College-ERP

College-ERP System

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Abstract — The many processes and techniques utilised in gathering requirements, planning, executing, and testing the project on the college management system are detailed in this report. The issues with the college's current system were examined and acknowledged. This project intends to address some of those issues and, as a result, increase the value of the current system. We gathered requirements from all stakeholders and used them to construct a requirements model, which we then used to design the software. The project was created as a website using the Django programming language (python).

We constructed the college ERP system using the different resources and tools we obtained along the process, including certain features that fix present difficulties in the system, such as the ability to alter attendance and marks before locking it at the end. The software was also put through its paces using multiple testing methodologies, with positive results. As a result, the findings can be incorporated into the present ERP system to improve its functionality and address some of the issues that have arisen.

Keywords — Business Marketing;Innovation in Business;College Erp ERP; ODOO ERP;SA;SAP ERP;ERP System, Case Study, ERP Survey, Enterprise Resource Planning, modules, Management System

INTRODUCTION

The goal of the College Information Management System is to give administrators of any organisation the opportunity to modify and find out a student's personal information while also allowing the student to maintain his profile up to date. It will also make it easier to maintain track of all of a student's information, such as their ID, name, mailing address, phone number, and date of birth. As a result, all of a student's information will be available in a matter of seconds. Overall, it will make the administrator's and students' jobs easier when it comes to Student Information.

This project's major goal is to demonstrate the project's requirements for the College Information Management System and to assist any organisation in maintaining and managing personal data. It's a large-scale initiative that was built from the ground up to meet the needs of institutions in guiding their pupils. This integrated information management system combines daily operations in the college setting, from attendance management to student-teacher communication.

This minimises data entry errors and guarantees that information is always current across the campus.. It gives you a single data repository to streamline your procedures and for all reporting needs. It offers a basic and intuitive user interface. As a result, users will spend less time learning the system and, as a result, will be more productive. Effective security measures ensure data privacy and, as a result, boost productivity.

- ➢ A case may store a large amount of data.
- ➢ The management of files is quick and easy.
- ➢ Records are updated on a regular basis.
- ➢ It is possible to easily edit stored data and operations.
- ➢ Cases can be used to generate reports.
- ➢ Calculations are made with precision and accuracy.
- ➢ The number of people employed has decreased.

Why do we need ERP?

Nowadays, in schools and colleges, it is very difficult to manage each and everything manually. Supervising and maintaining the whole database of a school or college can be time-consuming and challenging especially if it's done on a regular basis. So, we need to handle and manage everything smartly. To solve this problem ERP(Enterprise Resource Planning) is used. ERP software makes it easy to track the progress of every department of school and automate different functions. With ERP everything can be seen on a single dashboard. The administrator can manage the college from anywhere. The possibilities of maintaining the whole database of a college with ERP software are endless.

Some of the prominent roles of ERP are:

- Manages the office and automates different functions.
- Helps in long-term management and planning of all departments of college.
- Eliminates the need for having multiple management software for each department.
- Daily activities like attendance can be digitized and automated.
- Leave modules for teachers can be automated.

Introduction to problem domain

A college, as we all know, is made up of various departments, such as course departments, fees management, library management, and event management, to name a few. In comparison to the past, the number of applications and uses of information technology has expanded, and each of these unique departments now has its own computer system to perform their own functions. They can interact with one another from their own systems if they have a valid user id and password.

