

An Android App for University Management System

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Abstract: *The Android University Management System is an android app which is useful for students as well as the university faculty member and other academic staff. A paper based system all the works are done manually. Paper based work is so time consuming. The main objective behind the use of University Management System is easy supervision of the Institute. Through our application students can search their results using Android mobile. All information is stored in the university server. The faculty member is authorized to log into University Management System database backend through administrator user id and password and update the student result. In this application, students have no administrative user id or password and no scope to update their results. The student can only search their result using their student's id and password provided by the admin. Through this application student can also calculate their CGPA through CGPA calculator. Through this application notice board is all time updated by respective teachers and admin personnel. Student's attendance is also collected by this application.*

Keywords: *Android, CGPA Calculation, Faculty, Notice, Results.*

I. Introduction

The use of this application provides suitable services to all private and public universities all around the world. This application provides a complete solution of the traditional paper based record system. University admin personnel upload students mark, important notice, student results and student can also calculate their CGPA through CGPA calculator through android devices. All student information is totally reviewed and valid on the server before actual record alteration happens. The system plans for student interface, permitting students to access tips and tricks as provided by their seniors. All information is safely recorded in university database server that is controlled by the administrator. The use of this application decreases the use of paperwork and time needed by the university employee and students.

In last century, universities are heavily depends on paper based work that is so time consuming. This application maintains a simple structural interface for student and employee records. It are often utilized by private and public universities to keep up the records of scholars simply.[1]

Achieving this objective is tough employing a manual system because the data area unit scattered, are often redundant and assembling relevant data is also terribly time overwhelming. Our University Management System application has the ability to solve these problems.[2] This application provides university a wide range of facilities like student result analysis, CGPA calculation, notice board that provide a regular update of any time of any event happens in university premises, attendance, account maintenance, result viewing reducing use of paperwork and automating the all university purposes.

Using this application the university might simply inform the students and conjointly parents will communicate with the management. They can read student performance simply using this University Management System application and they will send queries to the management and conjointly get into concerning events organized by university. [4]

The rest of this paper is organized as follows. Limitation of existing system is described in section II. Feature of this android application are described in section III. Hardware and software requirements are described in section IV. System design is described in section V. Detailed workflow is described in section VI. Finally conclusions are given in section VII.

Limitation of Existing System

The existing system isn't user friendly as a result the retrieval of information is incredibly slow and data isn't maintained expeditiously. These systems have to be compelled to handle by specialist for maintaining and update the system which might be terribly pricey. Its need more paper work calculation to prepare the final exam result at end of an academic year. The existing system victimization the deprecated strategies as new JSON and GCM is more flexible then previous algorithmic program. [3-4]All calculation to get report is

completed manually therefore there's larger probability of errors. Here the University has got to suffer plenty through the calculation and if there is a loss of some report then it's going to cause plenty. Even then there is some fault that is incredibly frustrating for the University. These calculations conjointly effects average result of the students.

II. Feature of This Android Application

Our University Management System Application has the following attributes:

- Improving the efficiency of University information storage system.[5]
- Reducing the amount of time to process and view notice.
- Student can calculate their CGPA through CGPA calculator.
- Student and guardian can easily access the result through search result panel.[4]
- This application also has a phone book containing all faculty member and staff mobile number.
- This android application is a highly secured.

III. Hardware And Software Requirements

Software that is essential in our University Management System is:

- Windows 7/8/8.1/10 Operating System.
- Android studio 2.1.
- PHP MYSQL database.
- NET Framework 4.0 later, with ASP.NET functionality tested.[4-6]

Hardware that is essential in our University Management System is:

- Processor – Intel Core i3 or later.
- Clock Rate- 3.0 or more.
- RAM- 4GB or more.
- HDD- 100GB or more.
- Cache Memory- 3MB or more
- VGA Card- 2GB or more
- Monitor- HD quality

IV. System Design

The system design has a modern day mobile phone with android OS and a database. The android phone having 3G networks ensure better performance than mobile phone having 2G Network. The user can easily log into the account through android phone. The user name is checked by the database server, if account is verified then user can logged into the account and do their respective task. The system design is shown in figure 1.

