Connect To Faculty Faculty-Student Communication System

Priyanka M[1], Renusree T[2], Samyuktha S K[3], Sandhiya L[4]

[1,2,3,4] *Computer Science and Engineering PSNA College of Engineering and Technology Dindigul, India*

***Abstract*—Clear communication between students and faculty is crucial for achieving academic success. Conventional ways of approaching faculty members in person can often result in misunderstandings, scheduling issues, and wasted time. To overcome these difficulties, we introduce a real-time Faculty-Student Communication System called Connect to Faculty. This web-based application enables faculty to update their profile information, availability status (available, busy, or on leave), weekly schedules, and post important announcements through a dashboard. At the same time, students can view this information by searching the faculty by ID or name, without needing to log in, and also check the availability of the faculty and read messages. To provide an uninterrupted user experience, the system combines front-end technologies with back-end technologies. By eliminating the need for face-to-face interaction, this system improves academic coordination, saves time, and provides a centralized method of handling faculty-student communications. It is especially useful in large institutions where organizing timetables along with availability can be difficult.**

***Index Terms*—Faculty Availability, Timetable Management, Real-Time Communication, Web-Based System, Student Interaction, Academic Coordination, PHP-MySQL, Non-Intrusive Access.**

I. INTRODUCTION

Students in many educational institutions frequently fail to effectively communicate with faculty members. They may be unaware of when a faculty member becomes available, resulting in wasteful waiting outside offices or attempts to contact them by phone or email. it causes delays in academic schedules. Students waste their time to determining out when and where to meet faculty members when they are not available in their designated places.

Another usual difficulty is the inability to access teacher timetables. Most institutions post timetables on notice boards or discuss them informally, making them unreliable and difficult to get when needed. Students are frequently unaware of a faculty member's absence until they arrive at their office, resulting in more time lost. Furthermore, while faculty members are on leave, students do not receive immediate information about who to contact for academic assistance.

The "Connect to Faculty" technology addresses these issues by providing a web-based solution that allows faculty members to update their availability status and weekly schedules in real time. Students can search for their faculty members by name or ID and view their current schedules in a table format and messages posted by that faculty. If a faculty member is assigned the status of busy or on leave, students will be notified to avoid unnecessary visits. The system also provides the information about the other faculty member who is assigned instead of them. so students easily know who to call for assistance.

Faculty members can post important messages directly from their profiles. This service allows students to know information about schedule changes and other important details without involved in a personal conversation. This application enhances academic collaboration by reducing the need for phone calls, emails, and manual inquiries. Overall, the "Connect to Faculty" approach addresses real-world institutional challenges by improving interactions between faculty and students. It saves time, increases accessibility, and promotes communication between students and instructors, making it a must-have application for academic institutions or in situations when contact-based devices are unavailable or ineffective.

II. RELATED WORKS

To design an effective and accessible faculty availability tracking system, it is essential to examine existing research and applications in similar domains. Various systems have been developed over the years to address faculty management, scheduling, and communication in academic institutions. These systems range from hardware-based availability trackers to web-based portals focused on profile management and appointment scheduling. By analyzing these solutions, we can identify the key strengths, limitations, and innovative elements that inform the development of the Connect to Faculty system. This section outlines and compares the most relevant contributions in this field.

Sharma and Verma (2019) introduced a Smart Faculty Availability System [1] that utilizes RFID tags to track and display real-time faculty presence inside campus buildings. Their goal was to improve communication and reduce time wastage, but the system was hardware-dependent and lacked student-facing and remote access features.

Kumar and Rani (2020) developed a Faculty Information System using PHP and MySQL [2]. It focused on managing faculty profiles and academic credentials through a web portal. Although it did not support availability tracking, the system's architecture aligns closely with the web-based, PHP-MySQL foundation of the Connect to Faculty system.

