Team 7

Fitness Tracker Application

Team details:

Team Members:

Sandeep Reddy Salkuti – sswf7@umsystem.edu

Sumanth Medavarapu – smhqb@umsystem.edu

Harika Gurram – hghb6@umsystem.edu

Navya Yarlagadda – nybgc@umsystem.edu

Project Story and its details:

Story of the project:

We are going to build fitness tracker application, where we have sign up page, sign in page, Exercise selection, Timer functionality, Previous exercise tracker etc., where we can able to start exercises, pause them, cancel them and view past exercises, can watch you tube videos fetched related to exercises, can get more information from welcome screen etc. and also use a server behind the scenes to synchronize all that events across users.

We use firebase behind the scenes, a service where we can store and synchronize data in real time. Will use angular fire a package that enables working with real time data base, firebase database. Will also work on NGRX angular advanced state management system and use angular material for component designs.

Who are the characters in the story?

Our application helps for the people who are interested to reduce weight and stay fit by practicing exercises.

What happens?

Exercise is one of the most powerful tools we have for staying physically and mentally healthy. Social distancing, self-quarantining, and the closure of many gyms have made it harder to exercise. As many of our daily routines remain restricted during the coronavirus pandemic, it can be difficult to find the motivation to exercise. But this application tips can help keep you active and healthy during this

difficult time.

When does the problem exist?

This problem exists from beginning but with the challenges of working from home and limited access to fitness facilities, people are finding it hard to stick to a workout routine at home.

Where does the problems are happening?

Each corner in the world where maximum of human beings are facing problems in their fitness and finding ways to work with them.

Why: During pandemic, most of the people are restricted to home and lost their fitness. Suddenly people started doing exercises remotely. But there are no other fitness applications that give full guidance of exercises for free. Even some applications offer for free they provide only basic exercises but not complete guidance.

So, we are developing a fitness application which provides guidance from basic exercises to master level for free amount and easy access without facing any navigation issues, this mainly helps for the people who are not willing to pay but maintain their fitness.

How: By providing the ways to do different types of exercises as per user customizations, by providing beautiful features to track their exercise**.**

Data and Details:

Signup Data:

In this module we are collecting user details namely:

All the fields are designed using angular material forms and hints, errors are populated once user clicks on any field and moves out.

Name: This field asks to enter username

Birthdate: This fields asks to enter user birth date we are displaying calendar where current date minus 18 years is given. So that people with 18 years plus can only signup the application.

Telephone Number: A 10-digit telephone number needed to be entered in input box.

Gender: User can select gender from the dropdown

Email: User need to enter their email so it will verify whether it contains @ in the email or not and throws error if it is invalid and as well displays hint once user clicks on this field. This is required field.

Password: User need to enter 6 characters long password. If it doesn't contain the length, then throws an error. This is required field.

Submit: Until all required fields are filled in the form this button won't be enabled. Upon clicking submit it saves user email and password to firebase to check user authentication later.

Login Data:

In this page user need to enter his email and password which has been created while doing sign up to the application. If user enters some wrong credentials, then popup will be displayed for some time with error message. Data from firebase is fetched and authenticated in the module.

Exercise Data:

Once the user has login, he will be having two options in the application which are New Exercise and Past Exercises. Once the user has selected a new exercise, he will be having an option to select what kind of exercise he wants to do.

1) **New Exercise:** We have given 4 options (Crunches, Touch Toes, Side Lunges, Burpees). User can start the exercise by selecting it from dropdown. The exercises in the dropdown are fetched from firebase with associated details like duration of exercise, calories burned by doing the exercise etc.

2) **Past Exercise:** Once user clicks on this tab, they can able to see the past completed exercises with all complete details like on which date they done the exercise, calories, duration, status of exercise. All these data are fetched from firebase under his login id.

Videos Data:

Integrating YouTube data API in angular:

- Firstly, we need to enable YouTube Data API v3 in Google Cloud Platform
- Next select a project and create API key and use it in the project.
- Below are some of the modules used:
    1. HttpClientModule
    2. Ngx-spinner: used for displaying spinner while videos are being fetched from YouTube spinner will be displayed on screen.

How YouTube videos fetching API endpoint looks like:

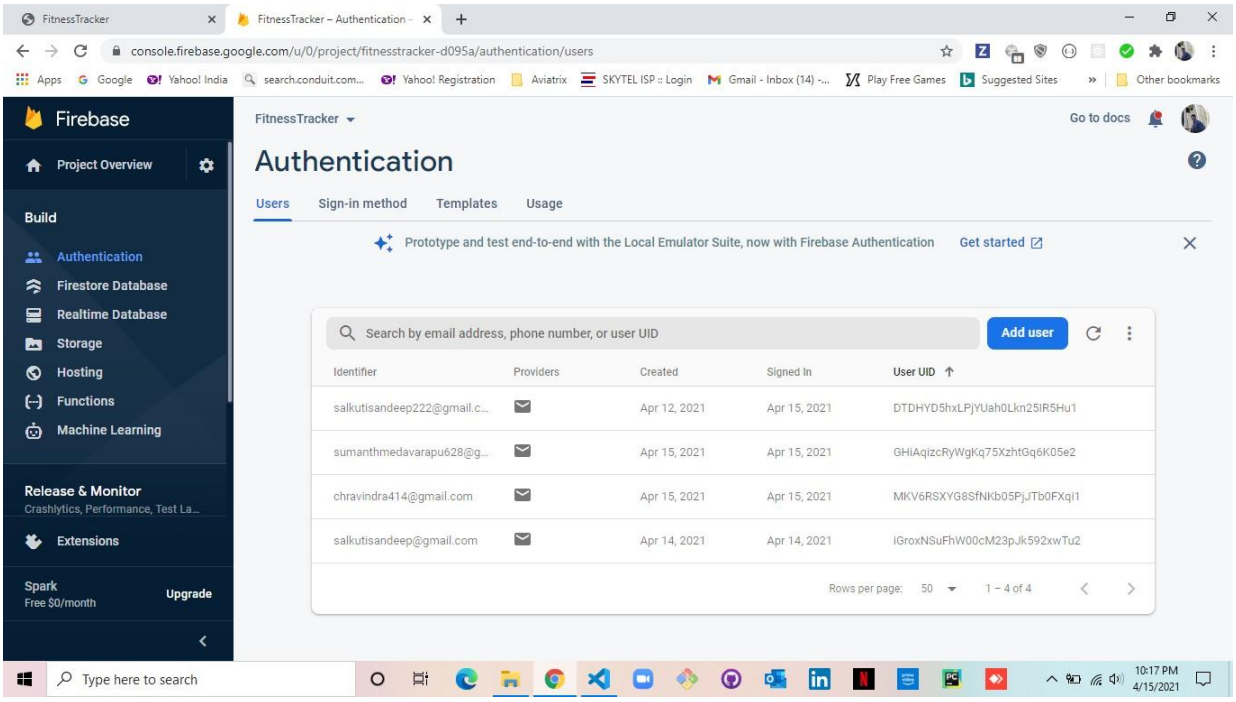
HTTP request - GET https://www.googleapis.com/youtube/v3/videos

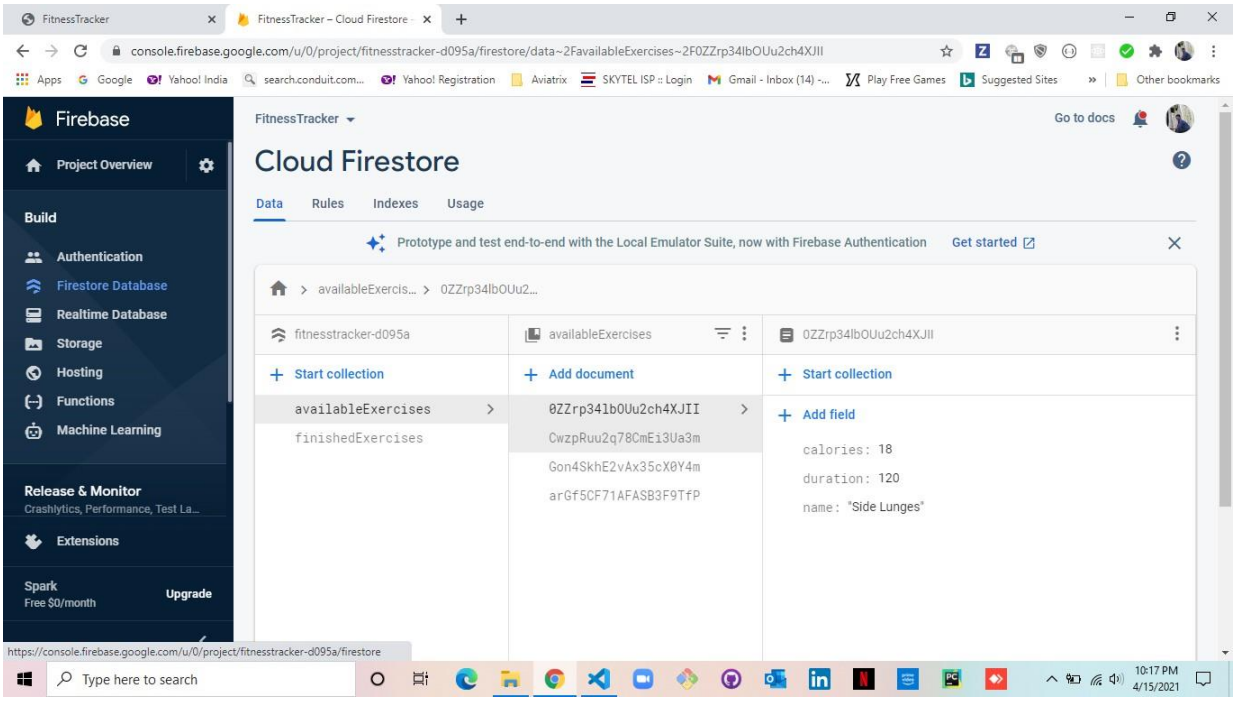
Parameters: chart (It identifies the chart we want to retrieve where it accepts content region and video category)

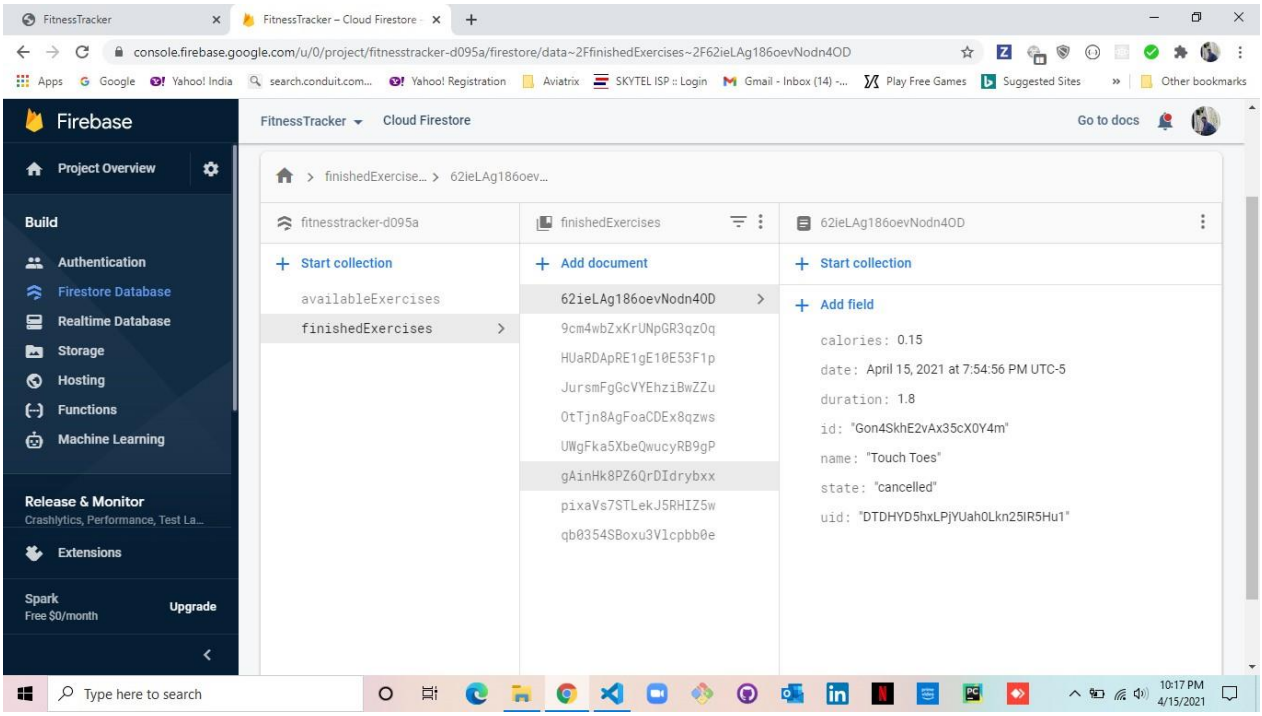
Id (It specifies the list of videos id for the given resource)
myRating (It return the video liked or disliked by user)
we have other optional parameters like region code, videoCategoryId, maxResults, part etc.


```
{
  "kind": "youtube#videoListResponse",
  "etag": "CCqIKdRU3jS4p8Qw75tzahunI0g",
  "items": [
    {
      "kind": "youtube#video",
      "etag": "3d3h9Omkqtg9jzv2KbTg93CzxzI",
      "id": "OvVj9LfCJjE",
      "contentDetails": {
        "duration": "PT1H9M38S",
        "dimension": "2d",
        "definition": "hd",
        "caption": "false",
        "licensedContent": false,
        "contentRating": {

        },
        "projection": "rectangular"
      }
    }
  ],
  "pageInfo": {
    "totalResults": 1,
    "resultsPerPage": 1
  }
}
```

Firebase data:

