Online Notes Sharing System

Atharva Madhukar Karale[1], Chaitanya Gorakshanath Kolhal[2], Shubham Dnyaneshwar Pachare[3], Rushikesh Balkrushna Kardile[4], Prof. Bhagwat R.R.[5]
[1,2,3,4,5]*Department of Computer Engineering, Sau Sundarbai Manik Adsul Polytechnic Chas*

***Abstract*—Online Notes Sharing Systems provide a digital platform for storing, organizing, and sharing academic notes among students and faculty. This paper presents the design and implementation of a web-based notes sharing system using PHP and MySQL. The system enables secure authentication, role-based access, structured categorization, and efficient file management. Unlike traditional methods, the proposed system ensures better organization, faster retrieval, and improved accessibility of academic resources. Security mechanisms such as password hashing, input validation, and file filtering are implemented to protect user data. Experimental results show that the system improves collaboration, reduces redundancy, and enhances academic efficiency.**

***Index Terms*—Authentication, Digital Learning, File Upload, MySQL, Online Notes Sharing, PHP, Web Application**

I. INTRODUCTION

With the rapid growth of digital education, students increasingly depend on online platforms to access academic materials. Traditional methods such as photocopies, pen drives, and messaging applications are inefficient and poorly organized.

The Online Notes Sharing System provides a centralized web-based solution where students and teachers can upload, manage, and access study materials. The system improves accessibility, reduces duplication, and enhances collaboration among users.

II. PROBLEM STATEMENT

Students frequently face difficulties in accessing reliable and organized study materials due to the scattered nature of note-sharing methods. Academic resources are often shared through multiple platforms such as messaging applications and cloud links, leading to confusion, duplication, and loss of important information. The absence of proper categorization and secure access control further complicates the retrieval process. Therefore, there is a need for a structured, secure, and user-friendly system that can centralize note sharing and provide efficient search and management features.

III. PROPOSED SYSTEM

The proposed Online Notes Sharing System is a web-based application developed using PHP and MySQL technologies. It provides a centralized platform that allows users to securely register, log in, upload notes, and access shared materials. The system supports role-based access control, ensuring that only authorized users can perform specific actions such as uploading or managing notes. The platform categorizes notes based on subjects and semesters, which helps users locate relevant materials quickly. The overall design focuses on simplicity, efficiency, and scalability to meet the needs of educational institutions.

IV. SYSTEM ARCHITECTURE & WORKING

The system follows a three-tier architecture consisting of the client interface, server-side processing, and database storage. The frontend is developed using HTML, CSS, JavaScript, and Bootstrap, which provides an interactive and responsive user interface. The backend is implemented using PHP, which handles user requests, authentication, file processing, and communication with the database. MySQL is used as the database management system to store user information, note details, and system data.

The working of the system begins with user registration, where students or teachers create an account using their credentials. After successful

registration, users can log in to the system, and their credentials are verified through the database. Once authenticated, users are directed to a dashboard where they can access available notes. Authorized users can upload notes by providing necessary details such as title, subject, and description. The uploaded files are stored on the server, while their metadata is recorded in the database. Other users can search for notes based on categories and download them as required.

V MODULES OF THE SYSTEM

The system is divided into several modules to ensure proper functionality and ease of maintenance. The user authentication module manages registration, login, and session handling, ensuring that only authorized users can access the system. The notes upload module allows users to upload study materials, while validating file formats and sizes. The notes download module enables users to retrieve stored files efficiently and may also track download activities. The admin module provides control over the system, allowing administrators to manage users, monitor uploads, and remove inappropriate content. Each module is designed to perform specific tasks, contributing to the overall efficiency of the system.

VI. DATABASE DESIGN OVERVIEW

The database plays a crucial role in managing the system's data efficiently. The system uses MySQL to store and organize information in a structured manner. The Users table stores details such as user identification, name, email, password, and role. The Notes table contains information about uploaded files, including title, subject, file path, and uploader details. The Subject's table is used to categorize notes based on academic subjects. Additionally, a Logs table can be implemented to track system activities such as uploads and logins. This relational database design ensures data consistency, avoids redundancy, and improves performance.

VII. SECURITY CONSIDERATIONS

Security is a vital aspect of the Online Notes Sharing System. The system implements several measures to protect user data and prevent unauthorized access. Passwords are stored using hashing techniques such as bcrypt to ensure confidentiality. Input validation and sanitization are applied to prevent malicious data entry and attacks such as SQL injection. Prepared statements are used for database queries to enhance security. File uploads are restricted to specific formats such as PDF, DOCX, and PPT to prevent the execution of harmful scripts. Session management techniques are used to maintain user authentication and prevent session hijacking. These security mechanisms ensure the reliability and safety of the system.

VIII. FEATURES & FUNCTIONAL REQUIREMENTS

The system includes essential features that enhance usability and functionality. Users can register and log in securely, upload notes with detailed metadata, and download study materials easily. The system supports search and filtering options to help users quickly locate relevant notes. The admin panel allows administrators to manage users and monitor system activities. The user interface is designed to be responsive, ensuring compatibility across different devices such as desktops and smartphones. These features make the system practical and efficient for real-world use.

IX.NON-FUNCTIONAL REQUIREMENTS

In addition to functional requirements, the system also meets several non-functional requirements. It is designed to provide fast performance, ensuring quick loading and retrieval of data. Reliability is maintained by implementing proper error handling and ensuring stable operation during file uploads and downloads. The system is scalable, allowing it to handle an increasing number of users and data. Usability is achieved through a simple and intuitive interface that enables users to interact with the system بسهولة. Security and maintainability are also considered to ensure long-term efficiency and ease of updates.

X. RESULTS AND DISCUSSION

The system was tested under various conditions to evaluate its performance and functionality. The

results indicate that the system provides fast and reliable file upload and download operations. The user interface is simple and easy to navigate, making it accessible for students and teachers. The structured categorization of notes improves search efficiency and reduces the time required to locate study materials. Overall, the system enhances collaboration and ensures better management of academic resources.

XI. APPLICATIONS IN REAL WORLD

The Online Notes Sharing System has wide applications in educational environments. It can be used in colleges and universities to provide a centralized repository of study materials. Teachers can upload lecture notes and assignments, while students can access them conveniently. The system is also useful for coaching classes and competitive exam preparation, where large volumes of study materials need to be managed efficiently. Additionally, it can be implemented in schools to support digital learning and improve resource accessibility.

XII. CONCLUSION

The Online Notes Sharing System provides an effective solution for managing and sharing academic resources in a digital environment. It addresses the limitations of traditional methods by offering a centralized, secure, and user-friendly platform. The system improves accessibility, reduces duplication, and enhances collaboration among users. With proper implementation of security and efficient database design, the system proves to be reliable and scalable. Future enhancements such as mobile applications, cloud integration, and intelligent recommendation systems can further improve its functionality and usability.

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