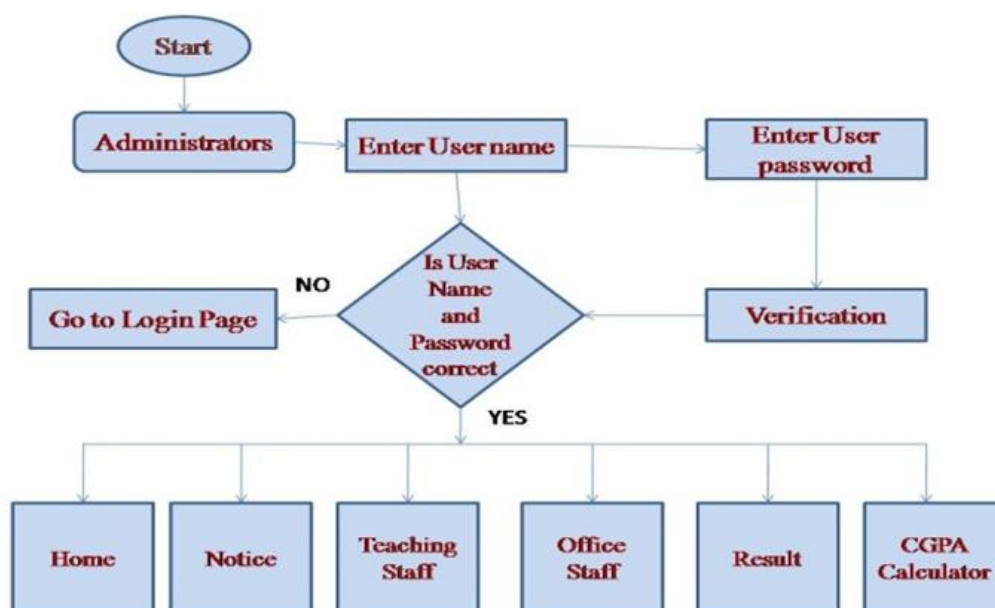


Figure 1: Flow diagram

V. Workflow of University Management System Application

The detailed workflow of University Management System App is described as follows:

A. Navigation Drawer

The Navigation drawer is the first step in this University Management System application which gives the details description of the entire application. This application consists of Home, Notice, Office Staff, Teaching Staff, Results, Calculate GPA and CGPA, Visit our website and contact us. Navigation drawer is shown in 2.

B. Home

Home window shows an introductory view of the University Management System Application. Through this we can go to the navigation panel of this application as shown in figure 3.

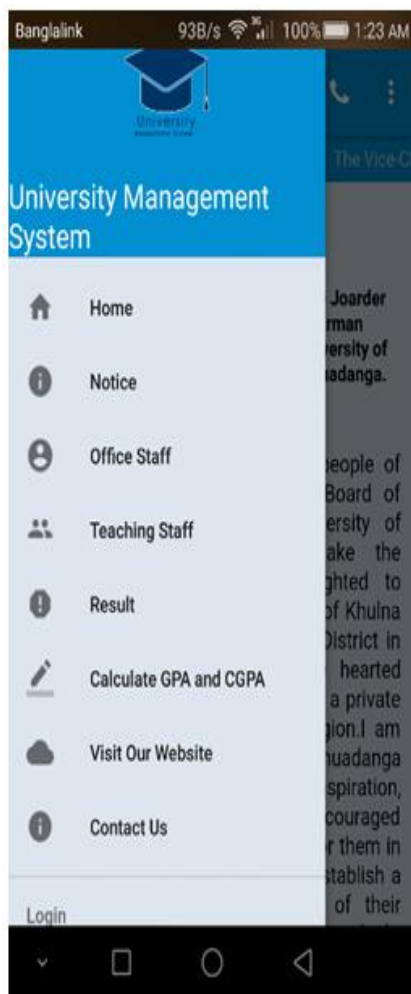


Figure 2: Navigation Drawer



Figure 3: Home

C. Login Panel

Through Login Panel faculty member and student can logged in their individual account. Through this panel faculty member and admin personnel can control faculty member, student and office staff information, give important notice into the notice board, faculty member can put exam result and finally student can search their result through this login panel as shown in figure 4.

