PragatiVeer

Product Requirements Document

India's first AI-powered daily practice platform for JEE & NEET

Version: 1.0

Date: 1 July 2026

Author: Maya — CEO's Office, Gyannetra Pvt Ltd

Approved by: Kapil Panwar (CEO)

Status: ✅ Final

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1. Product Overview

1.1 Vision Statement

PragatiVeer is India's first AI-powered daily practice platform for JEE & NEET aspirants. It combines daily practice sheets, computer-based test series, and an AI coach that personalizes every student's learning journey — all through a web-based portal accessible on any device.

1.2 Product Mission

To make high-quality, personalized JEE/NEET preparation accessible and affordable for every Indian student — especially in Tier 2/3 cities where quality coaching is out of reach.

1.3 Key Differentiators

Differentiator	Description
Daily Practice Loop	DPS every day builds discipline, not cramming
AI Personalization	Tracks every DPS, every test, every mistake — adapts to the student
Exam-Realistic Testing	Computer-based tests exactly like JEE Main/Advanced pattern
Affordable Pricing	₹299/mo for Pro vs ₹5K-15K for Physics Wallah
Parent Dashboard	Real-time progress visibility for parents (the actual buyers)

1.4 Platform

- **Web-based only** (no mobile app)
- Fully responsive — works seamlessly on mobile browsers, tablets, and desktops
- PWA (Progressive Web App) capabilities for offline access and home-screen install

1.5 Scope — Exams Covered (Phase 1)

- JEE Main (Paper 1: B.E./B.Tech)
- JEE Advanced
- NEET UG

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2. Target Audience & Personas

2.1 Primary Persona: Rohan (Student, Class 12)

Attribute	Detail
Age	17
Location	Tier 2 city (Jaipur)
Goal	JEE Main + Advanced 2027
Medium	Hindi medium school, studies in English + Hindi mix
Device	Android phone (primary), shared family laptop (occasional)
Internet	4G, sometimes unstable
Pain Points	Coaching is expensive (₹50K+/yr), no daily practice structure, doesn't know where he stands
Behavior	Uses Telegram for study groups, watches PW videos on YouTube, solves PYQs from books

2.2 Secondary Persona: Mrs. Sharma (Parent)

Attribute	Detail
Age	45
Role	Mother of a Class 12 JEE aspirant
Location	Delhi NCR
Device	Smartphone (WhatsApp, basic browsing)
Pain Points	Worried about child's preparation, doesn't know if child is on track, coaching is too expensive
Decision Trigger	Seeing concrete progress data — "Mera bachcha kitna padh raha hai?"

2.3 Tertiary Persona: Mr. Verma (School Principal)

Attribute	Detail
Role	Principal, CBSE-affiliated school in Indore
Need	Affordable practice platform for 500+ students
Decision Factor	Bulk pricing, white-label option, school performance dashboard

3. Tier Structure & Pricing

3.1 Pricing (Final — Neha Gupta's Model)

Tier	Monthly	Quarterly	Annual	Per Month (Annual)
Free	₹0	—	₹0	₹0
Pro	₹299	₹749 (₹250/mo)	₹2,499 (₹208/mo)	₹208
AI Coach	₹599	₹1,499 (₹500/mo)	₹4,999 (₹417/mo)	₹417

3.2 Launch Offers

- **Pro Launch:** First month at ₹99 (vs ₹299 regular)
- **Annual AI Coach:** 30% off + 2 months free
- **Referral:** Invite a friend → both get 7 days of AI Coach free
- **School Bulk:** ₹499/student/yr for 100+ students
- **Sibling Discount:** 20% off on second child

3.3 Tier Comparison Matrix

Feature	Free	Pro	AI Coach
Daily Practice Sheets (1/day)	✅	✅ Unlimited	✅ Unlimited
Answer Keys	✅	✅	✅
Basic Progress Dashboard	✅	✅	✅
Streak Tracking	✅	✅	✅
Leaderboard (City/School)	✅	✅	✅
Topic-wise Micro-tests	✅ (5/day)	✅ (Unlimited)	✅ (Unlimited)
Weekly Test Series	❌	✅	✅
Full-Length Mock Tests	❌	✅ (4/month)	✅ (Unlimited)
Previous Year Papers	❌	✅	✅
Detailed Performance Analytics	❌	✅	✅
Chapter-wise Progress	❌	✅	✅
Doubt Resolution (Community)	❌	✅	✅
Parent Dashboard	❌	✅	✅
AI Mistake Tracking	❌	❌	✅
Spaced Repetition	❌	❌	✅
Personalized Daily Study Plan	❌	❌	✅
AI Tutor Chat	❌	❌	✅
Exam Readiness Score	❌	❌	✅
Exam Day Strategy	❌	❌	✅
College Predictor	❌	❌	✅
Study Time Optimization	❌	❌	✅
Offline Mode (Download DPS)	❌	✅	✅
Print-Friendly PDF Export	❌	✅	✅

