



Enterprise Resource Planning (ERP) System for Educational Organization

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Abstract — The college ERP program provides a simple user retention interface, departments, skills, libraries, and other information. All colleges usually have several departments and educational modules such as courses, teaching halls, etc. Managing all these departments and other modules in person is difficult, inefficient, and costly. So here we are proposing a college ERP system. College ERP program has all the information about students, teachers, events, the library, departments, and other respected information. The program allows the administrator to add students, skills, and any other events. Our system allows faculty to add or add student presence to a site that can be viewed by students and skills. Students can view their presence through a different student entry. The supervisor can upload timetables for the various departments to prepare for the exam. The timeline is then available for viewing by students and students on the web portal. These systems have easy user connections and have a powerful data management system that makes this program very useful.

Keywords- Admin, Parents, Skill, Library, Students, Hostel.

I. INTRODUCTION

The Enterprise Resource Planning (ERP) college web application is a single type of web application that integrates all modules and operations of the college program into a single program that can be managed by the head of administration and accessible to students with practical ID skills, and password [1].

As we know, the college consists of various departments, such as academic departments, financial management, library, event management, etc. Today the use of information technology is increasing compared to before, with each of these departments having a computer

program that performs its functions. By having one central system they can interact with their reputable system by having valid user IDs and passwords [2].

The main goal of the whole system is to provide an easy-to-use interface and a powerful data system that makes this program very usable. The College ERP program incorporates into the computer all the college system information reviewed by the administrator and can only be accessed by students and skills. ERP in a college management system reduces the amount of human work done prematurely in managing a college system. Once the information has been entered into the system by an authorized person there is no need for other users to deal with different categories. Only a person with administrative authority is sufficient to keep all records at once system records. Security can be provided according to need.

The main thing is that our system reduces human activity with great effort.

It would be such a help

- Records are updated regularly.
- Staff capacity is reduced or reduced.

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- A large amount of data about colleges and their modules can be stored.
- Accurate and complete calculations performed.
- File storage is efficient and flexible.

ERP stands for Enterprise Resource Planning. Enterprise resource planning (ERP) is a business management software or program commonly used to manage departmental data associated with eligible businesses. ERP provides an integrated overview of business processes, usually in real-time, using standard data stored in site management systems. The ERP system tracks business resources - resources, cash, production capacity, and type of business obligations such as payments, purchase orders, and orders. An app developer shares data across a variety of departments (purchasing, accounting, marketing, production, etc.) that provides contextual data [3].

Each college should maintain a multidisciplinary management system that may include performance analysis, school system, intelligent test results, student details, lesson structure, course details, transportation location, staff details, and much more. Handling all these sections by hand on paper becomes a time-consuming and arduous task. In this system, there is a high probability of mismanagement of data collected and data delays in the form of paper records to overcome these barriers there is a need to design and implement the College [4].

The College ERP program is an online web-based application that uses an easy-to-use and attractive college interface. The purpose of the distribution and implementation of this program is to replace the college-based system with a web-based automation system. This is an ERP College program and handles data accurately and efficiently stored for a long time. The College ERP program provides one access point to all college administration systems. Previously, all departments operated independently and separately. If anyone wants to collectively access that data, it will not happen with such systems. Systematic research of such a system

shows that all bookings are made by hand in the registers, which was a very difficult task. Production of the report of all records was also not possible in the existing system. Also, the college work was well cared for and handled. All this data is stored in a college register or file system [5].

The current operating model is based on a hands-on system where all information is first obtained from qualified staff and then entered into registers or files. It is a very complex and time-consuming task. The current system is also dependent on students in the absence of students. Then student performance will be affected. Due to a large amount of data, many problems are involved finally, it updates and receives selected information [6]. As the previous system was taken care of in person, some of the difficulties that exist in the existing system are the following: -

1. The need for data.
2. Difficulty in updating data.
3. Non-fixed data.
4. Delays in retrieving information.
5. Problem with storing data.
6. It is not the correct retrieval of information.

