

I have created a visually structured documentation for the Smart Study Planner in PDF-ready format.

Smart Study Planner — Project Documentation

1. Project Overview

Smart Study Planner is a web-based AI-powered study management platform for students preparing for exams. It generates personalized study schedules, quizzes, topic explanations, and question solutions based on the student's past performance, board, and subjects.

2. Features

Core Features

Feature	Description	Plan Availability
Study Schedule Generator	Auto-generates daily study plans	All plans
Quiz Generation (AI)	AI-generated quizzes	Free: 1/day, Basic: 3/day, Pro: 5/day, Premium: unlimited
Question Solver (AI)	Step-by-step solutions	Free: 3/day, Basic: 10/day, Pro: 20/day, Premium: unlimited
Topic Explainer (AI)	AI explanations for topics	Free: 2/day, Basic: 0, Pro: 5/day, Premium: unlimited
AI Caching	Store previously generated content	All plans
User Progress Tracker	Track completed tasks & study hours	All plans
AI-Based Adaptive Plan	Adjust schedule based on performance	All plans
Board & Curriculum Support	CBSE, Gujarat, Maharashtra Boards	All plans
Free Trial	5-day limited AI usage	Free Trial plan
AI Image Generation	Visual learning for Premium	Premium

AI & API Management

API	Priority	Notes
Grok AI	1st	Cheapest; free & low-tier requests
Gemini AI	2nd	Mid-tier requests; better quality
OpenAI	3rd	High-quality output; Pro/Premium only
Caching	Always check before API call	Reduces cost & speeds up responses

API Allocation by Plan: | Plan | API Priority | Notes | |-----|-----|-----| | Free Trial | Grok only | Limited 5-day usage | | Basic | Grok → Gemini | OpenAI NOT used | | Pro | Grok → Gemini → OpenAI | Complex questions | | Premium | Grok → Gemini → OpenAI | Includes 10 AI images/day |

Board & Exam Features

- Multi-board support (CBSE, Gujarat, Maharashtra)
- Exam-specific AI-generated questions
- Personalized difficulty based on past results
- Adaptive schedule updates

3. Subscription Plans & Pricing

Plan	Monthly Price (₹)	Daily Limits
Free Trial	0	5-day trial, 1 quiz, 3 solved questions, 2 topic explains/day
Basic	99	3 quizzes/day, 10 solved questions/day
Pro	249	5 quizzes/day, 20 solved questions/day, 5 topic explains/day
Premium	599	Unlimited quizzes, solvers, topics + 10 AI images/day

4. Technology Stack

- Frontend: HTML, CSS, JS, Bootstrap/Tailwind
- Backend: PHP (Laravel/CodeIgniter optional)
- Database: MySQL / MariaDB
- AI Integration: OpenAI, Grok, Gemini
- Caching: Redis / MySQL table
- Hosting: Cloud server (AWS / DigitalOcean / VPS)

5. User Flow

1. Signup/Login → select board & class → enter subjects & exam date
2. AI Plan Generation → system generates daily study plan
3. Daily Tasks → quizzes, solved questions, topic explanations

4. Progress Tracking → marks, completion rate, adaptive updates
5. Premium Features → AI-generated images & unlimited queries
6. Notifications → reminders for study & pending tasks

6. Development Notes

- API Manager Module for Grok → Gemini → OpenAI per plan
- Caching Layer to reduce repeated API calls
- Enforce daily usage limits per plan
- Adaptive Schedule Algorithm for missed study/performance
- Multi-board syllabus support
- Image Generation limit for Premium

7. Future Enhancements

- AI topic difficulty predictor
- Offline study mode & PDF export
- Gamification: badges & achievements
- Mobile app integration
- Analytics dashboard for students & parents

8. Summary

- Multi-tier AI SaaS platform for students
- Grok/Gemini/OpenAI API prioritization
- Free trial for introduction
- Paid plans for scalable revenue
- Premium visual learning features
- Personalized, adaptive, AI-powered study planning

Note: Expense/profit section is excluded; can be added later.