

CSI1007 - Software Engineering Principles Laboratory

Assessment – 1

Reg.No: **23MIC0032**

Name: **A. JAIVANT**

Title of the Project:

Smart Workout Planner

Description of the Project:

This project aims to develop a user-friendly workout planner app for individuals based on their Body Mass Index (BMI). The app helps users achieve their fitness goals by offering pre-planned workout routines, tracking meal intake, and providing personalized insights. It also includes a rewards system for motivation, notifications for reminders, and secure account management. Users can choose a premium subscription to remove ads and control ad frequency. The app is designed to enhance user engagement through a clean interface, meal and workout tracking, and customizable features like light/dark mode.

Scope of the Project:

- To calculate and provide tailored workout plans based on BMI and fitness goals.
- To track meals and workouts while offering insights on nutritional intake.
- To motivate users with a reward system and redeemable points.
- To ensure user data security with password reset options and secure storage.
- To enhance user experience with optional premium features like ad-free usage
- To promote engagement through notifications and an intuitive interface.

Impact of the Developing Project:

Economic Impact:

- Offers a premium subscription model that generates revenue for developers.
- Provides potential partnerships with fitness brands and food tracking services, opening additional revenue streams.

Social Impact:

- Encourages users to lead healthier lifestyles by setting achievable fitness goals and tracking progress.
- Promotes awareness about balanced nutrition and sustainable workout habits, positively impacting community well-being.

Technological Impact:

- Introduces an innovative, personalized app that has user security, meal tracking, and fitness planning integrated into a single platform.
- Leverages cloud-based data synchronization, enabling seamless access across multiple devices for users.

Environmental Impact:

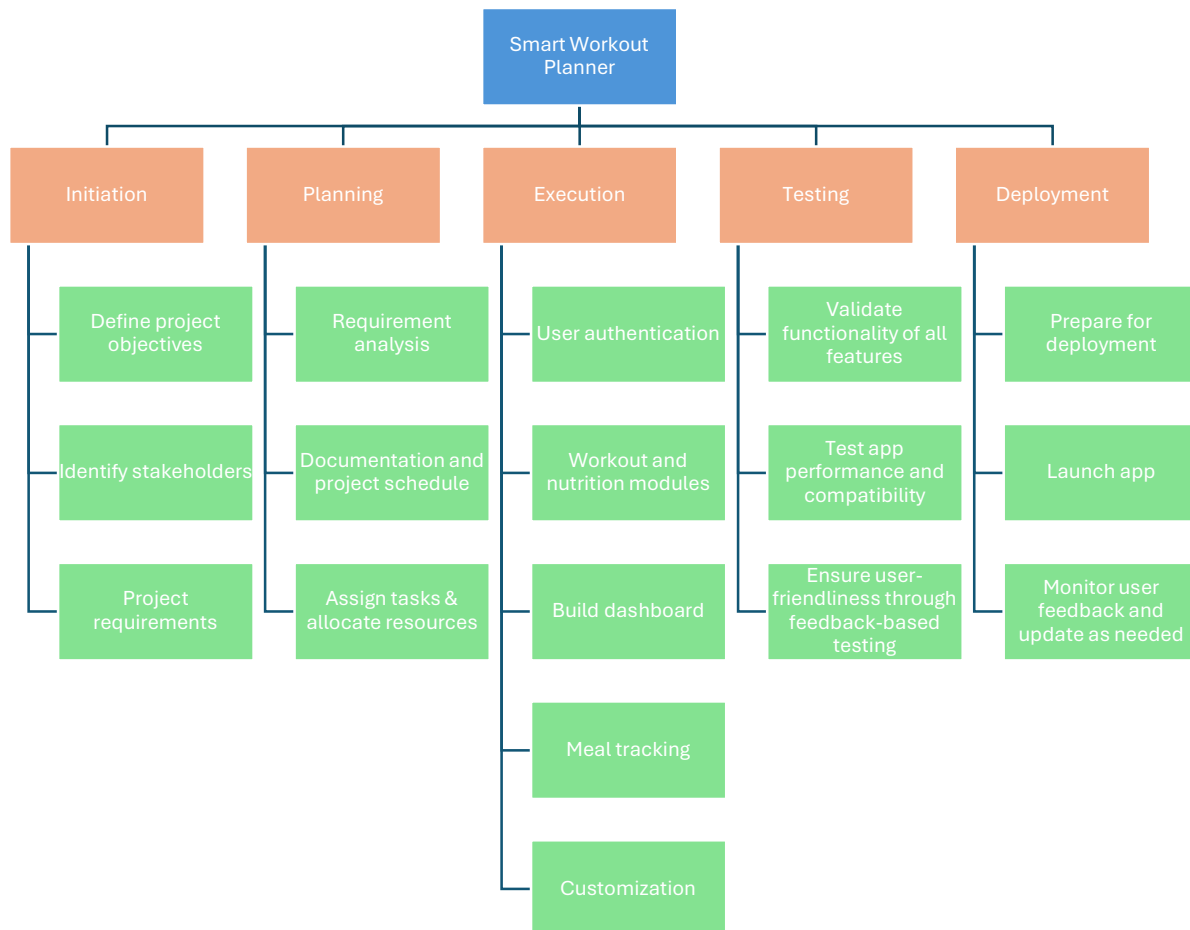
- Digital-only format reduces paper-based fitness tracking methods, making it eco-friendly.
- Encourages sustainable living by promoting healthier eating habits and waste reduction through conscious meal planning.