4. Feature Catalog — Free Tier

F-01: User Registration & Login

Description: Self-service registration with email/phone + OTP. Google login optional. **Priority:** P0 (Launch-blocking)

Requirements: - Register with email OR phone number - OTP-based verification - Google OAuth login - Password-based login (email + password) - Forgot password flow (email/OTP reset) - Session management (stay logged in for 30 days) - Single session per user (logout from other devices option)

F-02: Student Profile

Description: Basic profile capturing student's exam target, class, and medium. **Priority:** P0

Requirements: - Name, email, phone - Class (11, 12, Dropper) - Target exam (JEE Main, JEE Advanced, NEET) - Medium (English, Hindi, Bilingual) - School name (optional) - City/State - Avatar/ photo upload - Profile completion progress bar

F-03: Daily Practice Sheet (DPS)

Description: One DPS per day with 10-15 questions covering mixed topics. **Priority:** P0 (Core feature)

Requirements: - 10-15 questions per DPS (mix of Physics, Chemistry, Maths/Biology) - Questions displayed one at a time with navigation - Multiple choice (single correct, multiple correct) - Numerical answer type - Timer per DPS (configurable, default 20 min) - Submit and get instant answer key - Mark questions for review - Question palette (answered, not answered, marked for review) - Auto-submit on timer expiry - DPS resets daily at 6:00 AM IST - Cannot attempt previous day's DPS (creates urgency)

F-04: Answer Key & Basic Solutions

Description: Instant answer key after DPS submission with correct answers. **Priority:** P0

Requirements: - Show correct answer for each question immediately after submission - Highlight user's answer vs correct answer - Show score (X/15) - Show time taken per question - Basic solution text (not video) - Option to flag confusing questions

F-05: Basic Performance Dashboard

Description: Simple dashboard showing daily and weekly performance. **Priority:** P0

Requirements: - Today's DPS score - 7-day accuracy trend (line chart) - Total questions attempted (lifetime) - Overall accuracy percentage - Streak count (consecutive days) - "You're on a X-day streak!" message

F-06: Streak Tracking

Description: Track consecutive days of DPS completion. **Priority:** P0

Requirements: - Calendar view showing which days DPS was completed - Current streak count - Longest streak record - Streak milestones (7 days, 30 days, 60 days, 100 days) - Streak milestone badges - Daily reminder notification (browser/email)

F-07: Leaderboard

Description: Gamified ranking among peers. **Priority:** P1

Requirements: - City-wise leaderboard - School-wise leaderboard (if school provided) - All-India leaderboard - Based on: accuracy × consistency (streak bonus) - Weekly reset - Top 10 visible, user sees their own rank - Anonymous display (usernames only)

F-08: Topic-wise Micro-tests

Description: Short 5-question tests on specific topics. **Priority:** P1

Requirements: - 5 questions per micro-test - Choose topic from syllabus tree (e.g., Physics → Electrostatics → Coulomb's Law) - 5-minute timer - Instant results with topic-wise accuracy - Unlimited attempts (Free: 5 micro-tests/day) - Recommended topics based on DPS performance

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5. Feature Catalog — Pro Plan

P-01: Unlimited DPS

Description: Access to all DPS without daily limit. Multiple DPS per day. **Priority:** P0

Requirements: - All Free tier DPS features - Unlimited DPS per day - Access to DPS archive (previous days) - DPS difficulty levels (Easy, Medium, Hard) - Custom DPS: student picks subjects and topics - DPS bookmarking for later

P-02: Weekly Test Series

Description: Full-length computer-based tests every week, increasing frequency near exams. **Priority:** P0 (Core Pro feature)

Requirements: - One full-length test per week (standard frequency) - Increases to 2/week in last 3 months before exam - Daily tests in last month before exam - Exact JEE Main/Advanced/NEET pattern - Computer-based test interface (CBT) - Sectional timing (as per actual exam) - Question palette with color coding - Mark for review - Change answer within section - Calculator (on-screen, basic) - Periodic table reference (for Chemistry) - Scratchpad (digital notepad) - Auto-submit on section timer expiry - Submit entire test manually - Instant score report

P-03: Full-Length Mock Tests (4/month)

Description: Additional full-length mocks beyond the weekly series. **Priority:** P1

Requirements: - 4 full-length mocks per month (in addition to weekly series) - Can be taken anytime - Same interface as weekly tests - Different difficulty levels - Previous year paper simulations

P-04: Previous Year Paper Bank

Description: Complete archive of JEE Main, JEE Advanced, and NEET previous year papers. **Priority:** P0

