Daniel Guzman
10/22/2022
CINS 465

Project Proposal

Project Description

       I would like to develop a Fitness Tracking Web application. This Web application will be targeting Users that are wanting to track their Weight-loss journey in the form of tracking their daily intake calories, daily performed exercises, and display weekly results. For this project I want to use Django to serve as a Web application Framework and use Foundation 6.0 for the front-end looks. Hope to use Web Sockets in my web application to allow users to chat in real-time within a Web Forum page within the web application. Allowing the user to chat with another user without resetting / refreshing the client-side should be the end product when using Web Sockets.

Basic Web application Diagrams

       Here is a Generic View of the home page, When the user is not logged in and clicks on the buttons: Forums, Account, About Us, it will prompt them with a form to login. Additional, The user can choose to click on the sign up button to be prompted with a sign up form

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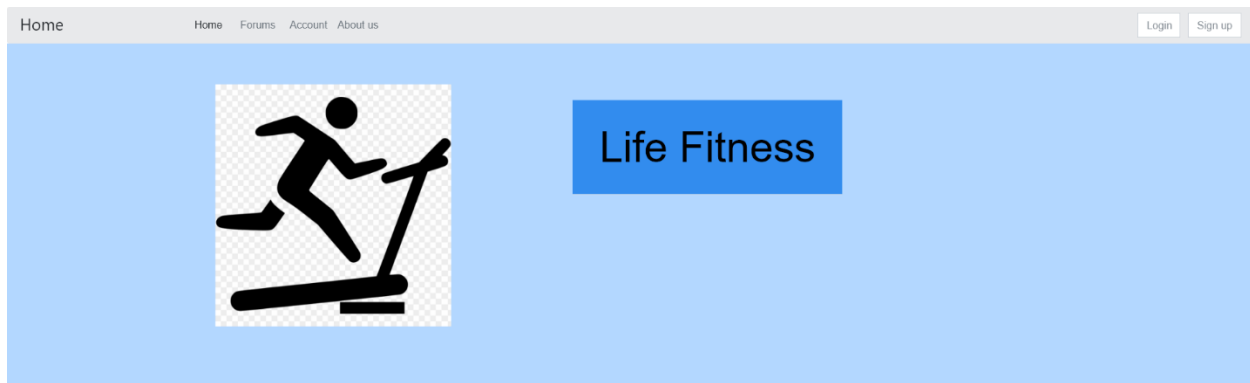
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Once the user is logged in, they can view their Account page which will show them their current Fitness Stats based off their Post Workout Reports that they submit. The Users get to schedule their workouts or input a Post Workout Report to update their Fitness Stats. Users will also be able to create/add new exercises to their workout to better organize the list of exercises during their workout.
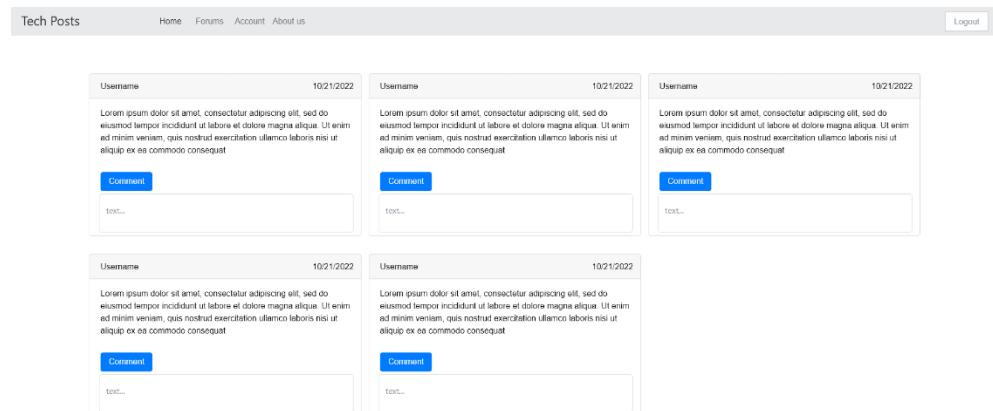
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As the User is tracking their fitness journey, they are also able to chat with other users through the Forums page.
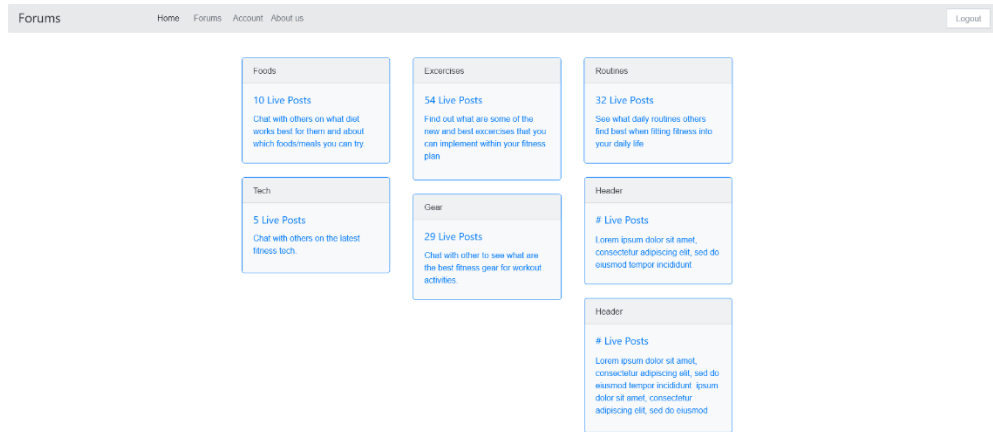
When a user enters a Forum Topic, such as posts about tech, this page will show the current list of posts under that Forum Topic.

