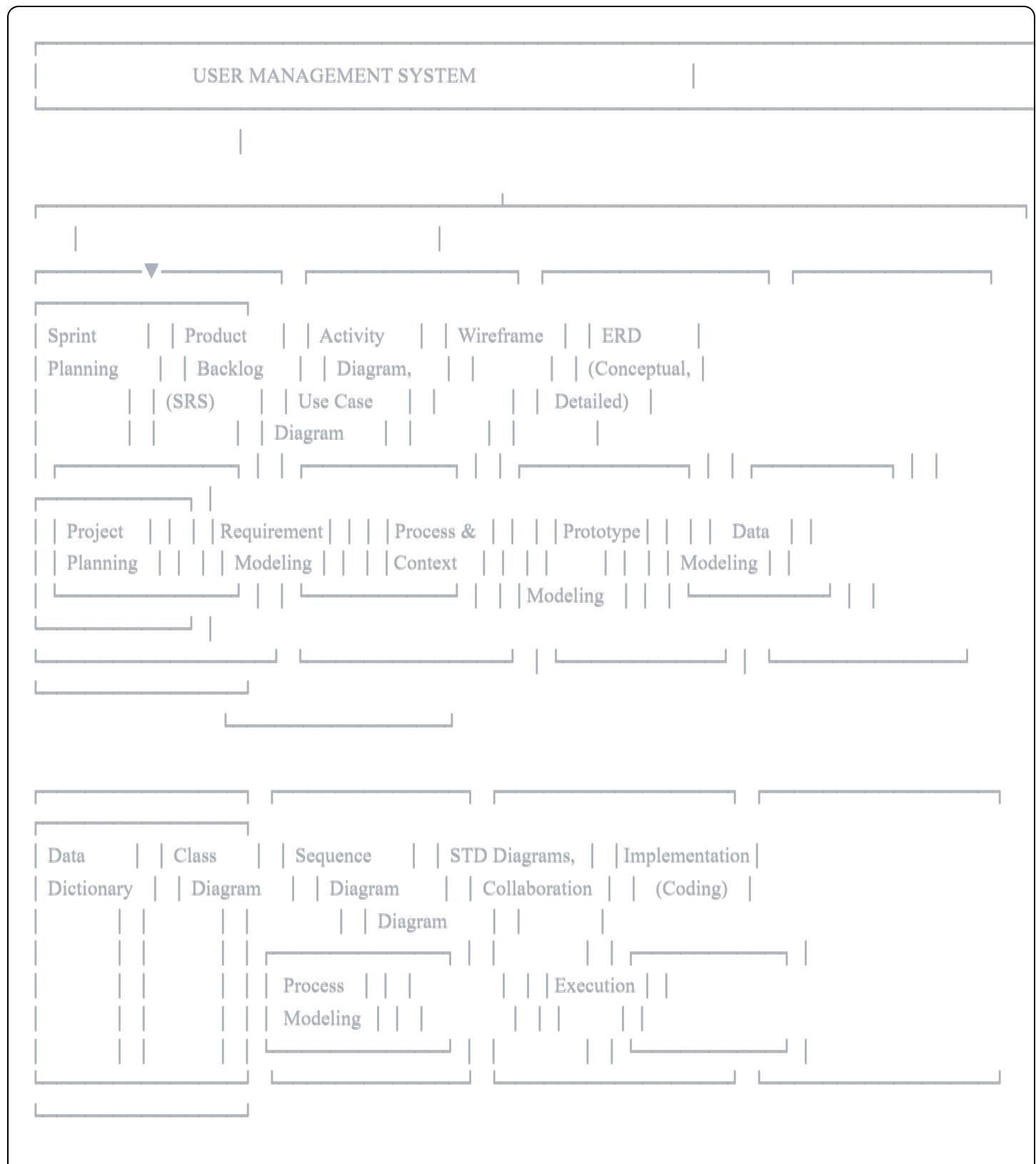