Requirements: - JEE Main: 2020-2026 papers - JEE Advanced: 2020-2025 papers - NEET UG: 2020-2025 papers - Attempt in test mode (timed) or practice mode (untimed) - Topic-wise filtering of PYQs - Difficulty tagging per question - Solution links for each question - Track which PYQs have been attempted

P-05: Detailed Performance Analytics

Description: Comprehensive analytics dashboard with heatmaps, trends, and insights. **Priority:** P0

Requirements: - **Topic Heatmap:** Subject × Topic grid showing accuracy (green/yellow/red) - **Accuracy Trend:** Line chart over time (daily, weekly, monthly) - **Speed Analysis:** Average time per question vs benchmark - **Strength/Weakness Report:** Auto-generated list of strong and weak topics - **Percentile Rank:** Among all Pro users - **Score Distribution:** Histogram of test scores - **Improvement Rate:** Week-over-week accuracy change - **Subject-wise Breakdown:** Physics %, Chemistry %, Maths/Biology % - **Question Type Analysis:** Performance by question type (MCQ, numerical, multiple correct) - **Export analytics as PDF**

P-06: Chapter-wise Progress Tracking

Description: Track syllabus coverage and mastery per chapter. **Priority:** P1

Requirements: - Complete syllabus tree for JEE/NEET - Per-chapter: questions attempted, accuracy, time spent - Chapter status: Not Started, In Progress, Practiced, Mastered - Syllabus completion percentage - Estimated time to complete remaining syllabus - Recommended next chapters based on dependency graph

P-07: Parent Dashboard

Description: Simplified dashboard for parents to monitor their child's progress. **Priority:** P0 (Sales-critical)

Requirements: - Separate login for parents (linked to student account) - Weekly progress summary (auto-generated) - Daily time spent on platform - Accuracy trend (last 7/30 days) - Tests taken this week/month - Rank improvement trend - "Areas of Concern" — topics where child is weak - Comparison with peers (anonymous) - WhatsApp/Email weekly report (automated) - Multiple children support (add multiple students) - Simple, non-technical UI (Hindi + English)

P-08: Doubt Resolution (Community)

Description: Text-based doubt solving with community + moderator support. **Priority:** P1

Requirements: - Post a doubt (text + screenshot/image) - Tag by subject and topic - Community answers (upvote/downvote) - Moderator-verified answers highlighted - 24-hour SLA for moderator response - Searchable doubt archive - "My Doubts" history - Notification when doubt is answered

P-09: Print-Friendly DPS Export

Description: Download DPS as PDF for offline solving. **Priority:** P1

Requirements: - PDF export of any DPS - Print-optimized layout - Answer key on separate page - Watermark with student name (prevents sharing) - Batch download (multiple DPS)

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6. Feature Catalog — AI Coach Plan

A-01: AI Mistake Tracking & Analysis

Description: AI tracks every mistake across all DPS, tests, and micro-tests — builds a permanent error profile. **Priority:** P0 (Core AI feature)

Requirements: - Every wrong answer logged with: question, topic, subtopic, error type - Error type classification: conceptual error, calculation error, reading error, time pressure error - Mistake frequency per topic - Recurring mistake patterns ("You keep making sign errors in Thermodynamics") - Mistake history (searchable, filterable) - "Your Most Common Mistakes" weekly report - Mistake count vs peers benchmark

A-02: Spaced Repetition System

Description: Wrong answers are queued for re-attempt at optimal intervals using spaced repetition algorithm. **Priority:** P0

Requirements: - Every wrong question enters spaced repetition queue - Re-attempt schedule: Day 1, Day 3, Day 7, Day 14, Day 30 - If answered correctly on re-attempt → interval increases - If answered wrong again → resets to Day 1 - Daily "Mistake Review" session (5-10 questions from queue) - Progress tracking per mistake (attempt 1/5, attempt 2/5, etc.) - Mastered mistakes removed from queue after 3 consecutive correct attempts - SM-2 algorithm (SuperMemo) adapted for exam prep

A-03: Personalized Daily Study Plan

Description: AI generates a customized daily study plan based on weak areas, upcoming exams, and past performance. **Priority:** P0

Requirements: - Generated every morning at 5:00 AM IST - Plan includes: DPS to attempt, topics to revise, mistake review session, micro-test recommendations - Time-budgeted: "Today: 45 min — Revise Thermodynamics (15 min) + DPS Electrostatics (20 min) + Mistake Review (10 min)" - Adaptive: adjusts based on what was actually completed yesterday - Student can mark tasks as done/skipped - Weekly study plan (Sunday generates plan for the week) - Plan difficulty calibrated to student's level - "Cram Mode" activated near exams (more tests, less new learning)

