Enterprise Resource Planning (ERP) System

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Abstract

ERP System which is automated and centralized provides a User friendly interface for maintenance of different student, department, faculties and others information. The system allows the admin to add students, faculties and any other events. Every college has number of departments and educational modules such as courses, seminar hall, etc. Managing all these departments and other modules manually is a very difficult, hard, ineffective and expensive task. Faculty also update subject list, view exam paper and also check the fee status of student. The students can view his/her fees status, gives feedback and online exams through a separate student login. The admin can upload the Fees structure, he also can remove faculty if that faculty no more belong to the college, admin can also set the feedback and online exams questions. The feedback and online exam questions is then available to be viewed by faculties and students on the web portal to perform their desire task.

Keywords — *ERP, System, Modules, Automation, Web Based, etc.*

I. INTRODUCTION

Enterprise Resource Planning System is a server based online platform which performs different operations. Enterprise Resource Planning mainly focuses on data manipulation. ERP System is online web based service which provides simple way of communication between users. ERP system has attractive and simple user interface. Every user needs an authentication to login and new authorized users can create their own account and update profile when required. One of the important part is administrator who sets the environment and required fields in system. Administrator has all rights and privileges to modify the system when required.

Main Objectives of ERP-
1. DesigningWeb based application which is hosted on server which will manage Clients.
2. Accessing data from database.
3. Authenticate to the user and then only give access to user.
4. Manage the data of institute through Admin.
5. Maintaining records in database.
6. Student feedback.
7. Report Analysis.
8. Attendance and leave Management.
9. Responsive Web based application.

II. Motivation

Motivation of the project is to design the dynamic web application which can allows an institute to use a system of integrated applications to manage the different operation of it and automate many back office functions related to technology, services and human resources.Also provide a smooth platform for the enterprise and keep each element of the institute connected.Focuses mainly on reducing the paperwork and maintaining the confidentiality of data.

III. Literature Survey:

[1] Paper Name: LEARNING THROUGH ERP IN TECHNICAL EDUCATIONAL INSTITUTIONS

Author: Shivani Goel and Ravi Kiran

ERP has become an integral part of all technical educational institutions(TEIs). ERP system can serve as a method to obtain high integration for management system of TEIs for the betterment of increasingly complex managing operations. ERP for institutions usually support academic , administrative and research activities which helps teachers, staff, students, researchers, top management and other human resources to learn in a collaborative manner. Various forms of learning are collaborative learning, cooperative learning and e-learning. The learning is actually done through communication. This paper discusses various design principles to be included in ERP system for institutions for successful collaborative learning, cooperative learning and e-learning.

[2] Paper Name: E-COLLEGE: AN ERP FOR EDUCATIONAL INSTITUTE

Author: Avinash Gutte, Nikhil Kate2, Ajayraj Hulikere

ERP systems way from the manufacturing sector are entering rapidly into universities and colleges. ERP now is experiencing the transformation that will make it highly integrated, more intelligent, collaborative, and web-enabled. Reason for choosing ERP for education are accessing information from paper files is difficult task, lack of means to access old records, wastage of hundreds of hours by staff each month manually entering information or performing task that could be handled automatically like evaluation generating results. E-college will solve these lacunas and help educational institutes to save their valuable time.

[3] Paper Name: ENTERPRISE RESOURCE PLANNING IN TECHNICAL EDUCATIONAL INSTITUTIONS: BENEFITS AND COST Author: Ravi Kiran and Deepak Garg Enterprise Resource Planning (ERP) systems are widely used in technical educational institutions (TEIs) since last two decades. Though many benefits are expected from success of ERP implementation but overall success depends on various cost factors involved. The objective of this paper is to identify various benefits and costs associated with enterprise resource planning implementations in various universities.ERP systems are becoming an integral part of TEIs. Many TEIs have implemented ERP systems for many benefits: to replace the older legacy systems with centralized ERP systems, to modernize the campus IT environment, for better services for students and staff, for better information for management and planning, to have the potential to decrease business risk and to increase revenues by lowering costs through improved efficiency.

[4] Paper Name: COLLEGE MANAGEMENT SYSTEM

Author: Srikant Patnaik, Khushboo kumari Singh, Rashmi Ranjan and Niki Kumari ERP systems way from the manufacturing sector are entering rapidly into universities and colleges. ERP now is experiencing the transformation that will make it highly integrated, more intelligent, collaborative, and web-enabled. Reason for choosing ERP for education are accessing information from paper files is difficult task, lack of means to access old records, wastage of hundreds of hours by staff each month manually entering information or performing task that could be handled automatically like evaluation generating results. E-college will solve these lacunas and help educational institutes to save their valuable time.

IV. Mathematical Model

According to this project the mathematical model as follows:
Here, Input= I1, I2, I3, I4
I1= Name of Student.
I2=Email of student.
I3= Contact Details.
I4=Category of student.
OUTPUT = O1, O2
O1=Report generate on student feedback.
O2=Exam results.

