Faculty Portal For Leave Application

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ABSTRACT :

Fr. C. Rodrigues Institute of Technology plans to develop a faculty portal using HTML, CSS, and JavaScript to streamline leave application processes and enhance information management. The portal will categorize and track leave types, store academic timetables, and enable access to individual salary statements. SQL will be used for data retrieval and manipulation. The goal is to create an interactive digital interface to improve accuracy, operational efficiency, and accessibility in faculty administration.

Keywords: Information Management, SQL, streamline Faculty portal, salary statements

INTRODUCTION :

BACKGROUND

The need for a sophisticated faculty management system arose due to the increasing complexity of educational institutions and the growing number of faculty members. Traditionally, universities relied on manual paper-based processes to manage faculty data, course assignments, research activities, and administrative tasks. However, these conventional methods often resulted in inefficiencies, errors, and difficulties in tracking and analysing faculty performance. To address these challenges, universities began exploring technology-driven solutions. The initial faculty management systems were rudimentary, often standalone applications designed to handle basic tasks like attendance tracking and payroll management. Over time, advancements in information technology and the emergence of more comprehensive Enterprise Resource Planning (ERP) systems paved the way for more sophisticated faculty management.

MOTIVATION

Fr. Conceicao Rodrigues Institute of Technology, Vashi, lacks an efficient leave application system on its website, necessitating immediate attention to enhance human resource management. Implementing a user-friendly process for leave requests and approvals would simplify procedures and track employees' remaining leave balances. This transition would notably diminish paperwork and manual tasks, fostering transparency. Moreover, it would lighten the administrative workload and optimize resource allocation. Centralizing leave management would facilitate seamless scheduling adjustments in response to faculty absences, minimizing disruptions. Integration with the payroll system would ensure accurate salary computations, promoting efficiency and transparency. Given the likelihood of conflicting leave requests in educational settings, this system would mitigate overlaps and enhance organizational coherence. Overall, the digitalization of leave management for college employees promises to augment productivity and advance institutional growth significantly.

AIM & OBJECTIVE

Our aim is to create a website that fills in the gaps between the faculty members and the administration of the institute. The real objective would be to create an end-to-end portal that would make the task of keeping records of leaves, application of leaves and checking the salary slips much easier and faster. The website designed would be designed as a link between the two facets namely administration and faculty and would be adapted in response to both perspectives. The website so designed would be used for various purposes and would be easily adaptable for other organizations as well.

REPORT OUTLINE

This report details our approach as we endeavour to solve the problem of record keeping and leave management as well as scheduling issues faced by the members of the faculty and administration by making the process digitalized and increasing the efficiency of the current system. We have further provided a comprehensive line of action including information on the implementation, performance and adaptation of the system.

1. STUDY OF THE SYSTEM

LITERATURE SURVEY

1. *Developing and Implementing a Web Portal Success Model [1]:* This paper delves into the pivotal role of web portals in elevating individual performance across various domains, including task productivity, innovation, customer satisfaction, and management control. The integration of diverse information technologies and systems is showcased as a potent catalyst for not only enhancing organizational efficiency but also empowering individuals to excel in their roles. Moreover, the paper provides valuable insights into the foundational principles of web portal development, shedding light on the essential functions and features that these portals should encompass. Key programming languages and technologies, such as HTML, PHP, Java and MySQL are highlighted as the building blocks underpinning the creation of these transformative digital gateways.

2. *Employee Leave Management System [2] :* This project was conceived with the objective of modernizing leave management by replacing the manual process with an automated system. It employed a well-structured three-tiered approach to achieve this transformation. The presentation tier, the first layer, was designed with a user-friendly graphical interface to interact with clients. The business logic tier, also known as the middle tier, featured a set of Application Programming Interfaces (APIs) responsible for the actual data processing, ensuring the system's functionality. Finally, the data tier, the third layer, was dedicated to efficient data storage and management. The project leveraged a combination of essential tools and languages, including CSS, HTML, JavaScript, MySQL, and PHP, to create a robust and user-friendly leave management system.

