Project Proposal: Fitness Tracker (Project Ki)

1. Project Idea: The AI-Powered Fitness Tracker is a web and mobile application designed to provide users with personalized fitness plans based on their individual goals and availability. Users input their height, weight, sex, target weight/body shape, available workout days and hours, and preferred duration. The system leverages a Large Language Model (LLM) to generate a customized diet plan, workout schedule, and targeted muscle group focus for each session.

The application includes a **database** to store user progress, allowing registered users to track their workouts, mark completed sessions, and receive long-term recommendations. A **guest mode** provides limited access, offering a one-week plan without tracking or long-term customization.

This project aims to provide a structured, AI-driven fitness experience, eliminating the need for costly personal trainers while ensuring a flexible, goal-oriented approach to health and fitness. The primary audience includes fitness enthusiasts, beginners, and individuals looking for structured, data-driven workout routines.

2. Technological Stack:

- **Front-End:** React.js (for responsive web UI), React Native (for mobile compatibility)
- **Back-End:** Node.js with Express.js
- **Database:** PostgreSQL (to store user details and progress data)
- **LLM Integration:** Open source LLMs with REST API integration for easy switch(plug and play) of different LLMs to keep up with the ever evolving industry.
- **Authentication:** Firebase Authentication (for user registration and login)
- **Hosting & Deployment:** AWS or Firebase Hosting
- **Additional Services:** Chart.js for user progress visualization, JWT for session management

3. Team Roles:

- **Benjamin Legget** – Oversees project timeline, architecture, and implementation.
- **M Munem Morshed** – Responsible for UI/UX design and cross-platform compatibility.
- **S M Wahid Chowdhury** – Manages API development and database integration.
- **Sadman Shahriar** – Handles LLM integration, ensuring optimal workout and meal plan generation.
- **Himel Paul** – Conducts testing, debugging, and quality assurance.

Conclusion: This project integrates cutting-edge AI with user-friendly fitness tracking, offering a practical solution for individuals seeking structured health guidance. By ensuring cross-platform functionality, a robust database, and LLM-powered personalization, this application meets the core technical requirements and provides a scalable foundation for future enhancements.