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# ERP MOBILE APP DEVELOPMENT

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**ABSTRACT:** The concept of an ERP System is to provide a simple interface for the management of various data such as attendance, fees, and other details. It is mainly used for higher education institutions. The Enterprise Resource Planning System can provide a secure and reliable management system. It allows the admin to collect and manage various student and faculty information. It also allows the faculty to view the student's attendance. It eliminates the need for manual work and can be operated efficiently. Students can also obtain study materials from their professors. This system can also maintain their records without redundant entries. Our system is secure and can be easily accessed by the administrators. It allows the faculty to manage all the details of the students. Study materials can also be provided by the faculty members of their choice. This system can also maintain records without redundant entries. Students can also obtain study materials from their professors. This system can also be utilized by professors for their students' study materials. It can maintain records without redundant entries and can provide a quick access to information.

**KEYWORDS:** ERP system application, combination of ERP and Google classroom, College ERP system.

## I. INTRODUCTION

Enterprise Resource Planning (ERP) college mobile application is a type of app that integrates all of the college's modules into a single system that can be managed by the admin and accessed by students and faculty members using their valid user id and password. The ERP Method for College was created to address the issues that plagued the practicing manual system. This program is being supported in order to eliminate the difficulties that the current system is experiencing. Furthermore, this system is tailored to the department's specific requirements for smooth and efficient operations. To eliminate data entry mistakes, the program has been condensed. Users with no formal expertise can utilize the system. It also displays a warning while submitting valid and invading data. As a result of all of this, it can be concluded that it is user-friendly. It has the potential to produce a management system that is dependable, secure, error-free, and quick.

## II. EXISTING SYSTEM

Schools and Colleges use the ERP School/College/University Management Module to manage their daily activities, which include managing Faculties, Students, Books and Library Records, Parents details, Assignments, Admission Process, Results and Reports, Exams, Events, Attendance, Timetable, Fees, and Other Reports. It offers a single point of entry to effectively and efficiently handle a wide range of operations. Managing a school, university, college, or any other educational institution in today's world is difficult, as is managing any organization or business. As a result, a suitable solution is necessary to ensure the smooth operation of the company as a whole, and this problem may be easily handled with the ERP college Management Module.

### Drawbacks of Existing System:

- 1) It's a web application so to use it every time we need a browser.
- 2) No interactions between students and faculty.
- 3) Time consuming.

## III. PROPOSED SYSTEM

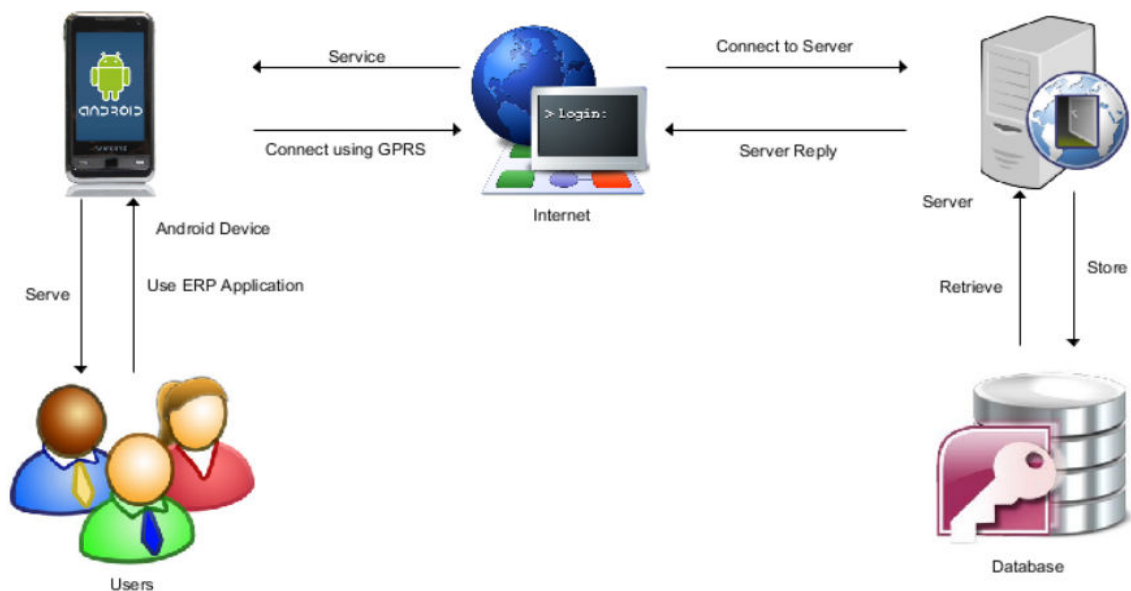
We are developing a mobile app application with some improvements in our ERP system, such as student – teacher interaction, students can interact with themselves, sending the class link to the registered email, and sharing study materials, as we know our college has an ERP website that is completely reliant on browsers. As a result, you must

