Online College Notification Mobile Application

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Abstract: Our everyday routines and way of life have altered as a result of technology. In order to receive all relevant information on notifications and events occurring in college campus, students need applications that support smart phones. Due to the traditional ways of updating students about their training placements and extracurricular activities—notice boards, calling systems, and in-class announcements—there is a significant likelihood that students will miss the crucial information. Nevertheless, this situation may be resolved by employing mobile applications that make it simpler for students to be notified as today's youth is more active on mobile phones so they can easily access these applications. It is really challenging to communicate with every student using WhatsApp or other messaging apps. Social media is limited in its user base, making it difficult to spread information quickly. This project proposes a mobile application has tools that categories event information by type, such as technical or non - technical. Students who are unable to regularly check the college website can use this application without any issues. This mobile application will function as a primary hub for push alerts for all campus events. This interface enhances communication between staff and students by enabling the posting of notices by the appropriate faculties. This Android mobile application is simpler, quicker, secure and user friendly.
Keywords: Centralized, Mobile, Student Centric, Android application, Java, Firebase, Notification, Events, Management.

1. Introduction

Recently, the crucial updates regarding training and placements have been disseminated via messaging services like WhatsApp and Telegram, which is a very ineffective method because there are numerous other groups and everyday life discussions on these services, and this chaos causes students to miss crucial and urgent messages. This causes a lack of order among the faculty and the students, which over time may have an impact on the academic achievement of the pupils. College events are extracurricular activities that help students develop their skills and abilities in the specific fields of their interests. With the aid of technology, we may avoid this misunderstanding. Previously, students were informed about events via notice boards, in-class announcements, and pamphlet distributions.

The most popular application platform world wide right now is Android. In order to manage their people and resources more effectively, every major organization has one or more apps available on the Google Play Store. The majority of students at a college would benefit from an android app. It would increase the number of message recipients and perhaps even reveal the precise number, which could aid in estimating event attendees. A better application is required so that students can experience college life with more options and that faculties can better manage the students and their workload. Being up-to-date with the events in their college, students can never miss out opportunities to represent themselves, and college events will see a huge participation.

2. Problem Statement

The event's planners are moving on. the news about the events via social media, such as WhatsApp, Tele gram, etc., however some students can access those messages, but some people might not since they don't completely understand the entire message. So, they are missing out on the opportunity to take part in the events, whether they be technical or not. Social media is also limited, and the event organizer or faculty must distribute the event information to every area of a specific department group. As a result, it will take time and be busy. If there is a mobile application that notifies users/students when admin istrators/staff post events, everyone will receive the information at once without any forwarding, ensuring that nobody misses out on the information.

3. Related Work

This college campus application was primarily created for uses where students don't have any kind of login. The students only have exposure to the view-only permission. The system's lack of authentication could result in third parties abusing the app. Simple apps now offer the authentication process as well.

In terms of features, student needs, technology, and interface element placements used in the de sign, development, and usability of an application, this application performs significantly better than existing Android

or web-based applications. The disadvantage of this system is that it does not support notification features in the event of emergency deliveries and instead transmits messages to users via Bluetooth technology.

The current system isn't user-friendly because information is retrieved very slowly and data isn't kept effectively. PHP, CSS, and HTML are currently used. Because it is a web-based tool, the user must access the webpage each time, which is time-consuming and increases the risk that the user may miss vital college-related news.

For college trainings and placements, a similar Android application implementation was used. This application lists all of the placement events and student information it has, then shows the list on a new page. The lack of smartphone notifications for the most recent events is one drawback of this implementation. Users must periodically check the programme to ensure it is updated. This equalises it with webpages and prevents it from making the most of an android application's capabilities. Another issue is that when offline registration is used, the registration process is not secure. Google Login is a tool that many applications utilize to secure their users and improve user authentication.

The authors recommended using a SQLite database to store user data in early stages of an Android application for managing college events. This is inefficient since, because of memory constraints, the anticipated amount of the data cannot be kept in a SQLite-based database. Additionally, it was suggested that Bluetooth technology be used to send notifications and events to the user's device. While being dependable for correct data transfer, Bluetooth cannot be used over a long distance, such as from the college office to the devices at the students' residences. This system can clearly be improved by using a cloud-based database and internet transmission. The proposed system is different from school applications as it has different department filters and also focuses on college entities.