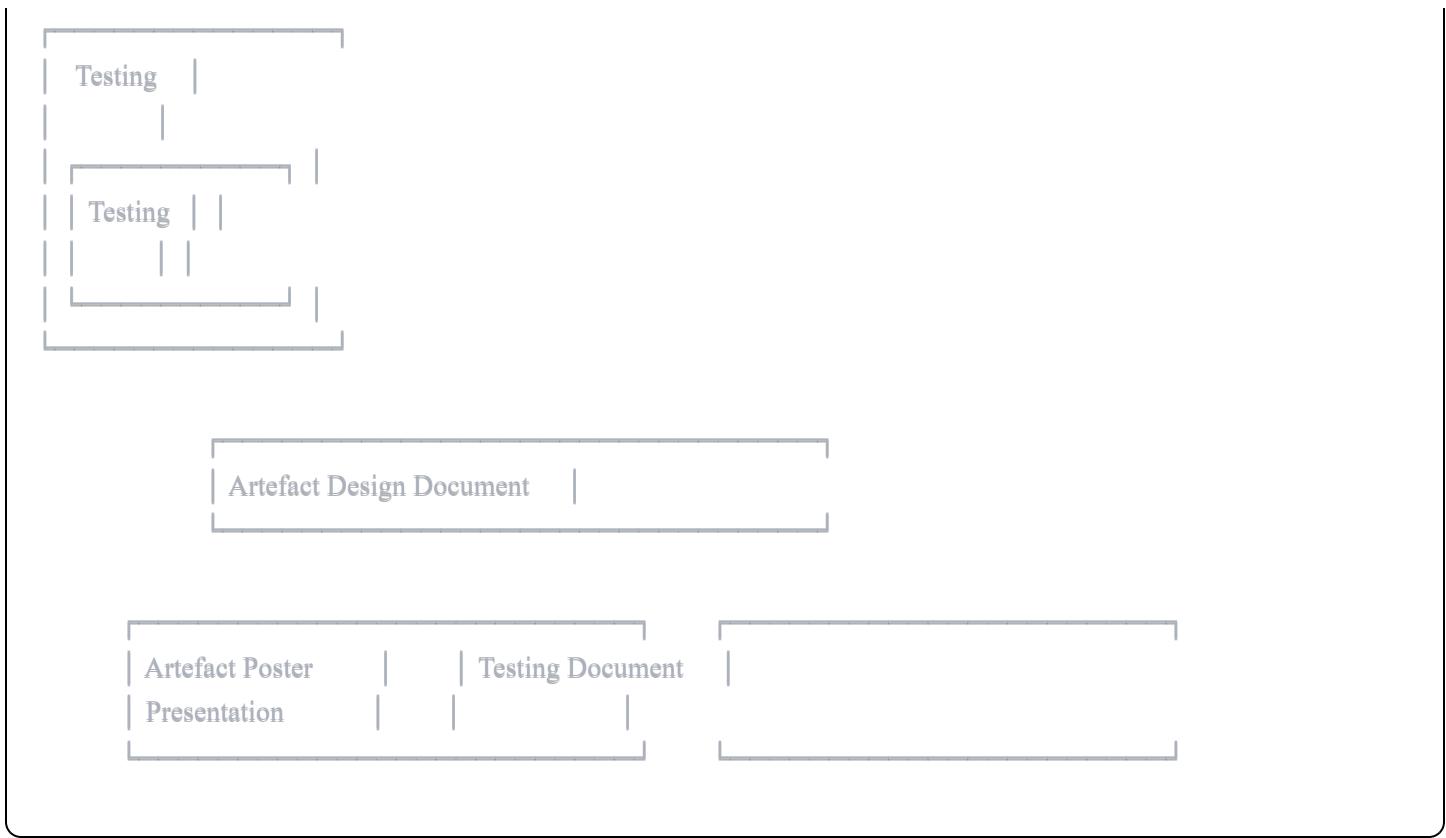