II. EXISTING SYSTEM

The existing system is not user-friendly because the retrieval of data is very slow and data is stored manually. The use of some technology can be complicated and time-consuming. These systems need to handle by specialists for maintaining and update the system which can again be very costly.

It requires more calculations to generate the report like attendance calculation, percentage calculation, etc. so it is generated at the end of the session. Hence requires more time to display the report.

All calculations to generate the report are done manually so there is a greater chance of errors. Here the faculty has to suffer a lot through the calculation and if there is a loss of some reports then it may cause a lot of problems. This is time-consuming also due to

exaggerating calculation. Even after that, some miscalculations are very frustrating for the faculty. These calculations also affect the marks of the students which will finally lead to their percentage.

In this existing system, the papers can miss placed and documents can be lost. This will cause extra work for the admin department pieces of stuff.

III. PROPOSED SYSTEM

The system architecture has a smartphone with android OS, web services, a database server, and the user as its components. The android smartphone or tablet must use 3G, 4G, or Wi-Fi network for internet connectivity to ensure better performance. The user will log in to the application through an Android smartphone. The user type is verified with the database server, and the appropriate user access is given to the appropriate user. The web application also can be used to log in and perform certain operations such as ensuring that the internet is on.

This module allows the department Admin to update students about any college-related information like exam dates, events, seminars, etc. through notification messages. The students can view notifications provided by the interface provided by the application. Admin can send messages to only available options like all students, all faculty, specific faculty, and all [7-9].



Figure 1. College ERP System

IV. MODULES OF COLLEGE ERP

A. Login:-

1. Director
2. Principle
3. Staff (Individual)
4. Parents
5. Students

Above can login in by using user-id and password and access the college ERP.

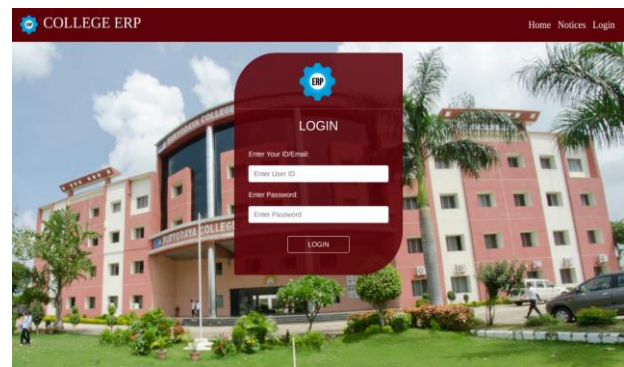


Figure 2. Login Page

B. Admin Module:- Admin has all the access rights to the system. Admin can manage the student Admission, Staff Registration, Academics, SMS gateway, Transport, Class Routines. First, he adds all the staff members of respective departments. Then the classes are added and the respective staff member Admin has all the access rights to the system. Admin can manage the student Admission, Staff Registration, Academics, SMS gateway, Transport, Class Routines. First, he adds all the staff members of respective departments. Then the classes are added and the respective staff member.

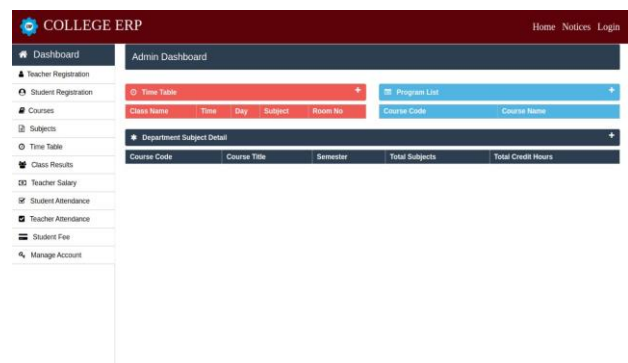


Figure 3. Admin Dashboard

C. Student Module: - Students are accepted only by the admin in the system. Upon receipt of the username and passwords generated by the administrator and can be managed afterwards. The student has access to his or her profile, current attendance record, Classroom Records, Daily Class routes, and all notifications and upcoming events held by the administrator. Students and their bus routes and bus numbers through the transport module. Another important institution provided for students to view the notice is their department.