D. Notice Board

Notice board is an important tool in an Institute. So we develop a dynamic notice board that provides all important information that student and faculty member needed regularly. Through this digital board student knows about their class routine, course lecture sheet, presentation information and other important event information as shown in figure 5.

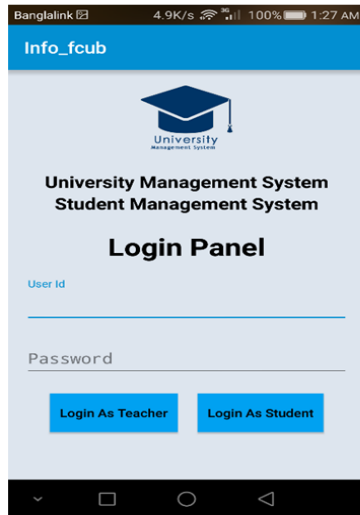


Figure 4: Login Panel

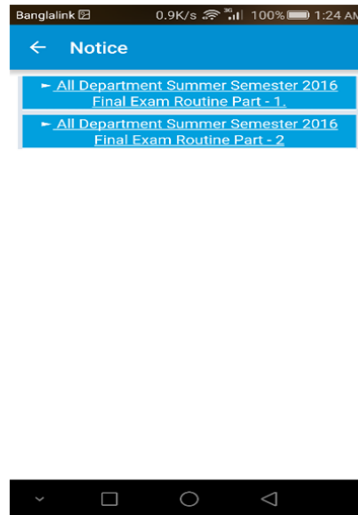


Figure 5: Notice Board

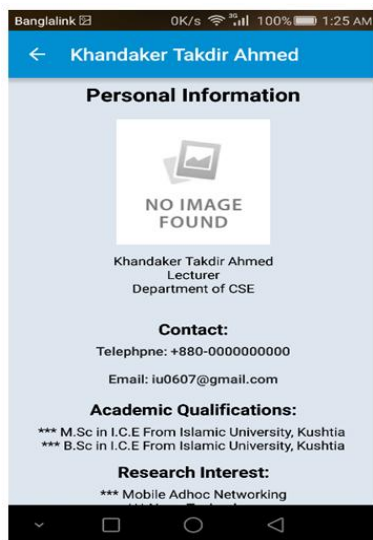


Figure 6: Teaching Staff

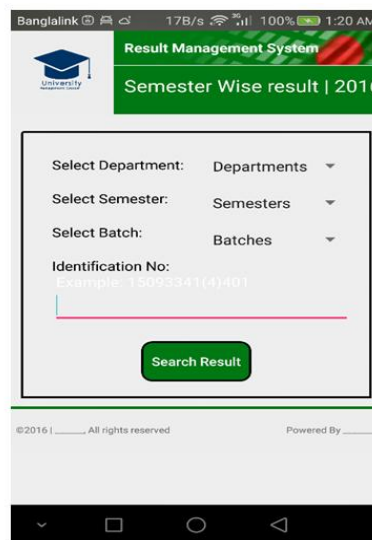


Figure 7: Searching Result

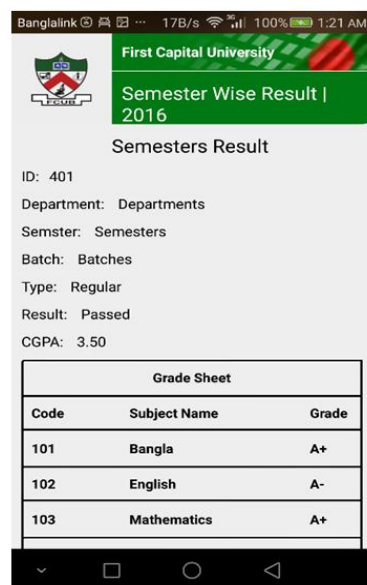


Figure 8: Result Output



Figure 9: Website

E. Teaching Staff

Through this phase of this application we can learn about the faculty member information and any student can contact their teacher through mobile number using this application as shown in figure 6.

