COLLEGE ENTERPRISE RESOURCE PLANNING SYSTEM

Project report submitted in partial fulfilment of the requirement for the degree of Bachelor of Technology in

Computer Science and Engineering

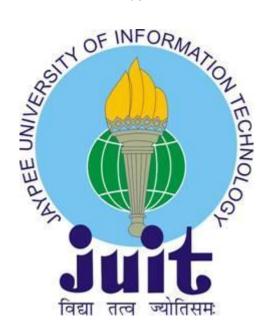
by

Neelkanth Vyas (131232)

Under the Supervision of

Suman Saha

to



Department of Computer Science and Engineering and Information Technology

Jaypee University of Information Technology, Waknaghat, Solan-173234, Himachal Pradesh

Certificate

Candidate's Declaration

I declare that work that has been done by me in this report titled "College Enterprise Resource Planning System" Technology is my very own real record for work done from August 2016 to May 2017 under the guidance of Suman Saha (Assistant Professor,

CSE).the department of Computer Science and Engineering and Information Technology,

Jaypee University of Information Technology

We experience proud and privileged in expressing my deep feel of gratitude to all those who have helped me in presenting this project.

All the data encapsulated in this report has not been used for any other degree.

Neelkanth Vyas, 131232

I hereby certify that the above declaration made by the student is correct to the best of my knowledge.

Suman Saha

Assistant Professor

Department of CSE

Dated

Acknowledgement

"The successful achievement of any work would be incomplete without acknowledging the people whose constant guidance and encouragement secured us the success."

He helped me completing this project and readily provided his assistance whenever we needed it.

I owe a debt of gratitude to our guide, **Dr. Suman Saha** (Assistant Professor) for suggesting us this challenging yet creative idea for Major Project. He helped me completing this project and readily provided his assistance whenever we needed it.

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Abstract

COLLEGE ERP System is the best of its type of ERP and the specialty in this is that it is best suited for the working of University, Colleges. It is made after extensive study of all the departments of Colleges and is provided with the extract of everything, a college requires for their department management and student/staff management.

ERP means performing college register functions by using portable electronic device. ERP has now become the backbone of every sphere of industries being in manufacturing unit, trading unit or the service arena. ERP as its name suggest is not only software to but also a planning tool that will suggest you the best way to do the same task in a better way.

Chapter-1

Introduction

1.1 About the Company

We are market leaders in delivering mobility solutions to entrepreneurs and enterprises looking to provide an omni channel experience to their customers. Our mission is to engineer and maximize mobile ROI.

Click labs was started as an incubator in 2014 as a technology solution provider that has taken mobile first approach. The company is headquartered in Chandigarh with about 400 employees and has offices in San Fracisco, Seattle, Brisbane and London. The company is focussed on providing mobility solutions to entrepreneurs and enterprises who want to provide their customers an omni channel experience. It has developed expertise in mobile, analytics and cloud services. The company has launched about 300+ platforms. Their mission is to engineer and maximize mobile ROI. Their products span across three categories Saas solutions, Platform framework and investment in startups. Jugnoo, App virality are some of the major successful ventures the company has worked upon.

1.2 Problem Statement

We propose an approach to develop a college enterprise resource planning system which will have three modules as admin, faculty, student. Admin has the functionality to add the faculty, give notification to the students. Faculty has the authority to add students and their details like marks and attendance.

1.3 Methodology

The project followed software development lifecycle. Initial training over android development was given using android development tool kit. Later the problem to be worked upon was identified and brainstormed. The modules were defined after consulting the senior colleagues and US design was provided. Once the features were finalized the development was done with cooperation from team members. Later code was subject to testing and the final deliverables were tested by the concerned team for approval.

1.4 Organisation

Chapter 1: In this chapter, the introduction to various concepts and techniques used in the implementation is covered.

Chapter 2: This includes reviewing relevant work from various research papers, books, journals and conferences. In this chapter, the extracts from assorted research papers on various situations are taken.

Chapter 3: Discusses about proposing a model suitable for developing the college erp system using android as a basic language.

Chapter 4:In this chapter results and screenshots are revealed to depict and defend the proposed work.

Chapter 5: This section concludes the whole work and also elaborates the scope of work that can be done in future which leaves an opportunity for upcoming students and scholars to further enhance this work.

Chapter-2

Literature Survey

INTRODUCTION TO PROGRAMMING LANGUAGE

JAVA INTRODUCTION

Java is a **programming language** and a **platform**. It is object-oriented programming language and is considered very robust and secured for developing software. By definition platform is any software or hardware environment in which program runs. As Java has JRE which is its own runtime environment and thus it is called a platform.

