PROBLEM STATEMENT

Modern life often complicates efforts to maintain a healthy lifestyle, with busy schedules making it difficult to track and balance physical activity, diet, and mental health. For example, a busy professional may find it challenging to keep track of their daily exercise, maintain a balanced diet, and manage stress. Without a comprehensive tool to monitor these aspects, individuals may struggle to identify patterns and make informed decisions about their health. Existing health apps often focus on isolated aspects like diet tracking or workout logging, leaving users without a holistic view of their overall well-being.

AIM

The project aims to develop a comprehensive web-based fitness tracking platform that will allow the users to track their exercise routines, record their food intake and track their progress towards fitness and health objectives.. The system will empower users to make informed decisions about their nutrition and fitness, facilitating better health management through personalized and AI powered insights and recommendations.

SCOPE

- **User Management**: Allows users to register, log in, and manage their profiles, including physical details such as height, weight, age, gender, marital status and fitness goals(weight gain/ weight loss/ stay fit).
- **Dietary Logging and Tracking**: Enabling users to log their food intake with a database of food items, including protein and caloric content.
- **Exercise Logging**: Providing functionalities for users to log various types of exercises, including cardio and weightlifting, with detailed metrics.
- **Caloric and Nutrient Calculation**: Implementing features to calculate required daily caloric intake and protein needs based on user-defined goals.
- **Progress Monitoring:** Offering visualizations and reports on users' dietary and exercise habits, including caloric intake versus expenditure.
- **Suggestions and Insights**: Generating AI based recommendations and suggestions based on user activity and dietary logs to help users reach their fitness goals effectively.

TECHNOLOGY USED

- Frontend: Angular

- Backend: Java with Spring Boot
- Database: MySQL
- Deployment: AWS Cloud Services

WORKFLOW OVERVIEW

1. **User Registration and Profile Setup**: Users will create an account and enter their physical details, including fitness goals (e.g., fat loss, gain, stay fit).
2. **Logging Entries**: Users can log dietary entries and exercise activities through intuitive forms. They can search for food items or exercises, making data entry seamless.
3. **Caloric and Protein content Calculation**: The system will automatically calculate the total caloric intake and the calories burned based on logged exercises.
4. **Progress Tracking:** Users will have access to dashboards displaying their daily and weekly progress, including graphs and charts representing their caloric balance and macronutrient intake.
5. **AI-powered Recommendations:** Based on user data, the platform will provide tailored advice and suggestions for meals and workouts to help users stay on track with their goals.

CONCLUSION

The proposed fitness tracking platform is designed to empower users in achieving their health and fitness aspirations through an intuitive and comprehensive approach. By integrating features such as dietary logging, exercise tracking, and AI-powered recommendations, the system aims to facilitate healthier lifestyles and provide personalized insights for users. Leveraging advanced technology, we strive to create an engaging user experience that not only supports individual health goals but also fosters a community of motivation and accountability on each user's fitness journey.