

1. Product Backlog for Gym and Fitness Management System

The product backlog includes user stories categorized by functional modules.

Feature	User Story ID	User Story	Priority	Estimate (Story Points)
Employee Management	EM-1	As an admin, I want to add, update, and delete employee profiles so that I can manage gym staff efficiently.	High	8
	EM-2	As an admin, I want to track employee attendance so that I can calculate monthly payroll accurately.	High	8
	EM-3	As an admin, I want to generate employee performance reports so that I can evaluate staff efficiency.	Medium	5
Supply Maintenance	SM-1	As an admin, I want to monitor gym equipment parts stock levels so that I can avoid shortages.	High	8
	SM-2	As an admin, I want automated alerts for low stock levels so that I can reorder supplies in time.	High	5
	SM-3	As an admin, I want to track supplier performance so that I can choose reliable vendors.	Medium	5
Customer Affairs	CA-1	As a user, I want to search for fitness instructors based on ratings so that I can find the best trainer.	High	8
	CA-2	As a user, I want to add, edit, and delete feedback so that I can share my experience.	High	8

Feature	User Story ID	User Story	Priority	Estimate (Story Points)
Equipment Management	CA-3	As a customer service manager, I want to validate and approve feedback so that I can maintain quality control.	High	5
	EQ-1	As an admin, I want to track maintenance schedules so that gym equipment is always in good condition.	High	8
	EQ-2	As an admin, I want to monitor equipment performance so that I can schedule repairs before breakdowns.	Medium	5
	EQ-3	As an admin, I want real-time alerts for equipment failures so that I can respond quickly.	Medium	5
Online Store	OS-1	As an admin, I want to manage product listings so that members can buy gym-related items online.	High	8
	OS-2	As a customer, I want to place online orders so that I can conveniently purchase gym products.	High	8
	OS-3	As an admin, I want to track online store inventory so that I can restock items efficiently.	Medium	5
Membership Management	MM-1	As an admin, I want to register new members so that I can track gym memberships.	High	8
	MM-2	As an admin, I want to manage membership packages so that I can offer flexible subscription plans.	High	8

Feature	User Story ID	User Story	Priority	Estimate (Story Points)
Payment Management	PM-1	As a user, I want to make secure online payments so that I can complete my transactions safely.	High	8
	PM-2	As an admin, I want to track pending and completed payments so that I can manage gym revenue.	Medium	5
Schedule Management	SC-1	As a registered user, I want to view my training schedule so that I can plan my workouts.	High	8
	SC-2	As a user, I want to request a trainer change so that I can modify my workout preferences.	High	8
Diet Plan Management	DP-1	As a user, I want to receive AI-generated diet plans so that I can maintain a healthy lifestyle.	High	8
	DP-2	As an admin, I want to allow nutritionists to create diet plans so that members get personalized recommendations.	Medium	5

2. Assign Priorities

Prioritization is based on business impact and development complexity.

Priority Level	User Stories
High (Critical for MVP)	EM-1, EM-2, SM-1, CA-1, CA-2, EQ-1, OS-1, MM-1, PM-1, SC-1, DP-1
Medium (Enhancement)	EM-3, SM-2, CA-3, EQ-2, EQ-3, OS-3, MM-2, PM-2, SC-2, DP-2

Priority Level	User Stories
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Low (Future Implementation)	SM-3, OS-2
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3. Agile Estimation

Estimation uses **Story Points (Fibonacci Sequence: 1, 2, 3, 5, 8, 13, etc.)** to reflect complexity.

4. Sprint Planning

The project will have three sprints, each lasting **two weeks**.

Sprint 1: Core System Development

Deliverables:

- Employee and membership management setup
- Customer feedback and instructor ratings
- Online store and inventory tracking

User Story ID	Feature	Tasks
EM-1	Employee Management	Add/update/delete employee profiles
EM-2	Employee Management	Attendance tracking & payroll calculations
CA-1	Customer Affairs	Search fitness instructors by rating
CA-2	Customer Affairs	Add/edit/delete feedback
MM-1	Membership Management	Register new members
OS-1	Online Store	Product listing management
SC-1	Schedule Management	View training schedule

Sprint 2: Enhancements & Reporting

Deliverables:

- Advanced reporting and alerts
- Payment tracking and scheduling system

User Story ID	Feature	Tasks
SM-1	Supply Management	Monitor stock levels
SM-2	Supply Management	Automated low-stock alerts
EQ-1	Equipment Management	Track maintenance schedules
EQ-2	Equipment Management	Equipment performance monitoring
OS-3	Online Store	Inventory tracking
PM-1	Payment Management	Secure online payments
PM-2	Payment Management	Track pending payments

Sprint 3: Final System & Deployment

Deliverables:

- AI-powered diet plans
- Final testing and deployment

User Story ID	Feature	Tasks
DP-1	Diet Plan Management	AI-generated diet plans
DP-2	Diet Plan Management	Nutritionist-created diet plans
SC-2	Schedule Management	Trainer change requests
EQ-3	Equipment Management	Real-time failure alerts
OS-2	Online Store	Online order processing
MM-2	Membership Management	Package management

5. Kanban Board

A **Kanban board** should be created in **Jira, Trello, or any project management tool**, with columns:

- **Backlog:** All user stories
- **To Do:** Sprint tasks
- **In Progress:** Ongoing tasks
- **Testing:** Tasks in QA
- **Done:** Completed stories

(Screenshot required for submission)

6. Sprint Plan & Task Allocation

Each sprint task should be assigned to a **team member** based on their expertise.

Sprint	User Story ID	Assigned To
Sprint 1	EM-1, MM-1, OS-1	Developer A
Sprint 2	EQ-1, SM-1, PM-1	Developer B
Sprint 3	DP-1, SC-2	Developer C