SDEV265

GROUP 6

4/10/2023

1. **Introduction**

This document outlines the requirements for a fitness and health tracking application designed to help users watch and improve their overall health and well-being. The business goal is multiple teams, and contractors will have access to the document to ensure a streamlined development process. The application will supply features such as step counting, calorie tracking, and progress monitoring to help users to motivate themselves, watch, and improve their overall health and well-being. We want to create an easy-to-use application that encourages users to adopt healthier habits and watch their progress over time. Also, the fitness and health tracking application are crucial in promoting a healthy lifestyle by providing them with the necessary tools to watch their daily activities. Furthermore, by offering personalized tracking features, the application solves the problem of manual tracking and analysis and simplifies the process of understanding and acting on health data. The target audience for this application includes fitness enthusiasts, individuals looking to adopt a healthier lifestyle, and anyone interested in tracking their physical activities and caloric intake. The audience will use the product to track their daily activities, caloric intake, and progress toward their fitness goals.Fitness and health tracking application supply step counting, caloric tracking, progress monitoring and data analysis. This application is designed for those people interested in health and physical well-being to be able to use it easily, quickly and without problems.

1. **Project organization**

**Lead Programmer**: Angel Vaquera, responsible for implementing the core functionality of the application, including backend and frontend development, and integrating the OpenAI API.

**Project Manager**: Gabriel Cobb, responsible for overseeing the project's progress, ensuring well timed completion, and managing communication among team members and stakeholders.

**Documentation Specialist**: Guadalupe Dominguez, helps in various tasks, such as development, testing, and documentation.

1. **Risk Analysis**

* Spamming API calls, leading to excessive costs: Implement rate limiting, and caching to minimize API calls.
* Security breach (hacking): Follow the best practices for securing the application, such as using HTTPS and strong authentication mechanisms.
* OpenAI API being down: Implement error handling, and supply alternative functionality, or notifications to users during API downtime.
* AI producing incorrect information: Implement validation checks and allow users to supply feedback on generated content to improve AI’s accuracy over time.

1. **Hardware and Software**
   1. Hardware Components

* AWS server for hosting the application.
  1. Software Components
* Django framework.
* React library.
* Compatible with iPhone 5 and most modern computers.
  1. Selected (Proposed) Software Language
* Python
  + - * Backend: Django
* JavaScript
  + - * Frontend: Vite with React

1. **Work breakdown**

Diagram

Description automatically generated

1. **Process Flow Diagram**

* Idea: Fitness AI
* **Frontend and Backend Development** Django (backend) and Vite with React (frontend).
* **AI Implementation** OpenAI API integration.
* **User Input** collect fitness data and preferences.
* **The Calendar** displays and manages the user’s fitness schedule.

**Diagram

Description automatically generated**

1. **The Project Schedule**

Graphical user interface, application, table

Description automatically generated

1. **Monitoring and reporting mechanisms**

* Communication: Discord for team communication and email for stakeholders.
* We will discuss progress monitoring and updates during our weekly meetings.

1. **Appendix**

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| --- | --- | --- | --- |
| Activity Number | Activity Description | Estimated Time | Dependencies |
| 1 | Set up Django backend | 1 week | - |
| 2 | Develop Vite with React frontend | 1 week | Activity1 |
| 3 | Integrate OpenAI API | 1 week | Activity2 |
| 4 | Design user input forms, | 1 week | Activity3 |
| 5 | Implement fitness calendar | 1 week | Activity4 |
| 6 | Evaluate the application | 1 week | Activity5 |
| 7 | Gather user feedback | 1 week | Activity6 |
| 8 | Implement feedback & improvements | 1 week | Activity7 |