Stakeholders of the Project:

- A. Jaiivant
- Abdur Rahman M

WBS (Work Breakdown Structure)

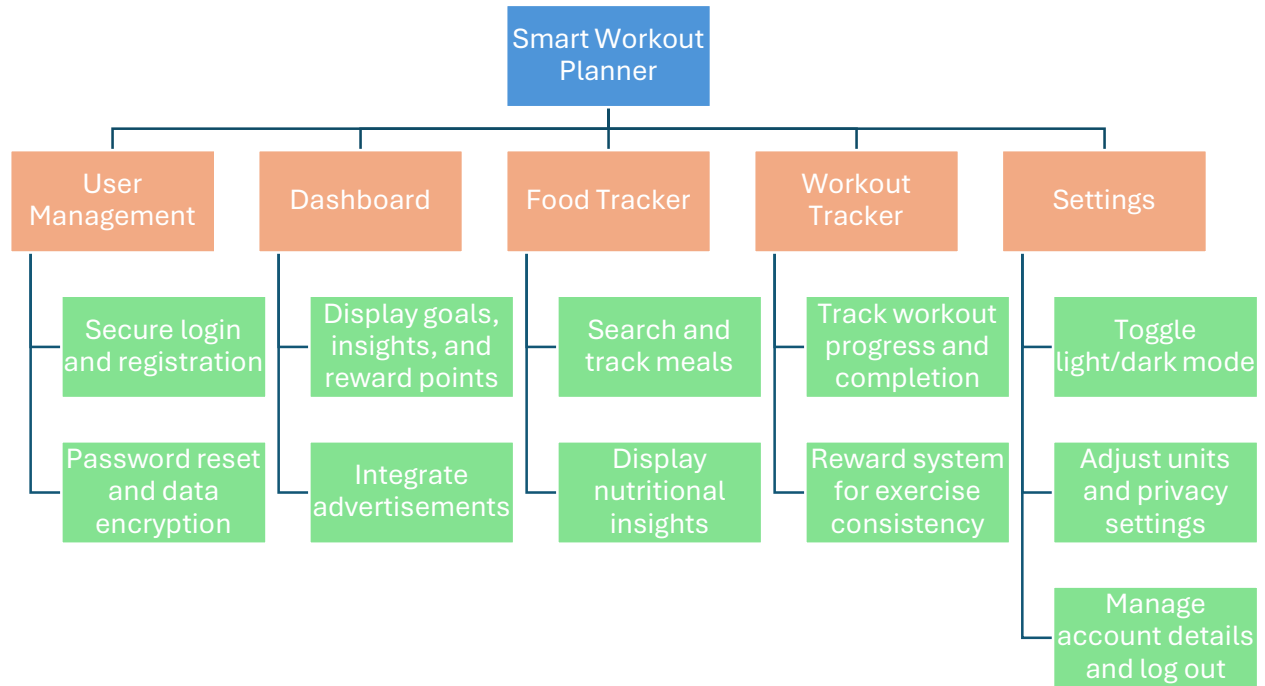
Process-Based Work Breakdown Structure:



- **Initiation**
 - Define project objectives.
 - Identify roles for stakeholders.
 - Finalize project requirements.
- **Planning**
 - User requirement analysis.
 - Prepare technical documentation and project schedule.
 - Assign tasks and allocate resources.

- Execution
 - Develop user authentication (login, registration, password reset).
 - Implement BMI-based workout and nutrition planning modules.
 - Build dashboard for daily goals, rewards, and insights.
 - Integrate meal tracking with search functionality.
 - Develop a reward system for completed goals.
 - Add advertisements with frequency controls and premium options.
 - Implement notifications for user reminders.
 - Customize app settings (theme, units, privacy options).
- Testing
 - Validate functionality of all features.
 - Test app performance and compatibility.
 - Ensure user-friendliness through feedback-based testing.
- Deployment
 - Prepare app for deployment.
 - Launch app on digital platforms.
 - Monitor user feedback and update as needed.