A-04: AI Tutor Chat

Description: Text-based AI tutor that answers questions, explains concepts, and guides problem-solving. **Priority:** P1

Requirements: - Ask any doubt in natural language (text only) - AI responds with step-by-step explanation - Can ask follow-up questions - Can request similar practice questions - Can ask "Why is option C wrong?" for specific questions - Context-aware: AI knows student's weak areas and adapts

explanations - Daily chat limit: 50 messages (to manage inference costs) - Chat history saved and searchable - Hindi + English bilingual support - Moderation filter for inappropriate content

A-05: Exam Readiness Score

Description: A single 0-100 score predicting exam readiness based on multiple factors. **Priority:** P0

Requirements: - Score calculated from: accuracy (40%), speed (20%), syllabus coverage (20%), consistency (10%), mistake recovery (10%) - Daily update - Trend line (score over time) - Component breakdown (which factor is pulling score down) - Peer comparison ("Your readiness score is higher than 65% of users") - Milestone celebrations (Score > 70: "You're on track for NIT!", Score > 85: "IIT within reach!") - Actionable recommendations to improve score

A-06: Exam Day Strategy

Description: AI generates personalized exam-day strategy based on mock test performance. **Priority:** P1

Requirements: - Based on analysis of all mock tests - Recommendations include: - Optimal section order ("Start with Physics — your strongest section") - Time allocation per section - Question selection strategy ("Attempt numerical questions first in Chemistry") - Guessing strategy (when to skip vs educated guess) - Pace recommendations ("You tend to slow down in the last 15 minutes — practice timed sprints") - Updated after every mock test - Printable one-page strategy card

A-07: College Predictor

Description: Predicts likely colleges based on current performance trajectory. **Priority:** P1

Requirements: - Based on mock test scores + historical JEE cutoff data - Predicts: IITs, NITs, IIITs, GFTIs - "Reach" (ambitious), "Target" (realistic), "Safety" (likely) categories - Branch-wise prediction - Updated after every mock test - Historical cutoff data for last 3 years - "You need X more marks to reach IIT Delhi Computer Science" - Motivational: "At your current trajectory, you're on track for NIT Surat"

A-08: Study Time Optimization

Description: AI analyzes when and how the student studies best and suggests schedule adjustments. **Priority:** P2

Requirements: - Track time-of-day performance (accuracy by hour) - Identify peak productivity hours - Suggest optimal study schedule - Track session length vs focus (longer sessions = diminishing returns?) - Recommend break intervals - "You perform best between 7-9 PM. Schedule your most difficult topics then."

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7. Cross-Cutting Features

C-01: Responsive Web Design

Description: Full responsive design working on mobile browsers, tablets, and desktops. **Priority:** P0

Requirements: - Mobile-first responsive design - Touch-optimized test interface (tap to select, swipe to navigate) - Desktop keyboard shortcuts (N for next, P for previous, M for mark review) - Test interface works in landscape and portrait - Minimum supported screen: 320px width - PWA manifest for "Add to Home Screen" - Service worker for offline DPS access

C-02: Multi-Language Support

Description: Interface and content in Hindi, English, and bilingual mode. **Priority:** P1

Requirements: - Full UI in English and Hindi - Bilingual mode (questions in English, UI in Hindi) - Toggle between languages without page reload - All DPS questions available in both languages - AI Coach responses in selected language - Parent dashboard in Hindi + English - Regional language roadmap (Marathi, Gujarati, Bengali, Telugu — Phase 2)

C-03: Dark Mode

Description: Dark theme for late-night study sessions. **Priority:** P2

Requirements: - Toggle between light and dark mode - System preference detection - All pages support both themes - Test interface in dark mode - Persist preference in user settings

C-04: Notifications & Reminders

Description: Browser and email notifications for DPS, tests, and milestones. **Priority:** P1

Requirements: - Daily DPS reminder (browser notification, configurable time) - Test reminder (24 hours before, 1 hour before) - Streak at risk notification (if no DPS by 8 PM) - Milestone celebrations (streak achievements, score milestones) - Weekly progress summary (email, Sunday evening) - Parent weekly report (email/WhatsApp) - Notification preferences (which notifications, when, how)

C-05: Referral System

Description: Built-in referral program for organic growth. **Priority:** P1

Requirements: - Unique referral link per user - Refer a friend → both get 7 days of AI Coach free - Referral dashboard (total referrals, rewards earned) - Share via WhatsApp, Telegram, email, copy link - Track referral signups and conversions - Leaderboard: top referrers

C-06: Shareable Progress Cards

Description: Auto-generated image cards showing progress that students can share on social media. **Priority:** P1