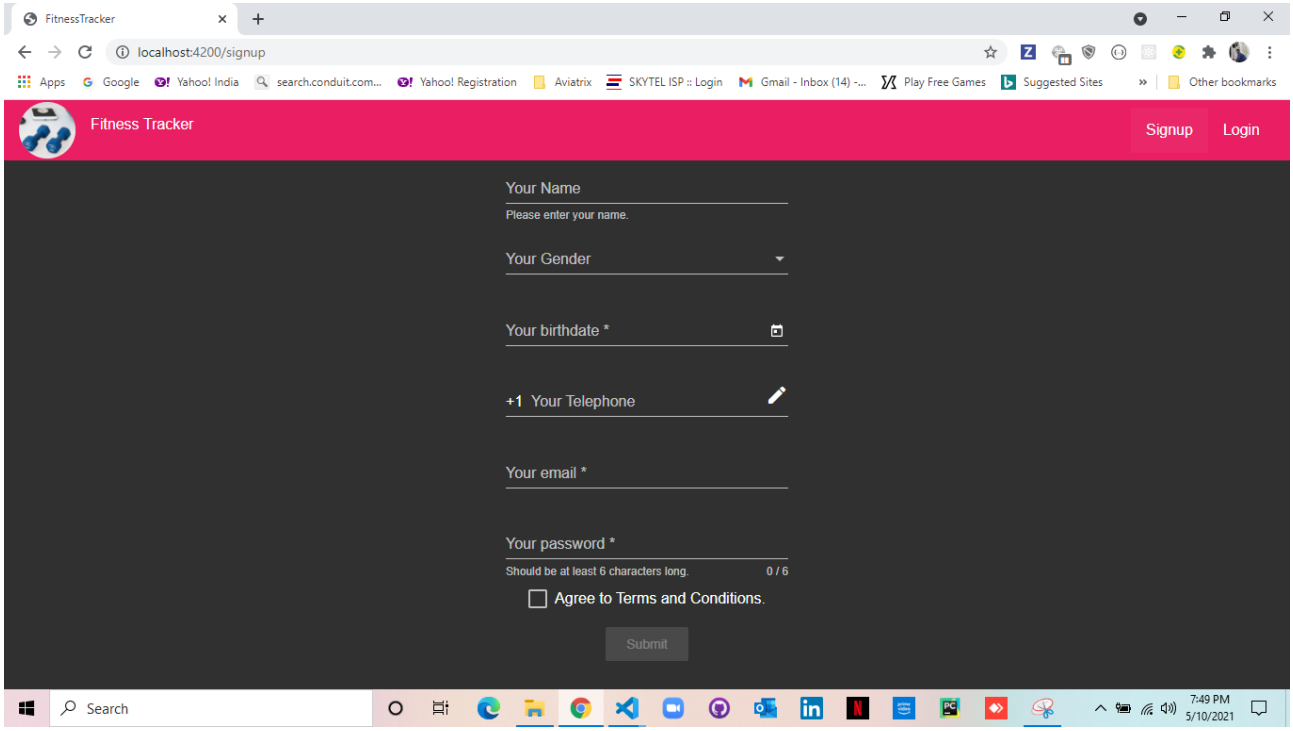




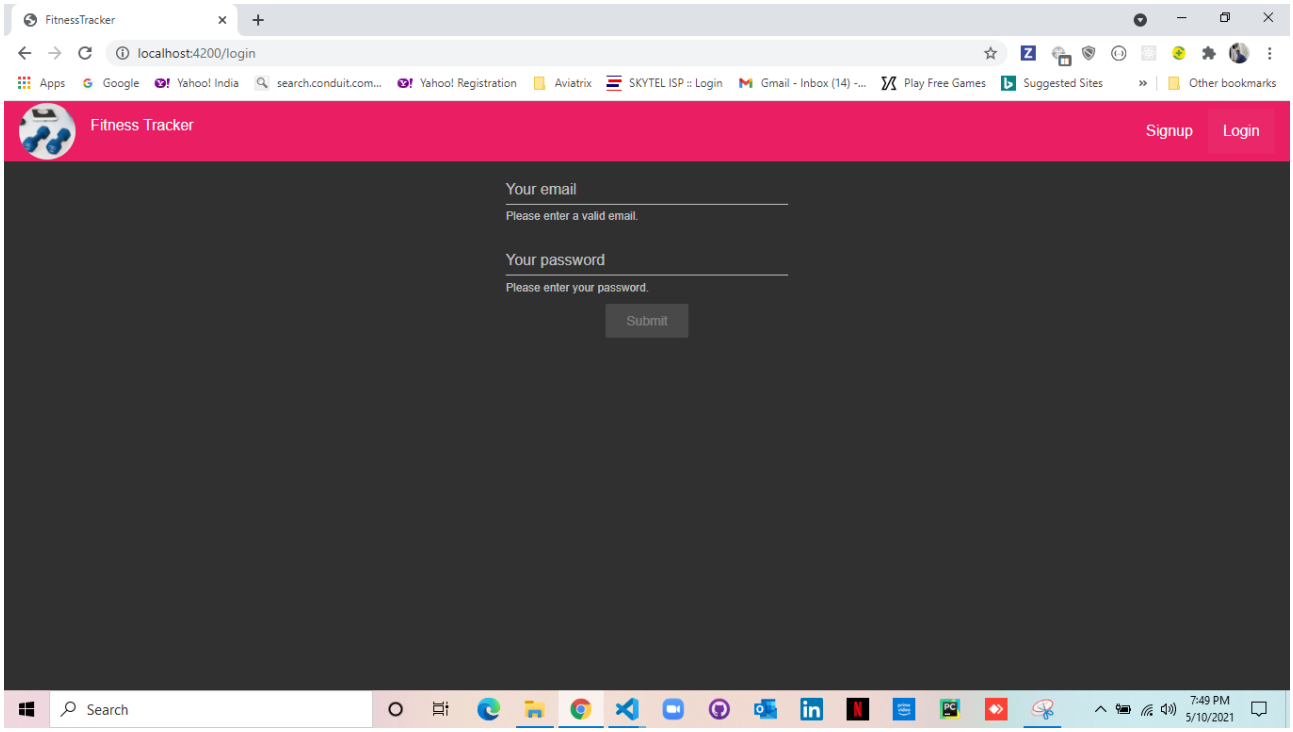


Working screens from project:

