



Research and Development of College Department System in Android

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Abstract— *An Education system in India has become so advanced in last decade due to the development of the technology. Smart class, video conferencing are some of the examples of modern trends in educational system. These applications help the institute to move forward quickly, fulfil their vision and accomplish their goals, E-way. The core idea of research project is to implement Android based application for advancement in the various department of college. The proposed project will be implemented in applications such as online study material, notices, training and placement cell, library management, office management and communication portal using Android applications. This app will introduce a new environment among students, teachers and various departments in a college that can be exploited and be used to improve the learning process and ease the formal tasks needed to accomplish by a student. When not connected with internet, app displays the latest cached data so students can still access important information and work offline.*

Keywords—Android, Smart phone, E-Learning, MySQL

I. INTRODUCTION

Nowadays, mobile devices have become a way of life for students especially in higher education. Computers are now replaced by compact smart phones that can be fit into pocket and can be carried anywhere. The rapid progress in mobile technology has created a new area which is known as mobile learning. Mobile learning is the next generation of e-learning that leads attractive way of knowledge delivery especially used in teaching and learning process. With development of this Android application the student preferred to use mobile devices as technology supported educational tool. This system is designed because notes dictation in the class is difficult considering semester duration, student might miss the exam schedule and important notice displayed due to unawareness, student might miss the deadlines related to fees payment and returning of books in library etc.

Circulating and generation of notices as well as deadlines of returning and issuing of book as well as records for maintaining scholarships etc is

tedious and time consuming job. Timely updates to students are not possible. With this system teacher can upload notes, time tables, assignment on server and broadcast it to the registered mobile numbers so that it is easily accessible to student by their own smart phone. This system enables student to learn anywhere, anytime and at their own convenience. This system makes students to be active, responsive while learning their academic. Another application that is provided by this system is communication portal in which students can directly communicate with their teachers as well as HOD related to their problems.

Smart phones are based on operating systems like blackberry, I OS and Android. To design proposed project, smart phones with Android operating system are chosen because penetration rate of Android OS is 70 percent. It is open source and free ware. The application is compatible with all Android versions ranging from Gingerbread2.3 to Lollipop 5.0.1 so that students who cannot afford to buy high end mobiles and institutes located in remote, rural area can also take the advantage of this application.

II. LITERATURE SURVEY

A. Library Management System:

In traditional library system students need to go in library for issuing and returning of books as well as librarian need to do lot of manual paper to keep and maintain records of books. this is quite time consuming and tedious job for the students as well as librarian as well as there is a time limit for performing this activities. Taking the library module on mobile phones instead of traditional approach is one step forward to sustainable development. Doing the same work on mobile phones not only saves our resources but also enables the user to get easy and interactive access to the library records of student. The application that we are building can allow teacher or any departmental head as well as students to use relevant facilities provided by libraries.

B. Notice Section

In traditional notice system students need to go in notice section for reading notices as well as faculties need to do lot of manual paper to keep and generate various notices. This is quite time consuming and tedious job for the students as

well as faculties as well as there is a time limit for reading the notices to take certain actions. Taking the notice module on mobile phones instead of traditional approach is one step forward to sustainable development. Doing the same work on mobile phones not only saves our resources but also enables the user to get easy and interactive access to the notices. The application that we are building can allow teacher or any departmental head as well as students to use relevant facilities provided by notice module.

C. Communication module:

In traditional System teacher teaches and ask the students for queries but we have surveyed that most of the students don't ask their query to teachers because they have certain hesitation as well as if they want to complain about any faculty they hesitate to say this to higher authority. Taking communication module on mobile phones instead of traditional approach is one step forward to sustainable development. Doing the same work on mobile phones not only solves the problem of students for interaction as well as there is a complaint processing section in which students as well as faculties can convey their complaints to respective authorities. There is one more provision for uploading and downloading the documents. With this facility teachers can upload various assignment as well as study materials which will be helpful for students and students can easily download the material from their cell phones and can use it anytime.