NutriLift - Functional Decomposition Diagrams (FDD)

Complete Set for All Subsystems

FDD 1: User Management System

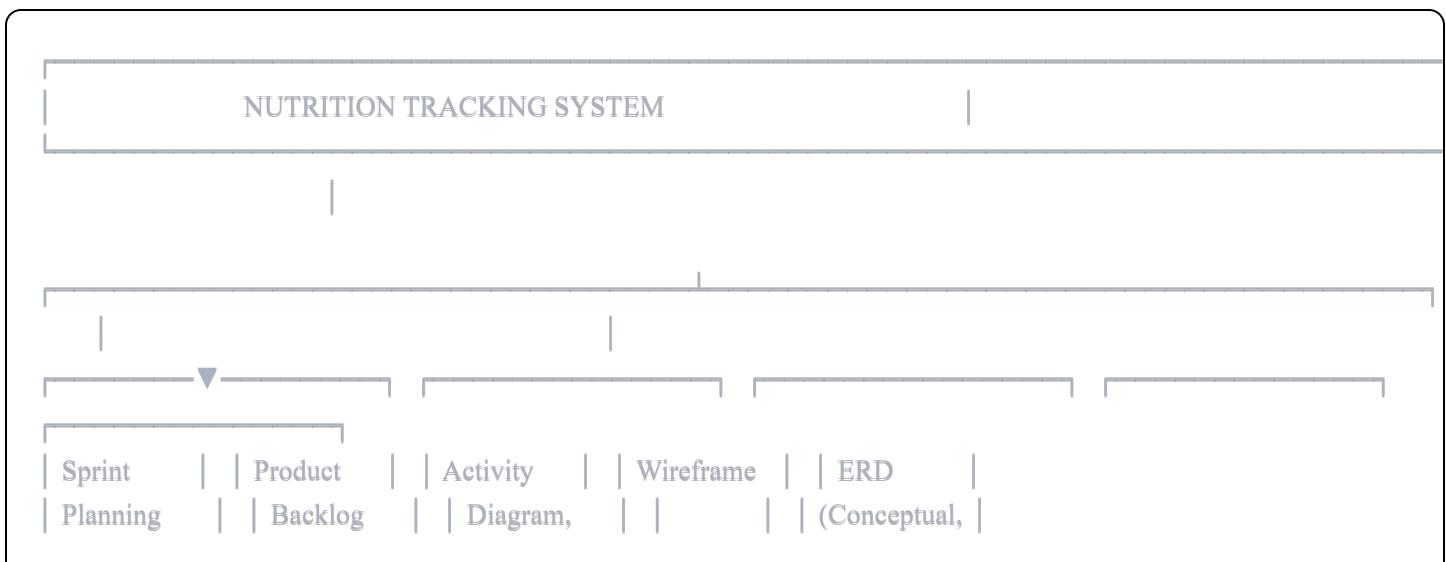


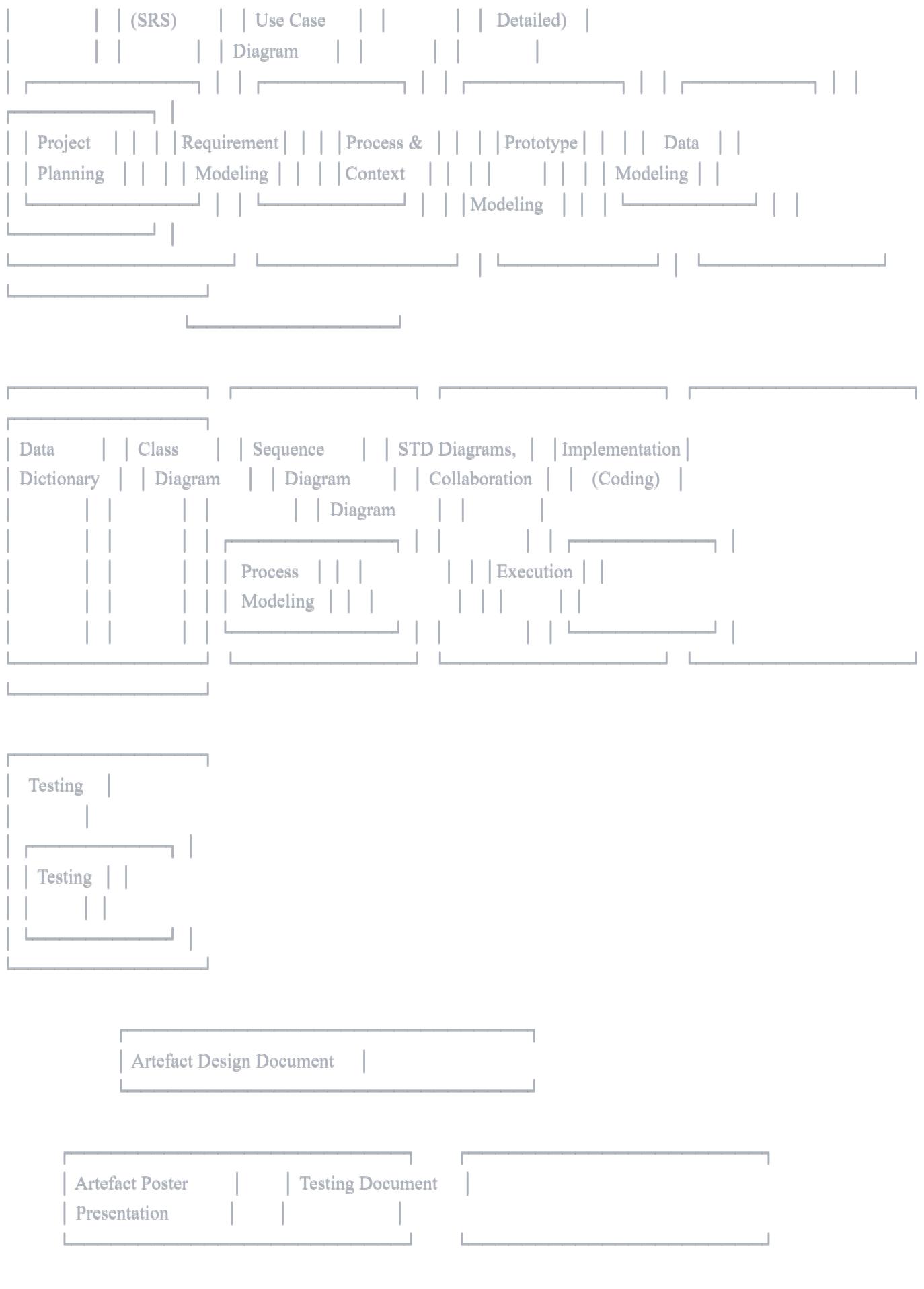


Key Features:

- User Registration
- Login & Authentication
- Profile Management
- Password Recovery
- User Settings & Preferences

FDD 2: Nutrition Tracking System





Key Features:

- Meal Logging
 - Calorie & Macro Tracking
 - Searchable Food Database
 - Hydration Tracker
 - Quick Log for Frequent Meals
 - Nutrition Progress Reports
-

