



LMS - Project Plan Document

Explore the Future of Learning.
Connect with expert tutors to unlock your
academic potential and achieve personal growth.

Objective

Develop a large-scale, scalable, and feature-rich Learning Management System (LMS) using Laravel and Flutter, deployed on AWS with integrated third-party services for seamless one to one teaching, course creation, selling, learning, and administration.

Technology Stack

Backend :

- Laravel (latest stable version)
- MySQL RDS (Amazon Relational Database Service)
- Amazon S3 for file storage (with CDN for fast delivery)
- Redis / ElastiCache for caching

Frontend :

- Blade templates with Tailwind CSS for web
- Flutter (latest stable version) for mobile (iOS and Android)

DevOps & Hosting :

- AWS EC2 for hosting Laravel backend
- AWS CloudFront for CDN
- AWS S3 for media/document storage
- AWS Route53 for domain management
- CI/CD pipeline with GitHub Actions or AWS CodePipeline



Third-Party Integrations :

- Google Enterprise for live meetings and scheduling
- Veriff for document & identity verification
- Stripe, Razorpay, PayPal, Paystack for payment gateways
- SMTP (Amazon SES or Mailgun) for email

Core Features

Learning & Course Management :

- One to One Teaching Module
- Course Manager
- Course Curriculum Manager
- Multi-type Lesson (Video, PDF, Text, Image)
- Course Overview Page
- Course Filter by Category, Price, Rating
- Quiz Manager
- Manual Course Enrollment

Multi-User Management :

- Student Portal
- Instructor Portal
- Organization Portal
- Admin Portal

Communication & Feedback :

- Live Classes using Google Enterprise
- Student Feedback system
- Blog & Comment system
- FAQ & Ticket Support system



Monetization :

- Cart, Coupon & Checkout
- Multiple Payment Gateways (Stripe)
- Admin Revenue Reports

Personalization : in

- My Course Page
- Enroll History
- Certificate Manager
- Switching to Multiple Languages (Dynamic Translation)

Theme & UI Management :

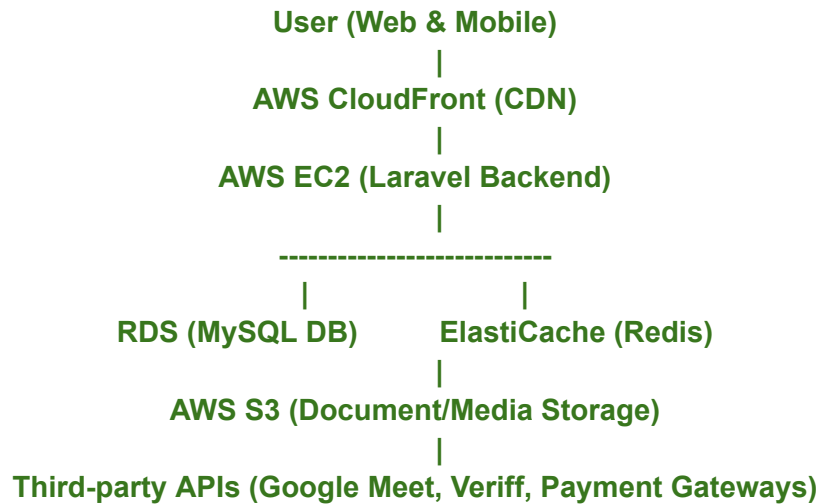
- Component-based UI for easy customization
- Theme Option Management
- Page Manager
- Blog Manager

Other Configurations :

- Email Template Manager
 - SMTP Settings
 - Multi Language Manager
 - Staff Manager
-



Infrastructure Architecture



Development Plan

Phase 1: Requirement Gathering & Architecture Setup (Week 2-4)

- Confirm business logic
- Setup Laravel project structure
- Setup AWS infrastructure (RDS, EC2, S3, CloudFront)

Phase 2: Core Module Development (Week 4-8)

- User Management (Login, Registration, Roles)
- Course Management (CRUD, Curriculum)
- Payment Integration Stripe
- Frontend and Mobile Design (Tailwind Components)



Phase 3: Advanced Features & Mobile App (Week 8-12)

- Live Class Scheduling (Google Enterprise)
- Document Verification (Veriff)
- My Courses, Enroll History
- Mobile App (Flutter Development & Integration)

Phase 4: Theme & SEO (Week 12-15)

- Theme manager implementation
- SEO-friendly dynamic pages
- Page Manager, Blog Manager

Phase 5: Testing & Deployment (Week 15-18)

- QA testing
- Load testing with AWS tools
- Final Deployment on AWS
- Play Store and App Store Submission

Security & Performance

- HTTPS with SSL Certificate
- API rate limiting and throttling
- Token-based authentication (Laravel Passport)
- Caching using Redis
- CloudWatch for performance monitoring

Deliverables

- Web Application (Tutormate LMS)
- Flutter Mobile Apps (Android & iOS)
- API Documentation (Postman)
- Admin Access Credentials
- AWS Infrastructure with Deployment Pipeline