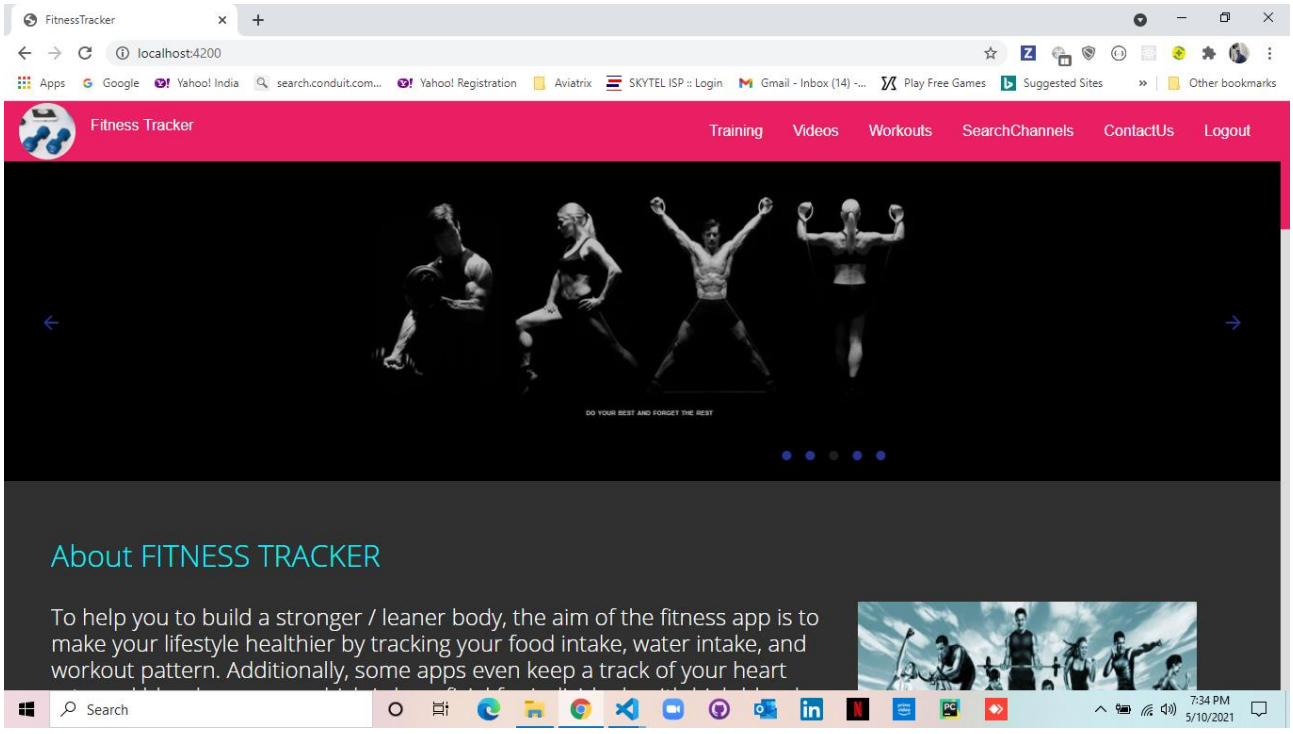
Signup Page for the Application

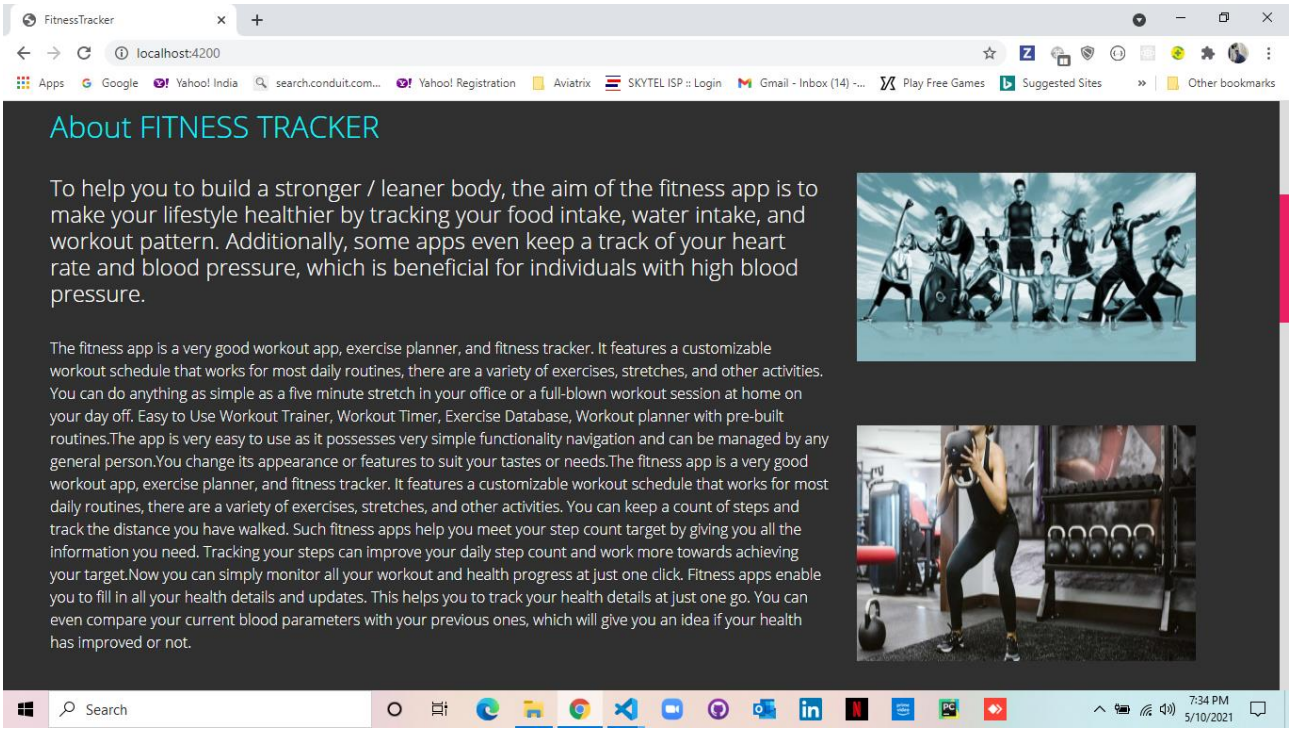


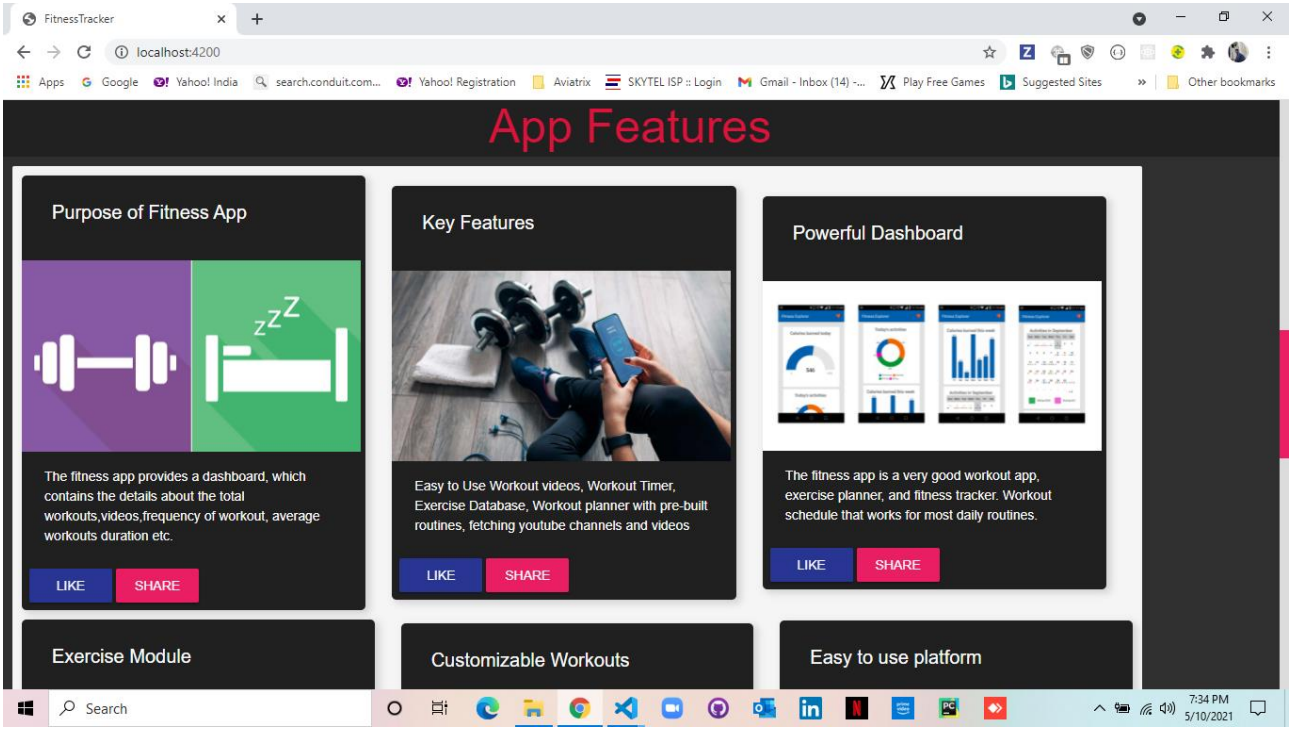
Login Page for the Application

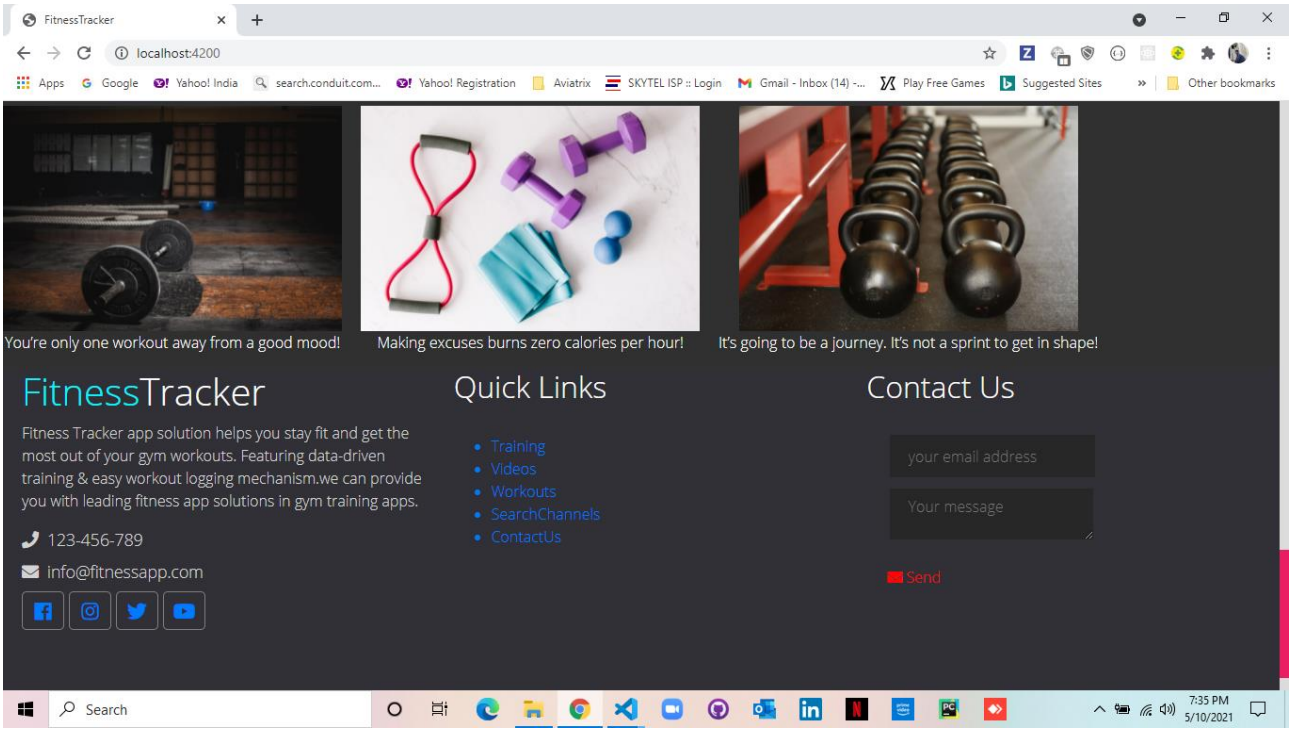


Landing Page for the Application

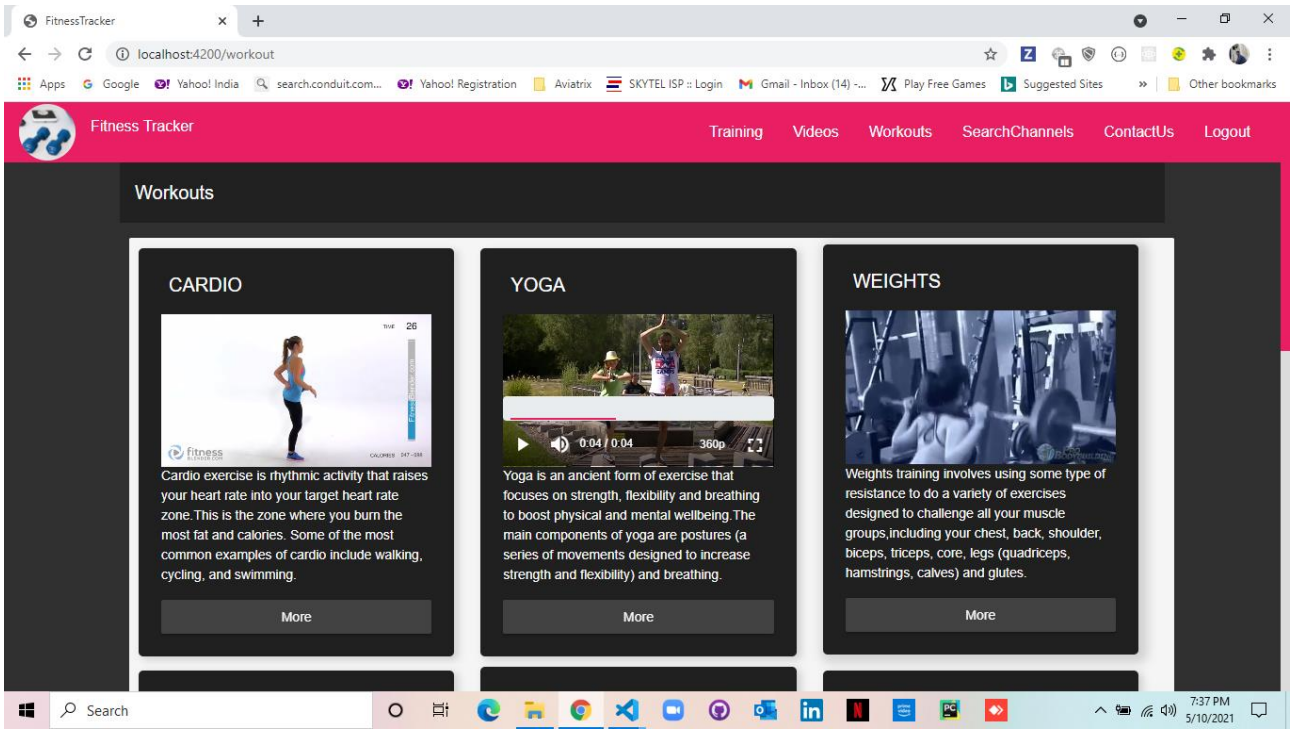



FitnessTracker
localhost:4200
About FITNESS TRACKER
To help you to build a stronger / leaner body, the aim of the fitness app is to make your lifestyle healthier by tracking your food intake, water intake, and workout pattern. Additionally, some apps even keep a track of your heart rate and blood pressure, which is beneficial for individuals with high blood pressure.
The fitness app is a very good workout app, exercise planner, and fitness tracker. It features a customizable workout schedule that works for most daily routines, there are a variety of exercises, stretches, and other activities. You can do anything as simple as a five minute stretch in your office or a full-blown workout session at home on your day off. Easy to Use Workout Trainer, Workout Timer, Exercise Database, Workout planner with pre-built routines.The app is very easy to use as it possesses very simple functionality navigation and can be managed by any general person.You change its appearance or features to suit your tastes or needs.The fitness app is a very good workout app, exercise planner, and fitness tracker. It features a customizable workout schedule that works for most daily routines, there are a variety of exercises, stretches, and other activities. You can keep a count of steps and track the distance you have walked. Such fitness apps help you meet your step count target by giving you all the information you need. Tracking your steps can improve your daily step count and work more towards achieving your target.Now you can simply monitor all your workout and health progress at just one click. Fitness apps enable you to fill in all your health details and updates. This helps you to track your health details at just one go. You can even compare your current blood parameters with your previous ones, which will give you an idea if your health has improved or not.
Search
7:34 PM
5/10/2021

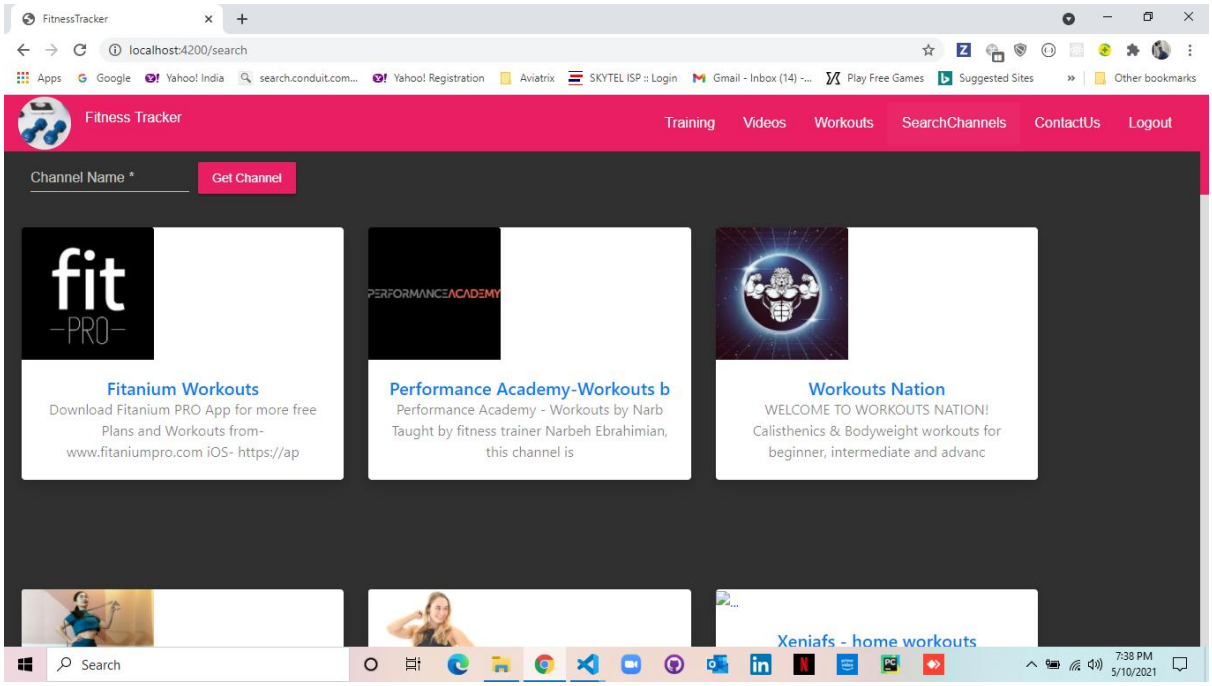

FitnessTracker
localhost:4200
App Features
Purpose of Fitness App
The fitness app provides a dashboard, which contains the details about the total workouts,videos,frequency of workout, average workouts duration etc.
LIKE
SHARE
Key Features
Easy to Use Workout videos, Workout Timer, Exercise Database, Workout planner with pre-built routines, fetching youtube channels and videos
LIKE
SHARE
Powerful Dashboard
The fitness app is a very good workout app, exercise planner, and fitness tracker. Workout schedule that works for most daily routines.
LIKE
SHARE
Exercise Module
Customizable Workouts
Easy to use platform
Search
7:34 PM
5/10/2021



