

# **Project Plan Document**

## **Document Authorship**

**Document Title:** Project Plan Document

**Project Name:** LifeSync

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### **Team Members:**

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## Document-Specific Task Matrix

Document Section / Task	Responsible Team Member	Task Description
<b>1. Project Scope</b>	Kerem Elma	Defined the boundaries, scope items and MVP goals.
<b>2. Project Organization</b>	Kerem Elma	Defined team roles and responsibilities.
<b>3. Objectives</b>	Kerem Elma	Defined specific goals regarding project execution, quality assurance, and management.
<b>4. Key Phases &amp; Timeline (Gantt)</b>	Kerem Elma	Created the Gantt chart and defined phase durations.
<b>5. Resources</b>	Kerem Elma	Listed technical stack and estimated effort allocation.
<b>6. Risk Management</b>	Mehmet Eski	Identified potential risks and mitigation strategies.
<b>7. Communication</b>	Mehmet Eski	Drafted the communication plan and change request process.
<b>8. Change Management</b>	Mehmet Eski	Outlined the procedure for handling scope changes, approval workflows, and impact analysis.
<b>9. Budget Plan</b>	Mehmet Eski	Defined the allocation of team effort and time resources across different project phases.
<b>10. Acceptance Tests</b>	Mehmet Eski	Defined the criteria for project success.

# 1. Project Scope

## Included in Scope:

- User registration, login, logout, and session management with secure password encryption
- User profiling module with comprehensive onboarding survey collecting physical metrics, fitness goals, dietary preferences and restrictions, and lifestyle factors
- AI integration for generating custom weekly diet and exercise plans using advanced language model technology
- Automated level determination system using Strategy Pattern to classify users as Beginner, Intermediate, or Advanced based on survey responses
- Notification system with scheduler-based automated reminders for workouts and meal times implemented using Observer Pattern
- User dashboard with intuitive interface displaying personalized weekly plans in calendar format
- Progress tracking functionality with task completion marking and adherence monitoring
- Desktop browser support with responsive design for optimal user experience
- Comprehensive test cases and acceptance checks
- Deployment package and release checklist

## Excluded from Scope:

- Mobile native applications (iOS/Android apps)
- Medical diagnoses, treatment recommendations, or professional health advice
- Real-time biometric integration with wearable devices or fitness trackers
- Social features including community forums, social sharing, or friend challenges
- Advanced analytics dashboards, body composition analysis, or long-term trend visualization beyond basic progress tracking
- Custom plan modifications allowing manual editing of AI-generated plans by users
- Professional consultation features or direct connection to fitness trainers, nutritionists, or healthcare providers
- Multi-language support (MVP will be developed in English only)
- Real-time push notifications via email or SMS

# 2. Project Organization

- **Project Manager:** Timeline, risk management, stakeholder communication.
- **Lead Developer (Backend/AI):** Logic, API integrations, DB architecture.
- **Frontend Developer:** UI/UX implementation, responsiveness.
- **QA & Tester:** Bug hunting, AI output validation.

### **3. Objectives**

- Develop a fully functional web-based personalized wellness platform accessible from desktop browsers
  - Implement secure user authentication and authorization system with registration, login, and session management
  - Create a comprehensive user profiling module that collects detailed metrics including age, height, weight, BMI, activity levels, fitness goals, dietary preferences, and restrictions
  - Integrate AI technology to generate custom weekly diet and exercise plans tailored to individual user profiles
  - Implement automated fitness level classification system that assigns users to Beginner, Intermediate, or Advanced categories using the Strategy Pattern
  - Develop intelligent notification system with scheduler-based automated reminders for workouts and meal times using the Observer Pattern
  - Create an intuitive user dashboard interface for viewing personalized wellness plans and tracking completion status
  - Implement progress tracking functionality allowing users to mark tasks as completed and monitor adherence to wellness plans
  - Achieve system performance with AI-generated plans delivered within 30 seconds and dashboard loading time under 2 seconds
  - Complete the entire development cycle within the 10-week academic timeline without requiring crunch periods

#### **4. Key Phases and Timeline**

Estimated Duration: 10 Weeks

## 5. Resource Planning

- Development Stack:
  - **Frontend:** React
  - **Backend:** Node.js / Express.js
  - **Database:** PostgreSQL
  - **AI Model:** Large Language Model (LLM)
- Collaboration Tools:
  - GitHub

## 6. Risk Management

- **AI Hallucinations (Medium):** Mitigation: Strict prompt engineering & validation layers.
- **API Cost Overruns (Low):** Mitigation: Usage limits & caching mechanisms.
- **Scope Creep (High):** Mitigation: Strict adherence to Out-of-Scope list.

## 7. Communication Plan

- Internal Team: Bi-weekly stand-ups (Thursday).

## 8. Change Management Plan

1. **Request:** Written request with justification.
2. **Impact Analysis:** PM estimates time/budget impact.
3. **Decision:** Approval required if team agrees.

## 9. Budget Plan

- **Planning & Design:** 15%
- **Development:** 50%
- **Testing & AI Tuning:** 25%
- **Deployment:** 10%

## 10. Acceptance Tests and Criteria

- **Functionality:** User can sign up and get a routine without errors.
- **Accuracy:** System correctly identifies user level.
- **Reliability:** Notifications trigger at set times.
- **Performance:** Dashboard loads < 2 seconds.