Requirements: - "I've solved 450 questions this month!" card - "X-day streak!" card - "Accuracy: 78% — Top 15% of users" card - "Test Score: 180/300 — Improved by 15 points" card - Branded with PragatiVeer logo - Download as PNG - Share directly to WhatsApp, Instagram, Telegram - Generated server-side (no client rendering)

C-07: Payment System

Description: Subscription management with UPI, cards, and netbanking. **Priority:** P0

Requirements: - UPI (BHIM, Google Pay, PhonePe, Paytm) - Credit/Debit cards - Netbanking - Razorpay/Stripe integration - Monthly, quarterly, and annual billing - Auto-renewal with 7-day grace period - Invoice generation - Coupon code support - Free trial management (7-day Pro trial) - Upgrade/downgrade between tiers - Pause subscription (for exam breaks) - Refund policy (30-day money-back guarantee)

C-08: Admin Dashboard

Description: Internal dashboard for Gyannetra team to manage content, users, and analytics. **Priority:** P1

Requirements: - User management (view, suspend, delete) - Content management (upload questions, create DPS, schedule tests) - Analytics dashboard (DAU, MAU, conversion rates, revenue) - DPS scheduling calendar - Test creation and scheduling - Question bank management (add, edit, tag, review) - Coupon code management - Refund processing - Support ticket management - System health monitoring

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8. User Stories — Complete Collection

8.1 Registration & Onboarding

ID	User Story	Priority	Tier
US-001	As a new student, I want to register with my email or phone number so that I can create my account quickly.	P0	All
US-002	As a new student, I want to verify my email/phone with OTP so that my account is secure.	P0	All
US-003	As a returning student, I want to log in with my email and password so that I can access my dashboard.	P0	All
US-004	As a returning student, I want to log in with Google so that I don't have to remember another password.	P0	All
US-005	As a student, I want to reset my password via email/OTP so that I can recover my account if I forget it.	P0	All
US-006	As a new student, I want to set up my profile (class, target exam, medium) during onboarding so that the platform personalizes my experience.	P0	All
US-007	As a student, I want to see a welcome tour on my first login so that I understand how to use the platform.	P1	All

8.2 Daily Practice Sheet (DPS)

ID	User Story	Priority	Tier
US-010	As a Free student, I want to attempt one DPS per day so that I can practice daily.	P0	Free
US-011	As a Pro student, I want to attempt unlimited DPS per day so that I can practice as much as I need.	P0	Pro+
US-012	As a student, I want to see questions one at a time with navigation so that I can focus on each question.	P0	All
US-013	As a student, I want to see a timer during my DPS so that I can manage my time.	P0	All
US-014	As a student, I want to mark questions for review so that I can come back to them later.	P0	All
US-015	As a student, I want to see a question palette showing which questions I've answered, not answered, and marked for review.	P0	All
US-016	As a student, I want my DPS to auto-submit when the timer runs out so that I don't lose my answers.	P0	All
US-017	As a student, I want to see my score and correct answers immediately after submitting so that I can learn from my mistakes.	P0	All
US-018	As a Pro student, I want to access DPS from previous days so that I can catch up if I miss a day.	P1	Pro+
US-019	As a Pro student, I want to choose DPS difficulty level so that I can challenge myself appropriately.	P1	Pro+
US-020	As a Pro student, I want to create a custom DPS by selecting specific subjects and topics so that I can focus on my weak areas.	P1	Pro+

8.3 Test Series

ID	User Story	Priority	Tier
US-030	As a Pro student, I want to take a full-length weekly test that follows the exact JEE pattern so that I can practice exam conditions.	P0	Pro+
US-031	As a Pro student, I want the test frequency to increase as exams get closer so that I get more practice when it matters most.	P0	Pro+
US-032	As a student, I want the test interface to look exactly like the real computer-based exam so that I'm not surprised on exam day.	P0	Pro+
US-033	As a student, I want sectional timing (as per actual exam) so that I can practice time management per section.	P0	Pro+
US-034	As a student, I want an on-screen calculator and periodic table (where applicable) so that the test mirrors the real exam.	P0	Pro+
US-035	As a student, I want a digital scratchpad/notepad during the test so that I can do rough work.	P1	Pro+
US-036	As a Pro student, I want to take additional full-length mocks (4/month) beyond the weekly series so that I can practice more.	P1	Pro+
US-037	As a Pro student, I want to attempt previous year papers in test mode so that I can practice with real exam questions.	P0	Pro+
US-038	As a Pro student, I want to filter PYQs by topic so that I can practice specific areas.	P1	Pro+