3. *Project on Employee Database and Payroll Management System [3]:* The "Employee Database and Payroll Management System" has been crafted to address the challenges posed by the manual system. This web-based application offers an efficient solution for maintaining and accessing digital records while eliminating redundant entries. The project focuses on optimizing user data management, thus enhancing overall system performance and client service delivery. Tailored to the specific operational needs of the company, it ensures smooth and effective functioning. To bring this system to life, a range of tools and languages were employed, including HTML, PHP, JavaScript, and an RDBMS (Relational Database Management System) in the form of Online MySQL. Additionally, it was developed using the XAMPP server environment, with Adobe Dreamweaver serving as the primary development platform, providing a comprehensive and robust solution for employee database and payroll management.

4. *Leave and Payroll Management System [4]:*
   The Payroll Management module encompasses various critical functions, including the ability to access payroll and tax deductions while also automating tax calculations. The proposed leave and payroll system is marked by its efficiency, offering a user-friendly interface that significantly reduces manual calculation errors and enhances security measures. On the other hand, the Leave Management module handles essential tasks such as leave application submissions, viewing leave history, monitoring leave statistics, and processing leave application approvals or rejections. To bring this web portal to life, a suite of cutting-edge technologies was harnessed, including Bootstrap for responsive design, MongoDB for database management, javascript for frontend rendering, and Meteor.js for robust and real-time application development, resulting in a powerful and feature-rich platform for leave and payroll management.

5. *TPGIT Employee Leave Management System [5]:* The TPGIT Employee Leave Management App Project for Android is designed with a primary focus on efficiently monitoring and managing employee leave-related activities. This system is adept at meticulously tracking leave details for individual employees and their respective departments, maintaining comprehensive records across various leave types. Its feature set includes leave cancellation, leave approval, and the generation of detailed reports. The project's architecture is strategically distributed, with centralized data storage, ensuring seamless access to information. Moreover, the system offers a comprehensive display of an employee's entire leave history, providing valuable insights into their past leave activities. To bring this project to life, a combination of essential tools and technologies were employed, including JAVA, HTML, and PHP, to ensure a robust and user-friendly application.

Table 1 - Comparison of the research papers referred

Paper Title	Author	Idea Presented	Gap identified
Developing and Implementing a Web Portal Success Model [1]	Mutes M. Al-Debei	Describes the basics of web portal creation and its functions	Some of the findings cannot be generalized in association to us
Employee leave management system [2]	Adamu A	Creation of an automated leave management system	Was designed to be run on windows OS and wasn't responsive
Employee database and payroll management system [3]	Marcus atish D rozario	Management and storage of user data	It is built for use in small scale organization where the number of employees is limited.

| Leave management and Payroll Management System[4] | Manish Singh, Prachi Singh, Ronil Singh, Shubham Singh, Shiwani Gupta | Application of leaves and viewing of payroll and tax deductions | Time consuming and complex for the teams current skill level |
| TGPIT employee leave management system[5] | A Abarna, Dr. J. S. Sreerambabu, Kalidasan | Tracking the leave for employee and their departments | Is focused on leave but doesn't provide storage for user data |

B. EXISTING SYSTEM

The current leave application system is a multi-step, manual process. Staff members must complete a leave request form, providing details about the purpose and duration of their leave. This form is then submitted to their Head of Department (HOD), who reviews it. If necessary, the request goes to the principal for final approval. Once approved, the request moves to the administration office for processing, including updating leave balances and maintaining records. Additionally, staff members need to adjust their work schedules to ensure the organization operates smoothly during their absence. This might involve delegating tasks, arranging replacements, or ensuring their responsibilities are covered. While this process has its merits, it can be time-consuming and occasionally results in delays. Transitioning to an automated system can significantly improve efficiency and reduce the administrative workload. Such a system would allow for quicker leave request processing and more efficient management of employee absences, benefiting both staff members and the administration office. The drawbacks of the current system are its time-consuming and tedious in nature, which is prone to human error, leading to the production of paper waste and incurring high costs.

2. Proposed system

A. Problem Statement

The current leave request process relies heavily on manual paperwork and email communications, leading to delays and errors in processing leave requests. Effective work schedule planning is hampered by the absence of a centralized system for monitoring leave balances, pending requests, and approvals in real time. Storing sensitive employee information and leave records in the paper forms raises concerns about data security, access control, and compliance with privacy regulations. The absence of a structured leave management system makes it difficult to efficiently plan employee schedules, causing work imbalances and interruptions in college activities and decreasing the overall productivity and efficiency of the institute. Both employees and supervisors often lack transparency and ease of communication in leave-related matters, affecting overall engagement and satisfaction within the college workforce. The system seeks to provide an online platform for employees to request leaves, supervisors to approve or reject requests, and administrators to maintain accurate records while ensuring data security and compliance.