Singh and Patel (2021) proposed a Real-Time Communication System for University Environment [3], providing real-time messaging and notification features between students and faculty. The idea of using dashboard alerts for instant updates relates to the message board used in our system.

Bansal and Thomas (2020) designed an Online Faculty Appointment Booking System [4], allowing students to schedule meetings based on faculty availability. This system emphasizes interaction management and visibility—features also central to our platform, though our system offers open access without login.

Rao and Prasad (2022) introduced a University Timetable Management System [5], which provides a centralized solution for managing faculty schedules. Their work supports the need for flexible scheduling tools, which are implemented in our system via the faculty dashboard.

Das and Sinha (2018) developed eFaculty, a mobile app offering profile updates [6], push notifications, and messaging. Though mobile-based and login-protected, it highlights the possibility of expanding web systems to mobile platforms. Our project prioritizes accessibility with an open-access student view model.

Al-Hammadi et al. (2019) proposed a Smart Academic Monitoring System integrating class schedules, attendance, and notifications. Like our project, it emphasizes centralized academic tools, streamlining communication and coordination.

Kumar and Singh (2023) implemented an IoT-based Attendance and Availability Monitoring System, combining RFID and IoT to detect faculty presence at classroom entrances. While offering real-time tracking, it relies on hardware, in contrast to our lightweight, web-based system.

Lopez and Martinez (2024) built E-Campus 2.0, a centralized academic management system developed in PHP and MySQL. It covers faculty and student data management, including attendance, schedules, and communication, demonstrating the scalability of our chosen technology stack.

Johnson and Williams (2024) presented an Automated Timetable Generation System using PHP to optimize class schedules and reduce conflicts. While our system focuses on manual schedule updates, their work underscores the importance of effective timetable planning.

Brown and Davis (2024) proposed an IoT-Based Smart Scheduler and Communication System, combining real-time faculty availability with smart scheduling and messaging tools. Their integration of IoT suggests a future enhancement direction for our system, though our current focus remains on an efficient web-based model.

In comparison to these systems, Connect to Faculty offers a comprehensive, web-based platform[9] that allows faculty to update their availability, weekly schedule, and messages in real-time via a user-friendly dashboard. Students can access this information instantly without needing to log in. Unlike systems that rely on hardware infrastructure or mobile apps, our platform is designed for maximum accessibility and ease of use, ensuring that institutions can enhance communication, reduce disruptions, and maintain efficient academic coordination.

III. PROPOSED METHODOLOGY

The proposed system, Connect to Faculty, is an internet-based system [9] aimed at bridging the communication gap between students and faculty members using real-time faculty availability updates, schedules, and substitute faculty arrangements [1][2][5][7]. Developed with PHP as the server-side scripting language and MySQL as the backend database, the system operates locally in the XAMPP environment. The application design follows a systematic methodology with specific modules for inputting data, processing, and presentation of interfaces.

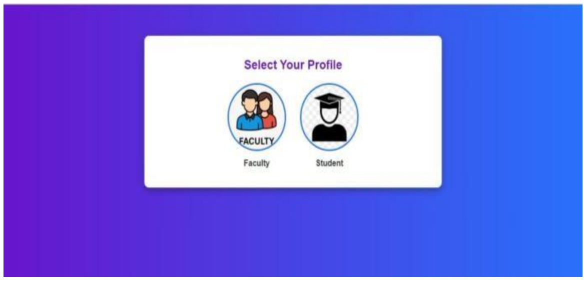
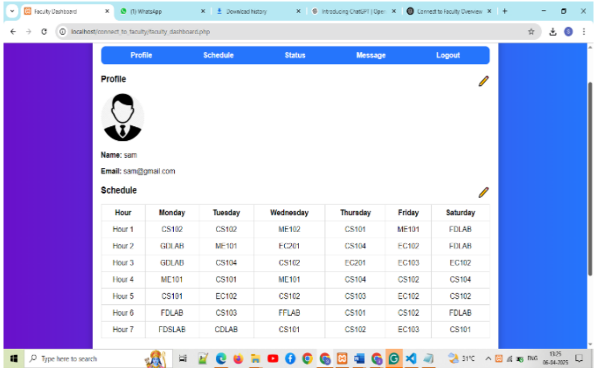