8.4 Analytics & Progress

ID	User Story	Priority	Tier
US-040	As a Free student, I want to see my basic accuracy and streak on a simple dashboard so that I can track my progress.	P0	Free
US-041	As a Pro student, I want to see a topic-wise heatmap of my performance so that I know exactly where I'm weak.	P0	Pro+
US-042	As a Pro student, I want to see my accuracy trend over time so that I can see if I'm improving.	P0	Pro+
US-043	As a Pro student, I want to see my percentile rank among other users so that I know where I stand.	P0	Pro+
US-044	As a Pro student, I want to see my speed analysis (time per question vs benchmark) so that I can improve my pace.	P1	Pro+
US-045	As a Pro student, I want to see my performance broken down by question type so that I know which types I struggle with.	P1	Pro+
US-046	As a Pro student, I want to export my analytics as a PDF so that I can share it with my parents or mentor.	P1	Pro+
US-047	As a Pro student, I want to see my syllabus completion percentage per subject so that I know how much I've covered.	P1	Pro+

8.5 AI Coach

ID	User Story	Priority	Tier
US-050	As an AI Coach student, I want the AI to track every mistake I make across all DPS and tests so that I never forget my weak areas.	P0	AI Coach
US-051	As an AI Coach student, I want the AI to classify my mistakes (conceptual, calculation, etc.) so that I understand WHY I got it wrong.	P0	AI Coach
US-052	As an AI Coach student, I want wrong questions to reappear at optimal intervals (spaced repetition) so that I permanently learn from my mistakes.	P0	AI Coach
US-053	As an AI Coach student, I want a daily "Mistake Review" session with 5-10 questions from my error queue so that I consistently revise my weak areas.	P0	AI Coach
US-054	As an AI Coach student, I want a personalized daily study plan generated every morning so that I know exactly what to study today.	P0	AI Coach
US-055	As an AI Coach student, I want the study plan to adapt based on what I actually completed yesterday so that it stays relevant.	P0	AI Coach
US-056	As an AI Coach student, I want to see my Exam Readiness Score (0-100) so that I know how prepared I am.	P0	AI Coach
US-057	As an AI Coach student, I want the readiness score to show component breakdown so that I know which factor is pulling me down.	P0	AI Coach
US-058	As an AI Coach student, I want to chat with the AI tutor to ask doubts and get explanations so that I can learn at my own pace.	P1	AI Coach
US-059	As an AI Coach student, I want the AI tutor to be context-aware (knows my weak areas) so that explanations are personalized.	P1	AI Coach
US-060	As an AI Coach student, I want a personalized exam day strategy based on my mock performance so that I can maximize my score.	P1	AI Coach
US-061	As an AI Coach student, I want a college predictor that shows which IITs/NITs I can target so that I stay motivated.	P1	AI Coach
US-062	As an AI Coach student, I want the AI to analyze my study patterns and suggest optimal study times so that I study when I'm most effective.	P2	AI Coach

8.6 Parent Dashboard

ID	User Story	Priority	Tier
US-070	As a parent, I want to create my own login linked to my child's account so that I can monitor progress without accessing their account.	P0	Pro+
US-071	As a parent, I want to see a simple weekly progress summary so that I know if my child is studying regularly.	P0	Pro+
US-072	As a parent, I want to see my child's accuracy trend so that I can see if they're improving.	P0	Pro+
US-073	As a parent, I want to see "Areas of Concern" — topics where my child is weak so that I can arrange extra help.	P0	Pro+
US-074	As a parent, I want to receive a weekly WhatsApp/Email report automatically so that I don't have to log in to check.	P0	Pro+
US-075	As a parent, I want the dashboard to be in Hindi so that I can understand it easily.	P1	Pro+
US-076	As a parent with two children preparing for exams, I want to track both from a single parent account.	P1	Pro+

8.7 Gamification & Engagement

ID	User Story	Priority	Tier
US-080	As a student, I want to see my daily streak so that I feel motivated to practice every day.	P0	All
US-081	As a student, I want to earn badges for milestones (7-day streak, 100 questions, etc.) so that I feel a sense of achievement.	P1	All
US-082	As a student, I want to see my rank on the city/school leaderboard so that I can compete with peers.	P1	All
US-083	As a student, I want to share my progress card on social media so that my friends can see my hard work.	P1	Pro+
US-084	As a student, I want to challenge a friend to beat my test score so that we can motivate each other.	P2	Pro+
US-085	As a student, I want to receive a notification when I'm about to lose my streak so that I don't break it.	P1	All

8.8 Payments & Subscription

ID	User Story	Priority	Tier
US-090	As a Free student, I want to upgrade to Pro with UPI so that I can start my subscription easily.	P0	Pro+
US-091	As a Pro student, I want to choose between monthly, quarterly, and annual billing so that I can pick what suits my budget.	P0	Pro+
US-092	As a student, I want a 7-day free trial of Pro so that I can try before I buy.	P0	Pro+
US-093	As a student, I want to apply a coupon code during checkout so that I can get a discount.	P1	Pro+
US-094	As a student, I want to receive an invoice for my payment so that I can show my parents.	P1	Pro+
US-095	As a student, I want to pause my subscription during exam breaks so that I don't waste paid days.	P2	Pro+
US-096	As a parent, I want a 30-day money-back guarantee so that I can purchase without risk.	P1	Pro+

