

LEARNING RESOURCE MANAGEMENT SYSTEM WITH STUDY TRACKER USING FULL-STACK WEB TECHNOLOGIES

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Abstract—In the digital era, students increasingly rely on online platforms such as YouTube, educational websites, and cloud-based resources for learning. However, the absence of a centralized system for managing these scattered materials makes it difficult to organize resources effectively and monitor academic progress. To address these challenges, this paper proposes a Learning Resource Management System with Study Tracker—a comprehensive web-based platform that enables students to efficiently manage educational content and track their study activities.

The system is implemented as a full-stack web application using ReactJS for the frontend, NodeJS and ExpressJS for the backend, and MongoDB as a cloud-based database. A modern client-server architecture with RESTful APIs ensures seamless communication between the frontend and backend. The platform provides subject-based course management, downloadable study materials, real-time study hour tracking, and robust search and filter capabilities for efficient resource retrieval. Key features include a centralized dashboard for course management, organized storage of downloadable notes, intuitive navigation, and study progress monitoring. By integrating these functionalities into a single platform, the system reduces the time and effort required to manage learning resources, promotes disciplined study habits, and enhances overall academic productivity.

This project demonstrates the practical application of modern web development technologies and offers a scalable, extensible solution for students and educational institutions. Future improvements include user authentication, AI-based content recommendations, advanced analytics for performance insights, and mobile application integration to further enhance accessibility and usability.

Keywords—Learning Resource Management, Study Tracker, Educational Dashboard, Full-Stack Web Development, ReactJS, NodeJS, MongoDB, RESTful API.