F. Searching Result

Through result search panel student can search their result by selecting their department name, semester, and batch and Id number. After pressing the search result button students can see their detail semester final result as shown in figure 7 and result output show in figure 8.

G. Visiting Website

Through this phase of this application any one can visit the main website that is in web application format and use all features that one can need to know about the University as shown in figure 9.

H. Office Staff

Through this phase we can learn about the office staff information and anybody can contact with them through mobile number using this application as shown in figure 10 and 11.

I. Calculating GPA

Student can able to calculate their semester final result through this University Management System Application in Credit Grade Point Average (CGPA) Format as shown in figure 11 and 12.

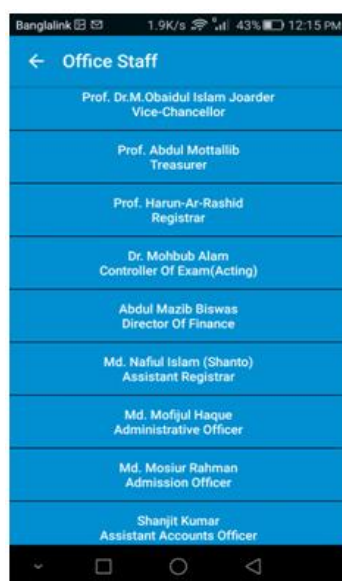


Figure 10: Office Staff



Figure 11: Office staff contact info

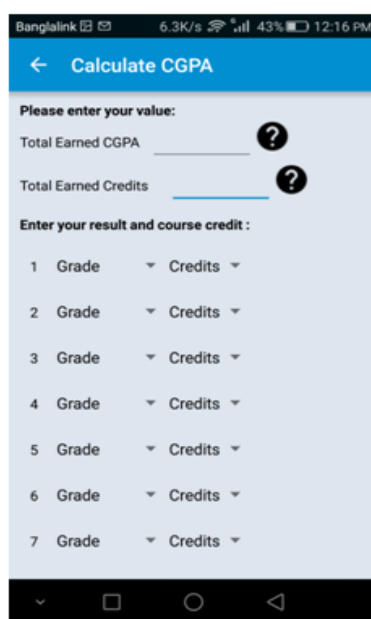


Figure 12: CGPA Calculator

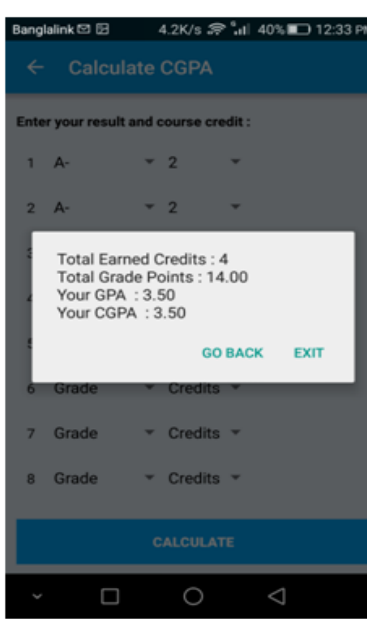


Figure 13: Calculated CGPA Output

VI. conclusion

Our University Management System application provides an autonomous solution of the paper based work. This is a completely paper work. This is controlled and monitored by admin. The man power is reduced by using this application. It provides accurate information all the time as faculty member or student needed. The university management can make useful decision using the data that are stored in the university database server. So it is better to have a Android Based University Management system. All the administrator, authorities, faculty, student and guardians will get the desired data directly.

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