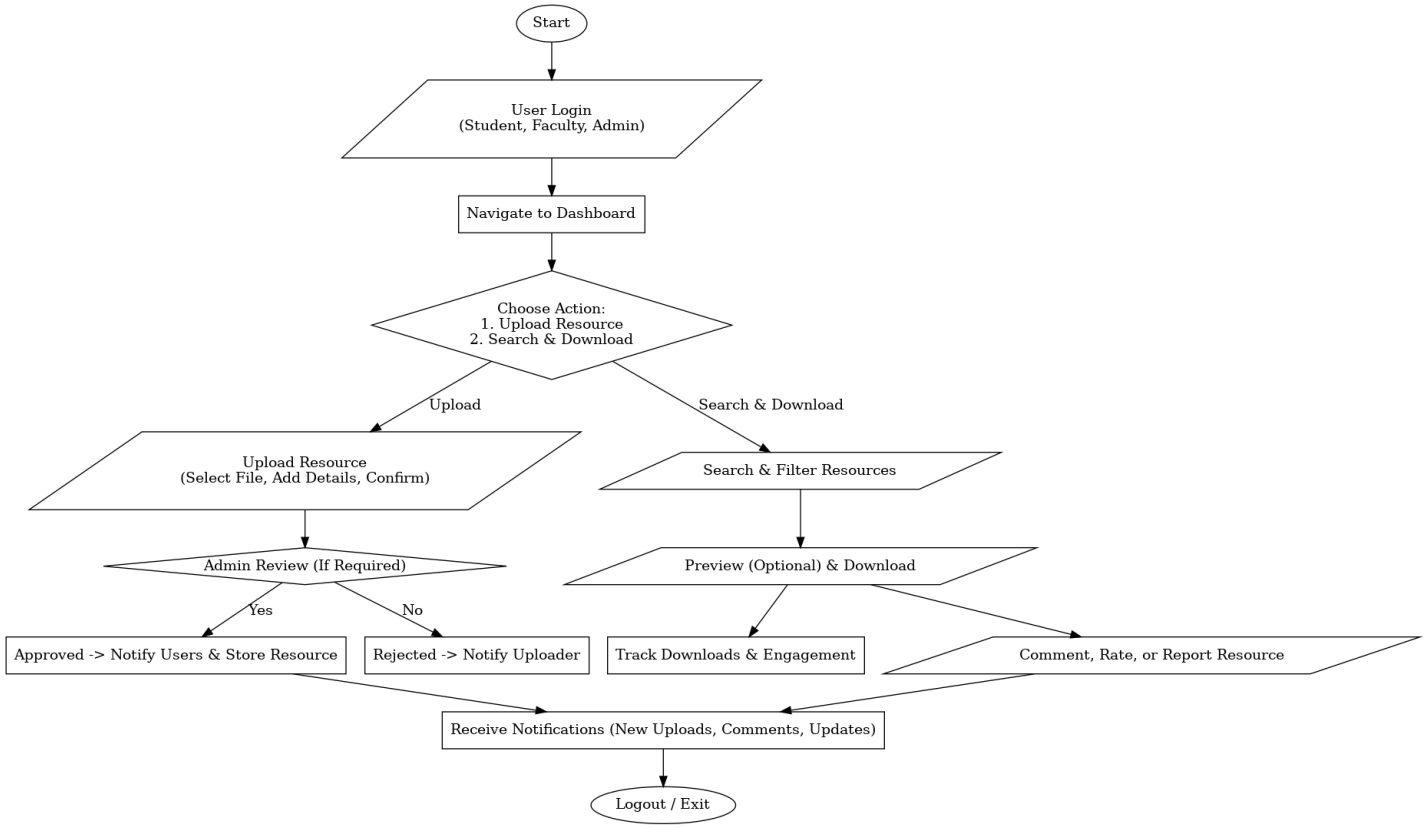
EduStake: Centralized College Resource Sharing Platform

Rahul Rathod Anurag Bodkhe Sahil Jirapure Ujjwal Garud Shrinivas Bhore

IT Department, MIT School of Computing, MIT Art, Design and Technology University, Pune, India

Abstract:

This project introduces a **EduStake: Centralized College Resource Sharing Platform** is a comprehensive digital infrastructure developed to enable seamless academic collaboration and efficient distribution of educational content across college campuses. Leveraging modern web-based technologies and secure cloud storage solutions, EduStake addresses the pressing need for a centralized platform where students and faculty can effortlessly upload, organize, share, and retrieve a wide variety of academic resources. These include lecture notes, assignments, research papers, lab manuals, project presentations, tutorial videos, question banks, and institutional announcements. The platform is tailored to foster a culture of digital-first learning and knowledge accessibility in a structured, scalable, and secure environment.



