

College ERP System Using Python Django Framework

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Abstract

There are different parts of a college, and each part stores all the info about students and the college's database. These parts are connected together, but the college's current system is having issues with interconnectivity and repeating data. To fix this, we've come up with a college ERP System that's automated and centralised. It's easy to use and has a strong data management system, so it's really useful.

Keywords: ERP system, case study, ERP survey, enterprise resource planning, modules, managementsystem

1. INTRODUCTION

The main goal of the current system is to make it easy to use. The college ERP system is now computerizing all the information that is manually maintained. Once the information is fed into the systems or computer, there is no more need for different people to deal with different sections. Only one person is sufficient to keep all the information and records. Security can also be added according to the user's needs.

- High volumes of information can be saved with a case.
- Maintenance of the file is smooth and efficient.
- Records are constantly updated.
- Editioning of stored data and procedures is simple. Reports can be created with the help of cases. Accurate and precise calculations are achieved. Manpower is decreased.

2. PROBLEM STATEMENT

The core modules/components of the College ERP solution include: Student, Financial Aid, Finance, Human Resources, and Advance College Data Warehouse, Reporting and Analytics, Workflow, Document Management, and Student, Faculty, and Staff Portal Implementing Services: Technical Services, Data Migration and Conversion Services, Integration Services, Database Management Services, System/End-User Training

3. LITERATURE SURVEY

ERP stands for "Enterprise Resource Planning". It's business management software, or a system that's usually used to manage the core department data of the business. ERP provides a real-time view of the business processes using common databases that are maintained by the database management system. The ERP system tracks business resources—raw materials, cash flow, production capacity, and status of business liabilities such as payroll, purchase order, and order status. The application that makes up the system shares data across the different

departments (Purchasing, Accounting, Sales, Manufacturing, etc.) that provides the basic data. ERP facilitates the flow of information between business functions, and manages the connections to external stakeholders. It ensures accurate and perfect calculations, and reduces manpower.

Every college has to keep a management system for different sections which may include: Performance analysis Attendance system Test wise result Student information Fee structure Academic information Transport facility Staff information Managing all these sections on paper becomes very tedious and complicated. In such a system, there is a high chance of misplacing the collected data. To overcome these drawbacks, a College ERP system needs to be designed and implemented. A College ERP system allows a college staff to track a student profile across all aspects of an academic course. It allows for accurate and perfect calculations. Manpower is reduced.

College ERP is an online, web-based system that provides a user-friendly and aesthetically pleasing interface for the college. The objective of the deployment and implementation is to replace the manual system of the colleges with the help of an automated web-based system. The College ERP also manages the data well and efficiently, which is stored for a long time. College ERP provides a single point of access to all the administrative system of the colleges. In the previous systems, all the departments work independently and independently. If someone wants to access the data together, then it cannot be done with such systems

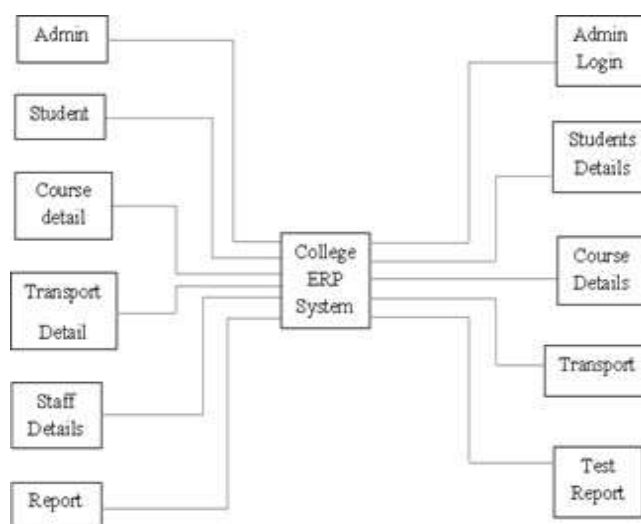
System analysis of such system indicates that all the bookings were done manually on the registers, which is a very complex task. Also, report generation of all the records was not possible under the current system. Also, the work of the college was done manually and stored in the college. All the data is maintained through the register or the file system of the college..

The current working method is based on a manual system where all the information is first collected from the relevant staff members and then inputted into the registers/files. This process is very complicated and time-consuming. The current system also depends on the students. If the students are not present, then the performance of the student will be impacted. Due to the large amount of data, there are many challenges in maintaining, update and retrieving the selected information. As the previous system was completely maintained by manual means, some challenges in the current system are as follows:

4.SYSTEM ARCHITECTURE

If you're in software engineering or systems engineering, a system diagram is a way to show the people and things outside of a system that can interact with it. It's like a high-level view of the system, usually software-based. A system diagram shows the system as a whole, and the things that can and can't happen to it. A system diagram is used to show the external factors that affect the system, and how they interact with each other. It's like having a picture of the system in the middle, but without any details about its inner workings. The goal of a system diagram is to show all the different things that can affect the system, so you can figure out what needs to be taken into account when designing a system.

