The Susruta Project

1. Project Summary

The name of the project "The Susruta Project" is to commemorate Susruta, one of the earliest wellness influencers that promoted exercise to stay healthy. The project aims at building a healthy lifestyle community by providing users a platform to have a shared community for their workout routine and it also encourages them to add their daily recipes to their workout camp.

Specifically, users would be able to search for videos ranging from HIIT&crossfit, aerobic&cardio, yoga&pilates, to stretching&balance. With the application, they would have access to workout videos made by professional trainers. There is also a video section for recipes, and users can search for recipe videos based on workout types. Besides, the application offers forums for the users to discuss their exercise experiences to either motivate other users to watch the same video/join the same channel/list some heads-ups to which type of workout might not be ideal for some particular groups. Users can also share their complementary "what they eat for the day" recipes and their workout practice to promote healthier lifestyles for the whole community.

2. Description

The application aims at promoting a healthier lifestyle for the public. Exercising regularly, eating healthy, and maintaining a healthy weight are the major ways to avoid diseases such as diabetes, cancers, and cardiovascular diseases, which are some of the major causes of high mortality rates worldwide. In modern society, however, people are becoming more and more inactive, which largely contributes to an unhealthy lifestyle and various health problems. Some of the major reasons might be pointing to a lack of time, lack of social support, lack of safe spaces to exercise, and poor street infrastructure. People would rather sit on the sofa scrolling through TikTok or watching YouTube/Netflix/HBO/HULU than engage in outdoor activities. The development of the Internet and social media has brought people closer than we can ever imagine, but to use technology only as a way of entertainment would be prosaic. Nonetheless, the application tackles tons of the obstacles that prevent people from engaging in daily exercises.

Within the healthy lifestyle community, the lack of access to a safe and affordable workout would be no more a concern. There would be numerous workout videos on YouTube that are categorized by types and trainers for people to choose from; as long as one has Internet access, one will have access to professional trainers and workout buddies worldwide. Some of the features such as total-excise-hour-ranking and most-liked recipes would further motivate individuals to engage in a healthier lifestyle. Moreover, the application is dedicated to bringing people together to build a strong community but also guarantees customized experiences for everyone. Whether users are experts in sports or they are novices in sports, they are free to explore a wide range of workout types, decide on their schedule and progress and they will find a pace that they feel the most comfortable with to keep going.

3. **Usefulness**

The application is useful in its wide variety of workout videos, interactive user experience, and user data records. If the user is looking for a variety of types of workouts, there is no need to browse YouTube forever and our website is the only thing they need. The forum can also help build connections between individuals and keep them motivated at the same time. They can share their workout experience, make workout friends, and help each other stay motivated by setting short-term or long-term goals. Users would largely benefit from their peers they can come up with workout recipes that can potentially be popular among the community.

There are similar workout clubs such as apple fitness, Nike Training Club, yoga app Glo, Home Workout app, etc. The application mentioned above either provides users with workout records only (workout time, heart rate, blood pressure), such as apple fitness, or they offer limited types of workouts, with cardio and yoga as two popular examples. Besides, most of the applications require users to subscribe or sign up for membership at a certain point to unlock more workout videos, resources, or new features.

Compared with the applications mentioned above, our application gives users free and numerous open sources of professional training videos. Members of our community will only need to sign in with their email and they will find different categories of workouts throughout their experience without having to switch apps to engage in different exercises. Different from a subscription or membership method, members of our community will not feel stressed or obligated to catch up with the workout videos, they can keep their own pace however comfortable they feel. Another feature on our website that distinguishes it from other applications is the workout recipe-sharing feature. We believe that a healthy lifestyle depends on the quality of exercise but more importantly on one's diet. Therefore, having people voluntarily share their workout recipes with the community and posting weekly recipe recommendations will help encourage healthy living methods like nutrition, fitness, and natural health care. Last but not least, this website has public forums where people can share their experiences and thoughts on their workout journey, which is an interactive feature that many of the other apps don't deliver.

4. **Realness**

The data for this project includes URLs of YouTube workout videos (based on YouTube video links), video titles, the time length for each video, the date when the video was released, and views of each video. There would be channel labels based on workout types and trainers' names. There is also the number of subscribers for each channel that contains a video, which users can use as a filter. Also, for users who are interested in recipes for specific kinds of workouts, there will be a different section for them to find relevant recipe videos. For this

section, we will include recipe videos for different types of workouts, and users can filter by video length, date, and views.

We would get the data from YouTube using the YouTube API and the web scraping technique. In terms of the workout videos, there would be four types of workout for users to filter, including HIIT&crossfit, aerobic&cardio, yoga&pilates, and stretching&balance. Youtube channels for HIIT&crossfit include *CrossFit®*, *Juice & Toya*, and *growingannanas*. Channels for aerobic&cardio include *Aerobic Workout*, *Hai Anh Aerobics*, and *Aerobic dance*. Channels for yoga&pilates include *Yoga With Adriene*, *Boho Beautiful Yoga*, and *YOGABODY*. Channels for stretching&balance include the *Stretching Channel* and *AskDoctorJo*. In terms of the workout videos based on trainers, channels include *Move With Nicole, Pamela Reif, Ashley Freeman, Mady Morrison,* and *Daniela Suarez* (there might be more channels included).