The first step in the **EduStake** system is user onboarding and role-based access control. The system classifies users into three primary roles: students, faculty members, and administrators. Upon account creation and login, each user is authenticated via a secure verification process, which could include institutional credentials, email verification, or multi-factor authentication. Depending on their roles, users are granted distinct privileges—faculty members can upload content to course-specific repositories, students can browse and download relevant materials, and administrators oversee system integrity, content moderation, and analytics. This modular access control mechanism ensures that content sharing remains structured and restricted to verified community members, thereby preserving the integrity of the academic ecosystem.

Once authenticated, users interact with a centralized dashboard that provides access to various course-specific folders and shared repositories. The core interface of **EduStake** is designed with user experience in mind—emphasizing intuitive navigation, responsive design, and ease of use across devices. The system's backend is built to integrate with existing institutional Learning Management Systems (LMS) and student information databases, ensuring seamless synchronization of user roles, course enrollments, and academic data. This interoperability minimizes administrative overhead while enabling real-time updates and content delivery.

One of the cornerstone features of EduStake is its intelligent resource categorization engine. Upon file upload, users can tag documents with metadata such as course name, subject code, semester, faculty name, and department. This metadata is used by the system to automatically organize files into their appropriate folders. Additionally, advanced search capabilities—such as keyword search, filter by department or semester, and sort by upload date—enable users to quickly locate specific documents without browsing through large volumes of unrelated content. This functionality significantly enhances the efficiency of academic resource retrieval, saving valuable time and effort for students and educators alike.

Another crucial functionality is EduStake's version control and document update tracking system. When a faculty member uploads a new version of an existing document—say, an updated assignment or corrected lecture notes—the previous version is not deleted but archived systematically. Users are notified of the updated file and can also access the older versions if needed for reference or comparison. Each document includes a version history, timestamp, uploader identity, and edit notes if provided. This transparent document management framework ensures that users always access the most up-to-date materials while maintaining a historical record of changes.

To promote student engagement and collaborative learning, EduStake incorporates interactive discussion threads linked to each uploaded resource. These threaded discussion forums enable students to comment, ask questions, share insights, and initiate peer-to-peer problem-solving activities. Faculty members can respond to queries directly within the forum, clarify doubts, and share additional references. This interactive layer transforms static resource sharing into a

dynamic academic dialogue, enhancing conceptual understanding and active participation among learners.

From a technical perspective, EduStake is designed with scalability, security, and performance in mind. The platform is hosted on a cloud infrastructure, ensuring high availability and fault tolerance. All user data and file uploads are transmitted via secure HTTPS protocols and encrypted at rest using advanced encryption standards. The system also includes automated daily backups to a secondary cloud location, ensuring disaster recovery and data continuity. Administrators have access to a monitoring dashboard to track platform usage, user engagement metrics, file uploads, and storage analytics. These insights aid in continuous system optimization and informed decision-making.

To further ensure reliability, the EduStake platform includes built-in redundancy, session timeout protection, and validation protocols to safeguard against unauthorized data manipulation. The upload interface restricts unsupported file types and scans incoming documents for malware. These safety mechanisms make the system resilient against common vulnerabilities and align with institutional IT security policies.

EduStake also provides a mobile-friendly interface and dedicated mobile app support, making it accessible to users on smartphones and tablets. This cross-device compatibility ensures that users can engage with the platform from anywhere—be it classrooms, libraries, hostels, or during transit. Offline access and document bookmarking features are also under development, enabling students to access previously downloaded resources even without internet connectivity.

From an administrative standpoint, EduStake includes tools for managing user accounts, creating department-specific folders, setting usage limits, moderating forum content, and generating reports on platform activity. These controls empower college administrators to align platform usage with academic goals, maintain decorum, and ensure content relevance.