FDD 3: Workout Tracking System

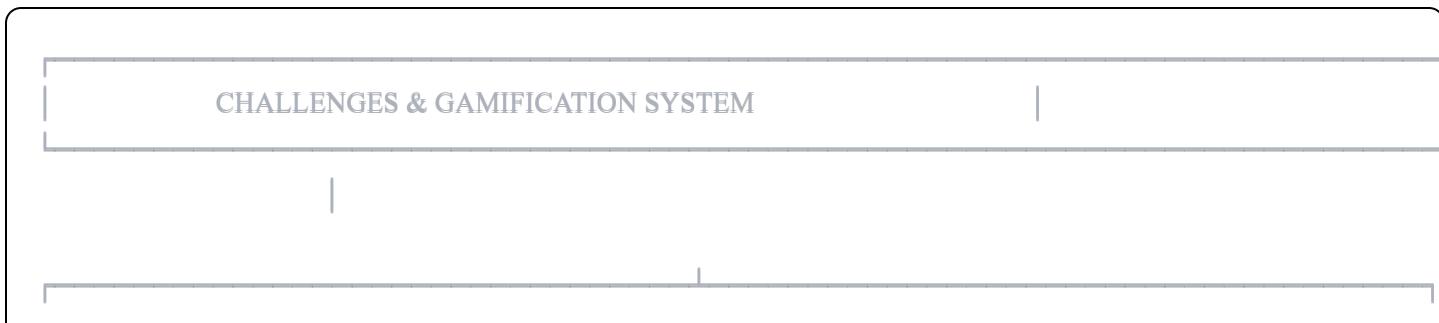


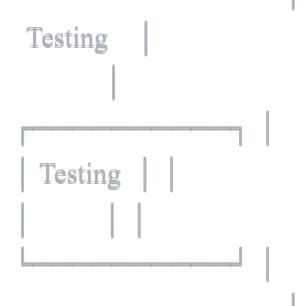
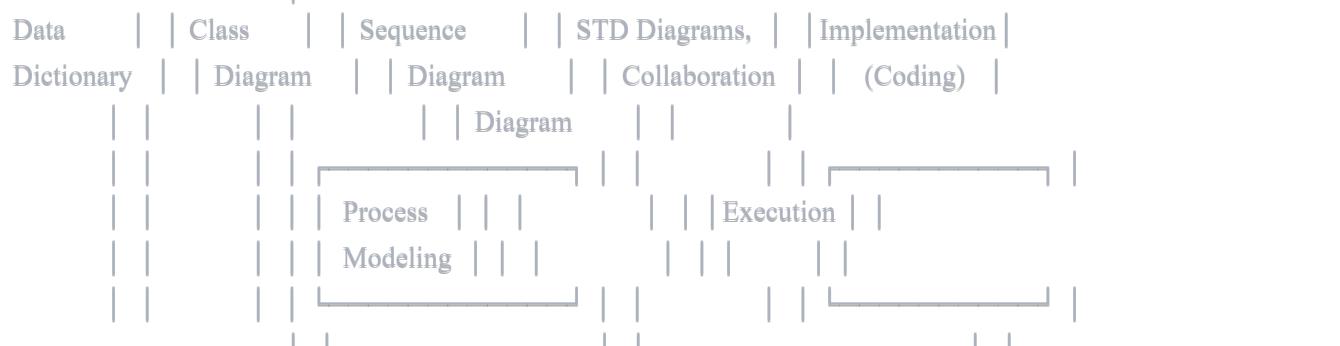
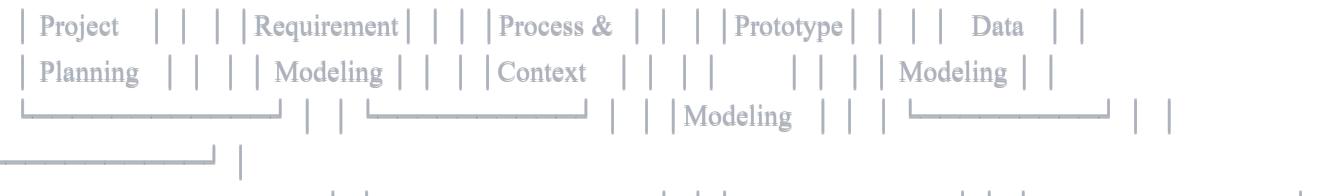
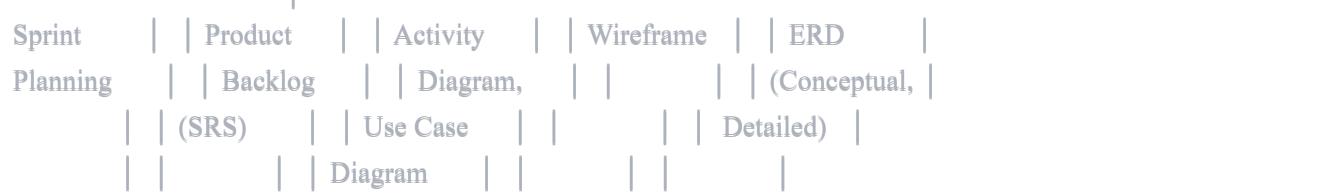


Key Features:

- Exercise Logging (sets, reps, duration)
- Custom Workout Builder
- Workout History & Calendar
- Exercise Library
- Workout Progress Tracking