B. Scope

Our project focuses on implementing a secure login process to restrict website access to authorized staff members and management, ensuring data confidentiality. Staff members can utilize the platform to submit leave requests conveniently, specifying leave types (e.g., vacation, sick leave), dates, and any required documentation, streamlining the application process. Additionally, faculty members gain access to a calendar view that aids them in scheduling and managing classes more efficiently, promoting better organization and resource allocation. Moreover, employees can autonomously manage their leave requests, review leave history, and make necessary edits. This self-service approach provides flexibility and promotes informed decision-making. In sum, our system combines secure login, simplified leave requests, and user-friendly features to enhance operational efficiency, empowering staff and faculty to manage their schedules, leaves, and work-life balance more effectively.

3. Design of the system

A. Approach
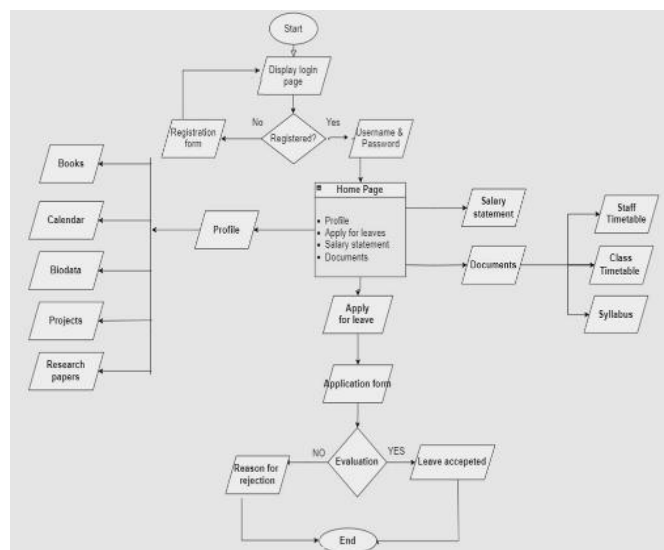
The flowchart starts with parallelogram displaying a login page, asking for user's credentials. Then the diamond box checks if the user is registered or not. If the user is not registered, the user is displayed a registration form, in order to create a new account. Once the account is created, the user is again displayed the login page. This loops only ends when the user is registered. The user's login credentials are checked and then the user is displayed the "Home" page which is connected to different tabs namely, "Profile", "Apply for Leave", "Salary statement", "Documents". All the parallelogram boxes display all the above-mentioned things to the user. Further if the user decides to click on the tabs "Profile" the user is displayed more information like "Books", "Calendar", "Biodata", "Projects", "Research Paper" and the "Documents" tab will connect the user to "Staff Timetable", "Class Timetable" and "Syllabus". When the user clicks on the "Salary statement" tab, the user can further access his/her salary slip. When the user desires to apply for a leave, the user clicks on the tab "Apply for leave" displayed on the home page. After clicking, the user is displayed an "Application form". The user has to fill up the application form, and the application form is further sent to the admin side for evaluation. It then enters another loop. The diamond box evaluates the application form for leave. From here the form is either accepted or rejected, if rejected, the user is displayed the reason and if accepted, the user is let known, and then the loop ends.