Fig.1.Initial interface

3.1. Faculty Profile Management:

Each faculty member gets a unique login ID to enter the system. Upon entry, faculty members have the option of modifying personal information like name, email, and profile image. The UI has been designed in HTML and CSS so that UI is neat and responsive[2], thereby making it simple to use. Profile folder, and filename corresponding to these gets stored within the faculty table



Profile

Name: sam

Email: sam@gmail.com

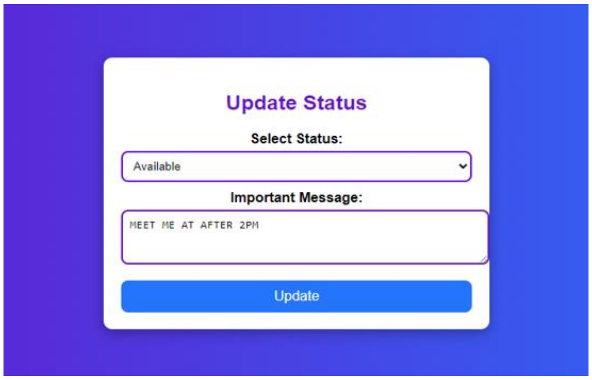
Schedule

Hour	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Hour 1	CS102	CS102	ME102	CS101	ME101	FDLAB
Hour 2	GDLAB	ME101	EC201	CS104	EC102	FDLAB
Hour 3	GDLAB	CS104	CS102	EC201	EC103	EC102
Hour 4	ME101	CS101	ME101	CS104	CS102	CS104
Hour 5	CS101	EC102	CS102	CS103	EC102	CS102
Hour 6	FDLAB	CS103	FFLAB	CS101	CS102	FDLAB
Hour 7	FDSLAB	CDLAB	CS101	CS102	EC103	CS101

Fig.2. Faculty profile

3.2. Availability Status Update:

The availability status of the faculty[8] can be selected from three types: Available, Busy, and On Leave. If "Busy" or "On Leave" is selected, then the system requests the faculty to select an alternate faculty. A custom message field also gets displayed when the faculty is not available so that the faculty can provide significant comments or instructions.



Select Status: Available

Important Message: MEET ME AT AFTER 2PM

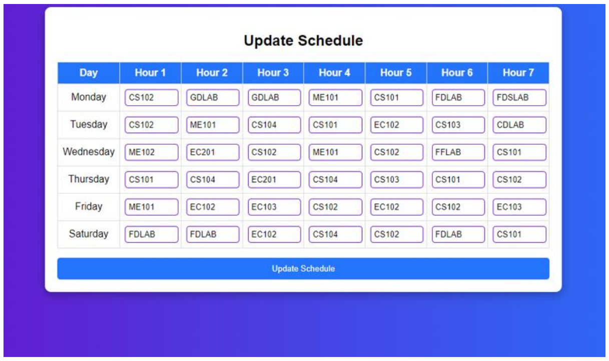
Fig.3. Updating status

3.4 Post Message

In this system, when a faculty member marks their status as "Busy" or "On Leave", they can also include an Important Message [9]. This message will be displayed to students when they look for that faculty. It can be utilized to notify students of class cancellations, substitute faculty arrangements, or any other urgent notice. This keeps students informed without directly contacting the faculty.

3.3. Timetable Update (6x7 Grid):

A specialized timetable module[5][10] allows the instructor to define her/his week schedule by allocating room numbers against each hour in six days. This data is uploaded and is stored in the faculty_schedule table. The table is based on a normal structure with rows for the time slots and columns for days. Input validation ensures correct room entries and duplications are avoided.