CHARACTERSTICS OF JAVA

- ➤ Platform independent: By definition platform is the environment which is hardware or software in which program runs. Java as a language gives software-based platform which are
 - 1. Runtime Environment
 - 2. API(Application Programming Interface)

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Java Virtual Machine (JVM)

JVM (Java Virtual Machine) is an abstract machine. It is a specification that provides runtime environment in which java bytecode can be executed.

JVMs are available for many hardware and software platforms. These JVMs, JRE and JDK are dependent on which OS are they running and thus are platform dependent while Java as a language is not dependent on any platform. JVM's main tasks are loading, verifying, executing code and providing runtime environment.

Java Runtime Environment (JRE)

JRE is an implementation of JVM and provides runtime environment. JRE is not a virtual entity rather exists physically and consists of a set of libraries and files which are used by JVM at runtime.

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INTRODUCTION TO ANDROID

Android is an OS developed for mobile environment and has been developed by Google. This is designed mainly for touch screen mobiles and is based on Linux kernel. The user interface of Android is subject to manipulation using various touch gestures e.g. swiping, tapping and pinching to change on-screen objects. It has a virtual keyboard to receive text input. Android OS software is run on televisions, autos for cars and wears for watches. Android has been upgraded with several versions which are used in game

consoles, electronics, digital cameras and notebooks. Aestro, Blender, Cupcake, Donut, Eclair, Froyo, Gingerbread, Honeycomb, Ice Cream Sandwitch, Jelly Bean, KitKat and Lollipop are the names given to different android versions available.

The History of android is as:-

In October 2003 Andy Rubin founded Android Incorporation in Palo Alto, California.

- In 17th August 2005, Android Incorporation was acquired by Google
- Andy Rubin, Rich Miner, Chris White and Nick Sears are the major employees of Android Inc.
- Android was initially made for camera but then it shifted to smart phones because of low market in camera only.
- Android was the pet name of Andy given by colleagues for his passion for robots.
- Google in 2007 announced the development of android OS.
- In 2008, HTC launched the first android mobile.

This operating system Android is a set of software for touch screen devices such as tablet computers, smart phones, electronic book readers, set-top boxes. This is based on linux, middleware and key mobile applications which can be used for various devices as televisions, tablets and mobiles. It was developed by Google and thereafter the Open Handset Alliance OHA. Android code is written mainly using Java language though other languages can also be used. The aim of android project is to develop a realworld product to improve mobile experience.

MYSQL

MySQL is a relational database management system ubiquitously used by different

businesses. It has been developed, marketed and supported by a Swedish company MySQL AB. MySQl is one of the most used and popular RDBMS because

- It is open source project and thus is available for free of cost
- It can handle large set of functionality of most powerful and expensive database packages
- It uses an easily understood an/d known SQL data language
- It works on several OS and different languages including PHP, Perl, C, C++, Java etc.
- It is very fast with large data sets

There are three categories of data type's numeric, date and time and string used by MySQL. Create, Select, Insert, Delete, Update and Drop are the basic statements used.

INTRODUCTION TO XAMPP

It's an abbreviation for Cross-Platform(X), Apache(A), MariaDB(M), PHP(P) and Perl(P). It is cross platform web server solution stack crated by people from Apache and consists of Maria DB database and interpreter for scripts written in PHP and Perl Programming languages. It is free and open source technology. This is a simple, lightweight Apache distribution that makes it easy to create local web server to be used for deployment and testing purpose.

All set up required for a web server – server application, databased and scripting language are included in extractable file. It is cross platform and thus works equally on Linux, mac and Windows. Since most actual web server deployments use the same components as XAMPP, it makes transitioning from a local test server to a live server extremely easy as well.

XAMPP consists of the three main things that you need to know when starting web development. They are:

- Apache Web Server
- PHP
- MySQL
- 1) **Apache Web Server:** It is a web server that allows you to host your websites or any other content for that matter. This is made available for Unix. This web server is available on Unix and Windows. PHP, Perl and Python are supported by Apache.

- 2) **PHP:** It is a server side language used to create dynamic web pages. It can be inserted in HTML and is platform independent and free.
- 3) **MySQL:** It is the most famous RDBMS and the data is stored in the form of tables and relationships are expressed using foreign key and unique key. The tables are accessed by SQL queries in any format requested by user.