D. Faculty / Teacher Staff Module: - Staff are registered by admin and login details are generated by admin which can be managed by staff thereafter. Employees have the right to access all data for their respective class subjects. They can manage the daily attendance of all students of different subjects and classes. Employees can provide notifications and may upload specific documents related to their topics. Staff can produce daily, monthly, annual, individual, and class reports. The construction of mark sheets and a timetable are also available to staff. Instead of manual labor, this app provides a default function.

E. Parents Module: - Parents can track all their children's information and educational records. Can't view information related to other students. Parents can add admin after their child is introduced. Parents can view result sheets, attendance records, notifications, etc. This module allows parents to track their children's educational growth. Parents can contact the teacher if they wish. In short, this module helps to monitor the educational development of the right child.

F. Human Resource Management: - HR management software is a flexible ERP software designed to simplify and perform the functions of the HR department. HR management software for higher education institutions is concerned with staff recruitment, recruitment, management, and professional training. The personnel management system manages employee pay and oversees deductions, payroll rules, and related payslips. Overall, the HR department's improved ERP helps HR staff carry

out their day-to-day operations seamlessly and save a lot of time, increasing their productivity. The HR module in ERP automatically performs the normal functions of the HR department and saves a lot of time that can be used to develop better strategies to engage and benefit employees.

G. Account Management: - The account management system automatically uses multi-program accounting and accounting for a limited number of financial years. The financial module integrates payments with other modules such as stores, hostel, Payroll, and inputs.

1. Financial Management: - The system has a system in place to set different tuition fees for different categories based on salary and allows online payments for students.

2. Student Accounting: - The system has a system in place to set different financial structures for students of different categories based on financial rewards and allows online payments for students. Funds collected from the education curriculum, exams, hostels, and certificates are archived within this university's financial management system module. A small Student Payment Module can generate receipts, challans, and reports; as well.

3. Scholarship and Scholarships: - Based on the type of student/type of admission; very advanced financial management software.

Educational ERP provides additional functionality for storing / editing/managing bursary-related data and revenue. Reports are needed by the media management or government. The software defines stipend types and monthly bill preparations.

4. Budget and Bills:- This sub-module defines flexible budget heads, purchases, and sanction notes. It is integrated with the core accounting module for payments and cheque printing.

H. Library: - Many colleges and universities hold thousands of books and donate the entire institution to them. Library management software is integrated with all ERP higher education modules and is accessible to

multiple users. The library management system handles the following library functions:

- Purchase, Installation, and payment of books
- Identify a unique serial number through the RFID library
- Unique serial number serial identification of books. Details of purchase, identification, search, and distribution are stored on the serial numbers.

I. Hostel: - The hostel management system is designed to manage all hostel activities such as hostel admission, fees, accommodation, dirty space, hostel shops and make related reports for smooth operation. It is also used to manage the monthly mess bill, pay for hostel staff, student certificates, etc. Designed and developed keeping in mind all the hostel management concerns, MasterSoft's Hostel Management Software is the only solution for higher education institutions. From student enrollment to room and dining allotment, managing student census records, and student outings, it makes it easy and automated for all the day-to-day operations of the hostel.

- Hostel infrastructure
- Creating pollution and management
- Registered students
- Eligibility lists
- Room allocation and disadvantages
- Mess bill calculation
- Payment and Payroll

J. Transports: - The administrator has granted access rights to manage transport information accessible to all users. Users can view all routes with the appropriate routes including their pick-up points. The time for the various buses from the pick-up points is indicated in this module.

K. Integration: - Integration means that the modules of higher education management activities are linked; Student data, intelligence, and valuable departmental information can be applied to all college modules. This avoids complete duplication of work.

