Fitness Tracker API

1. Project Idea

Create an API to allow users to log, update, and delete fitness activities, as well as view their activity history. The API will facilitate tracking various fitness activities, providing users with insights into their progress.

2. Features

- **User Authentication**: Allow users to create accounts and log in.
- **Activity Logging**: Users can log different fitness activities (e.g., running, cycling).
- **CRUD Operations**:
    - **Create**: Add new activities.
    - **Read**: View logged activities and historical data.
    - **Update**: Modify existing activity entries.
    - **Delete**: Remove activities from the log.
- **Activity History Endpoint**: An endpoint to view a user’s activity history with filters (e.g., date range, activity type).
- **Data Insights**: Basic analytics (e.g., total distance run, calories burned).

3. Technologies

- **Framework**: Django (with Django REST Framework).
- **Database**: MySQL (using Django ORM for interactions).
- **Deployment**: Heroku or PythonAnywhere for hosting the API.

4. Project Timeline

1. Idea & Planning Phase (Week 1)

- Finalize the Fitness Tracker API concept and outline features.

2. Design Phase (Week 2)

- Create an Entity-Relationship Diagram (ERD) using design tools.

3. Start Building (Weeks 3-4)

- Set up the Django project and PostgreSQL database.
- Implement user authentication and CRUD operations for activities.

4. Continue Building (Weeks 5-6)

- Develop the activity history endpoint and add analytics features.
- Conduct thorough testing of the API.

5. Finalize & Submit (Week 7)

- Polish the project, refine the user interface, and document the API.
- Prepare and submit the final version.