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Database Design

For the initial design of the database there will be 7 models: FitnessUser, HealthStat, Workout, Exercise, Forum, Post and Post Workout Report.

Forum

Posts	Model
Name	CharField
Description	TextField

Part of

derives from User model

HealthStat

Weight	FloatField
Height	FloatField
BMI	FloatField
CurrentWeight	FloatField
GoalWeight	FloatField
Field	Type

FitnessUser

Username	CharField
Password	CharField (hashed)
First name	CharField
Last name	CharField
Middle name	CharField (Optional)

Has

Post

user_name	Charfield
post_text	TextField
pub_date	DateTimeField
Field	Type

Part of

Has

Exercise

Name	CharField
Description	TextField
Image	ImageField
RepCount	IntegersField

Part of

Workout

Exercise List	Exercise[ ]
Post Workout Report	Model
DateAndTime	DateTimeField

Has

Post Workout Report

Duration_hrs	IntegersFIeld
Duration_mins	IntegerField
Duration_secs	IntegersField
Exercise List	Exercise[ ]
Weight_check	IntegerField

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Timeline

Here is my timeline for when parts of my project will get setup at.

Since I will be working on this by myself, I will try to be realistic about parts that I will
finish with this project since I will also need time to do work for other classes. Here I will layout
milestones for each week from now until finals week, for which the project should be complete by then.

Week 1:
- Gather materials for project Foundation files, js files, assets, etc.
- Setup Project (django-admin startproject site) and insert starting materials
- Create Web app (python manage.py startapp Life-Fitness)
- Setup url.py file along with views.py
- Create template base.html and integrate it within .html files
- Push this project to a private repo on github

Week 2:
- Develop models for Fitness_User and HealthStat
- Setup User authentication
- setup form to create account / reset password
- Display User info on account page per user

Week 3:
- Develop Workout model and Exercise model.
- Display Workout model info on account page per user

Week 4:
- Setup server to host Web application (Google Cloud or Linode), Must use Docker.
- Make sure ip address of web application is static and test to see if you can connect to web
application.
- Clean up site, make the site look good in terms of UI/UX
- Must complete MVP by then.

Week 5:
- Develop Forum, Post, Post Workout Report models.
- Test Forum page and Post functionality (Commenting, being able to view Fitness_user profile)
- Look into how to setup Web Sockets by first creating a chat server using django channel for
practice

Week 6:
- Test out Web sockets and try to get it working for posts
- Users should see updates on posts in realtime without having to reload page.
- Also should show the user when another user is commenting on a post.

Week 7:
- IF I still have not setup Web sockets yet, Continue doing so
- Refine page, clean up any flaws in interface design.

Week 8:
- Wrap up project for submission, Make sure everything works.

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Goals for Project

At the end of this semester, I hope to have develop a working Fitness Tracker Web Application. Users should be able to visit the website, sign up, and begin tracking their fitness journey by logging their post workout stats after every workout, then users should be able to view their progression through their account page. Users can also chat with other users through the live forums page where there list many different fitness topics that users can engage in.

For if there is more time to work on this project, I wish to add a Fitness News View on the home page so that incoming users can see the current Fitness news that's trending, also I want to add the users stats on the homepage as well in a collective view when they are logged in.