# WorkoutMate: Personalized Fitness Planner

**Submitted By:**
Name - Aryan Anthwal
UID - 23BCS13302
Section – KRG-3A

## Module 1: User & Authentication Management

Purpose: Manage user accounts, authentication, and profiles.

Key Features:

- • User registration, login, logout (JWT-based authentication).
- • User profile management (name, email, password, fitness goals).
- • Password encryption, session management, and secure JWT handling.

Tech Components:

- • Backend: Spring Boot User Service (Controllers, Service layer, Repository).
- • Database: MySQL (Users table).
- • Security: Spring Security + JWT.

## Module 2: Goal Input & Workout Plan Generation

Purpose: Collect user fitness goals and generate personalized workout plans.

Key Features:

- • Users input goals such as fat loss, muscle gain, or stamina improvement.
- • Workout Generator Engine creates routines based on selected goals.
- • Predefined workout templates for each goal type (strength, endurance, cardio).

Tech Components:

- • Backend: Spring Boot Workout Service (Controller, Service, Repository).
- • Database: MySQL (WorkoutTemplates table).
- • Logic: Goal-based workout generation engine.

## Module 3: Calendar & Schedule Management

Purpose: Display workout plans in an easy-to-use calendar interface.

Key Features:

- • Weekly/monthly calendar integration.
- • Assign generated workouts to specific days.
- • Mark workouts as completed for progress tracking.

Tech Components:

- • Frontend: React Calendar components.
- • Backend: Spring Boot APIs to fetch and update schedule data.
- • Database: MySQL (Plan table storing scheduled workouts and status).

## Module 4: Progress Tracking & Analytics

Purpose: Monitor workout completion and progress toward fitness goals.

Key Features:

- • Visual charts showing completed workouts and percentage progress.
- • Weekly/monthly summaries of workouts completed.
- • Dashboard for users to track goal attainment over time.

Tech Components:

- • Frontend: React charts and dashboard components.
- • Backend: Spring Boot Progress Service.
- • Database: MySQL (Plan table, logs).

## Module 5: Admin Management (Optional)

Purpose: Allow admins to manage workout templates and monitor users.

Key Features:

- • CRUD operations on workout templates.
- • View user activity and progress.

Tech Components:

- • Backend: Spring Boot Admin Service.
- • Database: MySQL (WorkoutTemplates, Users).
- • Frontend: React Admin Dashboard.

## Module 6: Future Scope

Purpose: Enhance user engagement and platform functionality.

Key Features:

- • AI-powered workout recommendations based on user history.
- • Social features: share progress, follow other users, and community challenges.
- • Mobile app extension for on-the-go access.

Tech Components:

- • Backend: Spring Boot AI Recommendation Service.
- • Frontend: React for social feed and notifications.
- • Machine Learning (Optional): Workout recommendation engine.

## Tech Stack & Tools:

- • Frontend: React
- • Backend: Spring Boot
- • Database: MySQL
- • Tools: GitHub, VS Code, Eclipse, Postman

## Evaluation Criteria:

- • Personalized workout generation logic.
- • Secure JWT-based authentication.
- • Calendar-based plan display.
- • User-friendly interface with complete CRUD functionality.

## Similar Platforms:

- • Nike Training Club → https://www.nike.com/ntc-app
- • FitOn → https://fitonapp.com/
- • Our project offers a free, beginner-friendly, and simplified alternative suitable for students and fitness beginners.