For recipe videos, there would also be four types (HIIT&crossfit, aerobic&cardio, yoga&pilates, and stretching&balance) of video for each type of workout. Data will be based on different YouTube channels, such as *Yoga With Adriene* and *Healthy Recipe Channel*, which contain videos about recipes for different types of workouts.

5. Functionality

The data stored for the workout section include URLs of YouTube workout videos, video titles, the time length for each video, workout type (HIIT&crossfit, aerobic&cardio, yoga&pilates, and stretching&balance), trainers' names (*Ashley Freeman, Mady Morrison*, etc.), the number of subscribers of the channel that contains the video, and the number of views.

Two tables store the data, with one based on workout type and one based on trainers. The first table based on workout type contains attributes of video title, workout type, video link, date, length, channel, the number of subscribers of the channel, and the number of views. The second table contains attributes of the video title, trainer (also the channel name), video link, date, length, the number of subscribers of the channel, and the number of views. All of the data are from YouTube by utilizing the YouTube API. The workout type in the first table would be manually added after getting the data.

For the recipe section, the data stored include links that lead to recipe videos, video titles, the time length for each video, workout type (HIIT&crossfit, aerobic&cardio, yoga&pilates, and stretching&balance), and the number of views. All of the data are stored in one table, which is from YouTube by utilizing the YouTube API. The workout type would be assigned to each video based on the keywords of the video titles.

In addition to the video search, there would be forums on the website for users to share "what they eat for the day" recipe and their workout practice to promote healthier lifestyles for

the whole community. This involves a table that stores the data about the post title, post content, the date of a post, and the username. Last, there will also be a table that stores the user information, including username and email address. New signup from a user would add a record to the table.

In terms of the functions of the websites, users can use them to search for a workout video based on keywords of video titles. They can also use the filters for the workout video section and recipe video section to find videos they are interested in. Users can also insert new records (rows) to the database that stores the information of the forum by making a new post. If they post a new post, a new record about the post title, post content, the date it is posted and the username will be recorded. In addition, they can delete a record of the table that stores the information of the forum by deleting a post they already posted. They can also modify the database by editing what they have posted.

Functions for each section are listed below. Generally, the search function for workout videos and recipe videos is relatively more complex because it involves filtering based on different attributes, such as workout type, views, date, and video length. Comparatively, the functions of creating, deleting, and updating for the forum are simple, which do not involve filtering.

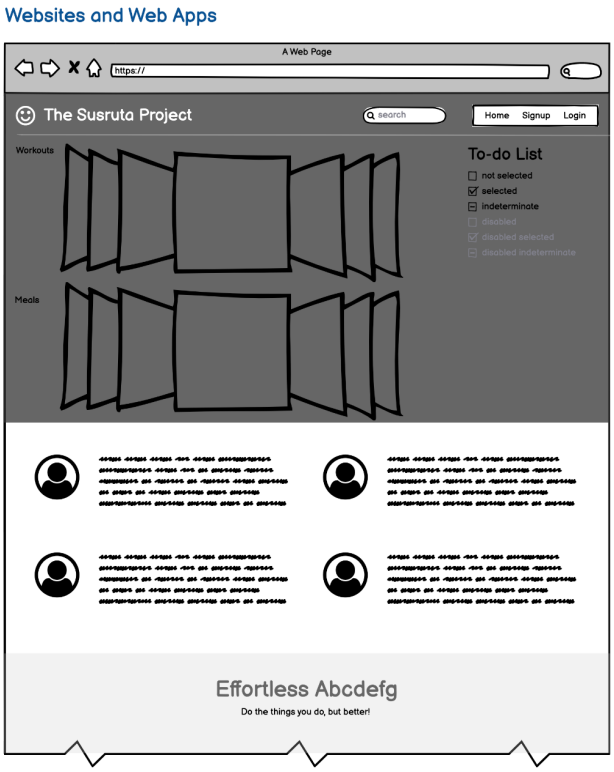
- Workout video
    - Search: users can search workout videos based on keywords of video titles, or use the filters to find videos they are interested in

- Recipe video
    - Search: users can search workout videos based on keywords of video titles, or use the filters to find videos they are interested in

- Forums
    - Create: users can post new posts on each sub-community of the forum
    - Delete: users can delete their posts
    - Update: users can modify their posts
    - Search: users can search other posts written by other users

One creative component that can improve the functionality of the application is the inclusion of cover flow, which is an animated 3D virtual environment for displaying graphic elements. With cover flow, users will be able to see the covers of the most popular (most viewed) videos for workouts and recipes on the main page. This will be realized by filtering the database based on views.

6. A low-fidelity UI mockup



7. Project work distribution

- Data collection and labeling: Tianhong Yin(tyin7), Ella Zhang(yimuz2)
- Creative component(cover flow): Nanxi Shan(nanxis2), Ander Liu(anderdl2)
- Demo and Report: Tianhong Yin(tyin7), Ella Zhang(yimuz2), Nanxi Shan(nanxis2), Ander Liu(anderdl2)
- Functionalities:
    - Workout video: Ander Liu(anderdl2)
    - Recipe video: Tianhong Yin(tyin7)
    - Forums: Ella Zhang(yimuz2), Nanxi Shan(nanxis2)
- Backend systems:
    - HTML+CSS: Nanxi Shan(nanxis2)
    - Ajax Javascript: Ander Liu(anderdl2)
    - SQL syntax: Tianhong Yin(tyin7), Ella Zhang(yimuz2)