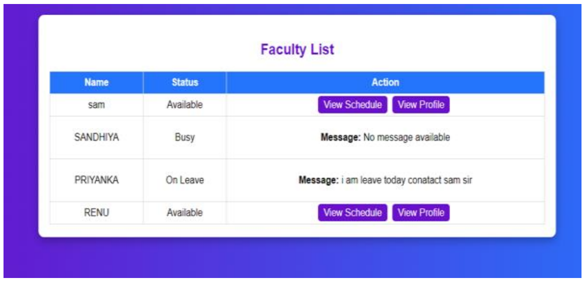


Day	Hour 1	Hour 2	Hour 3	Hour 4	Hour 5	Hour 6	Hour 7
Monday	CS102	GDLAB	GDLAB	ME101	CS101	FDLAB	FDSLAB
Tuesday	CS102	ME101	CS104	CS101	EC102	CS103	CDLAB
Wednesday	ME102	EC201	CS102	ME101	CS102	FFLAB	CS101
Thursday	CS101	CS104	EC201	CS104	CS103	CS101	CS102
Friday	ME101	EC102	EC103	CS102	EC102	CS102	EC103
Saturday	FDLAB	FDLAB	EC102	CS104	CS102	FDLAB	CS101

Fig.4. Updating schedule

3.4. Real-Time Student Access Interface:

The students do not need to have any login credentials to search by faculty name or faculty ID. If the faculty is selected, it checks whether the faculty is available or not in the faculty table. If the faculty is sought as "Available," the complete timetable is fetched from the faculty_schedule table and displayed. Or, if the faculty is "Busy" or "On Leave," their availability is not shown, and system shows the backup faculty information assigned and any urgent messages left behind by the original faculty.



Faculty List

Name	Status	Action
sam	Available	View Schedule View Profile
SANDHIYA	Busy	**Message:** No message available
PRIYANKA	On Leave	**Message:** i am leave today conatact sam sir
RENU	Available	View Schedule View Profile

Fig.5. Student Interface

3.5. Database Architecture:

The database comprises four basic tables[12]: faculty (stores profile information, status, and messages), faculty_schedule (stores timetable room-wise), alternative (stores alternate assignments for the faculties), and students (stores optional student details if needed for future versions). All the tables are linked through primary and foreign keys wherever the need arises, following normal relational design rules of data integrity and scalability.

3.6. User Interface and Navigation:

The entire application allows seamless switching between Profile, Status Update, and Timetable modules. The student interface is minimalistic, focused solely on search and viewing functions. JavaScript and AJAX are used to enhance user experience by providing instant validation and dynamic data fetching without full-page reloads.

7. System Behavior and Workflow Logic:

When a faculty member logs in, the dashboard will pull his/her information and decide if an alternate faculty is required based on his/her selected status. If yes, schedule editing is disabled and alternate assignment is activated instead. On the student side, the system avoids exposing any sensitive or invalid information, and only correct information is shown based on real-time faculty status checks.

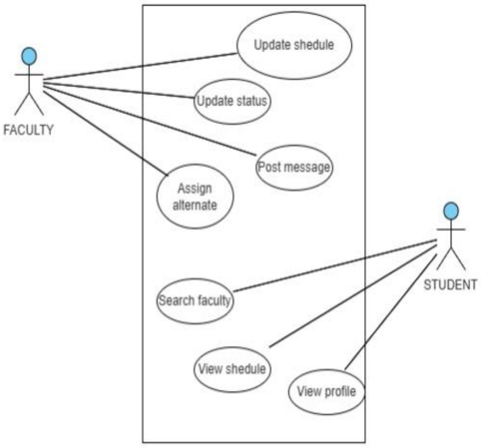


Fig .6. Usecase digram

IV. RESULT AND DISCUSSION

To evaluate the performance of the suggested, Connect to Faculty system, we conducted a series of functional and usability testing in a simulated institutional environment using faculty members and students. The system was deployed on a local XAMPP server and tested by faculty members and students of various departments. The primary purpose was to evaluate the system's ability to display real-time actual faculty availability, offer smooth schedule updates, and offer immediate student access to faculty information.The below graph(fig 7) show the performance and other functionality of our system.