8.9 Referral & Growth

ID	User Story	Priority	Tier
US-100	As a student, I want to refer a friend using my unique link so that both of us get free AI Coach access.	P1	All
US-101	As a student, I want to see how many friends have signed up through my referral so that I can track my rewards.	P1	All
US-102	As a student, I want to share my referral link on WhatsApp and Telegram so that I can easily invite friends.	P1	All

8.10 School/B2B

ID	User Story	Priority	Tier
US-110	As a school principal, I want to purchase bulk licenses for my students so that they all get Pro access at a discount.	P1	B2B
US-111	As a school principal, I want a school dashboard showing aggregate performance of all students so that I can identify weak batches.	P1	B2B
US-112	As a teacher, I want to assign DPS or tests to my entire class so that they practice together.	P2	B2B

9. User Flows

9.1 New Student Onboarding Flow

```
Landing Page → Sign Up (Email/Phone) → OTP Verification →
Profile Setup (Class, Exam, Medium) → Welcome Tour →
First DPS → See Results → Streak Started →
Upgrade Prompt (after 3 DPS completions)
```

9.2 Daily Practice Flow

```
Login → Dashboard → "Today's DPS" CTA →
Attempt DPS (10-15 Qs, timed) → Submit →
Instant Results (Score + Answer Key) →
Review Mistakes → Check Leaderboard →
Logout or Continue (Micro-test / Analytics)
```

9.3 Weekly Test Flow

```
Login → Dashboard → "Weekly Test Available" Notification →
Enter Test Lobby (instructions, pattern info) →
Start Test → Attempt Sections (timed per section) →
Submit → Score Report → Detailed Analytics →
Compare with Peers → AI Coach Analysis (if AI Coach tier)
```

9.4 AI Coach Daily Flow

```
Login → AI Coach Dashboard →
1. View Today's Personalized Plan
2. Complete Mistake Review Session (5-10 Qs)
3. Attempt Recommended DPS/Micro-test
4. Check Exam Readiness Score Update
5. Chat with AI Tutor (if doubts)
6. Mark Plan Tasks as Complete
→ Plan Adapts for Tomorrow
```

9.5 Parent Flow

```
Parent Login (linked to student) →
Dashboard: Weekly Summary, Accuracy Trend,
Areas of Concern, Time Spent →
Drill Down into Specific Topics →
Share Report with Family →
Receive Weekly WhatsApp Report (automated)
```

9.6 Upgrade Flow (Free → Pro)

```
Free User → CTA: "Unlock Unlimited Practice" →
Pricing Page (Free vs Pro vs AI Coach comparison) →
Select Pro Plan → Choose Billing (Monthly/Quarterly/Annual) →
Payment (UPI/Card/Netbanking) →
7-Day Free Trial Starts →
After Trial: Auto-charge or Downgrade
```

---

10. Technical Requirements

10.1 Platform

- **Type:** Web application only (no native mobile app)
- **Responsive:** Mobile-first responsive design (320px minimum)
- **PWA:** Progressive Web App with service worker for offline DPS access
- **Browser Support:** Chrome, Firefox, Safari, Edge (latest 2 versions)

10.2 Tech Stack (Recommended)

Layer	Technology
Frontend	Next.js (React) — SSR for performance
Backend	FastAPI (Python) or Node.js
Database	PostgreSQL
Cache	Redis (session management, rate limiting)
File Storage	S3-compatible (MinIO or AWS S3)
AI/ML	LLM API (for AI Coach), custom spaced repetition engine
Payments	Razorpay
Email	SMTP (Hostinger)
SMS/WhatsApp	Twilio / WhatsApp Business API
Deployment	Docker on VPS (Gyannetra production server)

10.3 Performance Requirements

- Page load time: < 2 seconds (desktop), < 3 seconds (mobile)
- Test interface: < 1 second question transition
- DPS submission results: < 2 seconds
- AI Coach response: < 5 seconds
- Concurrent users: Support 10,000 DAU in Phase 1
- Uptime: 99.5% (excluding scheduled maintenance)

10.4 Security Requirements

- HTTPS everywhere
- OTP-based authentication (rate limited: 3 attempts/min)
- Password hashing (bcrypt)
- Session management (JWT with 30-day expiry)
- Rate limiting on all API endpoints
- XSS and CSRF protection
- SQL injection prevention (parameterized queries)
- Data encryption at rest (database encryption)
- GDPR/DPDP Act compliance for student data
- Parental consent for users under 18

