**MOBILE-BASED ONLINE STUDENT NOTICE BOARD**

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**1.1 INTRODUCTION**

Giving users the relevant information at the right moment is difficult in the age of information explosion. Mobile technologies have enabled communication and information access for users from their own homes and offices, as well as from wherever they are on the go with their cellular phones or PDAs, very convenient and timely (personal digital assistants). With the advent of mobile technologies, the "Libraries in Hand" trend has emerged. Within a very short period of time, mobile devices can access information from a remote source. Kumbhar, Sagar & Pawar, Rohan. (2017).

Mobile applications are typically downloaded and installed from app stores, such as the Apple App Store or Google Play Store, and can be used on the go, allowing users to access information and services from anywhere.

The traditional notice board is one of the earliest ways for informing students of announcements and information in faculties. Students must visit their faculties or departments where the notice board is located in order to see any updates or notices posted there. However, as the world evolves and new technologies are developed, information dissemination has also improved in terms of effectiveness and usability. People can post messages for the public on a notice board. For instance, to promote products for sale or purchase, a job opening, a forthcoming event, a service, posters, memoranda, and business publications. (Kingsley N, et al, 2021)

**1.2 STATEMENT OF THE PROBLEM**

Despite its usefulness, information on notice boards is in danger from the manual system of information transmission. This is true in most educational institutions. The manual technique entails posting letters from both within and outside departments on departmental notice boards. Students visit the notice board regularly to check for available or pending Notices/Letters. Sometimes these Notices/Letters are not checked out for an extended length of time, and therefore the information included is no longer functional. If students are not present, all Notices/Letters are unread, and as a result, Notices/Letters that require immediate attention are ignored. Another important disadvantage of this method is vulnerability, as notices/letters are stored without protection.

In the case of the computer science department at Kaduna polytechnic, there is still the manual method of passing information around as they are pinned on the notice board and placed in strategic positions around the department.

**1.3 AIM AND OBJECTIVES**

A mobile-based **online notice board** for the department of computer science at Kaduna polytechnic and the objectives of this research work are as follows.

1. To design a normalized system that supports the creation, retrieval, deletion, and updating of notices during the process.
2. To implement a system where students can easily get and view notices from the department.
3. To evaluate how efficiently the system manages the information stored on it.

**2.1 LITERATURE REVIEW**

**(Abhishek, N., & Rashmi, R. (2018). E-Notice Board Android Application using Google Firebase Services.**

"E-Notice Board" Accessing online alerts that are available on physical devices is made easier by Android applications. Students may quickly access the application using their login information and see the virtual notifications on our mobile notice board. Text and images are used in this notice to alert users. "Replace paper papers with electronic documents, in the academic domain" is the application's major goal. All students get messages via this Android application, and they can only view the alerts from their Android phones after installing the apk file on their devices. Students may read the notices whenever they want because the admin will immediately save the data they post on the cloud. The Firebase platform, which offers backend services and a database as a service, is employed in this application. It offers the application's real-time database. When the administrator publishes the alert from his terminal, which contains text and images stored in several Firebase containers. By just tapping on the notification on the application's dashboard, the user may obtain data/information. An image and text message will then be retrieved from the database.

**Dharaskar, P.M., Waghmare, P., Palode, S., Dhunde, S., Gijare, C., & Mohane, S. (2022). Online Notice Board System**

Digital Notice Board is the most important factor in any organization or public utility for the places like bus stops, railway stations, schools, colleges, malls, etc. But sticking multiple notices every day is an irritating process. This mission is about an advanced cell board. The task is built around raspberry-pi. The display is obtained on LCD. Wi-fi is continuously used for Data transmission. We can add, erase, or differ the textual content material per our needs. At the transmitter, an authorized PC is used for sending notices. At receiving end wi-fi fidelity is linked to a raspberry pi. When a licensed consumer sends a message that is to be displayed from his system, it is familiar via the way the receiver.

**Tóth-Bakos, A. (2018) researched Options for Using Online Notice Boards in Education.**

There are several resources available online that aid teachers in making their lessons more engaging. Teachers constantly make every effort to ensure that their pupils can comprehend and absorb the subject being taught as much as possible. One of the biggest benefits of using digital tools and online resources for this purpose is the quick and simple demonstration of lesson content through illustrative and interactive demonstrations, which is what digital data is made for. The study's objective is to showcase a collection of web tools, or web apps, that serve as online message boards. These tools may be used to make conceptual and idea maps, brainstorming exercises, plans, information for sharing, curricula, and study materials in addition to serving as an online bulletin board. As a result, they serve as wonderful teaching and learning tools for instructors, students, and parents, as well as more broadly for all people who study in any way. The research includes presentations of Spiderscribe, Padlet, Corkboard, Lino, and Popplet among its five applications. The study's primary objectives are to give a general overview of the cited uses and, more importantly, to provide ideas and encouragement for creative ways to apply them.

**Nirmale, G., Kamalakar, S., Telasang, S., & Mali, P. (2022). IOT Based Digital Wireless Notice boards.**

This paper aims to present an Internet of Things-based online notice board (IoT). Display boards have played a significant role in mass communication over the years. The suggested solution includes an online digital notice board utilizing IoT to decrease paperwork, time, and labor. Things are linked to the internet by IoT. As a result, we may use the internet to access the Notice board from anywhere in the globe. The notice board and Wi-Fi module are interfaced to give the board internet access. The message is received from the designated user and displayed on the notice board by the Wi-Fi module that is installed on the digital notice board. According to our suggested model, an authorized admin can publish a message from any location, and the message will appear on the LCD Display. The proposed model funds with multiple applications like help desks in transporting stations like railway, airways, and bus stations, which offers travelers up-to-date/updated info. It works better to increase prices and decrease costs in congested areas, like supermarkets. This conducts the people/students in absolutely foreign locations. Lesser to the infinite each remote place of the earth may be shown on the screen with the current news and it can be feasible only by the IoT.

**3.1 METHODOLOGY**

A comprehensive inquiry such as this is used in the research technique to unearth new facts or information about the current system. The research method used in this study is the primary and secondary source of data collection.

**Primary Source of Information**

This includes data gathered directly or indirectly from target users, with no edits or suggestions from other writers. This main source's material is considered more accurate and credible. As a result, the goal is to incorporate the knowledge gleaned from this source into the project in order to satisfy the criteria. Interviews and observations were used as primary source data collection strategies.

**Secondary Source of Information**

This essentially includes all of the information that someone can receive from existing sources such as books, the internet, case studies, articles, newsletters, and other relevant publications. The resources obtained from the internet in particular were quite relevant; various search engines, particularly Google, made it very easy to find information.

**3.4 CHOICE OF PROGRAMMING LANGUAGE**

This research work will be a mobile-based application and will be implemented on a relational database system (SQLite). Flutter will be employed in the front end while Django(python) will be employed for the backend programming and APIs. The above are the modern languages used in implementing this system.

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