FUNCTIONS = P1, P2, P3, P4
P1=Student Registration.
P2= View Student Record.
P3=Feedback.
P4=Set Exam Paper

Student do the registration and system automatically update's in the data base and can be grouped according to respective class and generate the roll call list or assign the roll no to that particular student.
All student records are view by Admin, HOD, management and staff. Using all this records staff can maintain the further records of the students i.e. Attendance, marks, fees status etc.
ConstraintsX1, X2:

X1:- administrator or head of department must be login in our system
X2:-Detail Information about student.
Decision vector Q1:
Q1=ID (Email Id)
Constraint satisfy R1, R2, R3
R1: Using system
R2: Using database and
R3: Using results.

Actual set of system is S=I1,I2,I3,I4,O1,O2,P1,P2,P3,P4,x1,x2,Q1,,R1,R2,R3.

V.   System Architecture:

The client can get access to there account through the ERP interface as shown. The client can access the interface by using Computer, Mobile or Laptop connected in a LAN. The server contains all the users details and account details.

   a.   USER/STUDENT

ERP System accepts all information of user and stores in database. After login user will able to update profile and will get information regarding various activities held in the institute.

   b.   STAFF/TEACHER

Staff can perform the operations as user account performs and additionally provides information to users. Staff can also view every user profile. Staff also includes Head of Department and Director.

   c.   ADMINISTRATOR

Administrator is a key member of the institute who create an environment for every user to allow access into ERP System. Administrator regularly updates the system and provides every information.

   d.   OFFICE

Office user is different from all other users. Office can perform limited operations as fees updates, scholarship updates, exam forms, leaves, etc. They have user interface and keep regular updates as required.
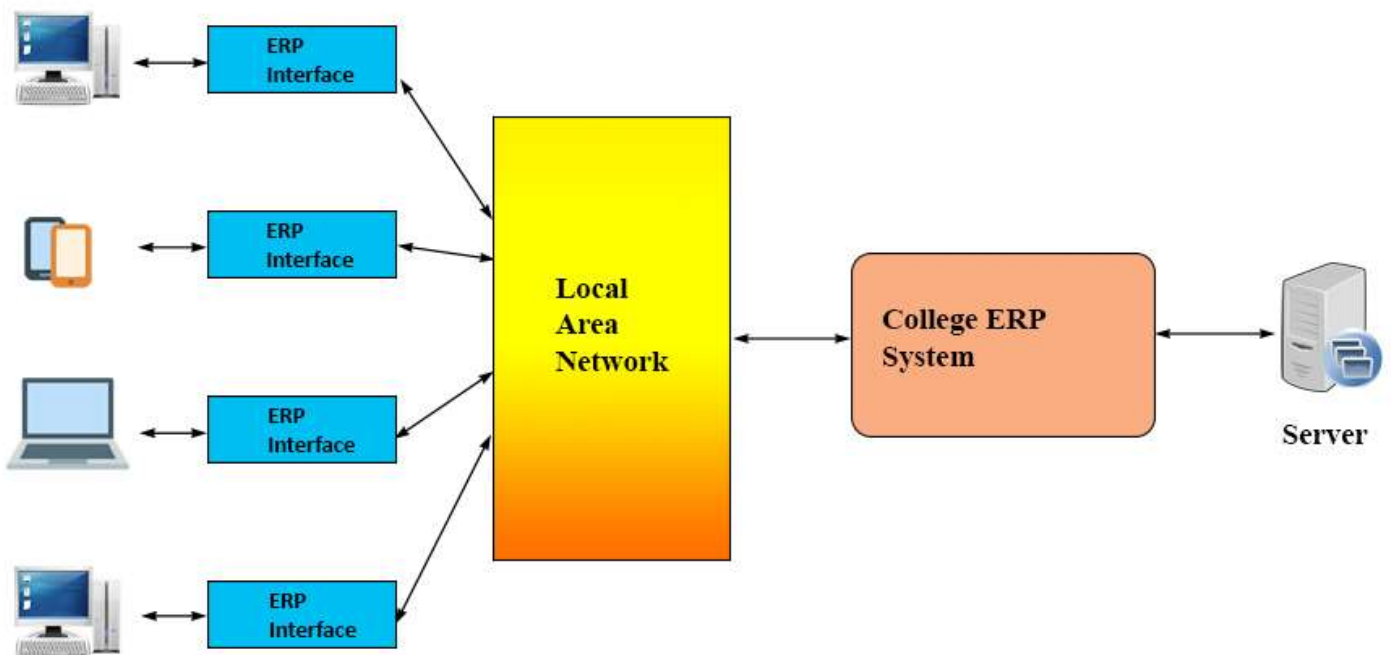

Fig –Architecture Diagram

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(B.E. COMPUTER ENGG.)

VI. CONCLUSION:

Paper states the automating system instead of manual system which is faster in all aspects. Hence, it is monitored and controlled remotely. This also reduces the man power required. Automating System has strong backend server which helps user to access, retrieve and perform different operations faster. This system uses highly secure database hence provides high security. Daily updates, news, notices are communicated easily just requires internet connection.
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