browse the website each and every time you need to access it, which is time consuming. During pandemic we students used google classroom a lot. So, our idea was basically to combine the ERP and Google classroom and also to introduce interaction between students and faculty.

**Advantages of proposed system:**

- 1) Accessibility.
- 2) Less time consuming.
- 3) Easy to use

**IV. ARCHITECTURE DIAGRAM**



*System Architecture*

The diagram above shows how the user interacts with the system and explains how the application interacts with the services you need to provide functionality to users. The users described in the architecture are employees, students and managers. User manages the app using an Android smart phone. It is required that the android device must be connected to the internet using GPRS / EDGE or Wi-Fi. M-ERP uses the Internet to connect to a server where processing is done. Installing a site site database server. All system connections are shown in the system design diagram.



## MODULES:

The modules of the system are discussed below:

The starting interface will offer a login option and registration option.

### A) User: New User

Scholars looking for Admission inside the institute need to download the M-ERP application. As he's new consumer, he will begin by checking in via the sign-up option. Right here, the candidate needs to enter his email-identity & password. Then, for electronic mail confirmation and account verification, an email is dispatched to the e-mail-id together with hyperlink for activation of the account on the M-ERP utility. After the account activation, the student will login into application with the email-id and password. The candidate is provided with the shape for filling up the info like non-public info, qualification info, allotment, wide variety, and so forth. After filing the info, the candidate is provided with QR code in his account. Now the candidate goes for the verification on the admin branch of institute, wherein the verification officer asks scholar for QR-code; then the officer scans this code via his mobile device. After a successful test, all the details of students are fetched inside the officer's mobile, so he compares the information with the original hard copies of documents given through candidate. The verification officer completes the verification method through his account. After the successful verification, the candidate is provided with some other QR-code, and the candidate is now eligible for charge of charges. After the price student enters the transaction identity in the transaction id section in his utility. After this he will get e-mail and SMS including pupil identification and password and the admission is finished successfully. The scholar-id is a particular identification, that is going to be identical for the complete educational years. Now the student can login into application using Register Number and password supplied. In future they could alternate their credentials by using themselves using their registered email. They're now not required to visit the admin physically.

### B) User module: Student

Student logs in to his/her account on ERP application by using correct login details. Then after the successful login the user student will see the main page consisting of options that he/she can perform. These options are:

#### 1) View attendance

#### 2) View unit-test marks

#### 3) Gate Pass (QR-CODE)

#### 4) Suggestion box/complaint box.

#### 5) Interaction with others.

##### 1) View attendance:

This option offers student's current semester attendance details date and subject wise. Student can check attendance anytime during semester.

##### 2) View Unit Test marks:

This option helps students to check their mark obtained in the unit test of current semester and past semester marks too.

##### 3) Gate Pass:

This option offers students who stays in hostel to apply for a gate pass request.

##### 4) Complaint box (Tutor):

This option helps student to tell their problems to his respective faculty or head of the department.



#### 5) Interaction with others:

This option helps students to interact with other students and also with their subject faculties.

#### C) User module: Staff

Likewise, faculty will have to login to the ERP application. After login the faculty's main page will contain the following options:

- 1) Student information
- 2) Mark attendance
- 3) Notice announcement
- 4) Marks entry
- 5) Interacting with others

#### 1) Student information

This option is available in Faculty module. This option let the faculty to check the student details using Register Number.