FEATURES

XAMPP is regularly updated to incorporate the latest releases of Apache, MariaDB, PHP and Perl.

The features comes along with a number of modules as including OpenSSL, MediaWiki, Joomla, phpMyAdmin, WordPress and more.

Multiple instances of XAMPP can remain on a single computer which can also be copied from one computer to another. It is available in small and full version. When XAMPP is installed localhost acts like as a remote host by connecting using FTP client. The program like FileZila is useful while installing a CMS like Joomla or Wordpress. Local host can be connected via FTP with an HTML editor.

INTRODUCTION TO SDLC

The main function of a lifecycle model is to establish the order in which a project specifies, prototypes, designs, implements, reviews, tests, and performs its other activities. It establishes the criteria that you use to determine whether to proceed from one task to the next.

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The main function of a lifecycle model is to establish the order in which a project specifies, prototypes, designs, implements, reviews, tests, and performs its other activities. It establishes the criteria that you use to determine whether to proceed from one task to the next.

All of the activities involved are highly related and interdependent, Therefore, in actual practice, several developmental activities can occur at the same time. So, different parts of a development project can be at different stages of the development cycle.

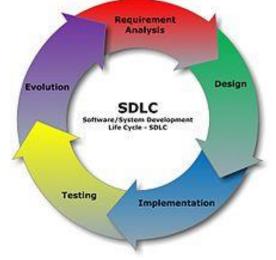
SEVEN STEPS OF SDLC

Given below are some phases, which are common in every SDLC model. Let us go through them to get an idea.

- 1. Requirement Gathering and Analysis: Requirement gathering and analysis is the first stage of any SDLC model. It is a brainstorming phase consisting of several sub stages to understand how feasible the idea if implemented is.
 - In projects which requires software to be updated and modified then issues underlying of that software are found and resolved by finding ways to solve it. If brand new software is going to be developed, then every minute requirement regarding that software is looked in to.
- 2. System Analysis: This is the second phase of SDLC where the entire system is defined in detail. Here a detailed blueprint of all the processes is developed. As

required, the system is divided into smaller parts to make it manageable and easier for software professionals who are currently working and will be latter working on the project.

3. System Design: Here, system analysts and designers using some tools create the logical design which is used to frame physical system.



4. Coding: This is the final stage of project development lifecycle where User testing is done by running the software on various systems and if non errors are found then it is considered to be a successful launch.

- **Testing:** This is the final stage of project development lifecycle where User testing is done by running the software on various systems and if non errors are found then it is considered to be a successful launch.
- **6. Implementation:** This is the final stage of project development lifecycle where User testing is done by running the software on various systems and if non errors are found then it is considered to be a successful launch.
- **Maintenance:** When the software is implemented, it does not mean that the software is good as it is. All SDLC models include maintenance since there are absolutely no way that software will be working perfectly.

Chapter-3

System Development

3.1 INTRODUCTION TO COLLEGE ERP SYSTEM

ERP as its name suggest is not only software but also a planning tool that will suggest you the best way to do the same task in a better way.

A College ERP system is an attempt to integrate functions across an institution by using An ERP for colleges is a single system to support rather than several small and different systems. Single application architecture with limited interfaces. Access to management information .Access to best practice systems and procedures. In this project, an attempt has been made to develop and deploy colleges ERP System on Android mobile phones.

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The aim of this project is to create an android mobile application for ERP system that will integrate the various college activities like Faculty registration, student registration, upload student attendance, student marks and upload the information of placement drive in a single system with a common database that can be used by students, teachers and other staff members of educational institution

In other hand the rapid development in operating system of the mobile phones gives rise to the application development on large scale. The major reason behind the popularity of Android is that it is an open source system and a software development kit is provided which helps build and run android applications.

COLLEGE ERP System is the best of its type of ERP and the specialty in this is that it is best suited for the working of University, Colleges. It is made after extensive study of all the departments of Colleges and is provided with the extract of everything, a college

requires for their department management and student/staff management.

ERP means performing college register functions by using portable electronic device. ERP has now become the backbone of every sphere of industries being in manufacturing unit, trading unit or the service arena. ERP as its name suggest is not only software to but also a planning tool that will suggest you the best way to do the same task in a better way.

