Bharatiya Vidya Bhavan's

Sardar Patel Institute of Technology

Department of Computer Science and Engineering

Academic Year 2025-26

Mini Project - Weekly Progress Report

EduFlex Learning Management System

Name of Students:
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Name of the Supervisor:

Review Date	Details of Work Done and Review of Meeting	Students Signature	Remarks by Supervisor	Supervisor Signature
18/08/2025	1. Researched various technologies, especially MERN stack, WordPress, and the technologies powering famous LMS platforms (like Moodle, Canvas, etc.). 2. Searched for existing LMS solutions and their architectures. 3. Gained a basic overview of how technologies work and what each component (MongoDB, Express, React, Node.js, WordPress) provides in terms of functionality. 4. Compared MERN stack vs WordPress in terms of flexibility, performance, scalability, and ease of use.			

	5. Reviewed JavaScript fundamentals to strengthen understanding of frontend and backend development.			
01/09/2025	1. Read and analyzed 5 research papers, extracting important insights (included in Literature Survey). 2. Conducted a Market Share Analysis of top LMSs: Moodle, Canvas, TalentLMS, and TutorLMS. 3. Performed demonstrations of existing LMS solutions and reviewed user feedback to understand strengths and limitations. 4. Documented the detailed Literature Survey based on research papers. 5. Performed Gap Analysis highlighting key limitations of existing LMSs (complex UI, lack of adaptive learning, technical setup issues).			
08/09/2025	Floated a student survey form for field survey and shared it on social media And Project Planning: 1. Finalized Functional Requirements for Students, Teachers, and Admins. 2. Detailed the Non-Functional Requirements (Security, Modularity, Ease of Use, Performance). 3. Planned the Implementation Workflow: ● Authentication flow with role-based access. ● Course management by Admin and Teacher. ● Assignment posting, submission, grading, and			

		notification system.		
		● Dashboard designs for students and teachers.		
		● Notifications (Email + In-App).		
		● Defined a clean Folder Structure for Backend and Frontend.		
		● Drafted a Deployment Plan:		
		● MongoDB Atlas or another cloud(options) for cloud database.		
		● Deployment on cloud.		
		● Postman used for API testing.		
		● GitHub for version control and CI/CD setup.		
		● Prepared Risk Management Table focusing on key project risks and mitigation strategie		
19/09/2025		**Learning the technology**		
		1. Learned the internal workings of the MERN stack in depth:		
		● MongoDB Models for storing data (Courses, Assignments, Users).		
		● Developed Backend APIs using Node.js and Express.js for handling requests and responses on various routes (authentication, course management, assignments).		
		● Designed the backend file structure (models, controllers, routes, utils).		
		● Implemented Authentication using JWT and file upload functionality using Multer.		

	Connected backend APIs to frontend using API calls. **Began frontend development in React.js:** ● **Set up project structure.** ● **Created components for Login, Course Listing, Dashboard, etc.**			
03/10/2025	**Backend API Completion** *(Work period excludes 21-27 Sept holiday)* **- Completed all CRUD APIs for Courses, Users, and Assignments.** **- Finalized all MongoDB models and database schema definitions.** **- Performed comprehensive API unit testing with Thunder for all endpoints to ensure correctness and error handling.**			
17/10/2025	**Security & Auth Integration** **- Implemented robust Role-Based Access Control (RBAC) middleware on the backend to secure API routes (e.g., 'Teacher' only, 'Admin' only).** **- Integrated frontend Login/Register components with the backend auth APIs.** **- Set up React Context API for global state management (to**			

	store user auth token, role, and info). - Secured all critical endpoints against unauthorized access.			
30/10/2025	**Student Dashboard (View)** *(Work period excludes 18-25 Oct Diwali vacation)* - Developed the main Student Dashboard UI/UX. - Integrated API calls to fetch and display the logged-in student's enrolled courses. - Created components to view all assignments and announcements for a specific course, pulling data from the backend. -adding the quizzes feature			
07/11/2025	**Student Submission Feature** - Built the frontend component for assignment submission, including the file upload interface. - Fully integrated the submission component with the backend Multer file-handling API. - Ensured student submissions are correctly associated with the user and assignment ID and saved to the database. - Started development of the basic Teacher Dashboard UI.			

–/–/–		Delayed in project : -Fixing the errors in admin User –Fixing the assignment submission and grading feature by the professor -fixing the assignment page and garage page of student that occurred while integration –fixed some critical API errors -fixing the error where student cannot view the assignment posted by professor			