FDD 4: Challenges & Gamification System





Artefact Design Document

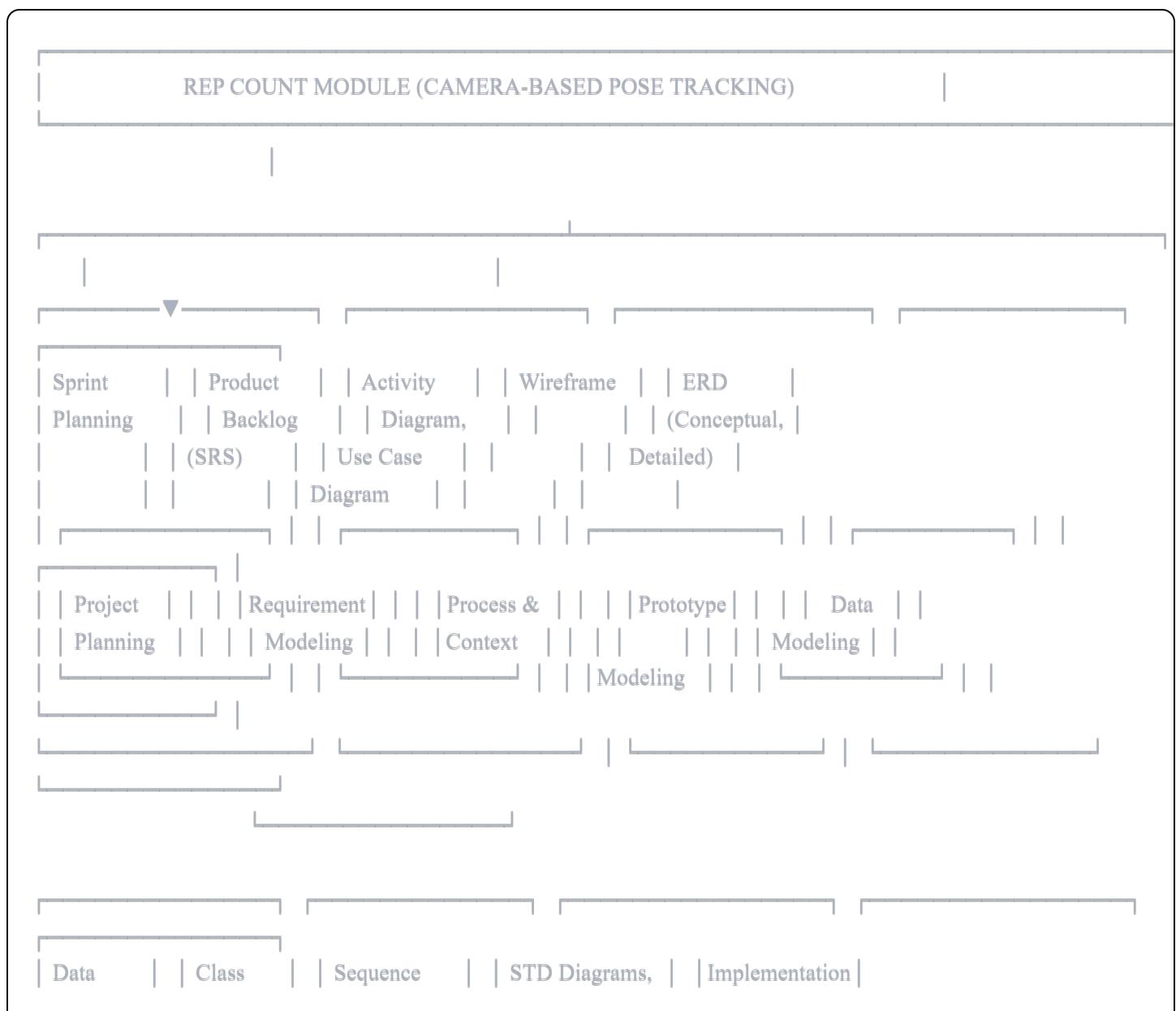
Artefact Poster

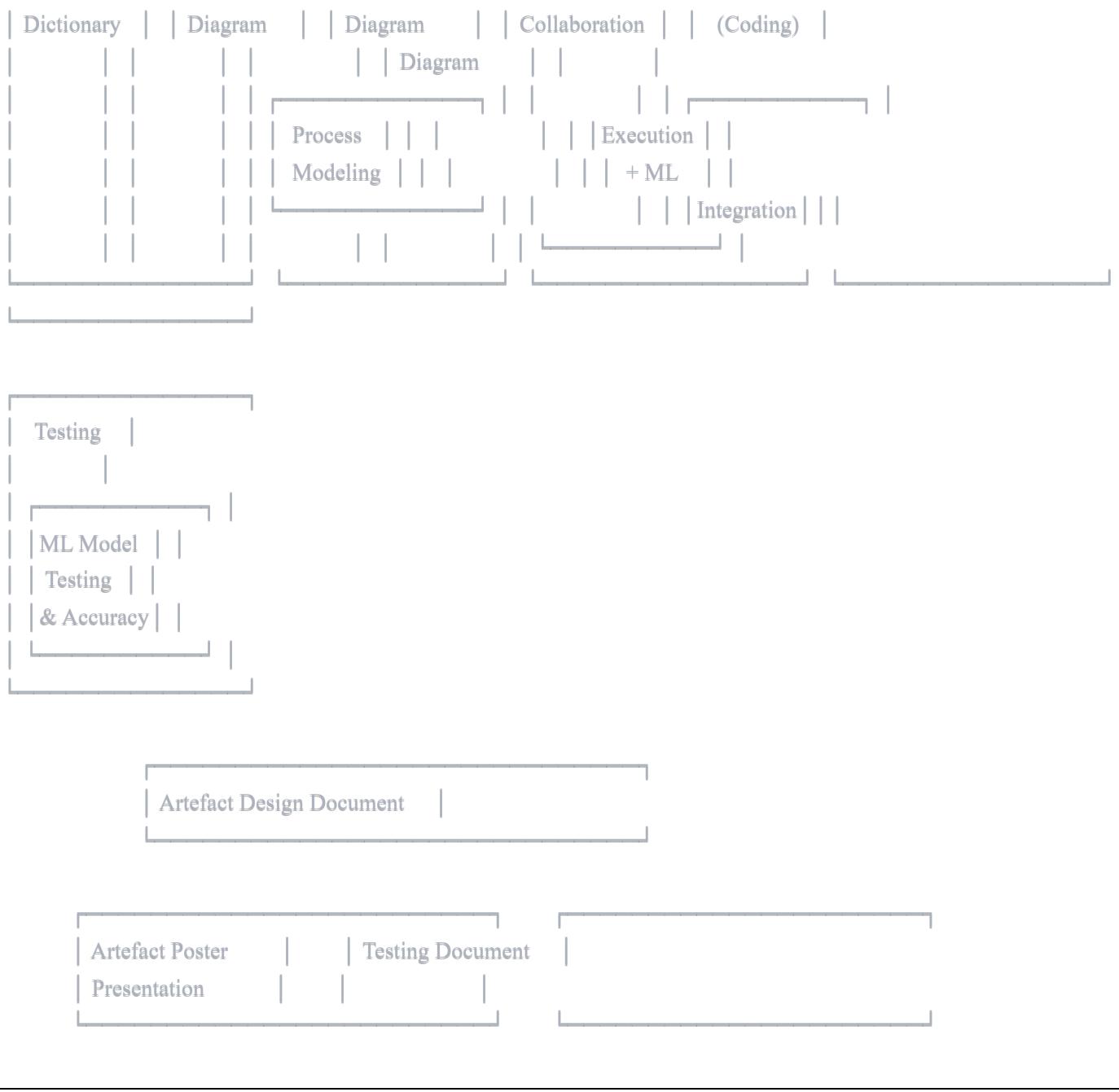
Testing Document

Key Features:

- Daily & Weekly Goals
- Streak Tracking & Rewards
- Badges & Achievements
- Leaderboards
- Mood & Energy Tracker

FDD 5: Rep Count Module (AI-Powered)





Key Features:

- Google ML Kit Pose Detection Integration
- Real-time Camera Tracking
- Automatic Rep Counting