3.2 PROBLEM DESCRIPTION

The software mainly uses Android client devices (such as mobile phone, tablet computer, etc.) to log in via wireless net, then the procedure interacts with shared database by access to the specified WEB server . With the continuous improvement of information campus. System respectively acquires needed information from shared database, at the same time, inputting data into shared database according to actual situations. Thus, shared database becomes a bridge for mobile campus to obtain different system information in colleges indirectly. After installing the generated mobile campus APK software on the Android client, the login page can be opened Input the student name and password as student roll number, click login, then the system will detect whether the client networking. If the network is normal, the system will access to remote database for authentication, while caching the access contents to the local database. After login, student view the attendance details, placement details, exam marks details and also view the grade details.

EXISTING SYSTEM

In a real world scenario, such as college campus, the information is in the form of notice and in web sites. Existing system follows manual work for managing student details. Today it is of the essence to not only use the predictable forms of statement, but also use the new forms such as cell phone technology, for faster and easier communication among students.

PROPOSED SYSTEM

The proposed system for college information system is fully an automated one using Wireless Android. In this system, we are using PHP Page for Admin side to maintain the Faculty details.

Admin can register the Faculty details and requirements such as placement details,

announcement details are added into the database.

Faculty can register the student details and requirements such as attendance, marks details are added into the database.

Students can login to the system using roll noand password. This centralized one, by which the data server updates the each and every detail; furthermore the coordination between server and client becomes much easier.

FEATURES

- Easy to use with simple interface.
- Connect all the education shake holders: Students, Teachers and Administrators.
- Effective management of students and staff records.
- Facility to intimate events, notice, holidays, placements etc easily and quickly.
- Personalized home page of students.
- Secure Scalable and robust platform.

BENEFITS

- Quick and streamlined flow of information.
- Improved existing processes.
- Increased transparency and flexibility.
- Improved Decision making capabilities.

3.3 SOFTWARE REQUIREMENTS

- About Operating System
 - o Window 7/8/10

• Front End Tool

- Android
- Server
- o MYSQL
- Client
- o For any organization

HARDWARE REQUIREMENT

1) Client

- Intel P4 processor with minimum 2.0Ghz Speed or any equivalent processor
- RAM: Minimum 512MB
- Hard Disk: Minimum 30GB

2) Server

- RAM: minimum 1Gb
- Hard Disk: 8 GB
- Any Microprocessors
- Power backup

3.4 DATA FLOW DIAGRAMS

The proposed system for college information system is fully an automated one using Wireless Android. In this system, we are using PHP Page for Admin side to maintain the Faculty details.

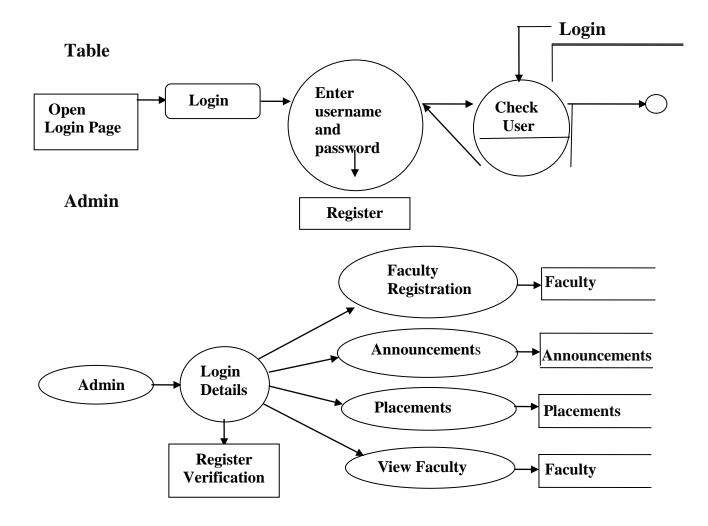
Admin can register the Faculty details and requirements such as placement details, announcement details are added into the database.