B. *System Architecture*
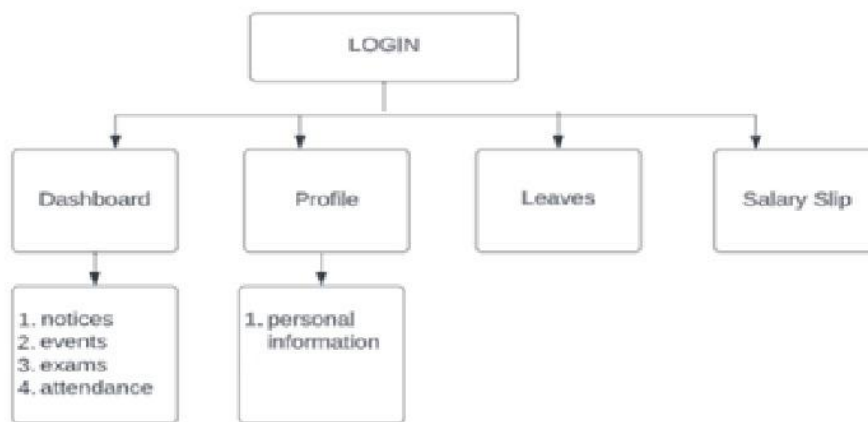
Figure 2. Block Diagram of the Faculty Portal

The above block diagram expands on the different aspects of the faculty portal. After logging in the user would be able to peruse the five different tabs, Dashboard, Profile, Leaves, Document and salary slip. Once in the dashboard tab the user will be able to access the notices, events, exams and attendance cards and gain information about the respective fields. In the profile tab the user would be able to store their personal and professional details including their name, contact information as well as the research paper and/or the books published by them. The documents tab will contain any of the documents that the user needs including reference books, course syllabus as well as a few others that the user finds to be important. The leaves tab and salary slip tab will allow the user to avail for a leave and also download their own salary slip.

4. Result

Login Page

The portal will open with the login page giving the user the option of logging into their account if they have one or if they don't have one; redirecting them to the registration page. It will also include the option of "forgot password" if the user fails to remember their password.
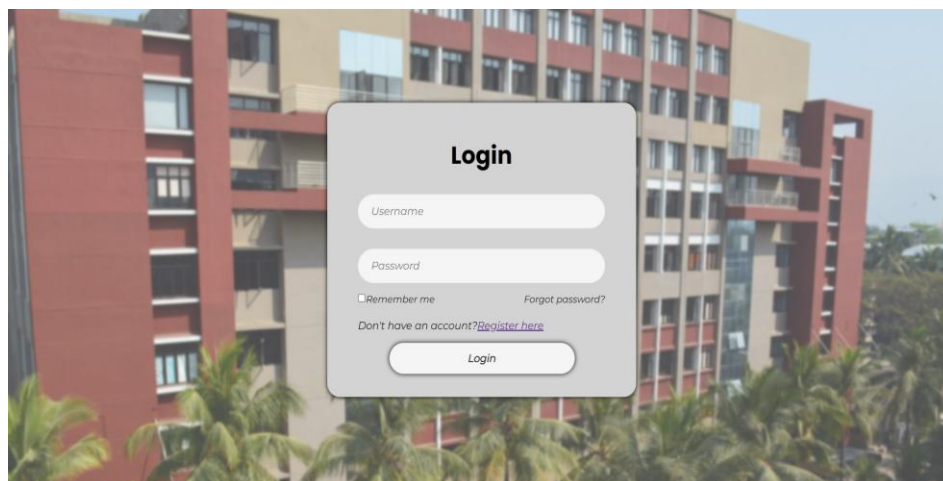
Dashboard/Home Page

After logging in, the user would be redirected to the home page.

The home page has four cards:

Notices: When the user clicks on "Events," he or she will receive notices containing all general information relevant to the faculty, such as meeting schedules, etc.

Events: The "Events" section contains remainders about the various seminars, workshops, competitions and fests taking place in college premises.

Attendance: Keeps a tab of the number of leaves taken by the user and the number of leaves he/she is left with.

Exams: This tab gives the information about upcoming exams for the current semester and helps them plan out their curriculum.

The home page also contains the faculty member's personal timetable which is signified here with a placeholder and there would be a calendar which would reflect all of their engagements such as their events, exams as well as the leaves that have been availed by the faculty member. This side-by-side placement of the timetable and calendar is aimed to provide greater ease for scheduling and organization by the user. To the left of the homepage resides the sidebar which will help the user navigate four more tabs namely "Profile", "Leaves", "Documents" and "Salary slip". It also provides the user with the option to logout.
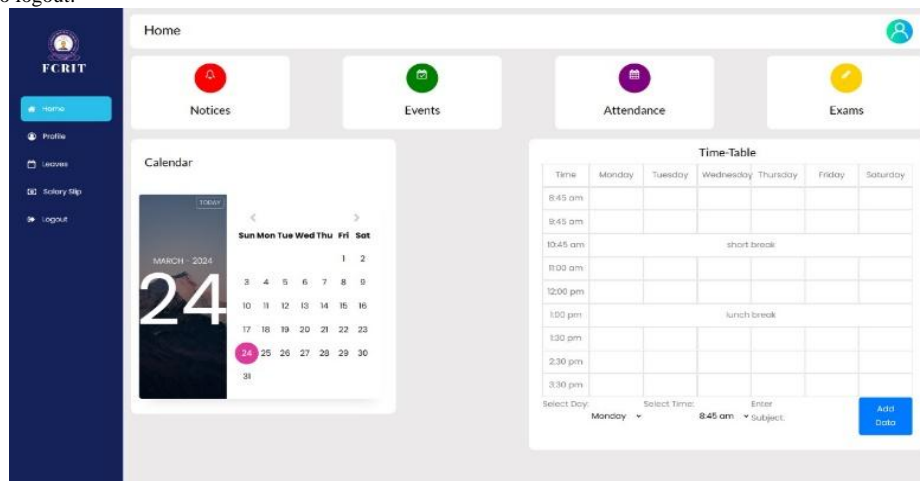
Figure 4 Home page