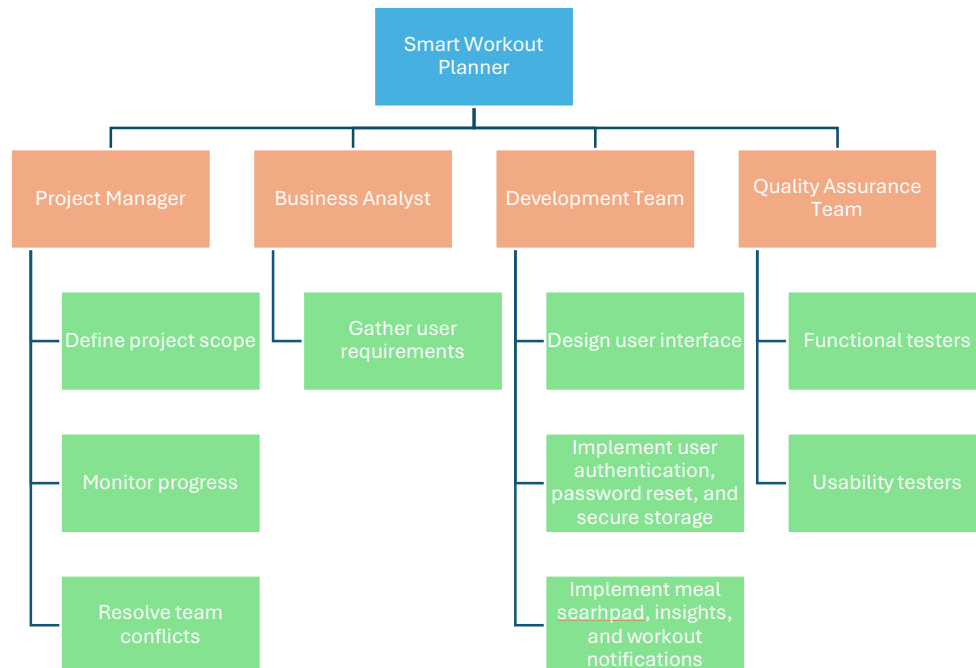
Product-Based Work Breakdown Structure:



- User Management
 - Secure login and registration.
 - Password reset and data encryption.
- Dashboard
 - Display goals, insights, and reward points.
 - Integrate advertisements and frequency controls.
- Food Tracker
 - Search and track meals.
 - Display nutritional insights for tracked meals.

- Workout Tracker
 - Track workout progress and completion.
 - Reward system for exercise consistency.
- Settings
 - Toggle light/dark mode.
 - Adjust units and privacy settings.
 - Manage account details and log out.

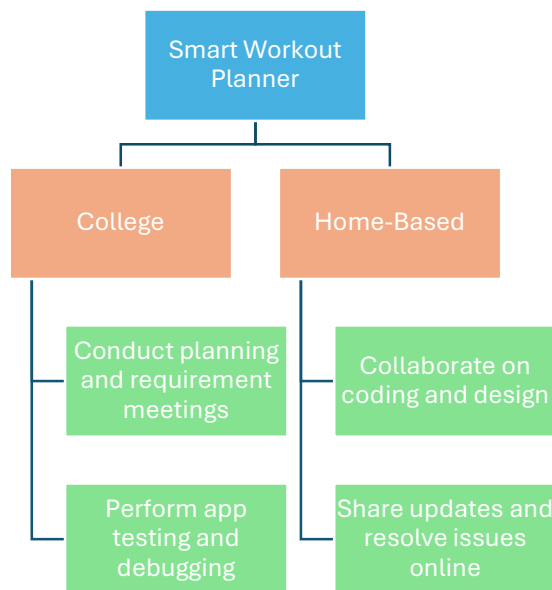
Role-Based Work Breakdown Structure:



- Project Manager
 - Define project scope.
 - Monitor progress.
 - Resolve team conflicts.
- Business Analyst
 - Gather user requirements.

- Development Team
 - Front-end developers: Design user interface.
 - Back-end developers: Implement user authentication, password reset, and secure storage.
 - API developers: Implement meal search pad, insights, and workout notifications.
- Quality Assurance Team
 - Functional testers: Test user account security, ads, rewards, and notifications.
 - Usability testers: Ensure ease of use for account features and ad-free experience.

Geography-Based Work Breakdown Structure:



- College
 - Conduct planning and requirement meetings.
 - Perform app testing and debugging.
- Home-Based
 - Collaborate on coding and design.
 - Share updates and resolve issues online.