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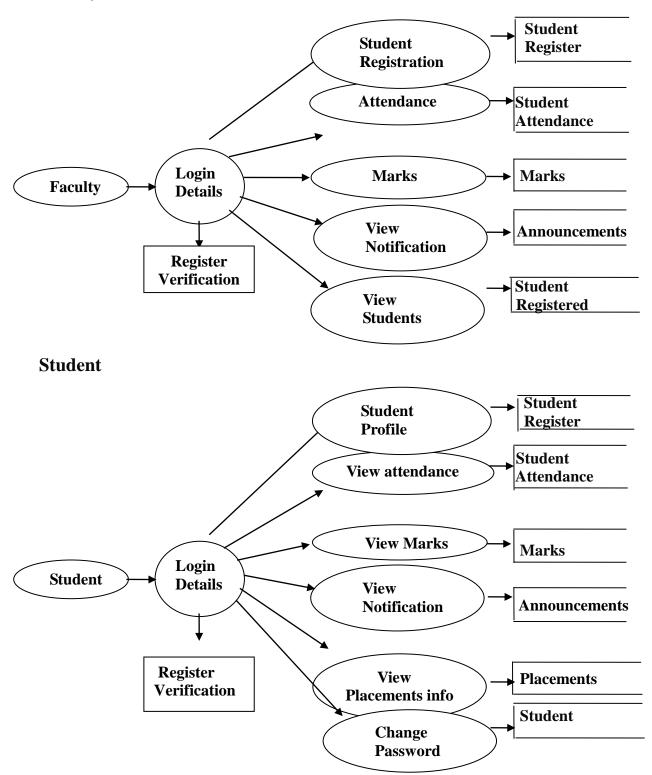
Students can login to the system using roll noand password. This centralized one, by which the data server updates the each and every detail; furthermore the coordination