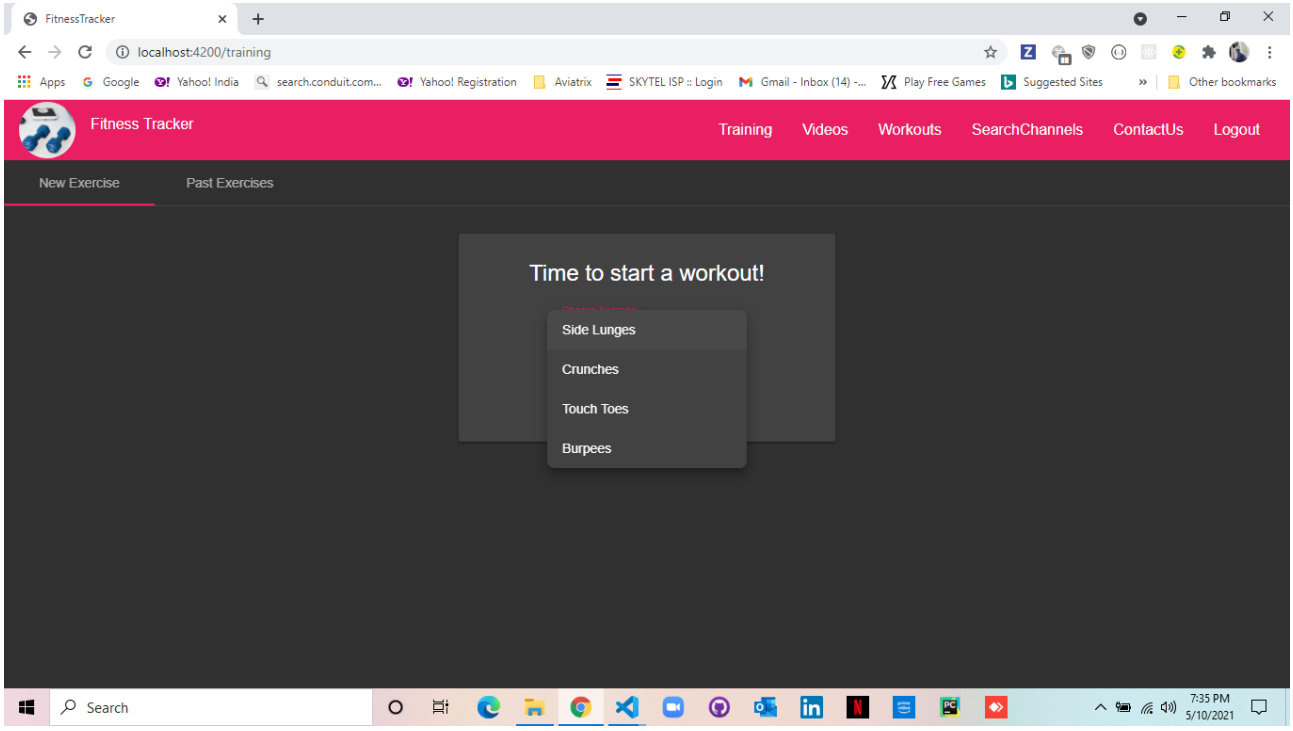
Workouts Page for the Application



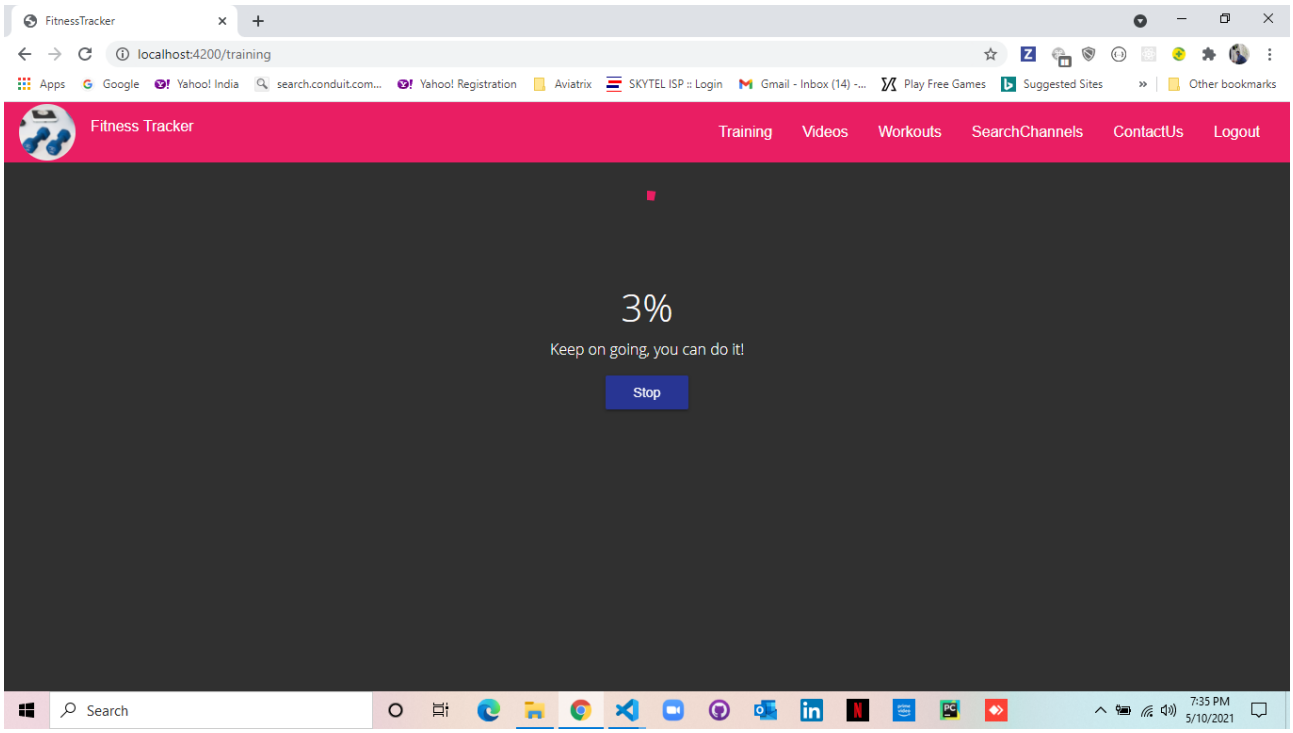
Search Channel's Page for the Application



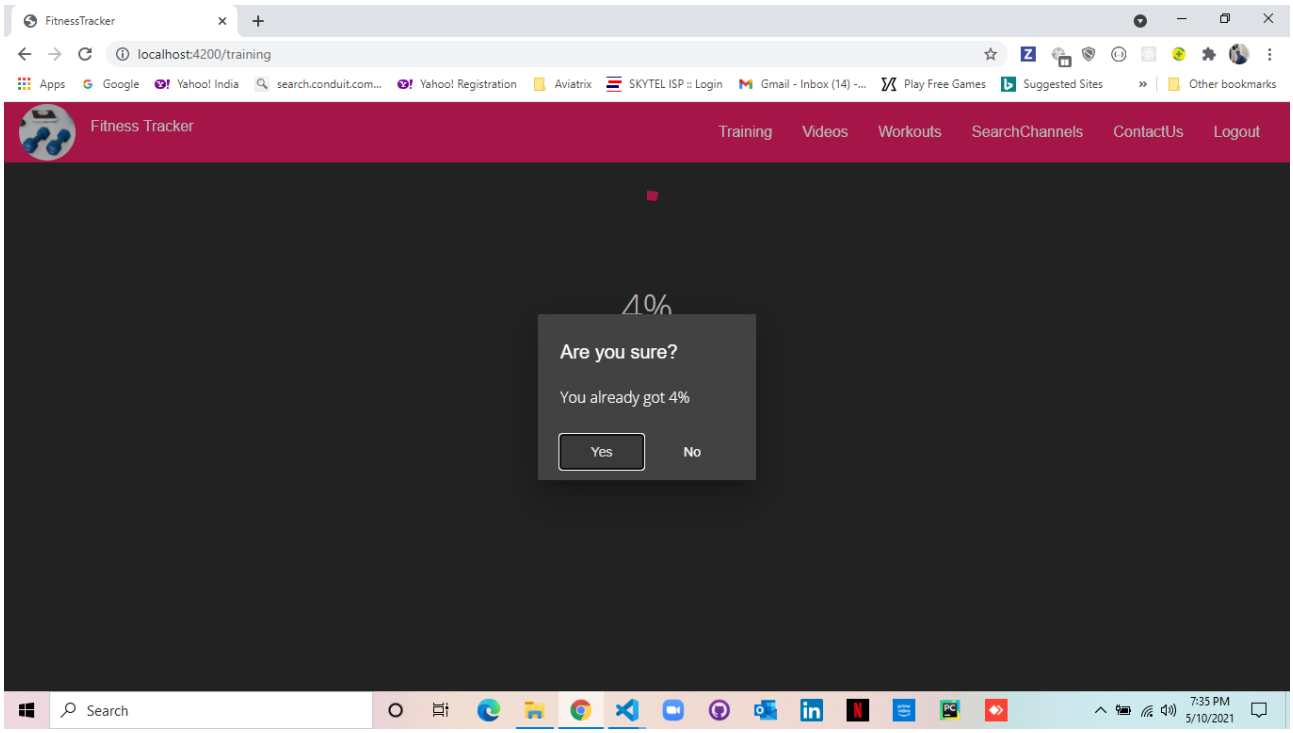
Exercise Page in the Application:



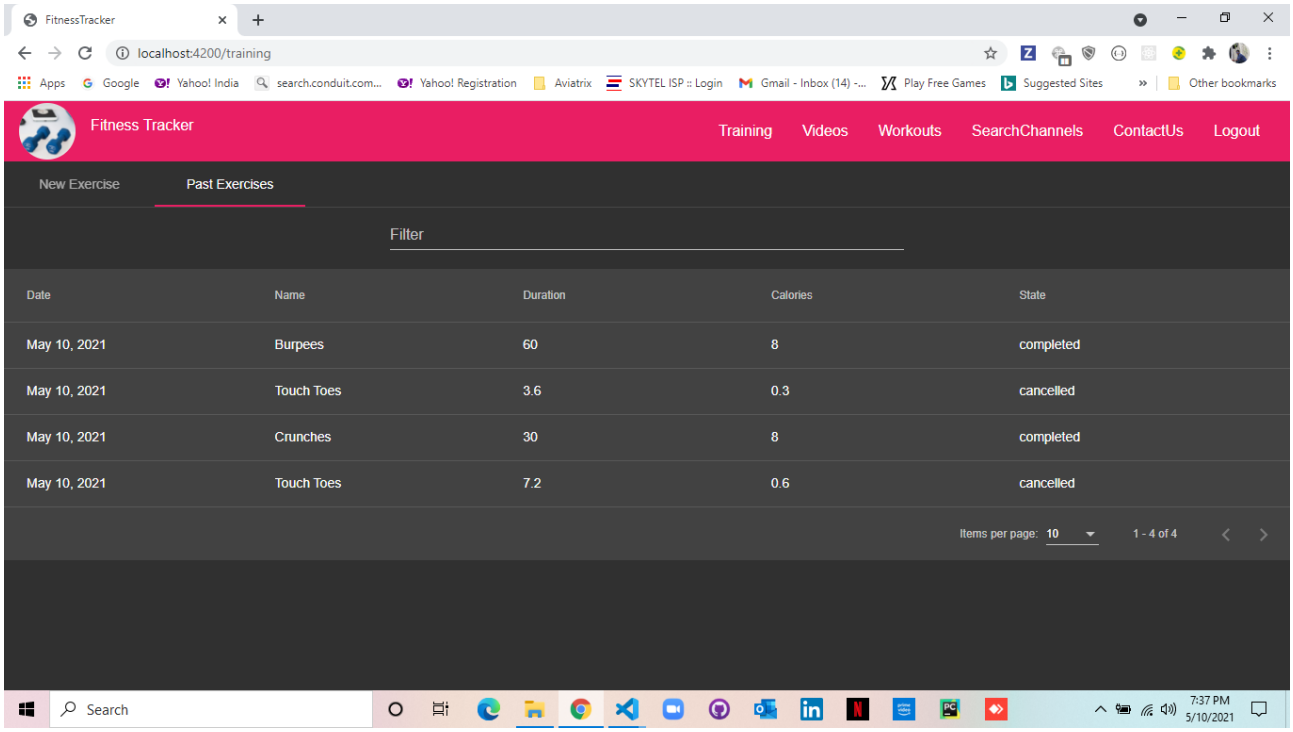
Calculating the progress of the exercise.



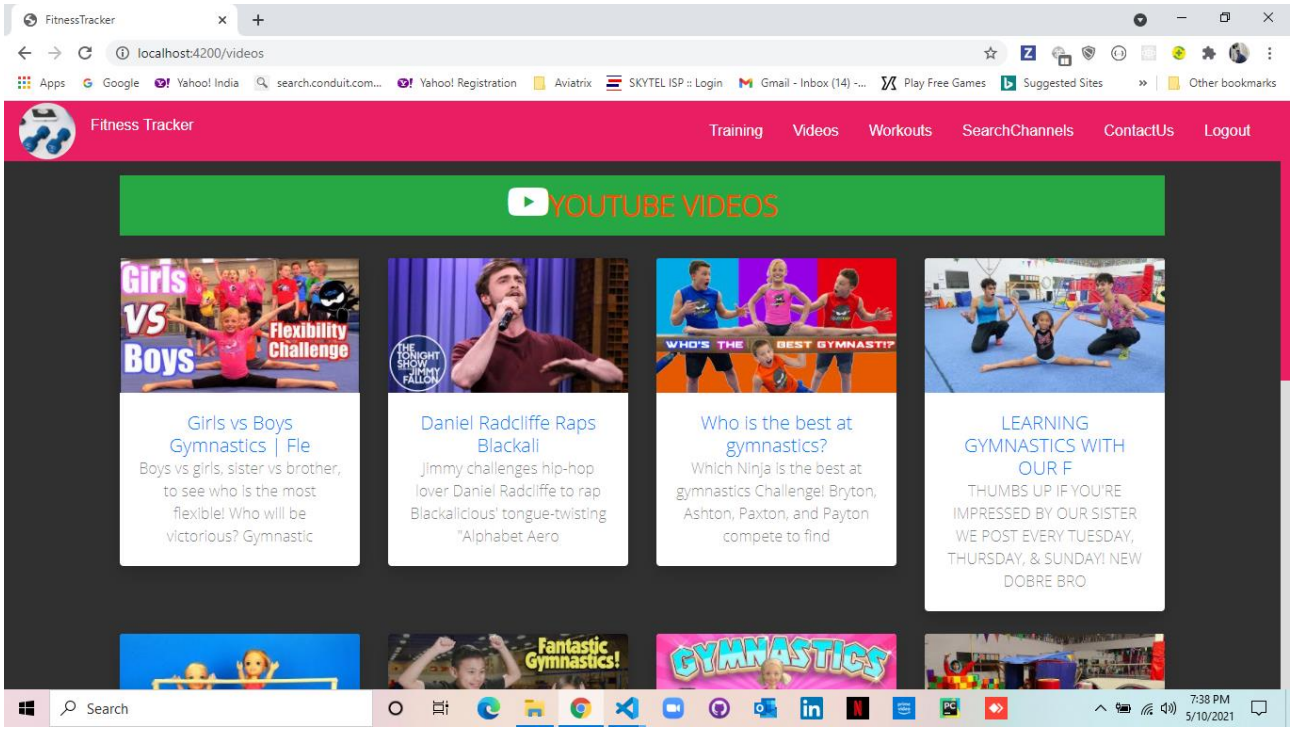
Stopping the workout in the middle:



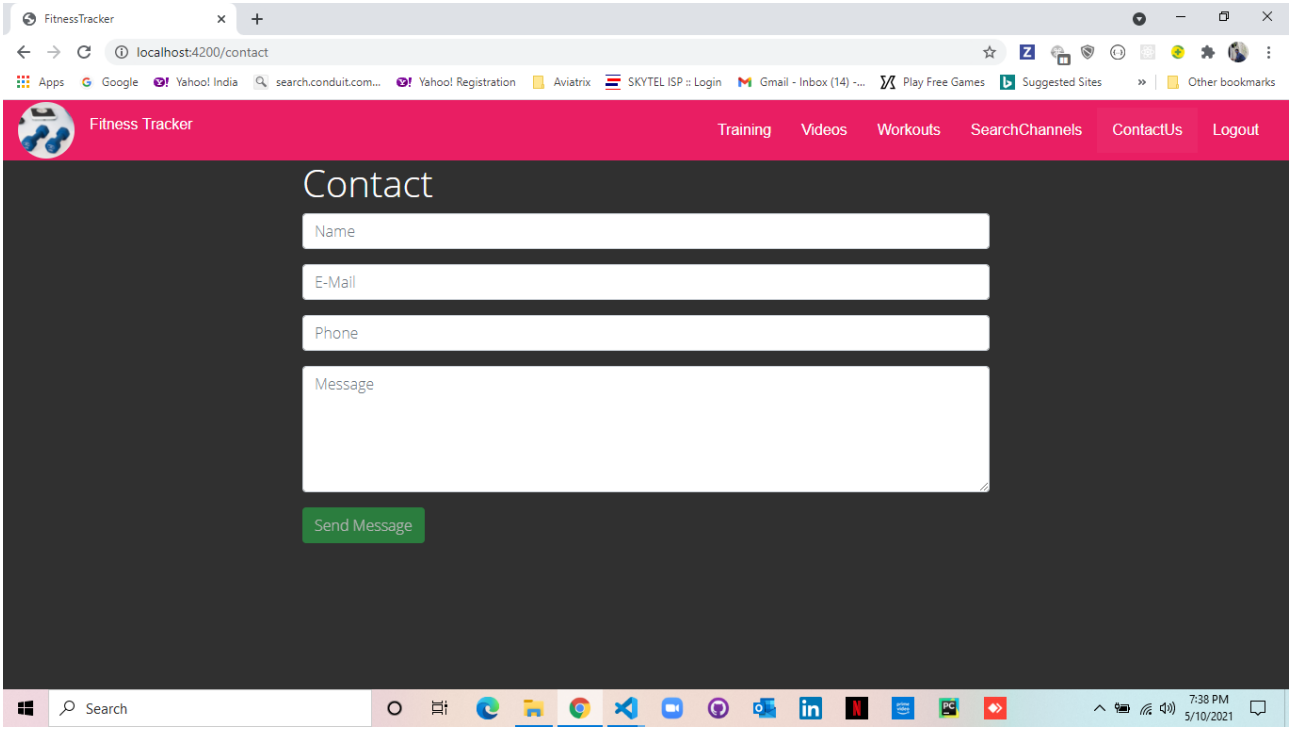
Here we can see the list of past exercises:



Here we can see the videos fetched from YouTube:

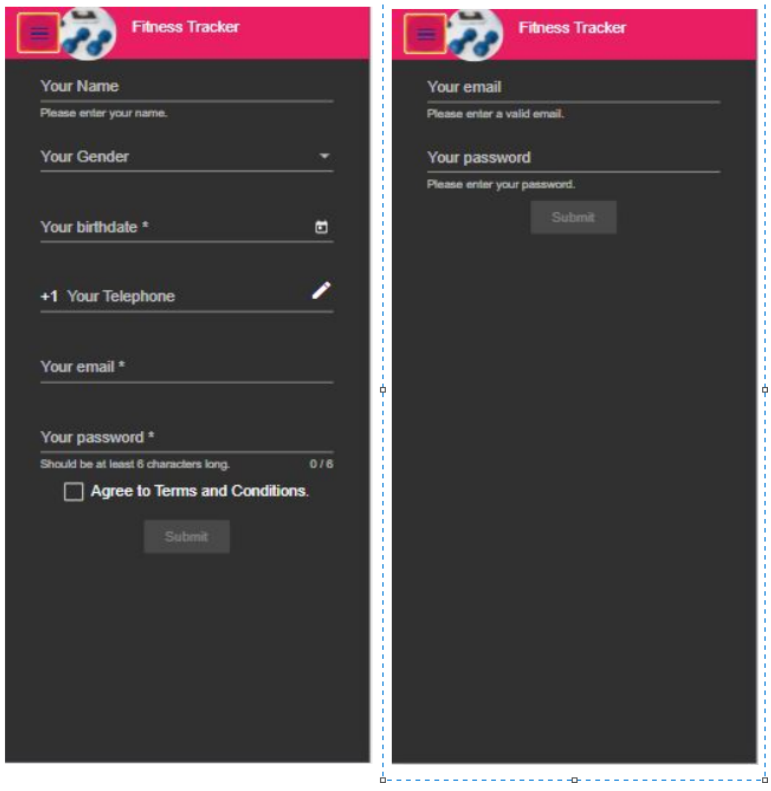


Here is the contact information:

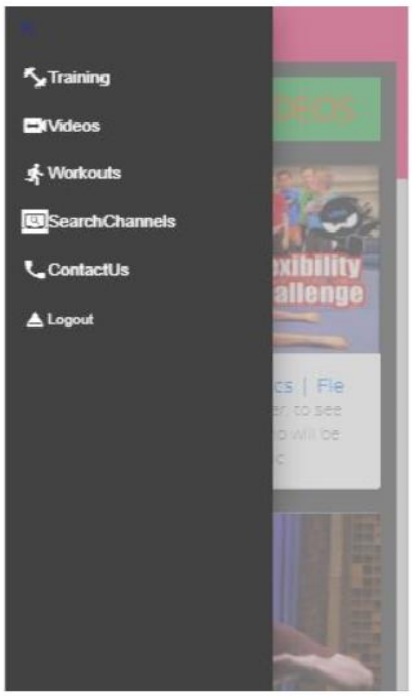


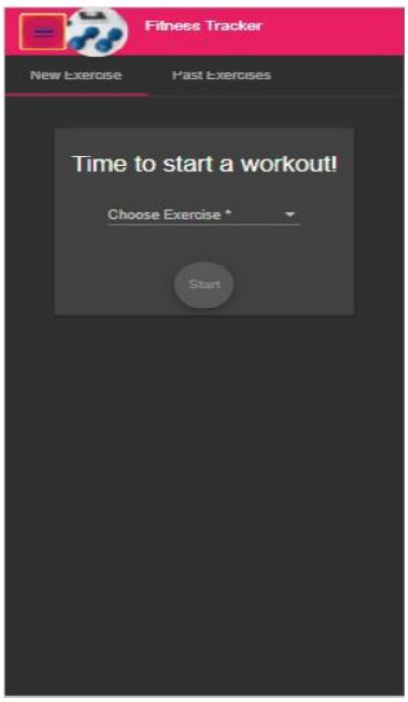
Responsive Mobile View of our application from developer tools:

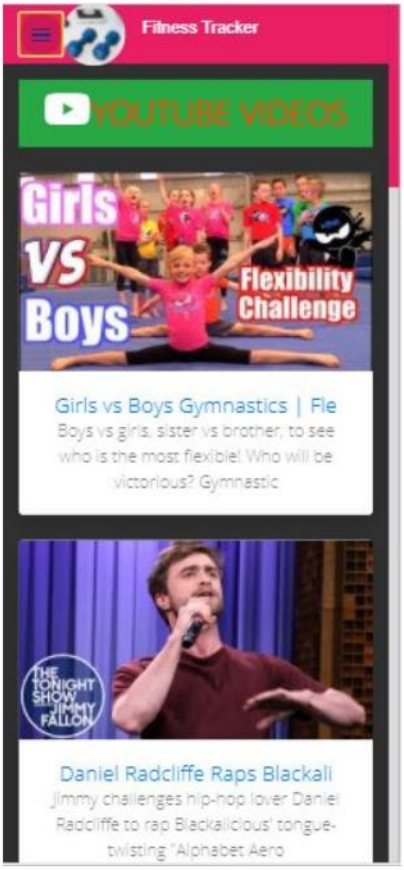
Sign up and Login Page of the Application

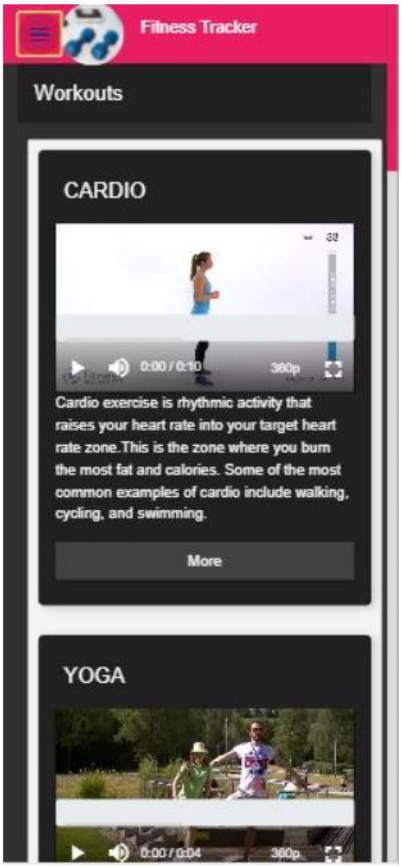


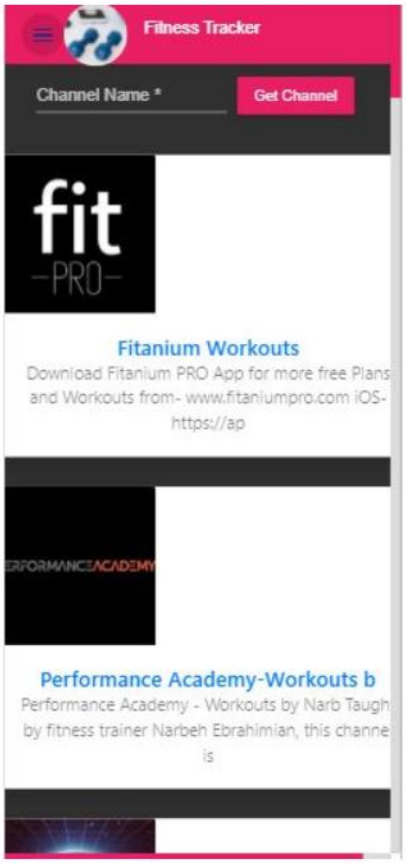
Exercises pages in the Application:



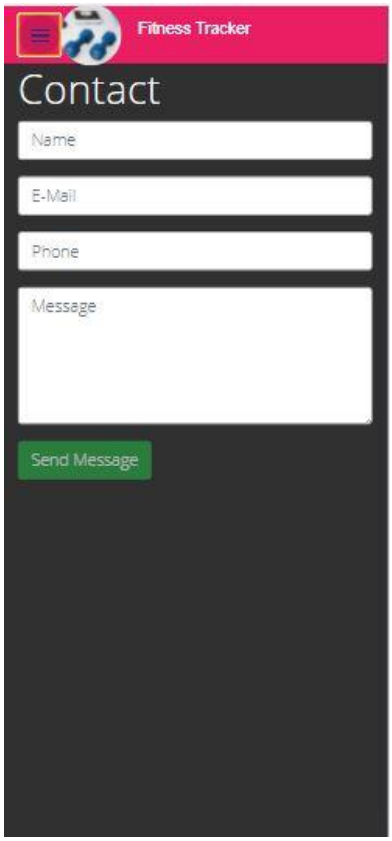








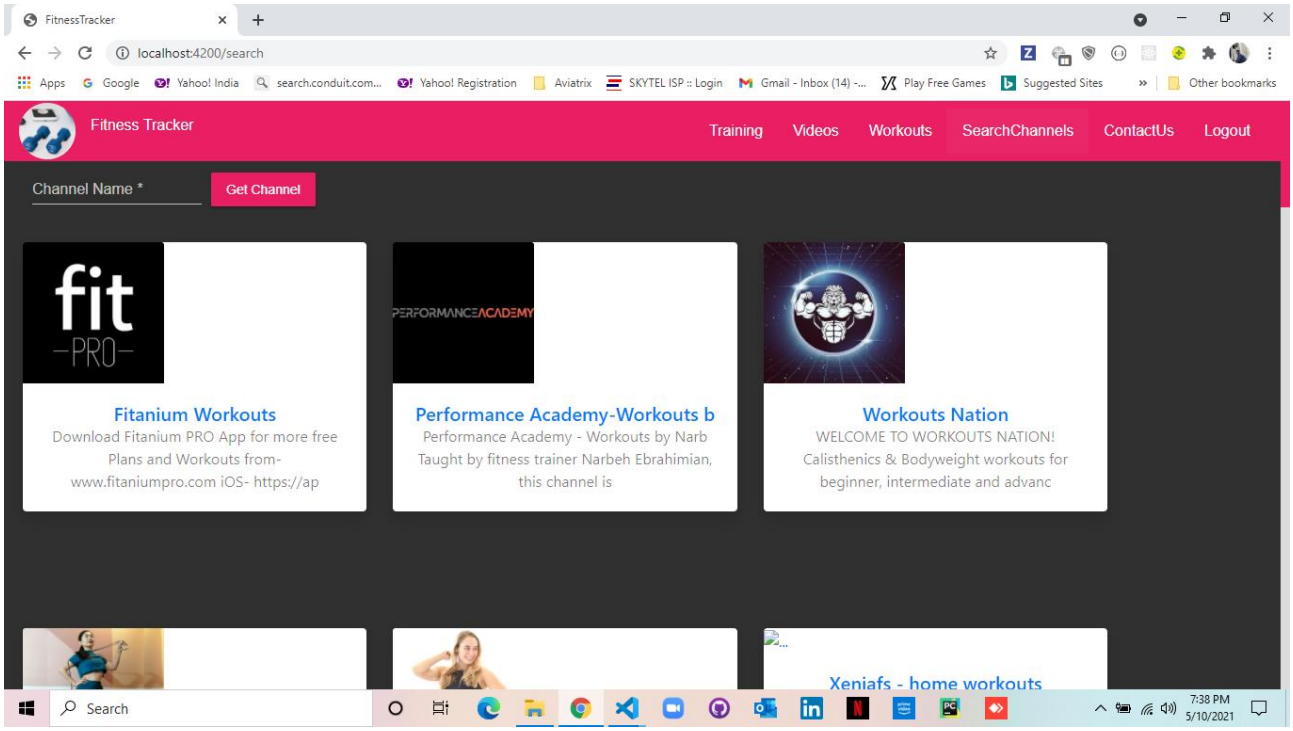
Contact information of our Application:

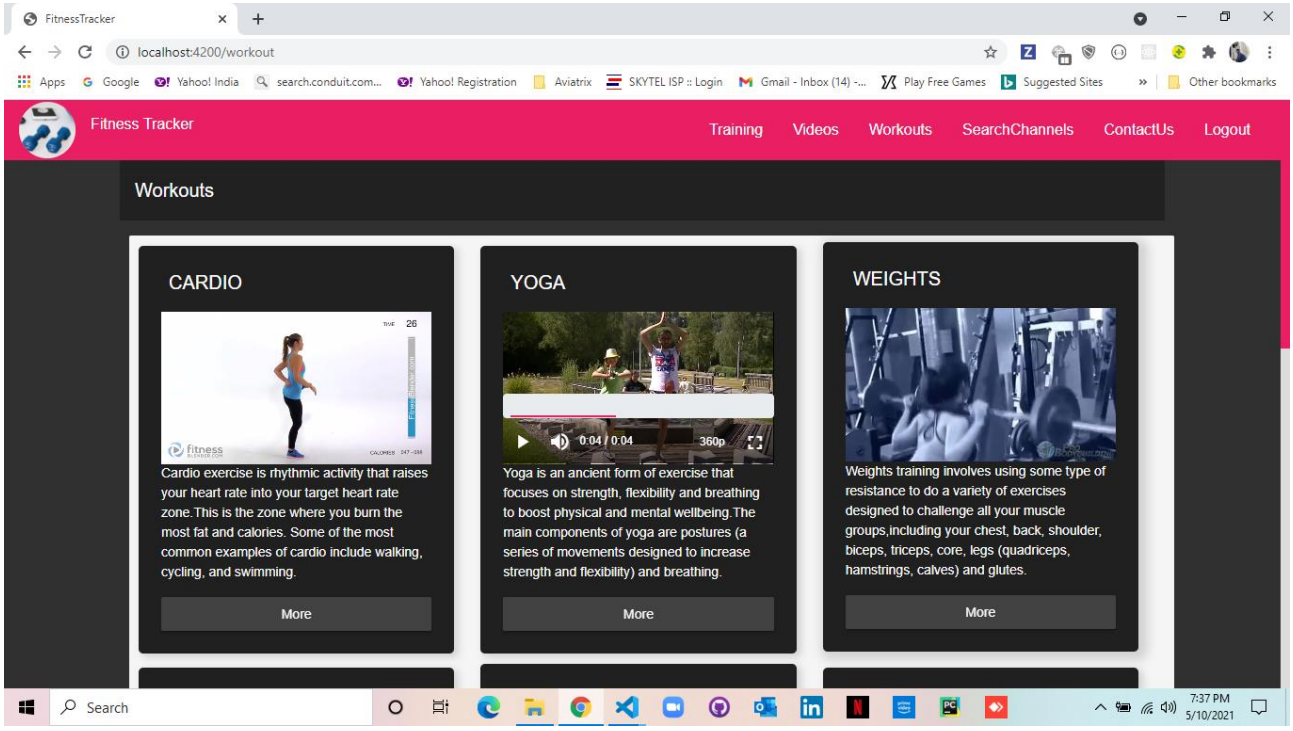


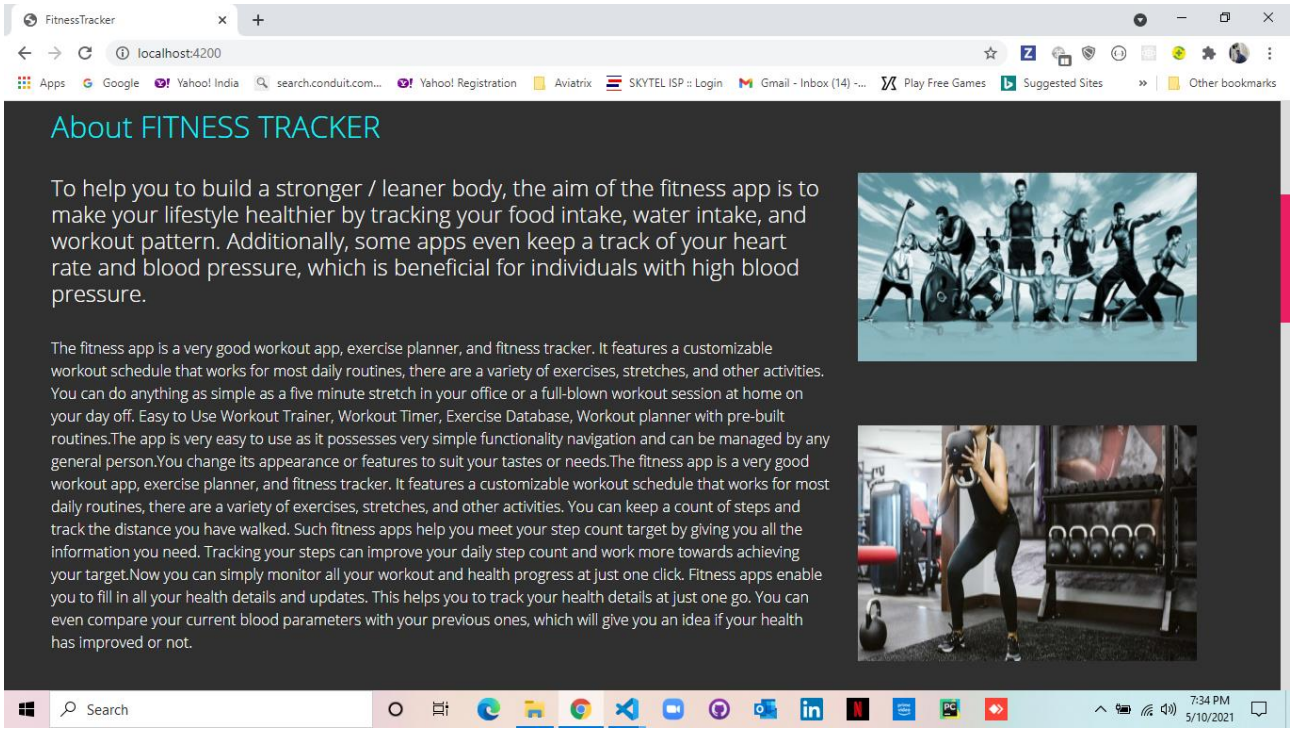
Improvement from the previous increment:

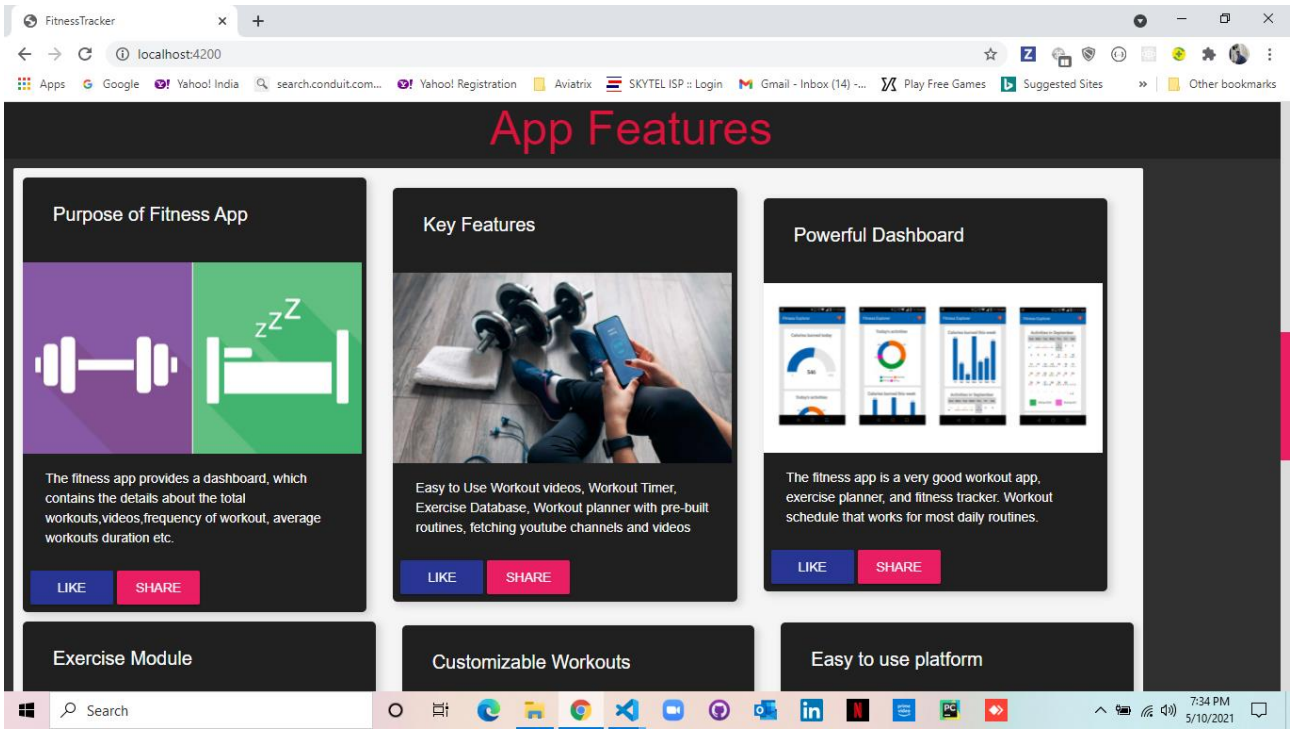
Since increment 3, we have enhanced our user interface by adding more information on fitness tracker, Adding App features like Training, Videos, Workouts, Search Channels and Contact Us.

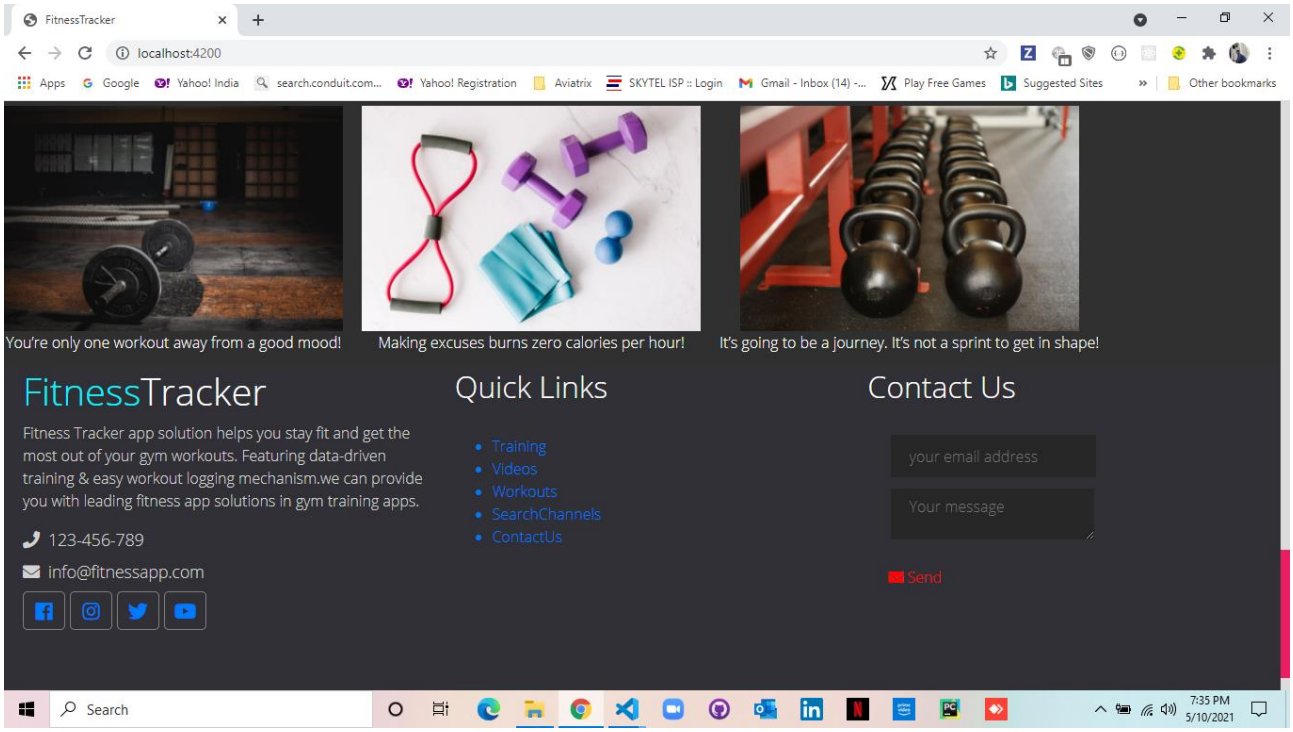
Below are the output screenshots that we did post last increment 3.