Profile Page

The profile section of the webpage contains all the information about the user such as their qualifications, area of specialization, their contact details, number of books and research papers published and their designation.
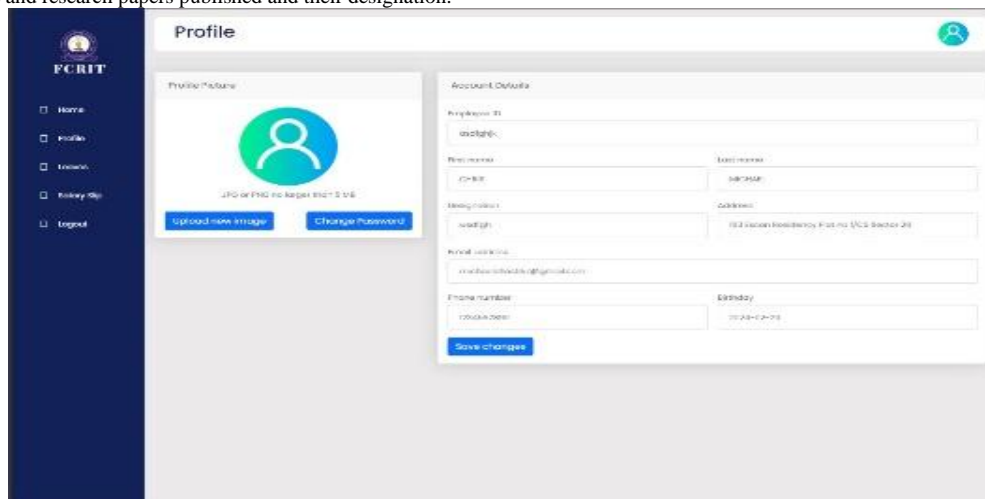
Figure 5. Profile Page

Leave Application Form

Upon opening the leave request form the user is directed to a form in which they must enter their personal details and enter the reason for their leave request. They will be provided with the number of leaves they have left so that they can plan out how many leaves they want to request. In the current implementation, as of now we don't have an option for specifying the type of leave   the user has applied for but it would be added as soon as possible.

Upon submitting the form, the request would be sent to the admin   for approval and the approved request would come via the "Notices" section in the Home tab.

Figure 6.   Leave Application Form

Salary Slip

The salary slip tab would enable the user to access and download their salary slip. Due to authorization issues we were unable to implement the salary slip tab fully which would have been responsible to fetch the data and display them to the user however we do have a html template implemented to showcase the way it can be implemented.

Figure 7. Salary Slip

Admin Dashboard

The admin dashboard displays the total registered employees as well as the pending leave requests awaiting evaluation. As observed below there is also publish notification card that would enable the admin to publish notifications on the employee (client) side.