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Login



Faculty

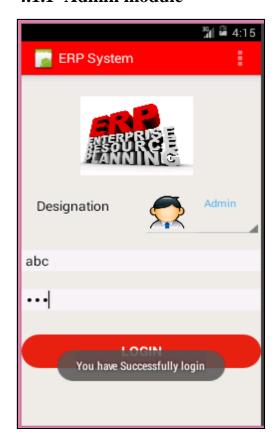


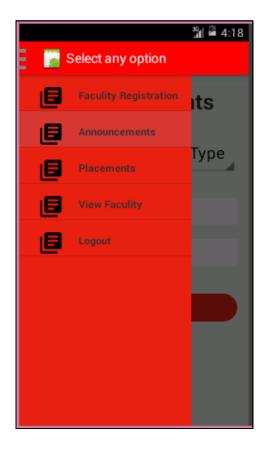
Chapter-4

Performance Analysis

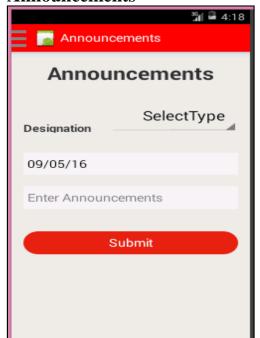
4.1 OUTPUT

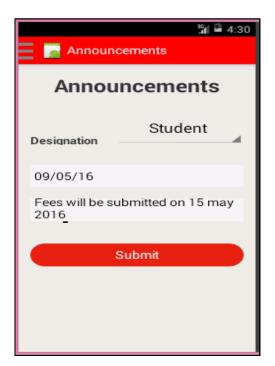
4.1.1 Admin module

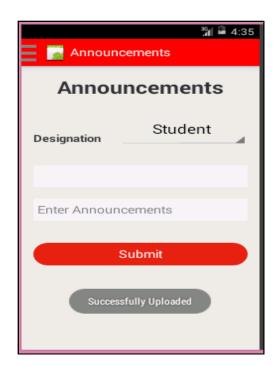




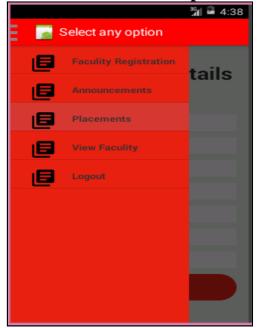
Announcements

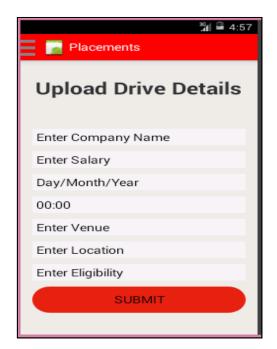




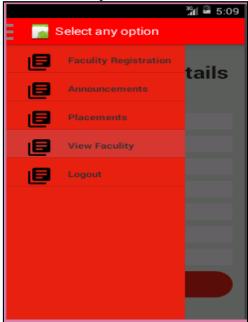


Placements Info Upload



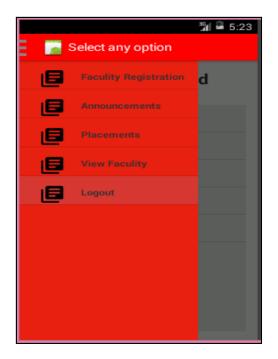


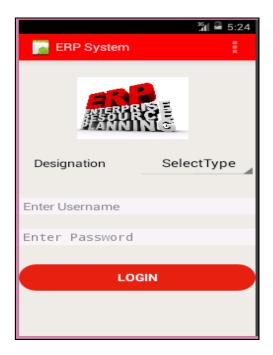
View Faculty Info



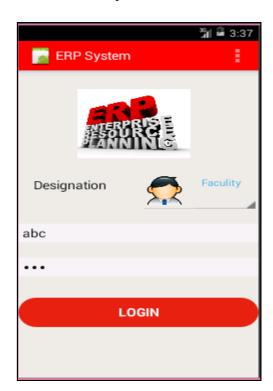


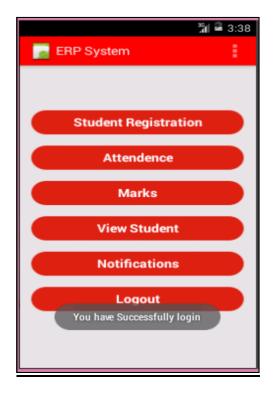
Logout



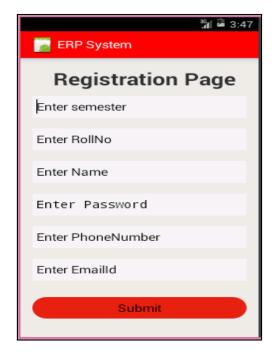


4.1.2 Faculty Module

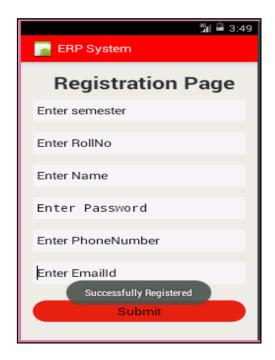




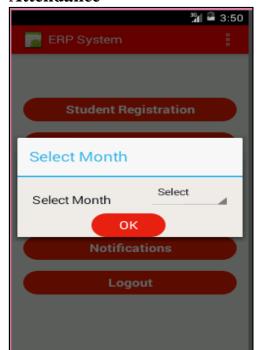
Student Registration

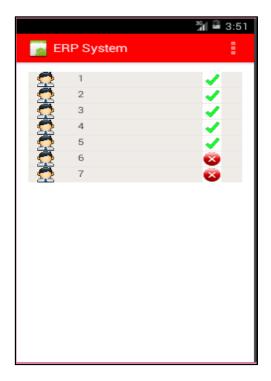


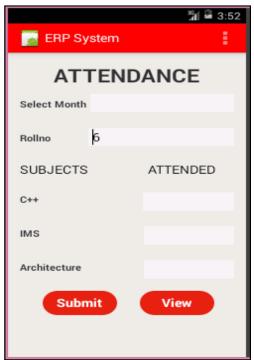


