gYM routine App

ReportA room filled with furniture and a large window

Description automatically generated

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Table of  
Contents

Problem Statement…………

Problem

There are many individuals today who are interested in going in working out but do not know where to start. These individuals research different kinds of exercises to do their work out, but they in some cases do not understand how to do the routines or create a proper regime to get the maximum effects of their training. These individuals often get demotivated as common outcomes of a lack of guidance in fitness often leads to no change in body composition, unhealthy diets or even damaging themselves. On the other hand, fitness enthusiasts often have problems planning out workout regimes as it is often tedious to write down plans and they end up losing their papers or have no reference on what these myriad of workouts contain and resort to trying to memorize what each movement entails from the name of the exercise.

Solution

To resolve this, we designed a web app that allows anyone with an account to create and share their gym routines with ease. This creates a platform for both fitness enthusiasts who can create and share routines, as well as beginners diving into the fitness world and looking for workouts to start with. To combat the problem of making workout regime planning being tedious, the web app gives an user-friendly layout of filling out a simple form and uploading exercises to create a comprehensive workout regime that is understood by the public.

Features

The web app will feature:

• The ability to create, edit or delete workouts

• Cross-Platform support

• The ability to add images to each exercise for reference

• Protection against manipulation for workouts made by the user.

• App-like navigation and notifications

Architecture

The gym routine app is built on the following technology:

Frontend:

Vue.js Framework: In the frontend, the app has separate views, which work like pages, and each view is built up of components like forms, headers and cards. The layout of the website is handled using another framework, Bootstrap-vue.

Bootstrap-vue: This plugin is a combination of Bootstrap 4 which is tailored for Vue.js so that the JQuery interacts with vue components without error in functionality. This plugin is responsible for the visual design of the structure of the website, which includes colors, positions and animations.

Axios: This plugin is responsible for handling the communication coming into and going out of the Vue.js application.

Router: This plugin is responsible for connecting all the views of the application and maintaining a SPA-like app where only one page is needed and components are switched and replaced.

Backend:

Django Framework: In the backend, the database is hosted as a sql database. This database is built using python and holds all the information about workouts, exercises and users. The REST API allows for users at the frontend to perform CRUD operations (create, retrieve, update and delete) by making requests to the API and receiving data stored. The REST API is built upon using the Django REST Framework.

REST Framework: This framework is responsible for the communication between the database and the frontend platform. This framework does so by serializing and deserializing “ViewSets”; model class with attributes and methods in order to pass and receive data as JSON format and convert them into a native python datatype in order for Django to receive and understand the data. This framework is also responsible for the authentication of the backend as it uses Token Authentication to protect access of the database.

Token Authentication: This form of authentication assigns each user a unique string of characters called a token upon registration. This token will stored on the user-side browser to which will be sent to the server to access the API REST operations.

Model Design