- Posture Detection & Analysis
- Form Feedback (optional)

FDD 6: Community Module

COMMUNITY MODULE

Sprint Planning | Product Backlog (SRS) | Activity Diagram, Use Case Diagram | Wireframe | ERD (Conceptual, Detailed)

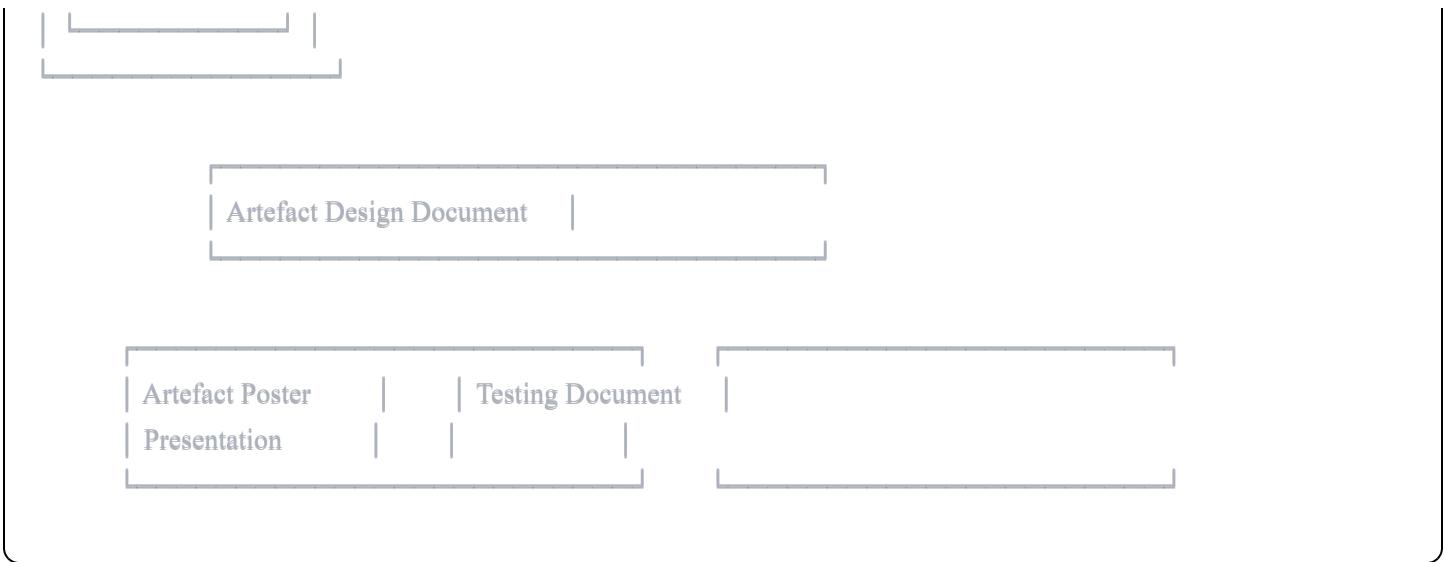
Project Planning | Requirement Modeling | Process & Context | Prototype Modeling | Data Modeling

Data Dictionary | Class Diagram | Sequence Diagram | STD Diagrams, Collaboration Diagram | Implementation (Coding)