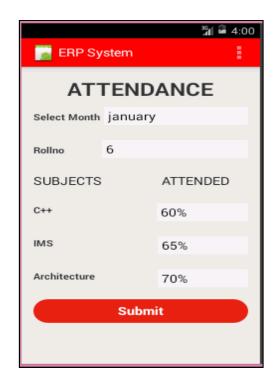


Attendance



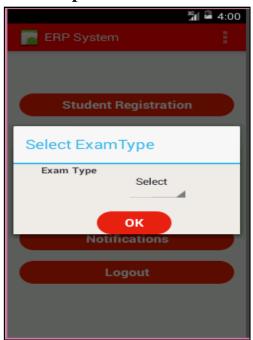


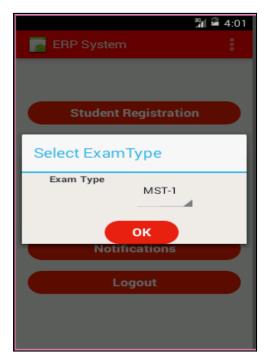


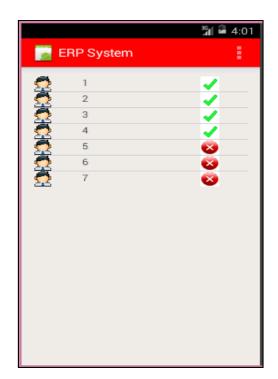


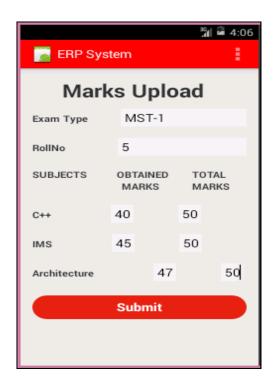


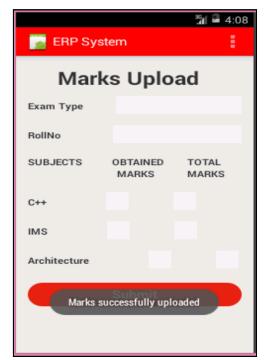
Marks upload











View Student Registered

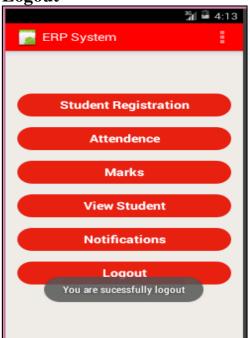




Announcements

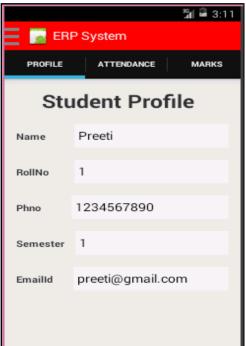


Logout



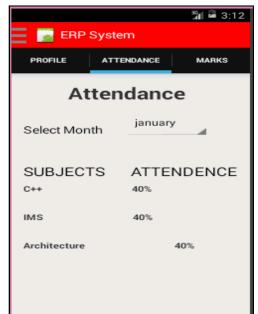
4.1.3 Student module



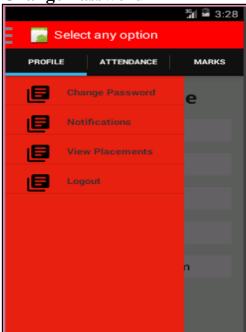


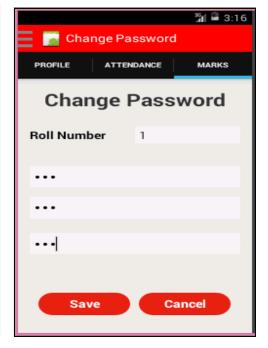
View Attendance





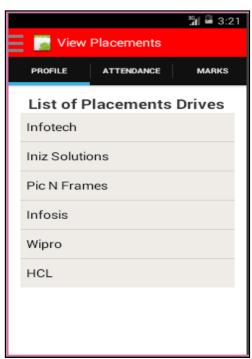
Change Password

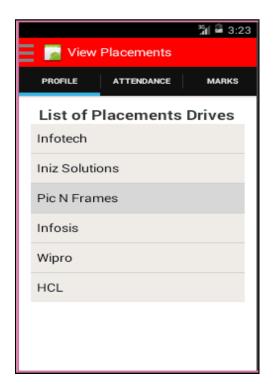






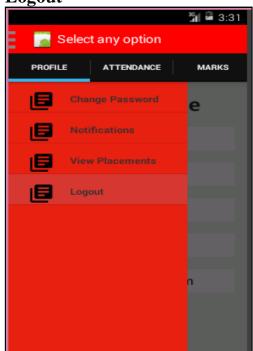
List of Placement drives

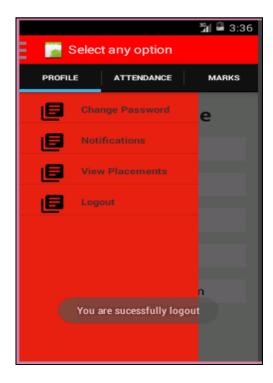




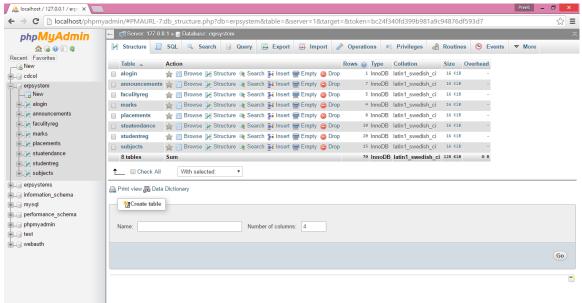


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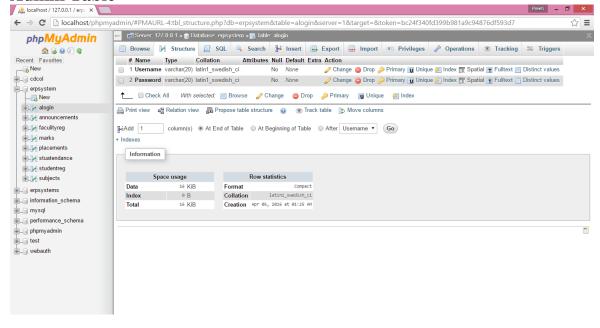




