



My Campus Android Application

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Abstract:

Digital Campus System is an essential platform for students to get all kinds of information. Since the present Guru Vriksha web portal can't access the campus information through a mobile phone and it can be only used in campus, this project focuses on some key issues such as how to connect to the target site via the communication interface, crawl pages and sub-pages, parse the desired content and store information in the SQLite database in developing wireless digital campus system based on Android. As a result, the project provides a practical solution to access pdf files, question papers etc. Compared with the traditional way to access Web pages through the mobile browser, the application is more convenient and saves much more data traffic. The app not only brings great convenience to majority of students, but also provides efficient support for the college management.

I. INTRODUCTION

Now a days android is more powerful and most popular operating system which makes life more comfortable and advanced for users. Applications on the web server which can be accessed on the PC/laptop is slowly getting unpopular. One of the most commonly used devices today is the mobile phone, it has become a gadget without which we cannot spend a single minute. Hence every business is developing applications for the mobile devices. Applications on the web server which can be accessed on the laptop is slowly getting unpopular. Hence we attempt to convert our GuruVriksha web based application into an Android mobile app. This will help students to always be in touch with academics and improve academics.

Android relies on Linux version 2.6 which provide services like Security, Memory management, Network stack, Process management and driver model. Android provide SDK for development of different new application. Android consist of four layer: 1.Applications, 2.Applicaton framework, 3. Libraries, a. Android Runtime, 4.Linux kernel.

Linux kernel is the basic layer which consists of hardware driver which are essential for controlling and communicating with hardware. Libraries are the next layer which consist native libraries. Native libraries include surface manager, media framework, SQLite, Web kit, OpenGL. Android runtime consist two main parts: Dalvik Virtual Machine, Core java libraries. DVM is like a JVM which is developed by Dan Bornstein of Google which is used for executing application. DVM requires `_dex` files which is built from `.class` file at the time of compilation. DVM allows multiple instances of virtual Machine simultaneously which also provide security, isolation, threading and memory management. Core java libraries provide most of the functionalities defined in java SE libraries. Applications are the top layer in android architecture where our application is gone fit.

II. LITERATURE SURVEY

School students' demand for smart IT is the most exuberant, and its group identity decides that it can be a Frontier which helps promote and develop information technology. Traditional digital campus system is a campus server which is based on Computer network and making PC as a terminal device to achieve all information resources, relating to the school, teaching, research, management, and living service, is fully digitized and stored, expanding the real campus to the off campus. However, traditional digital campus system can't realize the information exchange and information services at any time or anywhere. Moreover, these information services are based on the PC. Nowadays, with the development of wireless network technology, mobile communication technology (especially 3G technology) and the further development of university education reform, many universities construct multiple wireless access points on campus and make the use of mobile phones or other mobile devices to access the network more increasingly widespread. And since mobile communication technology is time efficiency and convenient, it's meaningful to deeply dig the applications which applies the mobile communication technology to help student exchange and communicate. A real market demand for exploring the university information technology construction and building a campus information exchange platform which is based on mobile communication technology can be told.

With the rapid proliferation of smart phones and the rapid development of its related technologies, smart phones occupy a high market share in a number of handheld devices. And smart phones regarding the Android as operating system account for a large proportion of all the smart phones. The campus information is enormous, it's normal for today's college students to view class locations and test results, renew books from the library, browse all kinds of campus information. There're some mobile applications about helping students to achieve campus information, but the vast majority

of them are only developed with a particular function. Thus, it's only convenient for students to conduct a unilateral operation instead of bringing a variety of convenience for students in the true sense. Not only does the software achieve the docking of Mobile and campus information and bring a great convenience to the majority of students, but also provide effective support for the school management.

III. PROPOSED SYSTEM

In this section, this is the proposed procedural and techniques in uploading and securing the data efficiently in the cloud by the faculties for the students to use the application. It will try to focus on an effective and flexible distributed scheme with explicit dynamic data support to ensure the correctness of user's data in the cloud. The staffs need to register and create an account to use the system or web portal. Once staff has a valid account, the staff can log in to their account after which he will be able to upload the files as per his department, his semester and the subject. He can upload any file related to the subject. At the time of downloading, the user needs to download the my campus android application and he can download the file related to his department.

Features of the proposed system:

- The system has interfaces to create new system users (Students and Staff).
- The system also has the facility to send circulars, notices etc, which should be displayed on the mobile app.
- The system has the facility to display syllabus copy, time table, assignments and question papers.

IV. ARCHITECTURE DESIGN

The My Campus Android application being a client-server approach, and follows a specific hardware and software architecture. The main challenge here is integrating both the hardware and software components to work together. The software architecture consists of: the database, the application program and the server.

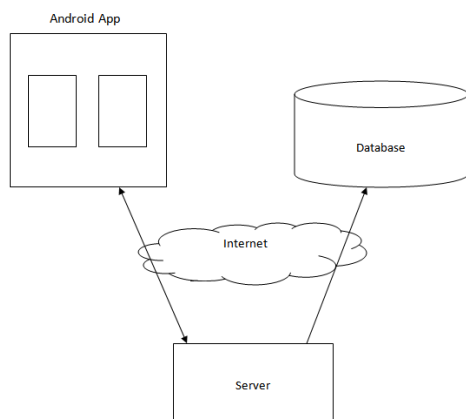


Fig. 4.1 Architecture Diagram

Database:

The database consists of a number of tables, which stores records implemented in phpmyadmin- MySQL. MySQL is easy, fast and efficient and can store a large number of records and requires a little configuration.

Application program:

The application program is developed with Android programming language using Eclipse framework. The application program provides user interface to both the faculty members as well as the students. Programming in Android is simple, user friendly and android offers an excellent data connectivity.

Server:

The server is deployed on the personal computer using xampp. XAMPP is a free and open source cross-platform web server solution stack package developed by Apache Friends, consisting mainly of the Apache HTTP Server, MariaDB database, and interpreters for scripts written in the PHP and Perl programming languages. XAMPP stands for Cross-Platform (X), Apache (A), MariaDB (M), PHP (P) and Perl (P). It is a simple, lightweight Apache distribution that makes it extremely easy for developers to create a local web server for testing and deployment purposes.

Hardware Architecture:

The basic requirement of the My Campus app is an android device, which will run the application, with the help of which the student's will mark their attendance. The other requirement is a personal computer on the server side, which will store the database.

Advantages:

1. The application provides user friendly interface for the students to access the application.
2. It can be used both inside and outside of college campus
3. It provides the facility for the staffs to create their own account.
4. The uploading and downloading of the files and other documents is very easy.
5. Android application supports all android versions.

V. RESULT

This system gives the administrator, the authority to create accounts for the staff members with their own user name and password. The staff members can upload the pdf files, question papers, or any other subject related materials as per their department and semester wise. The students are able to download this application and install it in their mobile phones.

VI. APPLICATION

- The android application is useful for students for academic purposes.

- The students can download their study related materials directly through the app.
- There is no need to create the account for students to download files.
- It can be used anywhere beyond the campus.

CONCLUSION

As per the report we have implemented the application with the above requirements and the application is effective, bug free & user friendly. We have developed a new application for Campus information for the students using android platform. The results show improvements in accuracy as compared to the current existing system. We have implemented online web portal which can be used by faculties to upload files and add notices. We have implemented the android module for the students to provide campus information on their smart phones easily. Moreover the proposed technique provides an easy way for uploading data or information through web portal and downloading it.

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