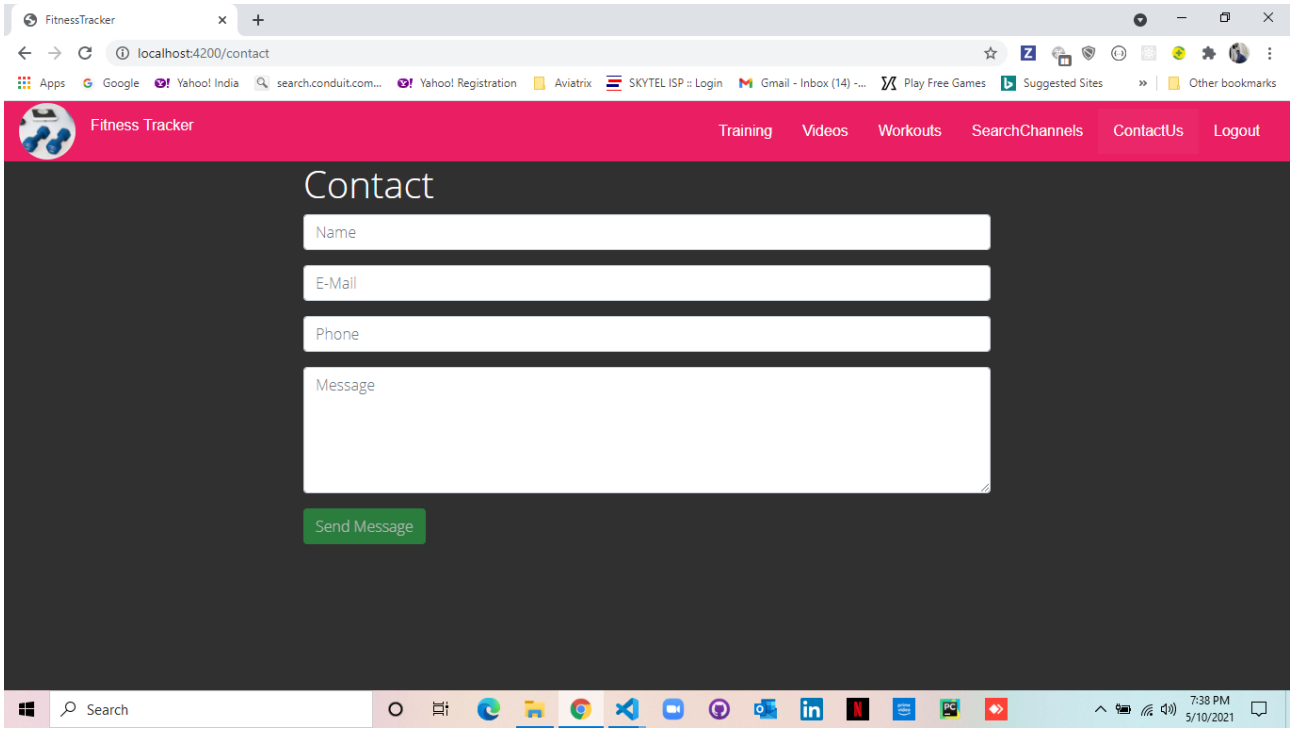




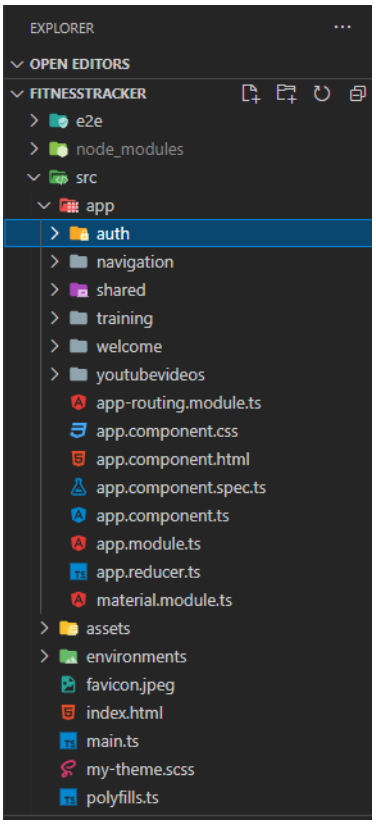

FitnessTracker
localhost:4200
About FITNESS TRACKER
To help you to build a stronger / leaner body, the aim of the fitness app is to make your lifestyle healthier by tracking your food intake, water intake, and workout pattern. Additionally, some apps even keep a track of your heart rate and blood pressure, which is beneficial for individuals with high blood pressure.
The fitness app is a very good workout app, exercise planner, and fitness tracker. It features a customizable workout schedule that works for most daily routines, there are a variety of exercises, stretches, and other activities. You can do anything as simple as a five minute stretch in your office or a full-blown workout session at home on your day off. Easy to Use Workout Trainer, Workout Timer, Exercise Database, Workout planner with pre-built routines.The app is very easy to use as it possesses very simple functionality navigation and can be managed by any general person.You change its appearance or features to suit your tastes or needs.The fitness app is a very good workout app, exercise planner, and fitness tracker. It features a customizable workout schedule that works for most daily routines, there are a variety of exercises, stretches, and other activities. You can keep a count of steps and track the distance you have walked. Such fitness apps help you meet your step count target by giving you all the information you need. Tracking your steps can improve your daily step count and work more towards achieving your target.Now you can simply monitor all your workout and health progress at just one click. Fitness apps enable you to fill in all your health details and updates. This helps you to track your health details at just one go. You can even compare your current blood parameters with your previous ones, which will give you an idea if your health has improved or not.
Search
7:34 PM
5/10/2021


FitnessTracker
localhost:4200
App Features
Purpose of Fitness App
The fitness app provides a dashboard, which contains the details about the total workouts,videos,frequency of workout, average workouts duration etc.
LIKE
SHARE
Key Features
Easy to Use Workout videos, Workout Timer, Exercise Database, Workout planner with pre-built routines, fetching youtube channels and videos
LIKE
SHARE
Powerful Dashboard
The fitness app is a very good workout app, exercise planner, and fitness tracker. Workout schedule that works for most daily routines.
LIKE
SHARE
Exercise Module
Customizable Workouts
Easy to use platform
Search
7:34 PM
5/10/2021

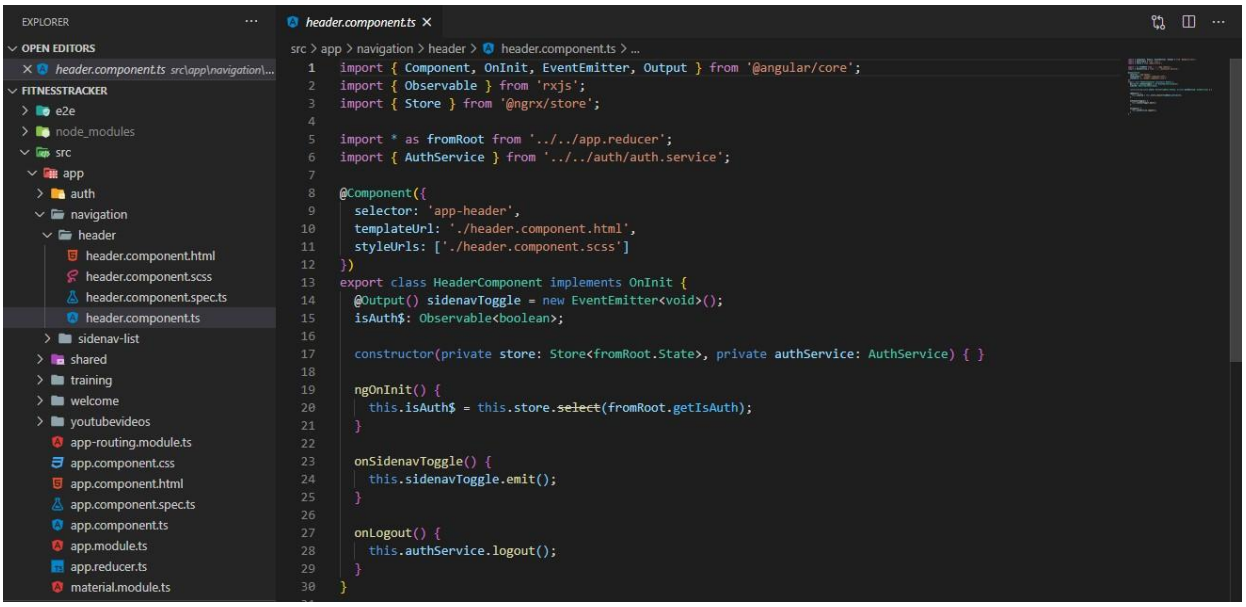

FitnessTracker
localhost:4200
Apps Google Yahoo! India search.conduit.com... Yahoo! Registration Aviatrix SKYTEL ISP :: Login Gmail - Inbox (14) -... Play Free Games Suggested Sites Other bookmarks
You're only one workout away from a good mood!
Making excuses burns zero calories per hour!
It's going to be a journey. It's not a sprint to get in shape!
FitnessTracker
Fitness Tracker app solution helps you stay fit and get the most out of your gym workouts. Featuring data-driven training & easy workout logging mechanism.we can provide you with leading fitness app solutions in gym training apps.
123-456-789
info@fitnessapp.com
Quick Links
Training
Videos
Workouts
SearchChannels
ContactUs
Contact Us
your email address
Your message
Send
Search
7:35 PM
5/10/2021


FitnessTracker
localhost:4200/contact
Apps Google Yahoo! India search.conduit.com... Yahoo! Registration Aviatrix SKYTEL ISP :: Login Gmail - Inbox (14) -... Play Free Games Suggested Sites Other bookmarks
Fitness Tracker
Training
Videos
Workouts
SearchChannels
ContactUs
Logout
Contact
Name
E-Mail
Phone
Message
Send Message
Search
7:38 PM
5/10/2021

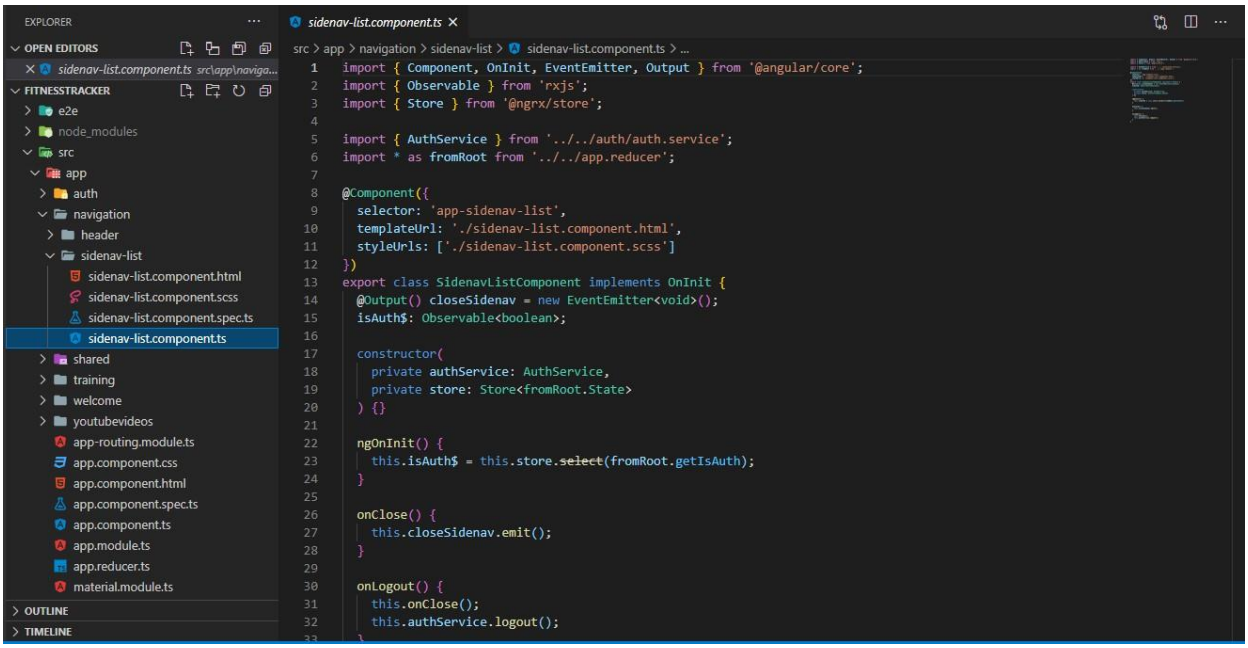
Important Code Snippets:



