ERP System For Automation of Computer Engineering Department

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Abstract- In our Technical Institution there are various departments in which the information related to the students and faculties is managed by the authority. The interlinking of the data became complex work. The current system has the problem of interlinking and data repetition. Department has number of modules. Managing all those modules manually has become a very tedious task. So, to overcome this problem we propose a system named "ERP System for the Faculty of Computer Department". ERP for Computer Engineering Department focuses on managing various parameters such as students, student association activities, faculties, academic records, departmental library, Training & placement cell and other information. Our department ERP will consists of all the records about the students, teachers, events, departmental library, and other respect information. It will generate the reports by analyzing the data which is updated by the respective authority. This report generation will be helpful for accreditation like NAAC & NBA. Authorized person can update and review their data from anywhere. This ERP will have user friendly interface and powerful data management mechanism.

Keywords- RP, Admin, Database, Student, Faculty

I. INTRODUCTION

Enterprise Resource Planning (ERP) web application is the one kind of web application which integrates all the modules and functionalities of department on a single system that can be handled by the administrative head and access by the students and faculties with valid user id and password. As we know that, a department consists of student's management, faculty management, library management, event management etc. Nowadays application and usage of information technologies is increased as compared to before. If we have a centralized and automated system then we can interact with each other by having valid user id and password.

The main goal of our system is to provide a user-friendly interface and powerful data management system to all registered users. In existing system, they are maintaining different types of files for managing their data. These files may contain redundant and duplicate data.

The ERP will maintain all these data on one site so that the data maintenance work will be reduced and we will get all records at one Place. Also the human error can be reduced in report generation. Once the details are entered into the system by the authorized person then there is no need for other users to deal with separate section.

Only a person that is having an administrative authority is enough to maintain all the reports and records of the system. It also displays the report which will analyze from the updated data. The security will be provided as per the requirements. The main thing is that our system will reduce the human works at a great extent.

It will be helpful such that –

- Manpower will be reduced.
- Large amount of data regarding department and their modules will be stored.
- Data duplication and redundancy will be avoided.
- Records updating as and when required.
- Accurate report generation will be possible.

II. METHDOLOGY

A. Outline of proposed System:

ERP stands for Enterprise Resource Planning. Our system consist of eleven modules,

- Student: This is also one of the core and important module in our system. Students are admitted by admin only to. When he got admitted the username and passwords are generated by admin and can be managed by student afterwards. Student has access to personal profile, current attendance record, Exams result records, Daily Class Routines and all the notifications and upcoming events which are managed by admin.
- Faculty: This is core and important module in our system. This includes our teaching as well as non-teaching staff. Admin will enroll the faculty and then faculty will update their information. It consists of

Profile information, their publications in national and international conferences, extra achievements and their awards, academic planning, their conducted and attended workshops or seminars. It also includes the service maintenance staff. This have the information related the profile of respective person such as qualification, experience, etc.

- Academics: This module includes academic calendar, study material, academic letter also displays the news related to the academics.
- Infrastructure: It includes overall information about labs, Server room and classroom. Lab section contains information about equipment like computers, printer, projectors, and scanners. Classroom section contain no of benches and other things.
- Students Association: This association works for student's curriculum & extra curriculum activities.
- Exams: this module contains timetable for exam, important questions and result of the examination.
- Departmental Library: This module consists of the records of books exchange like borrowing the book or returning the book.
- Project: This section includes the previous project list according to year and domain. Templates of documents required for projects.
- Training and Placement: It includes news regarding pool campus. It maintains the information of the eligible students and also about the alumina.
- Research & Development and Consultancy: It includes overall information about technical research and development done by faculty and student.
- Report Generation: This module includes the overall report of the students as well as the faculties. This module is the frame of automation.
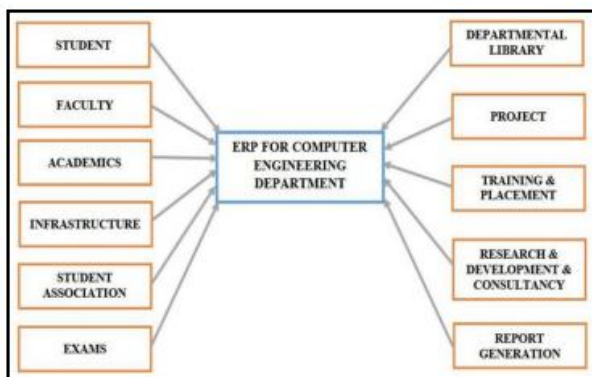
B. System Block Diagram