- User safety through smart cards and biometric technology
- Encrypted login id and user password
- With critical applications authentication of the IP address of your choice is provided for the user to sign in
- The website is password protected
- Separate the web application from the data server
- User access depends on the department and the role of the college user
- Automatic monitoring
- Log files can be created for user transactions
- Data storage can be done through,
 - o Disk screen
 - o Server
 - o Other equipment and hard disks

L. Training and Placement: - The student training and placement program builds a student and company website. This module allows students to review biodata segments and invite companies to be featured. A list of students can be retrieved from the management software website based on the company's selection criteria. The training and management module additionally controls interview schedules, student list announcements, various training records and placement activities, and so on. This educational ERP solution module can grant access rights to departmental staff.

V. RESULT AND ANALYSIS

These are screenshots of the College ERP System: - Admin, Students, Parents principals, and Teachers/Staff can log in by using their IDs and passwords.

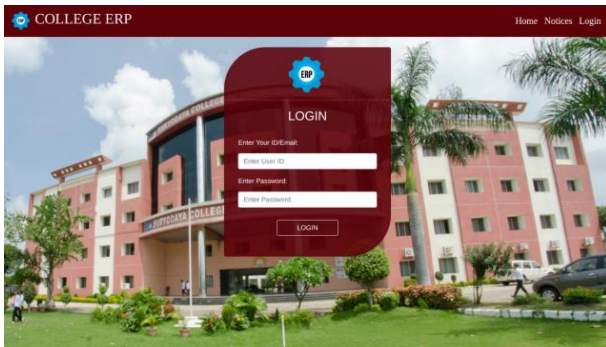


Figure 4. Login page

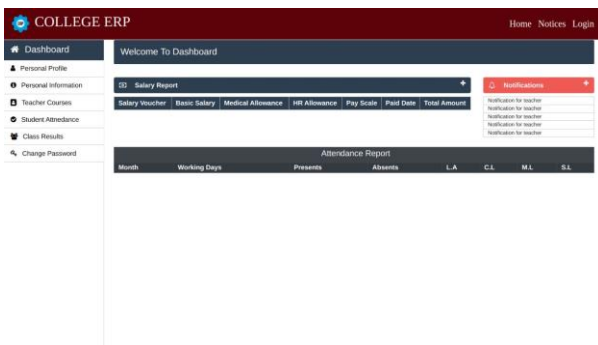


Figure 5. Home Page

This is Admin Dashboard, by using ID and Password admin can access the admin dashboard.

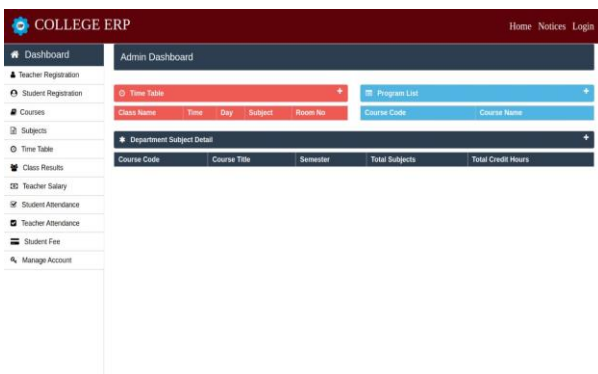


Figure 6. Admin Dashboard

VI. CONCLUSION

With ERP software, every college and university can aim to be transparent to various parties genuinely interested in the institution's running. The list includes names like audit authorities, board of directors, trustees, college unions, student groups, and many others. The data, which will be generated on tested and well-designed software, will be more accurate than data that are processed manually. This will also help the management

stay regular with their updates and maintain a system that is worth evaluation and appraisal. Cloud Next Vision is a leading provider of education software including ERP consultation and implementation for educational institutions. The _ERP system developed by Cloud Next Vision for colleges and universities is characterized by quick access to information, synchronization, and completely automated processes which save time.

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