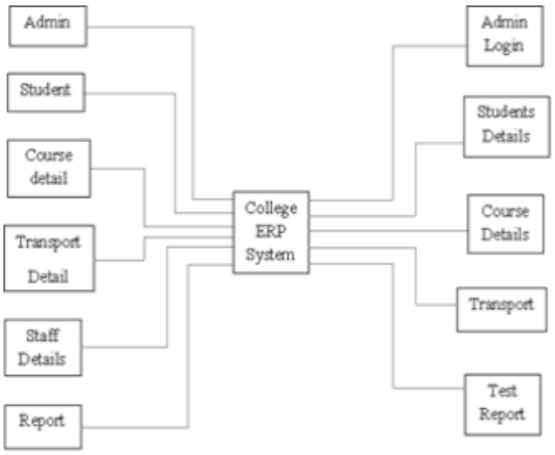
Aim of the problem

The goal of the College Information Management System is to give any organization's administrator the capacity to update and find out a student's personal information while also allowing the student to maintain his profile up to date. It will also make it easier to maintain track of all of a student's information, such as their ID, name, mailing address, phone number, and date of birth. As a result, all of a student's information will be available in a matter of seconds. Overall, it will make the administrator's and students' jobs easier when it comes to Student Information. The major goal of this project is to demonstrate the project College Information Management System's needs and to assist any company in maintaining and managing personal data. It's a large-scale initiative that was built from the ground up to meet the needs of institutions in guiding their pupils. This integrated information management system combines daily operations in the college setting, from attendance management to student-teacher communication. This minimises data entry errors and guarantees that information is always current across the campus. It gives you a single data repository to streamline your procedures and for all reporting needs. It offers a basic and intuitive user interface.

SYSTEM DESIGN

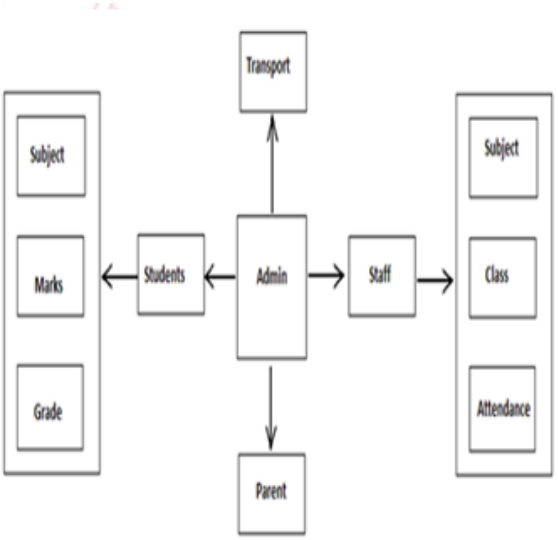
Problem Statement in Detail: The College ERP software system will include student, financial aid, finance, personnel resources, and advancement, as well as a collage data warehouse, reporting and analytics, workflow, document management, and a student, professor, and staff portal. The implementation services comprise technical services, data migration and conversion services, integration services, database administration services, and system/end user training.

Architecture of the System: In software engineering and systems engineering, a System Diagram (SD) is a diagram that depicts the external actors who may interact with a system. This diagram depicts a system's high-level view. SDs depict the overall state of a system, which is frequently software-based, as well as its inputs and outputs from/to external elements. System Diagrams are diagrams that are used in systems design to illustrate the more relevant external factors that interact with the system in question.



Core Modules

- Admin
- Student
- Staff
- Parent
- Transport



Module for Administrators

The system's access rights are all in the hands of the administrator. Student Admission, Staff Registration, Academics, SMS gateway, Transportation, and Class Routines are all managed by the administrator. He begins by listing all of the employees in each department. The classes are then added, and the appropriate staff member is assigned as a class coordinator. All the manual working of Admin is skipping through this system.

Workflow:

1. Start
2. Login
3. Add/Delete Staff
4. Add/ Delete / Edit Course
5. Add/delete/Edit Class
6. Add/delete/Edit Student
7. Add/Edit Class Routine
8. Manage Transport
9. Manage Notice Board
10. Manage SMS.
11. Manage Dormitory
12. Logout
13. Stop.

Module for Students

Administrators are the only ones who can admit students to the system. Admin generates usernames and passwords when he is admitted, which can then be maintained by the student. Students have access to their personal profile, current attendance record, Class Tests records, Daily Class Routines, and any alerts and forthcoming activities handled by the administrator.