Fig 1: Block Diagram of System

C. Method of data collection

We have collected the requirements for our ERP from the faculties of computer engineering department. The method of collection is conducted using paper pen strategy. The data will be filled or updated by respective person after deployment of ERP. Following figure explains the overall flow of ERP system with the help of flowchart.
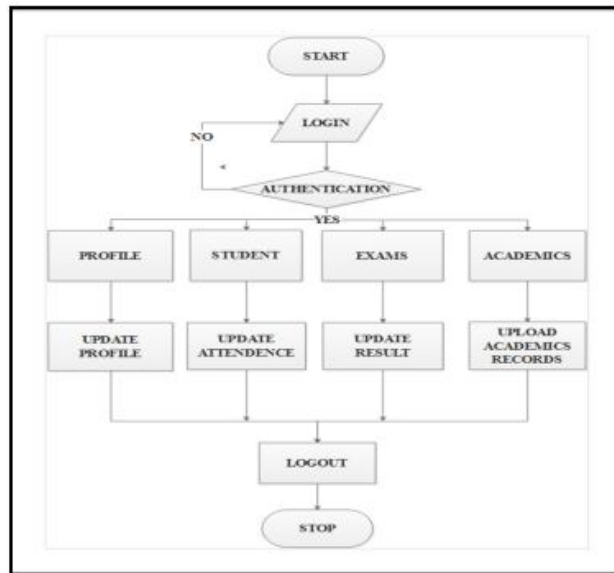

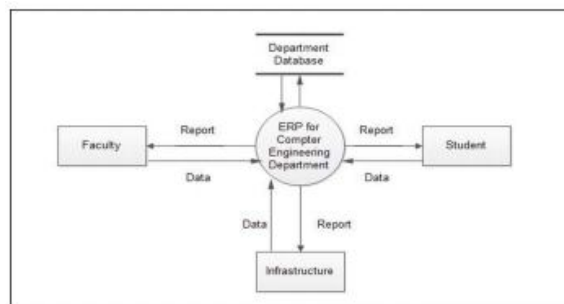Fig 2: Flowchart of ERP System

III. DESIGN DETAILS

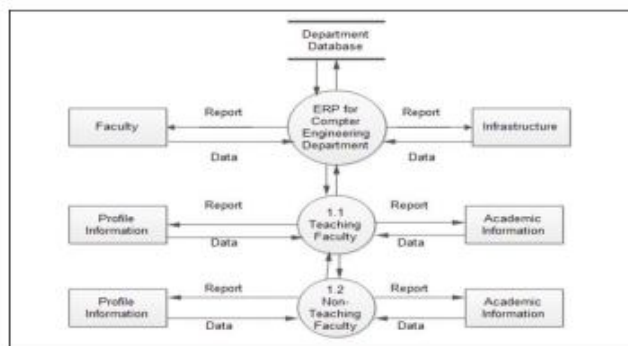Fig 3: Level-0 DFD for ERP System

Fig 4: Level-1 DFD for ERP System

IV. CONCLUSION AND FUTURE WORK

The project entitled as ERP System for the Faculty of Computer Department is the system that deals with the management and automation of the department. This project is partially implemented with some of the features as per requirements. The application will provide appropriate information to users according to the chosen service. This ERP will generate the report by using the updated data. This automation will make this ERP very efficient to work on data regarding the various activities. The project will be designed keeping in view of the day to day problems faced by a department. The fundamental problem in maintaining and managing the information by faculty will be overcome

V. ACKNOWLEDGEMENT

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