Process Modeling | Execution

Testing

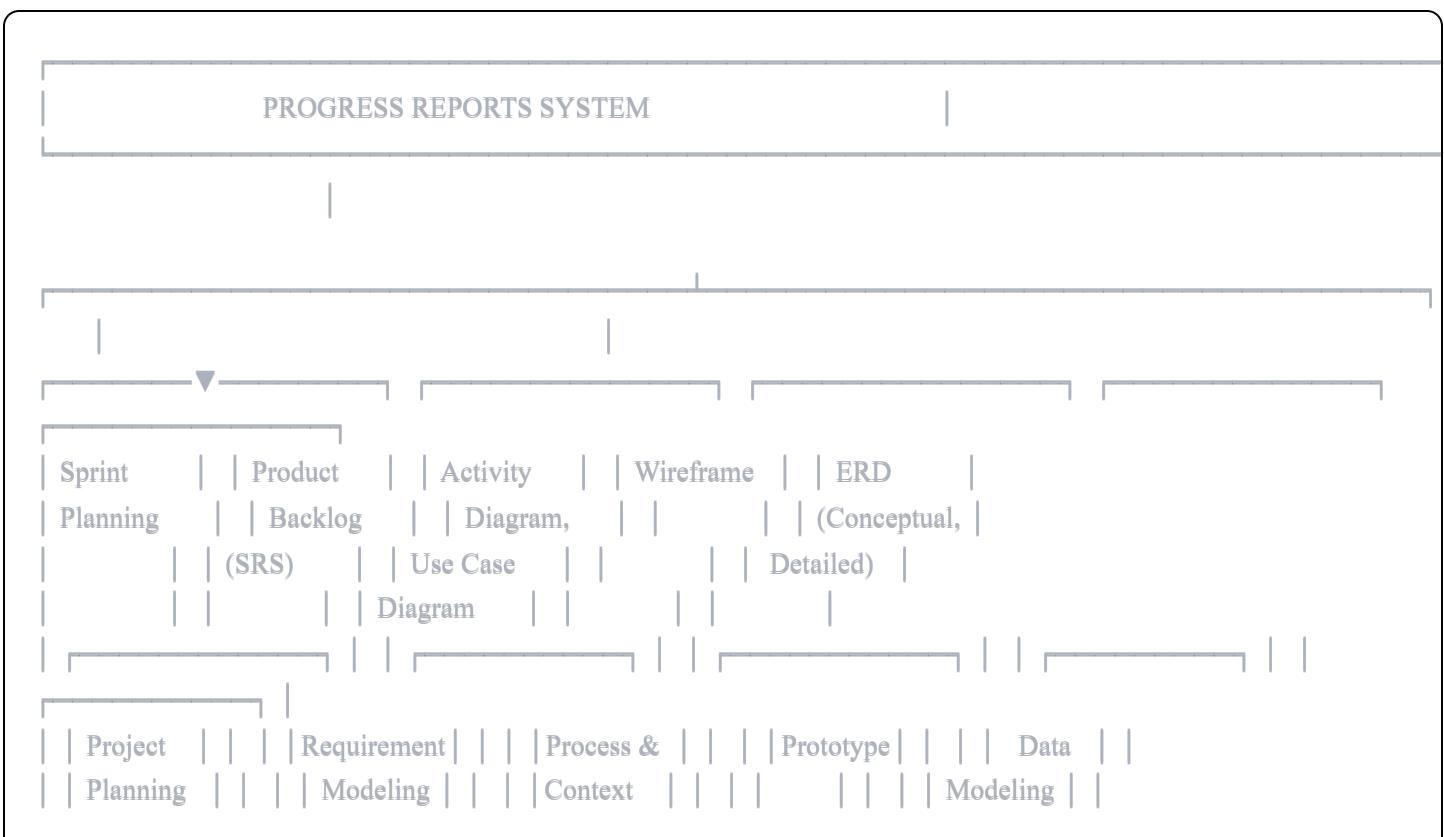
Testing

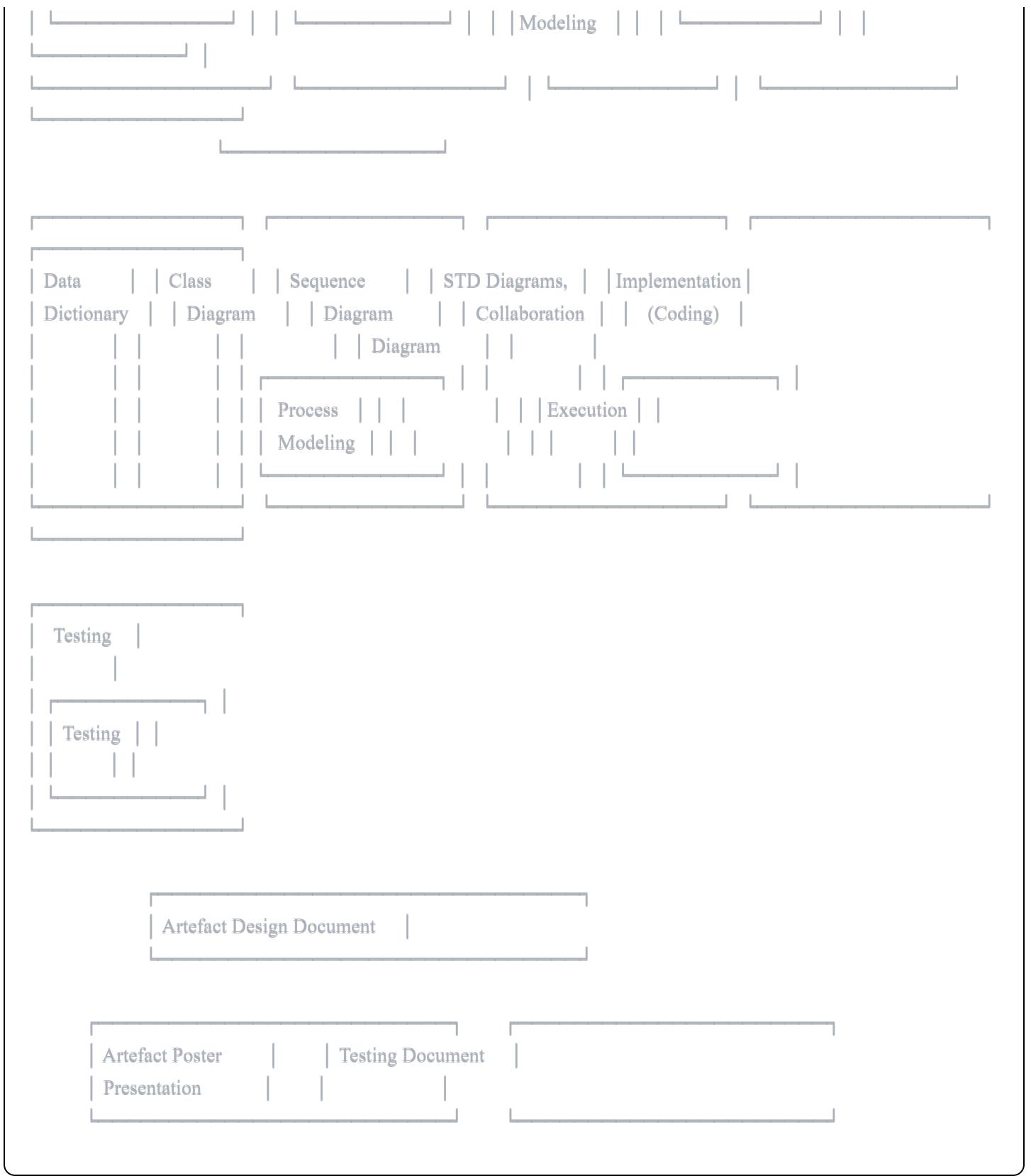


Key Features:

- Create & Share Posts
- Comment & Like System
- Group Challenges
- Community Feed
- Social Engagement Features

FDD 7: Progress Reports System





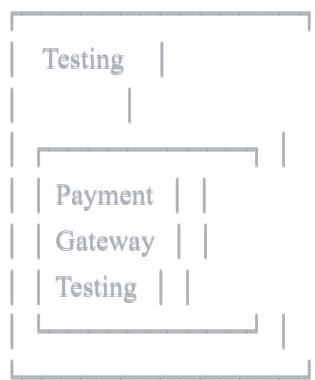
Key Features:

- Visual Charts & Graphs
- Weekly Progress Summary
- Monthly Reports

- Wellness Score Calculation
 - Nutrition & Workout Analytics
-

FDD 8: Payment Integration System





Artefact Design Document

Artefact Poster
Presentation

Testing Document

Key Features:

- Premium Feature Access
- International Payment Gateway Integration
- Nepali Payment Gateway Integration (eSewa, Khalti, etc.)
- Subscription Management
- Transaction History
- Payment Security

FDD 9: Admin Panel System

ADMIN PANEL SYSTEM



Key Features:

- User Account Management
 - Content Moderation (Posts, Comments)
 - Analytics Dashboard
 - Report Handling
 - System Monitoring
 - User Role Management
-

Summary: Complete FDD Overview

Development Methodology: SCRUM (Agile)

Each subsystem follows the same iterative development lifecycle:

1. **Sprint Planning** → Project planning and sprint goals
 2. **Product Backlog (SRS)** → Requirements gathering and modeling
 3. **Activity & Use Case Diagrams** → Process and context modeling
 4. **Wireframes** → UI/UX prototyping
 5. **ERD (Conceptual & Detailed)** → Database design and data modeling
 6. **Data Dictionary** → Complete database schema documentation
 7. **Class Diagram** → Object-oriented design