10.5 Offline Capability (PWA)

- Service worker caches DPS questions
- Students can download DPS when online
- Attempt DPS offline
- Sync results when back online

- Cache previous day's DPS for review

11. Data Model (Key Entities)

11.1 User

Field	Type	Notes
id	UUID	Primary key
email	String	Unique, nullable
phone	String	Unique, nullable
password_hash	String	bcrypt hashed
name	String	
class	Enum	11, 12, Dropper
target_exam	Enum	JEE_Main, JEE_Advanced, NEET
medium	Enum	English, Hindi, Bilingual
school	String	Optional
city	String	
state	String	
tier	Enum	Free, Pro, AI_Coach
trial_end	DateTime	7-day trial expiry
subscription_end	DateTime	
streak_count	Integer	Current streak
longest_streak	Integer	
created_at	DateTime	
last_active	DateTime	

11.2 Parent

Field	Type	Notes
id	UUID	Primary key
email	String	
phone	String	
password_hash	String	
name	String	
language	Enum	Hindi, English
linked_students	UUID[]	Array of student user IDs
created_at	DateTime	

11.3 Question

Field	Type	Notes
id	UUID	Primary key
subject	Enum	Physics, Chemistry, Maths, Biology
topic	String	e.g., "Electrostatics"
subtopic	String	e.g., "Coulomb's Law"
difficulty	Enum	Easy, Medium, Hard
type	Enum	MCQ_Single, MCQ_Multiple, Numerical
question_text	Text	Supports LaTeX
options	JSON	Array of options (for MCQ)
correct_answer	JSON	Correct answer(s)
solution_text	Text	Step-by-step solution
language	Enum	English, Hindi
year	Integer	For PYQs (nullable)
exam	Enum	JEE_Main, JEE_Advanced, NEET
tags	String[]	Custom tags
is_active	Boolean	Soft delete
created_by	UUID	Admin user ID
verified_by	UUID	Content reviewer ID

11.4 DPS (Daily Practice Sheet)

Field	Type	Notes
id	UUID	Primary key
date	Date	DPS date
title	String	e.g., "DPS #127"
questions	UUID[]	Array of question IDs
difficulty	Enum	Easy, Medium, Hard, Mixed
time_limit	Integer	Minutes
is_active	Boolean	
created_by	UUID	Admin user ID

11.5 Test

Field	Type	Notes
id	UUID	Primary key
title	String	
type	Enum	Weekly, Mock, PYQ
exam_pattern	Enum	JEE_Main, JEE_Advanced, NEET
sections	JSON	Array of {name, questions[], time_limit}
total_time	Integer	Minutes
difficulty	Enum	
scheduled_date	DateTime	For weekly tests
is_active	Boolean	
created_by	UUID	Admin user ID

11.6 Attempt (DPS or Test)

Field	Type	Notes
id	UUID	Primary key
user_id	UUID	Foreign key
source_type	Enum	DPS, Test, MicroTest
source_id	UUID	DPS or Test ID
started_at	DateTime	
submitted_at	DateTime	
time_taken	Integer	Seconds
answers	JSON	Array of {question_id, selected_answer, is_correct, time_spent}
score	Integer	Correct answers count
total_questions	Integer	
accuracy	Float	Percentage
status	Enum	In_Progress, Submitted, Timed_Out

11.7 Mistake (AI Coach)

Field	Type	Notes
id	UUID	Primary key
user_id	UUID	Foreign key
question_id	UUID	Foreign key
attempt_id	UUID	Foreign key
error_type	Enum	Conceptual, Calculation, Reading, Time_Pressure
topic	String	
subtopic	String	
next_review	DateTime	Spaced repetition schedule
review_count	Integer	Times re-attempted
consecutive_correct	Integer	For mastery detection
is_mastered	Boolean	
created_at	DateTime	

11.8 StudyPlan (AI Coach)

Field	Type	Notes
id	UUID	Primary key
user_id	UUID	Foreign key
date	Date	Plan date
tasks	JSON	Array of {type, description, duration_minutes, status}
is_completed	Boolean	
generated_at	DateTime	
feedback	Text	Student's feedback on plan

11.9 Subscription

Field	Type	Notes
id	UUID	Primary key
user_id	UUID	Foreign key
tier	Enum	Pro, AI_Coach
billing_cycle	Enum	Monthly, Quarterly, Annual
start_date	DateTime	
end_date	DateTime	
amount	Integer	Paise
payment_id	String	Razorpay payment ID
status	Enum	Active, Expired, Cancelled, Paused
auto_renew	Boolean	
coupon_code	String	Nullable

End of PRD — Prepared by Maya, CEO's Office, Gyannetra Pvt Ltd
Approved by Kapil Panwar, CEO — 1 July 2026