

README FLEXFIT

Description:

FlexFit is an innovative app designed to empower users by allowing them to create and follow personalized workout plans. Built using Python, a versatile and widely-used programming language known for its readability and robust libraries, FlexFit ensures efficient and reliable performance for users of all technical levels.

This project is important for our team as we faced real-world challenges in coding and problem-solving. FlexFit reflects our commitment to delivering a seamless experience for fitness enthusiasts. Future updates will include enhanced features and tools to further elevate the user experience.

Table of Contents

1. [Installation and Setup](#)
2. [How to Use FlexFit](#)
3. [Database](#)
4. [Further Improvements](#)
5. [Credits](#)
6. [License](#)

Installation and Setup

To get started with FlexFit, follow these steps:

1. **Download the Exercise Database:**
 - Navigate to the project main page and locate the “exercise_database.csv file”
 - Click on the three dots to the right of the page and download the file. Note the folder where you save it.
2. **Access the Code:**
 - Go back to the main page of the repository and open the FlexFit_Final_Working_Code.ipynb file.

- Click the “**Open in Colab**” button at the top center of the page to open the code in Google Collaborator.
3. **Set Up Google Collaborator:**
 - Sign in to Google Collaborator if you haven’t already.
 - Run the first code cell to initialize the environment.
 4. **Upload the Exercise Database:**
 - Scroll down the notebook until you see the “**Choose Files**” option.
 - Click it and upload the exercise_database.csv file you downloaded in step 1.
 5. **Start Using FlexFit:**
 - Once the database is uploaded, the program will start. You can now explore and interact with FlexFit. Enjoy!

* The code was developed using **Python 3.10.12**

How to Use FlexFit

FlexFit allows users to:

- Create custom workout plans tailored to specific fitness goals.
- Access past gym workout plans
- Search for a variety of exercises based on keywords

Database

The raw dataset consists of 7 different features: Category, Exercise Name, Description, Targeted Muscles, Equipment Needed, Difficulty, Repetitions.

Additionally, the exercises are divided into 11 different categories based on different muscles (ex. back_exercises) or objectives (ex. cardio_exercises) .

Further Improvements

The implementation of simple search algorithms and hashtable structures was sufficient for FlexFit’s MVP. For a small scale implementation, this was the most efficient solution. However, in case of future scalability the implementation of more advanced algorithms and data structures, like a binary search tree, must be adopted to ensure the continuity of the app’s efficiency.

Credits

This project was collaboratively developed by:

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