D. TNP and Office module:

In traditional System students face certain problems related to submitting data to training placement section as well as they are not pre-informed about the campuses. As well as students don't know the deadline to pay fees as well as certain dates to fill form of scholarships. Implementing this model in mobile phone allows students to get notification related to the deadlines of fees and filling of various forms as well students can be pre-informed about the campuses.

III. SYSTEM ARCHITECTURE

The system architecture has a smart phone with android OS, a web application, a database server and the user as its components. The android smart phone or tablet must use 3G or WiFi network for internet connectivity to ensure better performance. The user will login to the application through an android smart phone. The user type is verified with the database server and access is given to the appropriate user. The web application also can be used to login and perform certain operations such as registration of users, generation of reports. The web application and the android application access data from a common Database server through the internet as shown in the figure below.



Fig:Overall system design

IV. RELATED WORK

1) Users:

This will be the users of our app:

- ⊙ Admin
- ⊙ TNP officer
- ⊙ Staff
- ⊙ HOD
- ⊙ Principal
- ⊙ Students

2) Modules:

These are the modules in our project:

- ⊙ Admin Panel: certain task are performed by administrator such as
 - Create login for new staff
 - Approve student registration
 - Search students
 - Communication
 - Post/delete notices

- Upload/download documents
- Promote students
- Activate/deactivate students

- ⊙ User management: certain task are done by users such as
 - Registration
 - Login/Logout
 - Change password
 - Edit profile
 - Password Recovery
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- ⊙ Library: certain task are performed by librarian such as
 - Add new books
 - Issue books to students
 - Update books details
 - Books reports
 - Issued books
 - Available books

- ⊙ Upload/Download: certain task are performed in upload/download section such as
 - Upload assignments, notes, articles
 - Specify access permission
 - Download documents as per access permission
 - Delete documents

- ⊙ Communication: certain task are performed in communication module such as
 - Send message to any user
 - Inbox
 - Outbox
 - Delete received and incoming messages

- ⊙ Notices: certain task are performed in notice module such as
 - Post new notices
 - Specify access permission
 - View notices as per the access permission
 - Delete own notices

- ⊙ Account Section: certain task are performed in communication module such as
 - Courses wise Fees management
 - Keep track of students fees
 - Insert/edit scholarship form submission dates
 - Send notification to students about fees payment.

- ⊙ TNP: certain task are performed in TNP module such as
 - Admin will add details about coming companies
 - Add company criteria
 - Automatic notifications will be sent to students about criteria and coming companies
 - TNP Mark placed students
 - Company wise placed students reports

- ⊙ Complaint/Suggestions processing: certain task are performed in complaint/suggestions processing module such as
 - Student will Post new complaint or suggestion about any staff
 - Staff will be able to view Suggestions posted for him
 - View complaints as per the staff's authority
 - Principal will process HOD's complaints
 - HOD will process Staff's complaints
 - Authority wise view complaint reports

V. APPLICATIONS

This Android Application can be used in Universities and Colleges, Schools, Training institutions etc.

VI. ADVANTAGES

1. This application helps students to download notes sent by the faculties. In case of urgencies i.e., during examination time this application will be helpful for the students to get notes from the faculties.
2. Allows students to check their respective internal marks and can inform their respective faculty if there are any corrections.
3. Provide good relationship between the students and their respective management.
4. Helps students to broadcast messages which help in forwarding some important information sent by their departments or faculties or management.
5. Save time and less effort.

VII. CONCLUSION

Finally in this paper we have presented a SMART College Department application, developed using Android software. It is mainly designed for the students to know the respective details such as office section related notices, Training and Placement notices, uploading and downloading notes, complain processing and so on. Finally students can get their respective details and notes forwarded by their respective department. This will helps the students to get their respective details which saves time in taking Xerox for the students.

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