

# **Student Mentoring and Monitoring System**

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### ABSTRACT

The "Student Mentoring and Monitoring System" is a mobile application developed to provide an efficient solution to the problems faced by students and teachers in obtaining small permissions. The application aims to reduce physical interactions, saving time and effort for both students and staff. The system provides separate logins for both students and teachers. The process of obtaining permission is simple and involves requesting permission through the mobile application, forwarding it to the respective mentors and HODs, and obtaining approval through push notifications. The application also allows mentors to update student information, academic marks, attendance, and monitor their performance. The technology stack used for developing the application includes React-native, expo client, mongodb, nodejs, and heroku. The project aims to digitize the current manual process and make it more efficient.

# **INTRODUCTION**

The Student Mentoring and Monitoring System is a mobile application that aims to simplify the process of obtaining small permissions for students while reducing the workload of faculty members. Using a cross-platform technology stack, the system offers a scalable and customizable solution that can be adapted to the unique needs of any educational institution. Students can easily request leaves, outings, or ODS, and faculty members can approve or reject these requests with just a few clicks. Overall, the Student Monitoring System Mentoring and promotes transparency, enables easy communication, and provides timely updates on student performance, attendance, and leave records. By leveraging the latest cross-platform

technologies, the system provides a modern and efficient solution for small permission requests in educational institutions.

# About the Project

The Student Mentoring and Monitoring System is a modern mobile application designed to simplify the process of obtaining small permissions for students. This app is beneficial for both students and teachers as it reduces the need for physical interactions, making it easier for staff members to manage their busy schedules while also helping students to save time.

The application is built using a combination of different technologies. React-native is used as the primary development framework to create the application. The expo client is used to simplify the development process and ensure a seamless user experience across different platforms. The backend is powered by MongoDB, which provides a scalable and reliable database solution for storing and retrieving data. Node.js is used to build the server-side application logic, and Heroku is used to host the application.

One of the main advantages of the Student Mentoring and Monitoring System is the simplicity of the process for obtaining permissions. The app allows students to request permission through the application by providing the necessary details. Once the request is made, it is forwarded to the respective mentors and HODs through push notifications. Mentors can verify the details by contacting the parent through the request form. Once the mentor and HOD approve the request, the student receives a notification of the progress

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Overall, the Student Mentoring and Monitoring System is a useful application that simplifies the process of obtaining small permissions for students. The application is designed to reduce the need for physical interactions and provide a seamless user experience across different platforms. It is built using modern technologies and provides a reliable and scalable solution for managing academic records and monitoring student performance.

# **Existing System**

The existing system for obtaining permissions for various purposes in educational institutions is mostly a manual process, which requires students to physically visit the respective faculty members or heads of the departments. This process is not only timeconsuming but also very tedious, as students may have to wait in long queues to meet their mentors, particularly during peak periods, such as examination times or when there is an urgent need for leave.

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Moreover, the existing system requires a lot of paperwork, which makes it difficult to keep track of the requests and their status. It also poses a challenge to maintain the records of student attendance and academic performance, as the information needs to be manually updated by the respective mentors. In addition, the present system does not provide students with real-time information about their academic progress, which may cause them to fall behind or miss out on opportunities for improvement.

Another issue with the current system is that students may face difficulties in locating their respective mentors or department heads, particularly when they are not available on campus. This results in a lack of communication between students and mentors, which can lead to delays in obtaining the necessary approvals.

Overall, the existing system is outdated, inefficient, and lacks the necessary features to provide students with a streamlined process for obtaining permissions and tracking their academic progress. Therefore, there is a need to develop a more modern and efficient system that can provide a more personalized and convenient experience for both students and mentors.

### **Proposed System**

The proposed student mentoring and monitoring system is a mobile application that provides a convenient and efficient platform for students to obtain permissions for various purposes. The application is designed to work on both Android and iOS platforms and provides separate logins for students and mentors.

One of the main features of the proposed system is the ability to record and track the number of leaves taken by each student. When a student requests a leave or an outing, the request is sent as a push notification to the respective HOD and mentor. This feature simplifies the process of obtaining permissions, reducing the need for physical interactions between students and mentors.



Another feature of the proposed system is the ability for HODs to leave remarks on student performance and permission requests. This feature allows Head of Department(s) to provide personalized feedback and guidance to their students, which can help improve their academic performance and overall experience.

The proposed system is built using modern technologies such as React Native, MongoDB, NodeJS, and Heroku. This technology stack allows for a seamless and responsive user experience, with realtime updates and personalized experiences. The use of these technologies also enables easy scalability, so the system can be expanded to accommodate more users in the future.

So, this system makes the students get permissions without delay. Then necessary remarks provided by the HODs help the teachers to review their students performance in academics.

In summary, the proposed student mentoring and monitoring system is designed to simplify the process of obtaining permissions and managing academic records. By providing a convenient and efficient platform for students and mentors to interact, the system can enhance the overall educational experience of students and help them achieve their academic goals.



### Methodology

As it takes more time and efforts to get permissions in manual way, this application makes it effortless, time saving and reduces manual things.

Student Activity

When a user first opens the app, the certain individual is provided with the start page. The start page of mobile application shows the two buttons says student login and mentor login (for HODs to login they are provided with same mentor login).

The purpose of the start page is to provide an easy and intuitive way for users to access the features and functionalities of the app that are relevant to their needs.

Student login – when a student login into the mobile application with their individual logins, the interface will show up and the navigation menu shows "Home", "Permissions" and "Accounts".The home page will greet the user with "Hello" message. The permissions shows the small form to fill the details of the student for permission. The form has two text fields, one about what is the permission for that is "Title" field and another text field is about to describe



the purpose of the permission that is "Description" field, this field makes the clear about the student purpose for permission. There are "from" and "To" buttons, these buttons will open a calender to select the duration for permission. A "Submit" button to submit the form to mentors and HODs. The same permissions will show the history of previous permissions that a particular individual made in past days.

The student can check the progress of his/her permission in "previous permissions", this will show the status of permission with two buttons, one is "Mentor" and another with "HOD". There are two primary colours "Red" and "Green" which will show either permission given or not. The red will indicate permission rejected and green will indicate permission granted.

Teacher login - when teacher logins, the interface will show the form submitted by the student, the form will show two buttons, "Accept" or "Reject" so, the accept button will turn into green and reject button will turn into red. The HODs login will have additional coloumn that is "remarks". HODs can make students remarks individually.

### Conclusion

In conclusion, the development of a student mentoring and monitoring system is an essential step towards enhancing the overall educational experience of students. The existing system for obtaining permissions is outdated and inefficient, which makes it difficult for students and mentors to interact and communicate with each other.

The proposed system aims to address these challenges by providing a user-friendly and convenient mobile application that can be accessed by both students and mentors. This application streamlines the process of obtaining permissions, making it more efficient and effective.

The use of modern technologies such as React Native, MongoDB, NodeJS, and Heroku allows the system to provide real-time updates, personalized experiences, and easier tracking of student performance. With the proposed system, students will have access to more detailed and up-to-date information on their permission progress.

Overall, the student mentoring and monitoring system is a significant step towards enhancing the experience of students and teachers. The development of such systems is necessary to keep pace with the latest technological advancements and to provide a more efficient, effective, and convenient way of managing academic records. By reducing the effort required for obtaining permissions, this system can enhance the overall learning experience and help students.

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