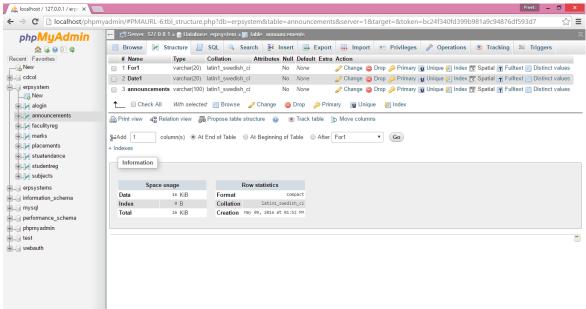
4.2 Database Screenshot



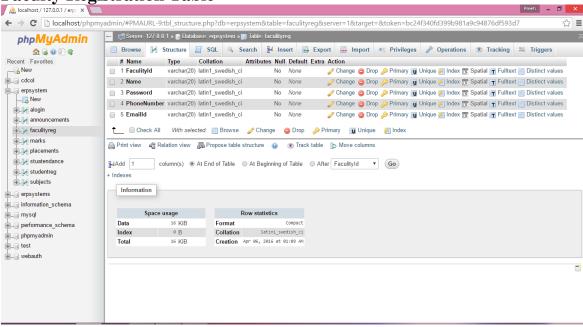
Admin Table



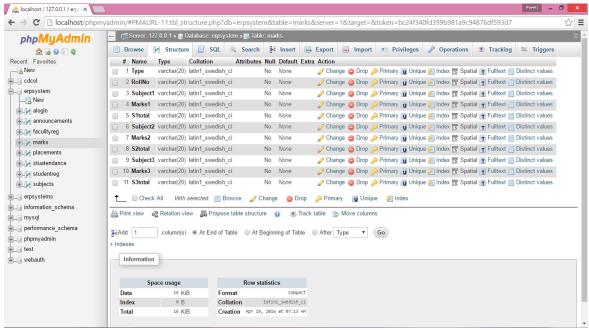
Announcements Table



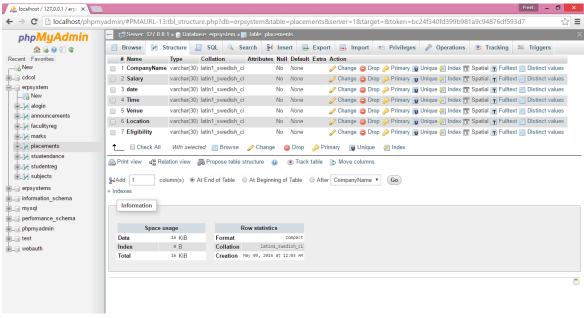
Faculty Registration Table



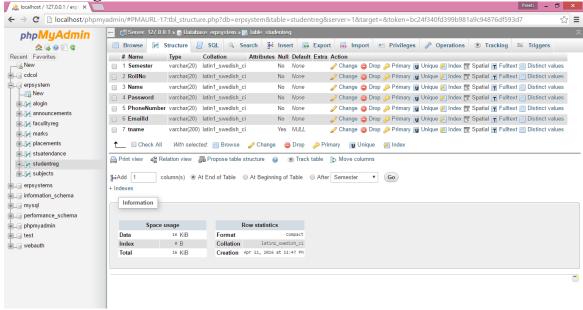
Marks Table



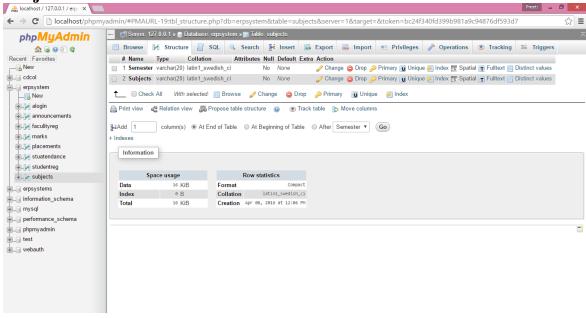
Placements Table



Student Registration Table



Subjects



Chapter-5

Conclusions

A College ERP System is developed in android language for better functioning for the colleges administration. For the backend purpose php language is used for writing backend scripts. The application is providing different functionalities to the admin , faculty as well as to students. The admin can add new faculties and change the details of the current faculty. Faculty can add new students , enter the their attendance and marks.

A student can check their marks, attendance and personal details.

References

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