In the broader academic landscape, **EduStake: Centralized College Resource Sharing Platform** addresses critical challenges faced by institutions today—fragmented communication channels, inconsistent access to learning resources, and limited peer-to-peer interaction. By centralizing educational content and fostering a collaborative digital environment, EduStake promotes inclusivity, accessibility, and a culture of continuous learning. It reduces reliance on informal, unregulated content sharing via messaging apps or cloud drives, thereby enhancing quality control and academic compliance.

In conclusion, EduStake represents a paradigm shift in how academic resources are managed and shared within colleges. It redefines traditional educational workflows by integrating content management, role-based access, collaboration tools, and analytics into a single cohesive platform. The implementation of EduStake holds the potential to significantly improve learning outcomes, encourage digital literacy, and create a well-connected, knowledge-rich academic community.

- 1.Rahul Rathod
- 2.Anurag Bodkhe
- 3.Sahil Jirapure
- 4.Ujjwal Garud
- 5.Shrinivas Bhore

MIT SCHOOL OF COMPUTING

Class : SYCORE1
Group Id:03

DEPARTMENT OF INFORMATION TECHNOLOGY

"EduStake: CENTRALIZED COLLEGE RESOURCE SHARING PLATFORM"

User

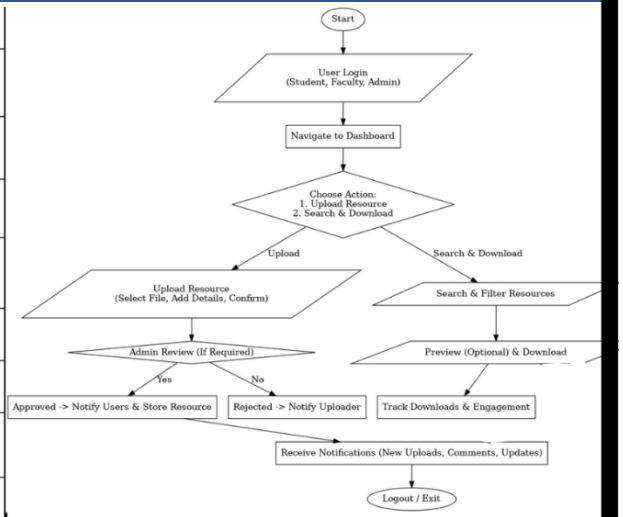
What user says:
- Hard to find materials
- Scattered resources
- Need quick access
- Outdated notes
- No organized platform

What user Thinks:
- I wish all study materials were in one place.
- Searching for notes takes too much time.
- It would be great to access updated resources easily.

What user Does:
- Searches for study materials across multiple sources (WhatsApp, emails, Google Drive, etc.).
- Asks friends or seniors for notes and resources.
- Spends time organizing and storing files manually.

What user Feels:
- Frustrated when materials are hard to find.
- Overwhelmed by scattered and unorganized resources.
- Annoyed with outdated or missing study materials.

Sr. No.	Requirements	Proposed Solution
1	Easy access to materials	Centralized web-based platform
2	Efficient searching	Advanced search & filters
3	Updated resources	Version control system
4	Collaborative learning	Comments, ratings, and discussions
5	24/7 availability	Cloud-based hosting
6	File format support	Support for PDFs, Word docs, PPTs, images, etc.
7	Resource categorization	Tags, subjects, and department-wise sorting
8	Live Q&A Sessions	Faculty-student interaction for better understanding



Problem Satement

in many educational institutions, students and faculty struggle to efficiently share and access academic resources such as lecture notes, research papers, e-books, assignments, project materials, and other study materials. Traditional methods like emails, social media groups, and offline sharing are inefficient, leading to disorganized content, difficulty in retrieving specific resources, and lack of proper access control.

Proposed Solution

Develop a web-based platform that allows students and faculty to upload, categorize, search, and download academic resources efficiently. The platform will provide role-based access (Student, Faculty, Admin) with a secure authentication system.

Conclusion

The College Resource Sharing Platform will provide role-based access for students, faculty, and admins to upload, categorize, search, and download academic resources. It will include version control, collaboration tools, and an admin dashboard for efficient management. The platform will be cloud-based, accessible 24/7, and scalable for future enhancements.