#### 2) Mark attendance

Marking Attendance would be less difficult with the android software. Here the instructor will login through ERP software on his android clever-phone. After login, he selects the Mark attendance alternative. Then he can be offered with the interface in which he has to choose the elegance and difficulty. The list might be proven to be of the enrolled students in that class. Instructor just has to uncheck inside the field provided after scholar call. Uncheck is for absent pupil.

#### 3) Notice announcement

This option is used by teaching faculty for announcement of urgent notices to the students. Student will get SMS or email regarding the notice. Here the faculty will select the class for which notice is to be announced.

#### 4) Mark entry

This option is for teachers to enter the unit test marks of the student that are saved in the database. These marks are accessed by student through student login.

#### 5) Interacting with Others:

This option is for teachers, they can interact with their students, other teachers and also with Head of Department.

#### D) Admin Module:

Types of admin modules are:



**Type1: HOD**

**Type2: Personnel**

**Type 1: HOD**

- 1) Subject allocation*
- 2) Leave approval/reject*
- 3) Notice Announcement*
- 4) Check Dashboard*
- 5) Interact with Others*

**1) Subject allocation**

Here the Head of Department allocates subject to respective teachers for current semester.

**2) Leave approval/reject**

Here, when the student requests for leave the Head of Department looks for the leave request and send response (approved/rejected)

**3) Notice Announcement**

This option is used by Head of Department for announcement of notices to the students. Student will get the notice to their registered email. Here teacher will select the class for which notice is to be announced.

**4) Check Dashboard**

Here, when a student submits a complain through student module the Head of the Department can look for the complains. The name is kept hidden.

**5) Interacting with others**

Here, HOD can interact with his department faculties and also with other HOD's.

**Type 2: Personnel Department**

Personnel Department officers use this module.

- 1) Verification*
- 2) Update Student Detail*

**1) Verification:**

This is used by the officer during the time of admission in the institute.

**2) Update Student Detail:**

If Student requests for any update in his personal detail, then the Type 2 admin have privileges to edit or update the student information.

## V. IMPLEMENTATIONS

### A) The three-tier architecture

This application is based on three tier architectures, also known as client-server architectures. In which client is the consumer of the services and server being the provider of services. The middle layer that is the logic layer, it basically converts user requests into server understandable form. The system developed contains Android Application in the front end, i.e., client-side. Json (JavaScript Object Notation) Parsers work as the middle layer is primarily used to transmit data between server and server application. The server side comprises of Database. The Android API uses PHP to connect to a database.

### B) Operating Environment

The primary component of M-ERP mission is the software with a purpose to be limited to the android running gadget (android 2.3 and above). The utility will depend on numerous functionalities constructed into Android's Software Programming Interface (API), so ensuring appropriate usage of the API can be a main challenge. Past that, the utility was a self-contained unit and could no longer depend on every other Android-related software additive. The software will, however, regularly interact with the MERP server. The server operates on a Linux platform with 1GB of RAM and 1GB of allotted garage area. The M-ERP database might be saved at the server using MySQL and could be interfaced with a wrapper written in Hypertext Preprocessor (PHP).

## VI. RESULT

So, using PHP Page for Admin side to maintain the student details. So now, Admin can register the student details, and requirements such as attendance, exam details are added into the database. Parents can login to the system as student name and then batch number as password. This is a centralized one, by which the data server updates every detail; furthermore, the coordination between server and client becomes much easier. The machine offers high protection for all its records and data. This college information application includes functionality such as parents can view the details and the server can update or delete student information. This information should be provided to parents in a cost-effective manner. And in server side, easily add the details about attendance, exam schedule, exam results, and grade details. Server easily updates each and every student's details

## VII. CONCLUSION

This project entitled "ERP Mobile App Development for College Institution" is designed, keeping in view the day-to-day problems faced by a college. the principle aims in developing this app is to automate all functionalities of a university, with the greatest of information about every scholar. It is efficient because it is developed with the new technology. This application provides appropriate information to users according to the chosen service. By this system the user can view the details anywhere, anytime as per their own convenience. Timely updates of student can be sent to their parents. Attendance marking and report generation becomes easy. With all the features mentioned in system requirements specification the Project is successfully implemented. In future this system can be implemented to automate most of the educational systems and it can be designed for cross platform.

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