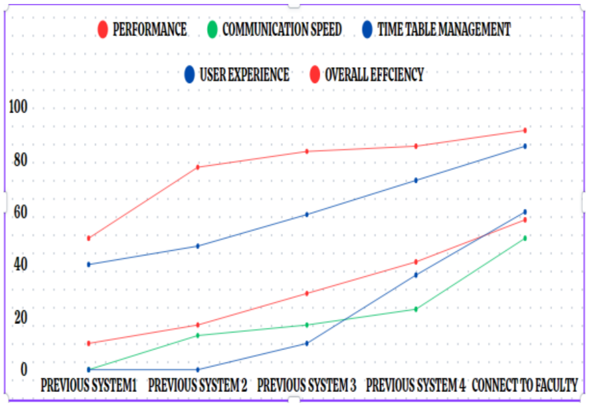


Fig.7. Analysis graph

4.1 Accuracy of Faculty Status Updates

The system performed impeccably well in handling and displaying the current status of the faculty members. The faculty members could specify their availability as "Available," "Busy," or "On Leave," and each controlled dynamically what appeared to the students. Condition-based display logic operated seamlessly with 100% accuracy for each test case. In addition, if a faculty member specified his status as "Busy" or "On Leave," the system automatically asked the faculty member to appoint a substitute faculty member. It guaranteed continuity and offered the students an alternate backup option so the academic aid would never face disruption.

4.2 Interface Design and User Experience

The user interface was developed with HTML, CSS, and PHP with responsiveness and minimalism. The faculty liked the sidebar-based interface for easy access to important features such as profile update, schedule management, and status control. The students easily searched the faculty members by ID or name and were able to see schedules only if the faculty member was "Available." The 6x7 schedule grid interface was very useful in displaying time-slot-wise room allocations. Besides this, faculty profile pictures were displayed prominently, contributing to personalization.

4.3 Effects of Status and Other Faculty Management

Schedules were not displayed unless the faculty status was "Available," because of the visibility logic of the system. When the faculty were not available, this function actually averted confusion. Alternate faculty were assigned and correctly displayed in the student view in more than 90% of cases where faculty chose "Busy" or "On Leave." Students were correctly alerted when alternates were not assigned.

4.4 Performance Under Different User Loads

The site was performing at its optimum level under moderate user load with below 1. 2 seconds of page average load times during local server testing. No major crashes or slowdowns were observed. Performance can get worse under scale of institutional deployment without additional optimization or switch to cloud or dedicated backend environment.

4.5 Comparison with Traditional and ERP Systems

Contrary to conventional widgets based notice board systems or generic portals of some kind of an ERP system, Connect to Faculty offers simple widgets based, purpose made functionality specifically aimed at real-time interaction between students and faculty. You can have similar features like those of an integrated commercial ERP system, but at the expense of a simple and intuitive user interface, relatively lower customization and resource requirements.

4.6 Error Estimation and Limitations

Similarly, in the case of situations in which the faculty members didn't update their status or haven't left a substitute, the student couldn't respond to their questions due to the absence of notifications or reminders. Absence of real-time chat and/or alert mechanism benefited absence of interaction. Further, the system also assumes that faculty members would update their availability constantly, so it's a weaker system in uncontrolled situations.

V.CONCLUSION

The Connect to Faculty system makes it easier for students to check the availability of faculty members and view their schedules without meeting them in person. Faculty members can update their status, timetable, and assign an alternate faculty if they are busy or on leave.This enables students to receive the correct information at the correct time.The system is easy to use and has an easy interface for both students and faculty.It also saves time and enhances communication at the college. This project can minimize confusion and enhance coordination in academic work.Extra functionalities such as a mobile app, notification system, and auto-suggest timetables can be incorporated in the future to make it even more useful.