Workflow:

1. Start
2. Login
3. View personal information
4. View subjects
5. View teachers
6. View marks
7. View class routines
8. View transport
9. View notice board
10. Logout

Module for Employees

Admin registers staff members and generates login credentials for them, which may then be managed by staff. Staff members have full access to all of their subjects' data in their respective classes. They can keep track of all pupils in their particular courses and classes on a daily basis.

Workflow:-

1. Start
2. Login
3. View student information
4. View/Edit student's marks
5. Manage daily attendance of students
6. Add notes
7. View subjects
8. View personal class routine
9. View transport
10. View noticeboard
11. Logout
12. Stop

Development Life Cycle

SPECIFIC REQUIREMENTS

1. Requirements for the external interface:

- simple, appealing, and user-friendly;
- self-contained,consistent,and self-explanatory

  Robust is a word that comes to me when I think of robustness.

2. The system's main modules:

Buildings/Blocks:

- This module provides information about

the buildings/blocks on campus: It includes information on the overall number of blocks on campus as well as the number of rooms in each of those blocks.

- **Laboratories:** This section contains information on the number of laboratories in each department.
- **Buses:** This is the number of buses that the management has deployed.
- **Library:** students can borrow/return and can view status of books present in the library

Administration: This module is mostly concerned with,

- **Admission:** This is mostly concerned with registering students and employees and issuing them a login id and password.
- **Accounts:** This keeps track of the college's financial information.
- **Hostel:** It provides information about both boys and girls' college hostels.
- **Bus Routes:** This section keeps track of the bus routes.

Department Information: This module gives the information about,

- **Course:** This contains the information about the number of the courses offered by the college and number of seats present in each.
- **Staff:** This contains the number of staff available in each department.
- **Infrastructure:** This has the details of the assets allotted for each department.
- **Syllabus:** This provides the academic syllabus of the students from different branches.

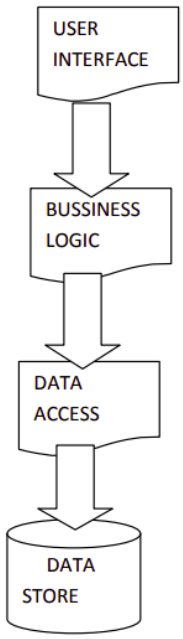
Staff Information: This module is primarily concerned with,

- **Profile:** This section contains information on the employees' personal lives.
- **Attendance:** This informs the personnel of his or her attendance.
- **Salary:** This section contains information on the employee's pay.
- **Feedback:** This feature enables the staff to provide feedback to the management.
- **View Student Details:** This provides the staff to view the student details.

Information for Students: This module provides information on,

- **Profile:** This section contains the student's personal information.
- **Attendance:** This gives the student information on his or her attendance.
- **Marks:** This shows a student's internal and external grades.
- **Feedback:** This tool allows students to offer management with feedback.
- **Remarks:** This section contains the faculty comments regarding a student.
- **Change Password:** This option allows the student to change their password.

ARCHITECTURAL STRATEGIES: A software project's architectural design is essentially the design of the entire software system. This contains the module hierarchy as well as the modules that are present in the system. A good architectural design will strike a good balance between cohesion (each module serves a single purpose), coupling (no two modules are completely dependent on each other), abstraction (seeing modules in their entirety rather than in detail), hierarchy (logical modules are derived from others), and partitioning (logically grouping modules together) of software modules.



CONCLUSION

The project entitled as College Management System is the system that deals with the issues related to a particular institution.

- This project is successfully implemented with all the features mentioned in system requirements specification.
- The application provides appropriate information tousers according to the chosen service.
- The project is designed keeping in view the day today problems faced by a college

As a result, the administrator's primary challenge of maintaining and controlling work is resolved. Prior to this, keeping track of the daily routine and maintaining the time table was a bit of a pain. However, by creating this web-based application, the administrator can enjoy the task, complete it with ease, and save time.

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