4. Proposed Work

System Architecture

The architecture diagram explains the application's workflow. After students register, their information is stored in the database and the event board module is redirected to a navigation module that lists all the departments by category, making it simple to understand the events that each department is hosting. After that, students can log out of the application. The proposed system's architecture illustrates how information is sent and received between various users and the database.
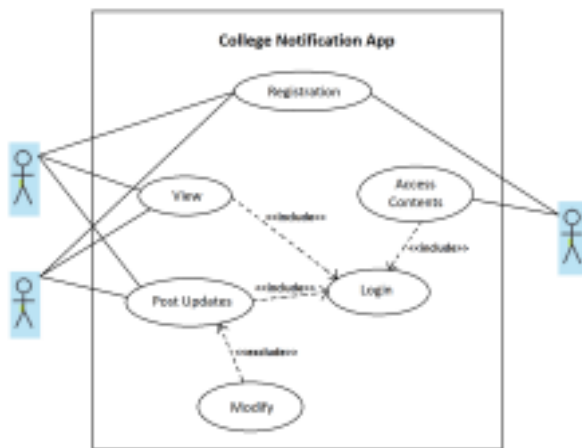

Figure 1: Use Case Diagram

Figure 2: Overview

Login and Dashboard

The application's Events tab informs all users, including students, faculty, and non-teaching staff, about all forthcoming activities taking place in the college. Every user has access to comprehensive information about every event listed on our application. Only coordinators have the ability to add events to the application or edit events that have already been listed. All users, excluding coordinators, can only access event information.

Category Filter

In this system, the department is used to determine the category. Several departments' names will display in the navigation bar, allowing us to go to events that fall under a specific department. The ability to look up departmental events is really helpful for students.

Adding New Events

A specific group of students can receive new information or events based on their year, department, and division from authorized faculties. A new event must have a title, description, category, as well as the name and contact information for the organizing committee before it can be added. All that is needed to add a new Notice are the title and description.

Notification

Teachers can use the notification system to send a crucial message after posting the event. Simply enter the notification's head and body information, then press the "Send Notification" button. The pupils who have installed the application will thereafter receive the notification.

Main Interface

A side navigation bar that provides access to the application's major features is included in the main interface. The relevant tabs allow you to view events that the faculties have posted. These messages can be filtered by users by pressing on the appropriate filter.

Security and Privacy

The suggested system uses firebase authentication and authorization to safeguard the user's data. Different users are granted access according to different Firebase security policies. It offers a means of letting each user's access be managed.

5. Advantages

- Students will get notified whenever faculty posts about events, results or placements.
- Complete work on time.
- Management of workflow can be done easily. • Increase the accessibility.
- User-friendly

6. Required Tools

Andriod Studio

Andriod Studio is based on IntelliJ IDEA, a Java integrated development environment for software, and incorporates its code editing and developer tools. To support application development within the Android operating system, Android Studio uses a Gradle based build system, Android Emulator, code tem plates and GitHub integration.

Android SDK

The Android SDK is a software development kit that includes a comprehensive set of development tools. These include a debugger, libraries, a handset emulator based on QEMU, documentation, sample code, and tutorials.

Java

Java is a widely-used programming language for coding web applications. It has been a popular choice among developers for over two decades, with millions of Java applications in use today.

Firebase

Firebase is a mobile app development platform which offers a huge variety of tools and services to its users to make app development easier. Firebase manages the backend aspect of the applications, giving users more time to work on interface and other features of the application.

7. Conclusion

A student event management system is extremely helpful at a college, or university because everything is now conducted online. With the suggested system, there is no documentation. Human work is minimised in this project. Since every time an administrator or staff member adds a new event, a notice is sent. so that all students have the opportunity to take part in the activities. As The college will manage this application to prevent information leaks and to ensure data security. Since that it is a mobile application, anyone may use it whenever they want and every where they are, and it is extremely simple to obtain event information instantly.

The students find it extremely helpful to learn about activities so that there would be greater engagement in the events and also students will not miss important notices about Training and Placements.

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