Figure 8. Admin Dashboard

 Add employee

The add employee tab gives us an overview of the current employee registered in the faculty portal furthermore we can create, edit and delete a particular employee record whenever needed. This creation of an employee account would generate the user id and the password using which the employee can login to their account for the first time after which they can change the password as when they wish to do so.
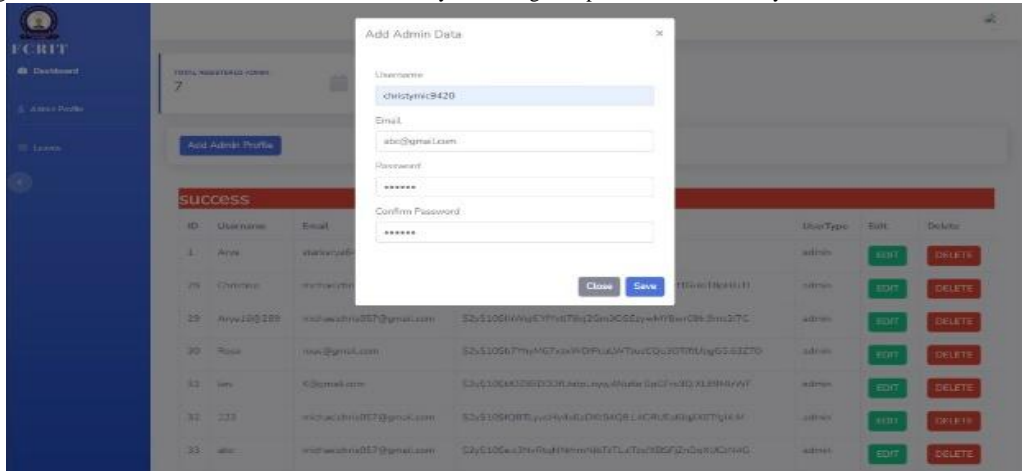
Figure 9. Add Employee

H. Leave evaluation

The leave evaluation tab will reflect the leaves that have been   requested by the different employees in tabular format. After the leave request has been passed through the appropriate channels the admin can accept or reject the leave requested.
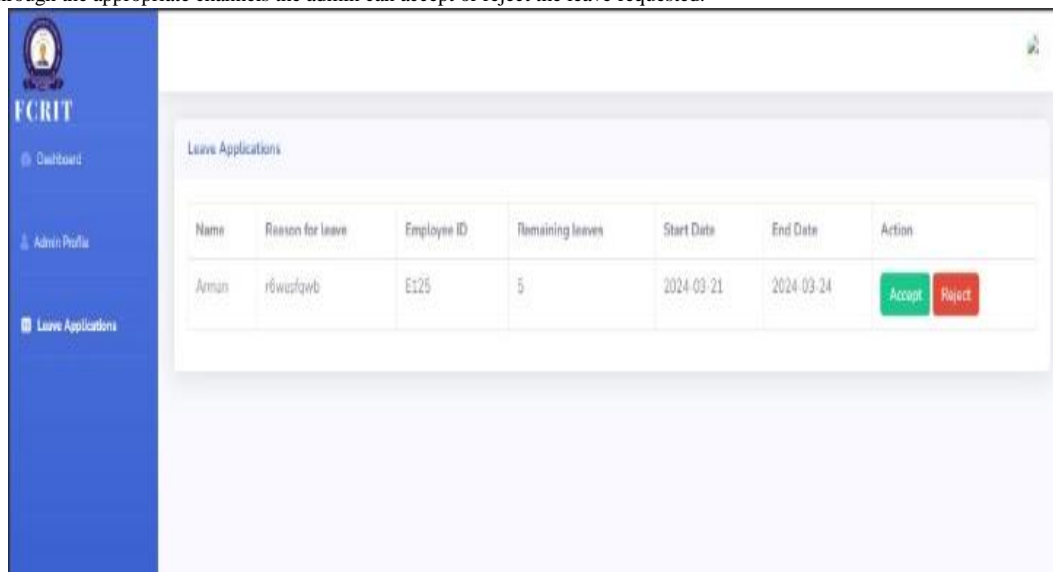
Figure 10.   Leave Evaluation Form

5. Conclusion :

The Faculty Portal marks a significant leap forward in addressing the inefficiencies and security vulnerabilities associated with manual paperwork and email exchanges in academic institutions. Through its array of comprehensive functionalities, spanning leave management, academic timetable storage, and salary statement access, the portal significantly streamlines administrative processes while enhancing accessibility for faculty members. Additionally, integrating robust session management mechanisms can ensure secure authentication and persistent session state maintenance, thus safeguarding sensitive user data during their interaction with the portal. Furthermore, the inclusion of a notification system facilitating communication between the admin panel and faculty members, along with the ability to post notices for instructions, events, and exam-related announcements, promises to further enhance collaboration and information dissemination within the academic community. By embracing these technical enhancements

and transitioning away from traditional manual processes, the Faculty Portal not only enhances precision and convenience but also cultivates a deeply immersive digital environment tailored to the evolving needs of modern academia.

Acknowledgements

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