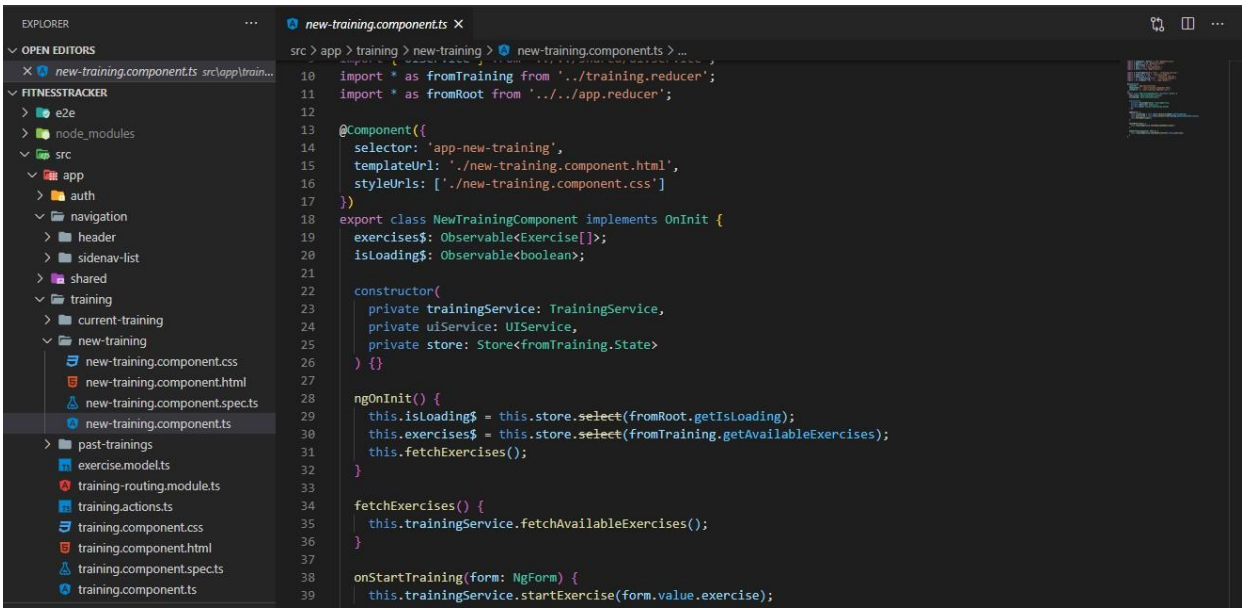
Navigation Header



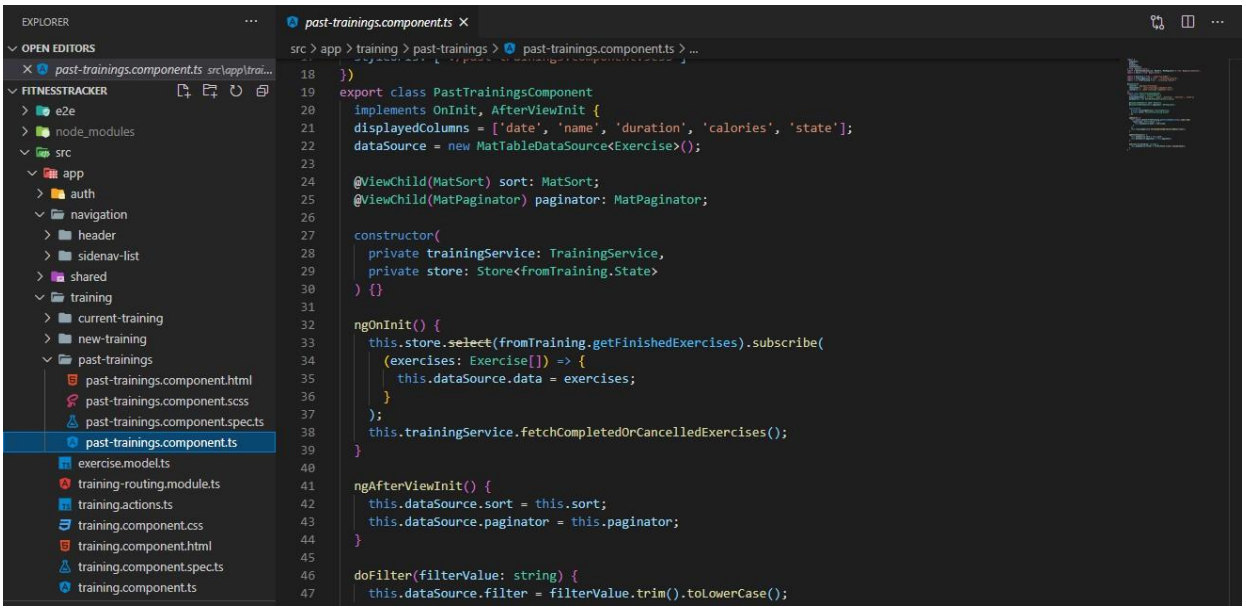
Sidenav component



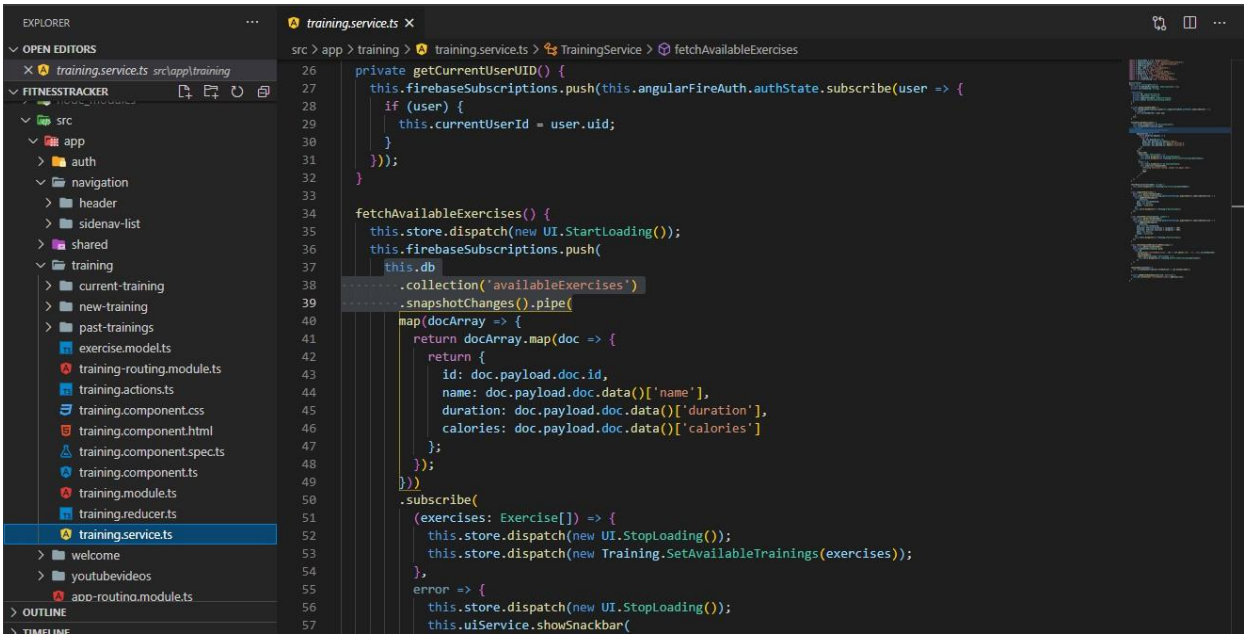
New Training Component:

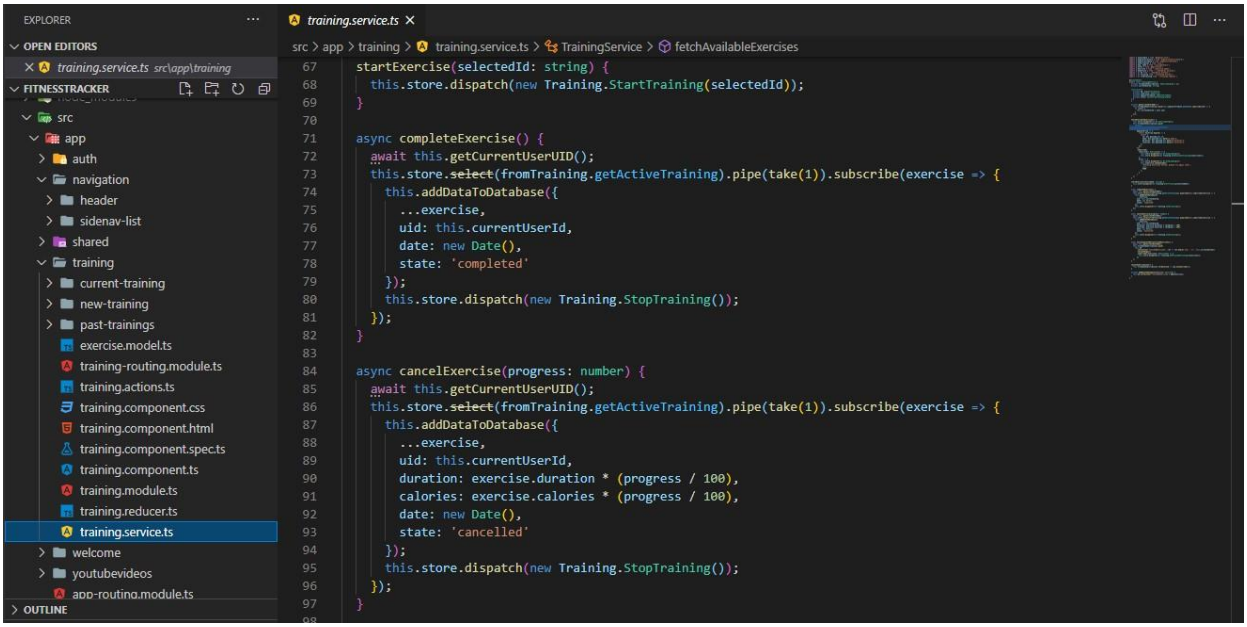


Past Training Component:



Training service model:





YouTube Component:

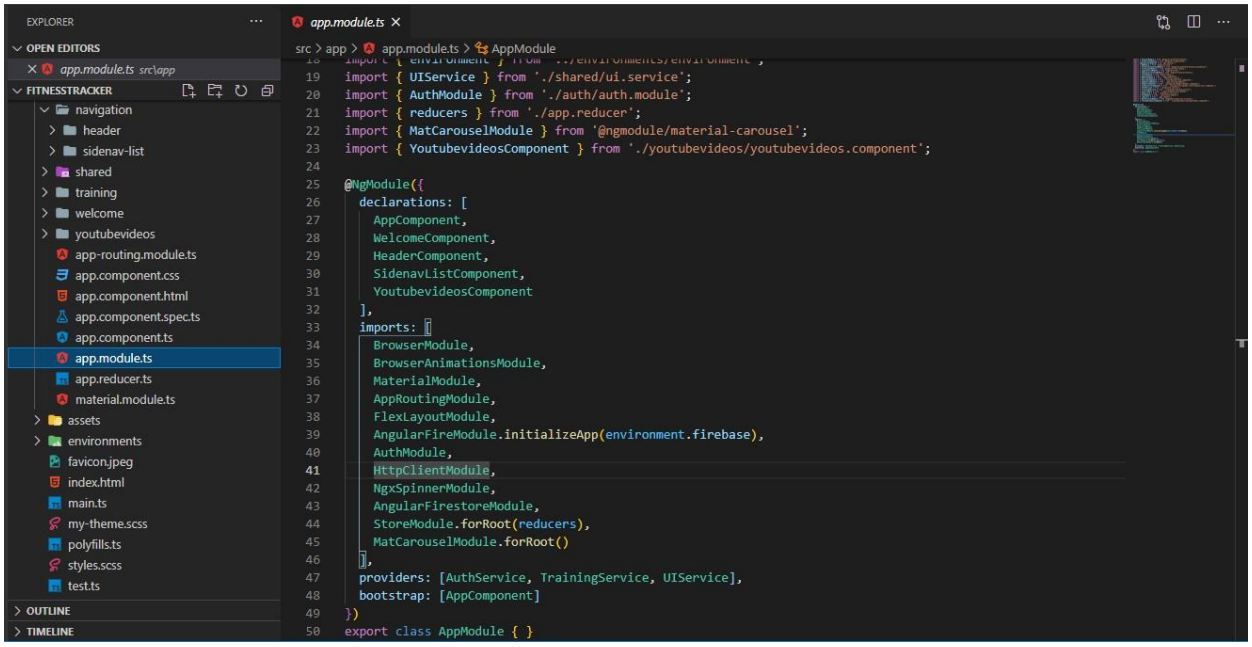
- We are calling Youtube API in the below code by passing the key , Keyword and order is given as viewCount so that it gets the list based on highest views
- In the query, Keyword is passed to the API based on exercise chosen by user
- Max Results parameter is given to get number of videos

```
export class YoutubeService {

  apiKey : string = 'AIzaSyDlQGyzrnECYCf0ZNgtY903PSXGHSt5NS4';

  constructor(public       http:       HttpClient)       {       }

  getVideosForChanel(keyword, maxResults): Observable<Object> {
    let url = 'https://www.googleapis.com/youtube/v3/search?key=' + this.apiKey +
'&q=' + keyword + '&order=viewCount&part=snippet &type=video,id&maxResults=' + m
axResults
    return this.http.get(url)
      .pipe(map((res) => {
        return res;
      }))
  }
}
```

- Below code we can getting list of videos based on keyword given “aerobics|gymnastics” and saving the results in this.videos list

```
this.videos = [];
   this.youTubeService
     .getVideosForChanel('aerobics|gymnastics', 10)
     .pipe(takeUntil(this.unsubscribe$))
     .subscribe(lista => {
       for (let element of lista["items"]) {
         this.videos.push(element)
         console.log(element)
       }

     });
```

App. Module file:



Work sharing/Module sharing between teammates:

Harika Gurram: Worked on Database connection, backend part and Signin/signup screens along with authentication. Involved in project planning, execution, Documentation.

Sandeep Reddy Salkuti: Worked on building UI components for different components like search channels, workouts etc. Involved in project planning and codebase maintenance

Sumanth Medavarapu: Worked on fetching videos by view count using youtube API and responsible for building youTube component. Involved in project planning, execution.

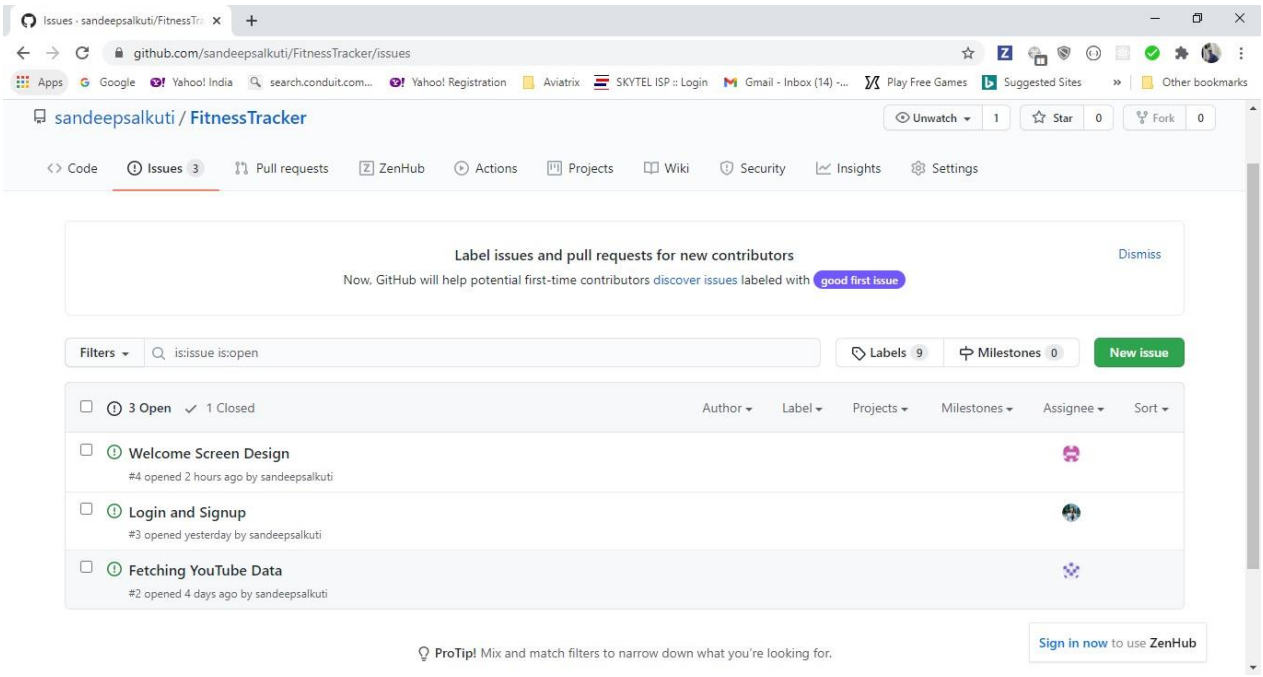
Navya Yarlagadda: Worked on welcome page, contact page and different UI components. Involved in project planning and project closure.

Any issues, blockages with the project:

- In Signup component need to store all details in firebase instead of only email and password.
- In Videos component need to re-design UI categorizing different fitness topics and upon clicking them need to fetch them.
- In Welcome component need to design the page as per planned.
- Planning to add discussion or contact page further.

Above are the blockages in previous increment and now we are able to achieve all the tasks as planned.

Below is the image of issues assigning among ourselves:



GitHub link for your project:

https://github.com/sandeepsalkuti/FitnessTracker

Video link for your project: https://youtu.be/3Do9C5fcu5c

Technologies Used: Angular, ngrx, firebase, Angular Material, Angular Fire, Firestore, Firebase hosting.

Advantages by using our application:

1) They can maintain fitness by tracking their exercises done and to be done in upcoming time i.e. keeping track of all actions at a place.
2) They can learn more about each exercise by going through deck of cards available i.e. all information is available at one place.
3) FAQ section is available with general information and health related discussions.
4) Discussion form is available to discuss on issues everyone can interact each other by this feature.
5) Overall, this application is available or hosted online with easy access to everyone and at every corner of the world with simple navigation to go through application.

References:

- https://developers.google.com/youtube/v3/guides/implementation/videos
- https://fortune.com/2020/10/05/covid-fitness-gyms-health-trump/
- https://www.nuvancehealth.org/coronavirus/exercise-is-essential-for-well-being-during-covid-19- pandemic/
- https://developers-dot-devsite-v2-prod.appspot.com/youtube/v3/docs/search/list#type
- https://kheronn-machado.medium.com/youtube-angular-en-2ed98f07e0f9