- Requirement of the data collection: will be performed using two dataset are Training data and Testing data. The image gesture or sign is captured using the laptop camera or the external device webcam to get better image clarity.
- Preprocessing : In the context of applying deep learning algorithms to a dataset, preprocessing is an important step that involves preparing the data before feeding it into the algorithms. Preprocessing techniques can help improve the accuracy of deep learning models.
- Feature Extraction:feature extraction is a crucial step in utilizing neural network algorithms to analyze image data.
- Results analysis: Applying the image processing technique, such as the image segmentation or object detection algorithms, to identify and extract regions of interest (ROIs) that potentially contain signs or gestures in the captured test images.
- Set Node: The setmode is a decision function best on two mode such as: Mode_1(Input Image) and Mode_2(Speech to text) .



5. EXISTING SYSTEM

In this section, we'll look at the existing system and some of the drawbacks that prompted us to even consider the idea of developing a college ERP system. For instance, let's look at one example: Institutions initially hire large numbers of employees in order to track the number of students, teachers, and other staff members, as well as employee wages and student fees..

If a student wants to apply for a fee, they have to go to the desk, pay the fee, wait 1-2 business days for the fee to be updated, and then go back to the desk to check the status. Because all the records are stored on cards and file, there's a risk that the records will be lost.

Let's say after a month, a student asks, "Where are my fees now?" The worker will need to open his file and search for the student's name manually, which will take a long time. Suppose we want to organize an event in the college, we will need to make banners and posters, and advertise it in the classroom to get more students to participate, but if the student is absent on the day in question, he won't get any notice.

6. PROPOSED SYSTEM

College ERP is intended for any college that wishes to replace their current manual paper-based system. The purpose of the new system will be to manage the information of students, faculty, courses, departments, etc. These services will be delivered in an efficient and cost-effective way. The aim is to reduce the time and resources currently required for these tasks.

7. INOVATION

A college ERP system is an online web-based system that offers a comprehensive solution to manage multi-level processes in higher education institutions. College ERP systems replace manual systems with an automated web-based system. They offer a user-friendly interface for managing various student, department, faculty, library and more information.

There are several College ERP software solutions available in the market today. Some of the top college ERP software solutions in India include Birlamedisoft medical college campus management software, swastin cloud ERP – school & college, rushda college management software, qualsoft eCollege, augurs college management, sonet college ERP and edys2.

8.METHODOLOGY

A methodology is a set of tools, templates, deliverables and artifacts developed and executed by an ERP project team to organize, plan and manage the implementation of an ERP system. You can think of a methodology as the road map where the actual implementation work starts¹.

There are a variety of ERP system selection methodology on the market, including Kuiper's funnel, Dobrin's 3D web-based Decision Support tool, and Clarkston's Potomac methodology.

9.OBJECTIVES

College Information Management System is designed to make it easier for administrators and students of any organization to access and edit personal information about students, and for students to stay up to date with their profile. It'll also make it easier to keep track of student info like IDs, names, mailing addresses, phone numbers, and DOBs, so all the info about a student is ready to go in seconds. All in all, it'll make Student Information a breeze for administrators and students.

This project is all about showing what's needed for the college information management system. It's designed to make it easier for any organization to keep track of personal info. It's a whole-system project that's been built from scratch to help colleges manage their students. It links everything from attendance management to communication between students and teachers, so you don't have to worry about data errors. Plus, it's a one-stop shop for all your data needs. It's easy to use, so users don't have to spend too much time learning the system, which helps them be more productive. Plus, it has strong security features to protect your data, so you can be more secure.

10.ADVANTAGES

The proposed system has the following benefits:

1. Benefit of the proposed design is that the admin can add and maintain all the details of the staff students course departments.
2. Reduces paper work.
3. Provides accuracy.

11. DISADVANTAGES

1. Data set is too small to effectively train using bigrams or trigrams.
2. The present system has only been trained on a very small vocabulary.

RESULTS

The purpose of these systems is to replace the manual systems with the automation of the web-based system. These systems provide a user-friendly interface for the maintenance of various information about students, departments, faculties, libraries and more. Features of these systems are as follows: Online admission process management Enrollment management Attendance management Online fees management Grades assignments management Library books management Online marks Reports on student performance².

FUTURE WORK

There are many future scopes mentioned below:

- In future our system can include Online Accounting System, Good backup and Restore facility.

- System is so much flexible so in future it can increase easily and new modules can be added easily.
- You can add online student admission as well pay online fees.

12. CONCLUSION

Maintaining and managing work for the administrator is now easier than ever. Before, it was a pain to keep track of the schedule and keep track of the time. But now, with this web application, the administrator can do it easily and save a lot of time. They don't have to do manual calculations, they can get reports regularly and whenever they want, and they can share the work and get accurate results. Plus, the storage facility will make the operator's job easier. So, the system will help the administrator by making their job easier.

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