Mobile NoticeBoard System

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Abstract:- In this world of modern technology where the representation of information has taken igital form, it is highly essential for the students to leverage this so as to keep themselves updated with theongoings of Things around them. Lately mobile market has seen a revolution and about 70% of the student population use mobile phones. The aim of our proposed system is to provide a simple mobile application for the students to useto get information about the college activities and courses.

Keywords:-Mobile, IBM Bluemix,Cloudant, Node.js, Mobile Learning.

I. INTRODUCTION

From quite some time, mobile devices have played a crucial part in the human lives. Initially, invented as a communication device by Alexander Graham Bell, it was a big and immobile instrument. Slowly with the years the size and features of the device changed and now it fits snugly into our palm and has the capability to perform many functions at the click of a button. Development of Operating System for mobile phones led to the incorporation various hardware components which the OS can leverage and provide a better User Experience to the users. All these factors led to the considerable rise in the usage of mobile phones over few decades.

Over 80% of the world population uses mobile phones and a majority of them are students. According to the survey carried out majority of the student population use mobile phones for their study and learning purposes. They prefer using smartphones over traditional desktops and laptops for their learning and this number is steadily increasing in number. Out of the above percentage of students, more than 50% of them tend to use mobile applications for education purposes rather than the mobile browser. As we can see a majority of the student population prefer to use mobile phones for education purposes, our proposed system leverages this fact to provide a better channel to provide information to students along with their course contents.

Currently, universities around the globe tend to use the traditional notice board to display or

Communicate information to students, be it the examination results, the class schedules or activities. There are few who have adopted to the modern ways of communication and those who did use websites to do so. The drawback of this system is :

• More inclination to use mobile applications rather than web browsers.
• Have to visit the notice board to get the updates.
• No archiving of the previous data.

Our proposed implementation will aim to solve these drawbacks and provide a better ways to making information accessible to the students by the use of a mobile application. This application will be connected to an online database where the information is stored or updated regularly. When the student opens the application he can view the information of that day or previous days or if any important announcements have been made regarding the classes or examinations. He will be able to view the course schedules and materials also.

II. LITERATURE SURVEY

Many a surveys were carried out on the preference of students on mobile app usage for education:

1.Student preferences for Mobile App Usage
        Author: Kyle Bowen, Matthew D. Pistilli
The above research bulletin examines a study conducted by urdue University regarding student mobile preferences. The study provides insights into how students prefer to consume information on their mobile devices, ranging from broad categories to coursework-specific areas of interest.

2.Mobile Learning for Education: Benefits and Challenges
        Author: Yousef Mehdipour, HamidehZerehkafi
This paper introduces the subject of mobile learning for education purposes. It examines what impact mobile devices have had on teaching and learning practices and goes on to look at the opportunities presented by the use of digital media on mobile devices. The main purpose of this paper is to describe the current state of mobile learning, benefits, challenges, and its barriers to support teaching and learning.

3. Taking Surveys with Smartphones: A Look at Usage among College Students

Author: Shimon Sarraf, Jennifer Brooks, James S Cole The purpose of this study is to examine college student demographics and engagement results by smartphone respondent status. The results of this study will provide insights into the prevalence of college-aged survey respondents using smartphones, and the impact this technology has on survey responses.

4. Towards a Method for Mobile Learning Design

Author: Genevieve Stanton, Jacques OphoffThis paper unifies existing theories into a method for mobile learning design that can be generalized across mobile learning applications. This method develops from a strategy – seeking objectives, identifying the approaches to learning and the context in which the course will exist, to guide the content, delivery and structure of the course towards a successful implementation that is evaluated against the initial objectives set out.

III. MOBILE NOTICE BOARD APPLICATION

Mobile Notice Board is a mobile application that provides information regarding the various activities, class content, examination activities, University activities etc.. Our application is based on the fact that more number of students are inclined towards using smartphones as a medium of learning compared to the traditional desktops and laptops. Usage of mobile phones for learning and getting updates allows them to be easily updated with latest notifications on the go rather than have to personally check on the notice board every time, which is a time consuming and inefficient way.

This application could prove to be an effective and efficient way in facilitating smooth communication channels between the University and the students, thereby eliminating any scope for miscommunication or lack of proper communication. All this is possible only with the cooperation of the University management in keeping the Information system updated with the proper content and not allowing the misuse of this application. As this may contain University related content, the authorities should take proper steps on the usage of the application. With proper synergy between students and management, it would be possible to achieve a better and efficient information channel.

Figure 1 depicts the architectural flow of the application. The entire system consists of a client device (mobile phone), a cloud platform which hosts a server; in this case, we used IBM Bluemix; and a NoSQL database like Cloud ant. The flow of the application is simple; the client device makes a request to the server hosted in the cloud. The server processes the request and makes a query to fetch the required data from the database and send it back to the mobile device as a JSON response. Now coming to the working and features of the application, the client device will have a mobile application which shows information regarding various activities. The student opens the application and selects his required category of interest, be it the particular department or examination results or club activities or class schedule. The application then makes a particular request to fetch the required data from the server. In our project, we have used Android to develop a client application, node.js as a server and Cloudant database to store the database. The management has the responsibility to keep the database updated with proper information so that when the student queries the data he gets the correct information. This enables the student to access the University updates in his mobile application.
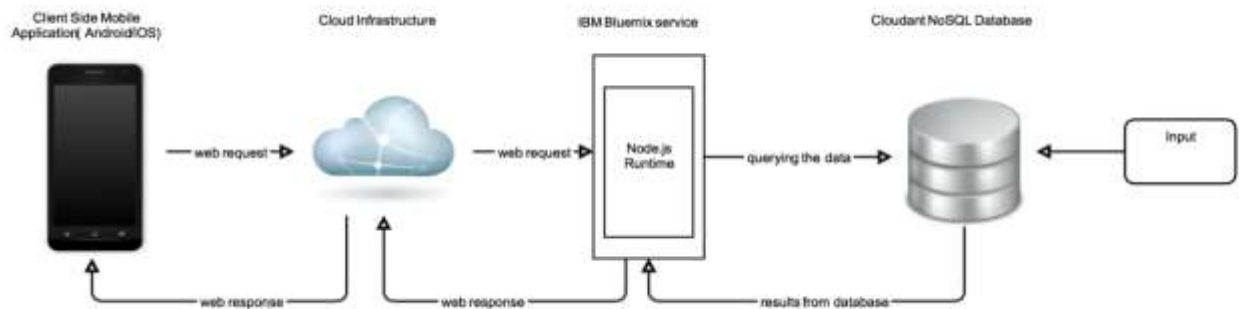
IV. ARCHITECTURE

Fig 1 Architectural flow of the application

This model consists of the mobile device, a cloud service (IBM Bluemix here), a NoSQL Database. The database and runtime are provided by IBM Bluemix.

V.CONCLUSION

In this project, we have concentrated on designing a mobile application using Android to serve as a medium to make available information more quickly without any hassle and ease to the students. The implementation of this design is quite crucial these days as a preference of mobile usage in students is more and this provides information on their respective mobile phones rather at a common place which further allows them access notifications and materials on the go.

Future works in this field would be to provide class materials and video lectures of the professors in the mobile application even in offline mode.

REFERENCES

[1]. Kyle Bowen and Matthew D. Pistilli, "Student Preferences for Mobile App Usage", Research Bulletin, Center for Applied Research, EDUCASE. .

[2]. Yousef Mehdipour and HamidehZerehkafi, "Mobile Learning for Education: Benefits and Challenges", International Journal of Computational Engineering Research, June 2103, Vol, 03, Issue, 6, p. 93 .

[3]. Shimon Sarraf, Jennifer Brooks and James S Cole, "Taking Surveys with Smartphones: A Look at

[4]. Usage Among College Students", Annual Conference for the American Association for Public Opinion Research, Anaheim, California, 2014.

[5]. Genevieve Stanton and Jacques Ophoff, "Towards a Method for Mobile Learning Design", Issues in

[6]. Informing Science and Information Technology,2013, Volume 10, p. 501.