 8. **Sequence Diagram** → Process flow modeling
 9. **STD & Collaboration Diagrams** → State transitions and object interactions
 10. **Implementation (Coding)** → Actual development
 11. **Testing** → Quality assurance
 12. **Artefact Design Document** → Complete technical documentation
 13. **Deliverables** → Poster presentation and testing documentation
-

Technology Stack (All Subsystems)

Frontend: Flutter (Cross-platform mobile - Android & iOS)

Backend: Django REST Framework / Node.js with Express

Database: PostgreSQL

AI/ML: Google ML Kit (Pose Detection for Rep Counter)

Payment: International Gateway + Nepali Gateways (eSewa, Khalti)

Version Control: Git & GitHub

Deployment: AWS

Design Tools: Figma (for wireframes and prototypes)

Sprint Timeline

- **Week 1-2:** User Management System
 - **Week 3-4:** Nutrition Tracking System
 - **Week 5-6:** Workout Tracking System
 - **Week 7-8:** Challenges & Gamification System
 - **Week 9-10:** Rep Count Module (AI Integration)
 - **Week 11-12:** Community Module
 - **Week 13-14:** Progress Reports System
 - **Week 15-16:** Payment Integration System
 - **Week 17-18:** Admin Panel System
 - **Week 19-20:** Integration Testing & Documentation
-

Notes

- Each subsystem will be developed iteratively following Scrum methodology
- Each sprint results in one working increment of the system
- All subsystems integrate to form the complete NutriLift mobile application
- This approach allows for continuous feedback and adaptation

- Testing is performed throughout each sprint, not just at the end
-

End of FDD Documentation