the page with Website Name and the Menu Bar structure beneath it. Also, the reset Button should be shifted below Thank You text.

12. I worked on the above feedback as well as showed the CSS applied to all of the pages.

This is when my professor was able to see a line that was repeating on the Home Page and also, they suggested me to add an opaque block to user inputs on the Home Page, so that the text is visible even if the background image is changed

13. I fixed the line that repeated and added the changes that had been told to me. I also showed the Email functionality and its code in JavaScript. For which I was asked to write it as a proof of concept since the Fitness Mantras Gmail credentials aren't encrypted. It can only be encrypted if the code is developed in PHP and my code is in JavaScript. Hence, JavaScript code cannot be encrypted.

14. I commented the Email functionality and in this meeting we discussed about the Final Report and I was asked to start working on the Final Report moving ahead

15. I sent the Final Report draft for review and then we discussed the defense date and what is expected out of me in the Capstone Defense.

16. I created a Capstone Defense Presentation, and received a few changes in the Final Report presentation.

17. I defended my Project on 20th April and also sent the revised Capstone Final Report for review.