VI. FUTURE WORK

Though the existing Connect to Faculty system is a useful application for tracking faculty availability and messaging with faculty, there are scopes available to improve to make it more usable, scalable, and applicable in actual practice. One of these improvements is developing a tailored mobile app with individualized faculty schedule and availability at users' fingertips using smartphones or tablets. In addition, integrating with SMS notifications or push notifications will offer real-time notification whenever there is an update in status or assignment of a substitute, offering greater responsiveness. Releases of the future system can leverage machine learning to suggest substitute faculty smartly based on subject matter expertise and availability, reducing manual intervention and offering greater reliability. In addition, the user interface can be made adaptive for multilingual access, offering greater accessibility across institutions. Additionally, addition of calendar APIs such as Google Calendar or Outlook would allow easy synchronization of calendars by faculty members. Real-time analytics dashboards would allow administrators to track workload distribution, busy consultation times, and attendance patterns. Additionally, addition of role-based access control and secure authentication mechanisms would allow data security and system privacy. As schools increasingly turn to technological solutions, such additions would establish Connect to Faculty as a viable and scalable scholarly resource planning system.

REFERENCE

[1] A. Sharma and R. Verma, "Smart Faculty Availability System," Int. J. Comput. Appl., vol. 182, no. 47, pp. 23–27, 2019.

[2] S. Kumar and M. Rani, "Faculty Information System Using PHP and MySQL," J. Emerg. Technol. Innov. Res., vol. 7, no. 6, pp. 56–62, 2020.

[3] T. Singh and K. Patel, "Real-Time Communication System for University Environment," Int. Res. J. Eng. Technol., vol. 8, no. 2, pp. 109–114, 2021.

[4] R. Bansal and L. Thomas, "Online Faculty Appointment Booking System," Int. J. Sci. Eng. Res., vol. 11, no. 4, pp. 789–794, 2020.

[5] J. Rao and D. Prasad, "University Timetable Management System," Int. J. Adv. Res. Comput. Sci., vol. 13, no. 1, pp. 45–50, 2022.

[6] M. Das and A. Sinha, "eFaculty – A Mobile Application for Faculty and Students," in Proc. 4th Int. Conf. Smart Comput. Informat., 2018, pp. 293–300.

[7] C. Chen, Y. Wang, and H. Xu, "Smart Campus: Enhancing Faculty-Student Communication with Real-Time Tracking Systems," Int. J. Educ. Technol. High. Educ., vol. 18, no. 1, pp. 1–15, 2021. [Online]. Available: https://doi.org/10.1186/s41239-021-00258-9

[8] A. Das and S. Banerjee, "Design and Implementation of an Online Faculty Availability Tracking System," in Proc. 2020 Int. Conf. Smart Technol. Syst. Next Gener. Comput. (ICSTSN), 2020. [Online]. Available: https://doi.org/10.1109/ICSTSN48952.2020.9214195

[9] R. Gupta and M. Jain, "Web-Based Faculty Management and Notification System," Int. J. Comput. Appl., vol. 178, no. 22, pp. 25–29, 2019. [Online]. Available: https://doi.org/10.5120/ijca2019918974

[10] A. Patil and D. Pawar, "Timetable Management and Availability Tracking using Web Technologies," Int. Res. J. Eng. Technol. (IRJET), vol. 5, no. 3, pp. 1452–1456, 2018. [Online]. Available: https://www.irjet.net/archives/V5/i3/IRJET-V5I3295.pdf

[11] Google Developers, "Firebase Cloud Messaging (FCM)," [Online]. Available: https://firebase.google.com/docs/cloud-messaging. [Accessed: Apr. 5, 2025].

[12] W3Schools, "PHP MySQL Database System," [Online]. Available: