

Notice App: An android application to understand and identify students' perspective

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Abstract— In older days college notices were displayed on wooden notice board that are mounted at different locations in college building^[1]. Generally students were not aware about notices which are very time bounded and also not habitual to read notices regularly. As technological evolution done very rapidly, it is need to update with technology. Smart phones and android phones are now a days ease to use and everybody aware of its handling. In this paper, we proposed an android application to display different kind of notices organized into various categories such as department, TPO, office, sports, cultural, hostel etc. so that students will get all college notices anytime and anywhere. This application mainly focuses on update, delete notices and specific feedback generation using association rule on student dataset. We will try to find students perspective by analyzing specific feedback questionnaire.

Keywords— data mining, association rule, android application.

Introduction

An educational mobile application can be very useful into different aspects of student knowledge domain. We are living in fast paced world, where everything is done instantly because of technological enhancement. Android phone and android application is now became an important aspect for local and global connectivity. NoticeApp is an application support to provide up to date notices to students and staff on a single click. Administrator can upload and delete a notices department and group wise. We proposed the application that contain all informative notices distributed into various categories like Administrator, staff, student, department, TPO, Innovation, clubs and committees, library, college map, sports, achievements, office, hostel and mess, photo gallery, help, student profile along with notification, birthday reminder, academic calendar for autonomous and non autonomous, teaching learning process feedback and invite friends to connect with this mobile application. These are various sections of application that contain section wise information and notices uploaded by administrator, respective department heads and in charge faculty for activity.

In this paper we focused on notices and specific feedback. Administrator can complete student and staff registration process and upload the notice. Student and staff can view the notices. The application generates student dataset which contains the record of student who visited the notices number of times. Association rule is used to find frequent notices visited by student based on that analysis; application automatically generates specific purpose feedback form to understand the perspective of student towards frequently visited notices. If a student more frequently visit scholarship notice, an application generates feedback form which contains

questionnaire related to financial support to the student, fees related problem counseling needed, interested to participated in earn and learn scheme etc. Our main is to develop NoticeApp to understand and identify the student perspective towards the frequently visited notices.

Existing System

The traditional way to display notices is on wooden notice board. Various authors proposed digital notice boards like wireless digital notice board^{[1][2]}, SMS driven automatic display board^[4], online web application and SMS alert to display notices^[5] and digital notice board.

Existing system majorly display information on different platform. Along with the notices, specific feedback is not generated to identify why stakeholder frequently view the particular notices. Common feedback mechanism is used to assess and improve quality of teaching learning process, and facilities. NoticeApp can help to disseminate the notices easily and efficiently student and staff.

Literature survey

Many authors have proposed different kinds of notice board. Victor Chukwudi Osamor et. al. in^[1] describes a case study of university administrator and notices were displayed on digital notice board where the system is deployed on LAN computers. Ajinkya Gaikwd et. al.^[2] develop wireless electronic notice board using Zigbee protocol. To avoid misuse of authorization GUI was provided. Avinash Gutte et. al.^[3] proposed limited set of functionality for college ERP to avoid paper work, reduce manpower and time management.

Anujkumar Karnwal et. al.^[4] suggested replacement for existing programmable electronic display by SMS driven automatic LED display board. Anushree S. P. et. al.^[5]

develops Enotice board as a web application. An SMS was send by system to viewers to give alert for notices.

Proposed system architecture

The proposed system architecture, shown in Fig.1, describes different sections to place the notices and information.

NoticeApp will take care of the detail information at any point of time. Student and staff registration will be performed on the web panel. User can access NoticeApp by login credentials. The entire system will consist of web panel, android application and the communication between them using internet connection.

We are performing data mining on student dataset based on the number of times particular notice visited by the student and then find out the student perspective.

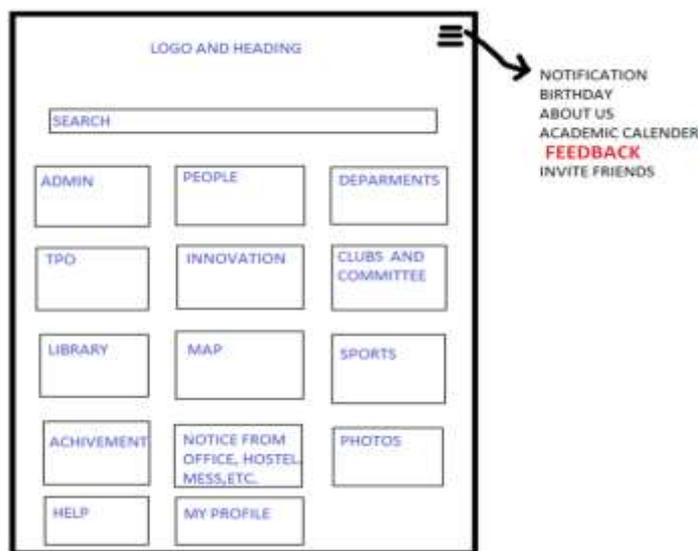


Fig.1: Proposed system architecture

Design methodology

The system provides registration facility for students and staff using web panel. Administrator will provide user name and password to students and staff to use the NoticeAPP-android application. Administrator will control all the activities using web panel. Fig. 2 shows the fundamental data flow diagram with three major entities which are producer and consumer of information to and from the application [6].

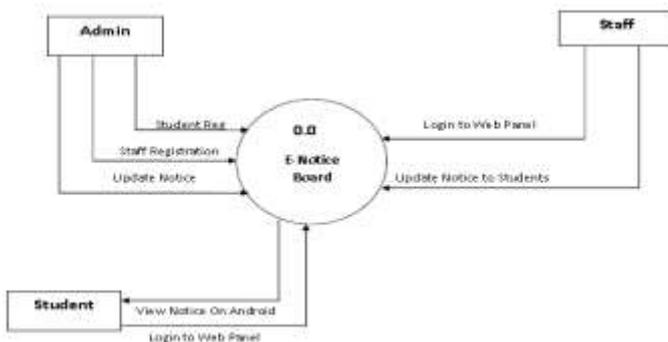


Fig. 2: Context Level Data Flow Diagram for NoticeApp

Using NoticeApp application students will be able to get notices at any time and at any place on their smart phones and as well as on the computers connected to network.

There are three major entities in our projects:

1. Admin
2. Student
3. Staff

Workflow

Step 1: Admin is an authorized user of web panel. Admin will perform student, staff registration and update notices.

Step 2: After registration of student and staff, user name and password will sent to their mail id.

Step 3: Student and staff will login to NoticeApp and view notices on his/her android device and also on web panel.

Step 4: Notices will contain category such as general, sports, cultural, department and office .In department category, student will get notices related to his/her department.

Step 5: Based on frequently visited notice, specific feedback will provided to understand and identify students’ perspective.

Algorithm

An association rule has the form of LHS => RHS, where both LHS and RHS are set of items.

For important relationships, association rule uses the criteria of support and confidence [7].

Support: It is an indication of item how frequently it occurs in database; support (LHS U RHS)

Confidence: It indicates the no of times the statements found to be true, support (LHS U RHS) / support (LHS).

{stud_id, item} => {Specific_Feedback}

SC - Scholarship, SP - Sports, CL - Cultural, SC_Feedback – Scholarship Feedback

View id	Stud id	Item	Date	Feedback
111	105	SC	25/12/2015	SC_Feedback
111	105	CL	25/12/2015	
111	105	SC	25/12/2015	
111	105	SC	25/12/2015	
111	105	SP	25/12/2015	
111	105	SC	25/12/2015	
111	105	SC	25/12/2015	

I. RESULTS

After authorized user login, the first screen shown in Fig. 3.



Fig. 3: Admin Homepage

Admin can generate the notice by selecting the user type, notice id, detail notification, branch, year and title shown in Fig. 4.

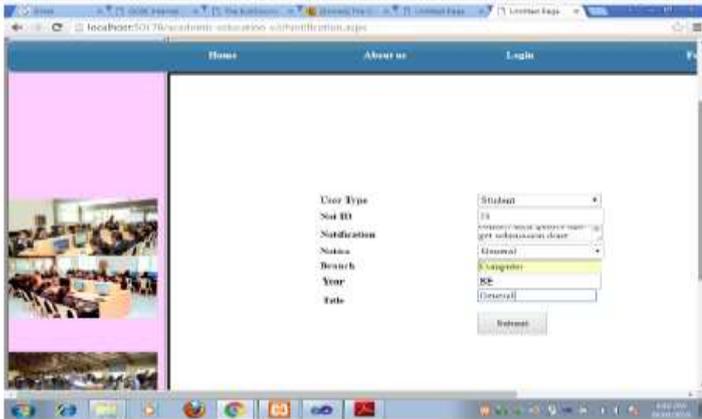


Fig. 4: Notice generation

After student login, he can access the NoticeApp. The Screen shown in Fig.5 describes the general, cultural, sports, department and office sections in which the different notices are organized.

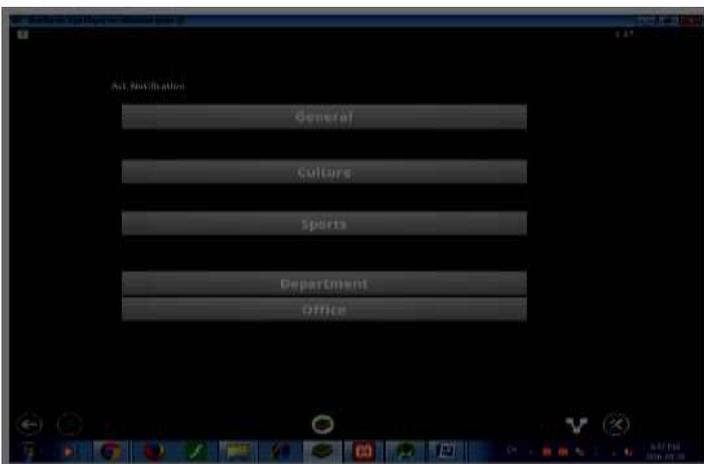


Fig. 5: NoticeApp main display on BlueStack

Student select the particular section, notices were displayed as shown in Fig. 6.



Fig. 6: Notice display

A sample questionnaire shown in Fig. 7 was generated and displayed to the particular student by the system when the frequently visited notice count reaches up to the threshold value.



Fig. 7: Sample specific feedback

II. CONCLUSION

This paper describes, NoticeApp, an android application that would help in disseminating information much easier between different stakeholders of the college that brings an advanced way of passing notices in the college campus in a much easier and efficient way.

Students will get the notices and current updates through this application at any time and any place. We are performing data mining on student dataset based on the number of times particular notice visited by the student and based on that we try to understand student perspective using specific feedback.

In future we can update all section notices with the complete real dataset and we try to implement notice search mechanism using text mining concept. We also focus to develop invite friend option which is important to make NoticeApp more popular in college as a smart NoticeApp.

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He is selected in Wipro through campus placement and will be joining from December 2017. His interest includes android application development.

Authors' profile



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He is an author of a paper titled 'A novel Temperature Sensing and Monitoring Using IoT' (International Journal of Engineering and Computer Science, Dec. 2016). He has developed three projects in Internet of Things. His contribution also includes ideas for a college project titled 'Textile Industrial Automation using IoT'. His research interest includes the development in Internet of Things, smart devices, automation, networking and health monitoring.



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