



Institutional Quadro: College Based Educational Portal

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ABSTRACT

There are many departments of administration for the maintenance of college information and student databases in any institution. All these departments provide various records regarding students. Most of these track records are needed to maintain information about the students. This information could be the general details like student name, address, performance or specific information related to departments like collection of data. All the modules in college administration are interdependent. They are maintained manually. So they need to be automated and centralized as, information from one module will be needed by other modules. This project is useful for easy user interface. The system utilizes the powerful database management, data retrieval and data manipulation. This project provides easy way for managing the data than manually maintaining the documents.

Institutional quadro gives a straight forward interface to support of student data. The creation and administration of error less, exceptional data in regards to a student scholarly profession is discriminatingly paramount in the colleges and in universities. Institutional Quadro manages all sorts of student details, academic related reports, college details, fee details, faculty, results, batch details and other resource related details too. It tracks all the details of a student from very first moment to the end of the course which could be utilized for all reporting purpose, progress in the study, completed semesters, years, coming semester year curriculum details, fee details, project or any other assignment details, final exam result and all these will be available through a secure, online interface embedded in this Quadro.

1. INTRODUCTION

The design and implementation of a comprehensive institutional quadro and user interface is to replace the current paper records [1]. College Staff are able to directly access all aspects of a student's academic progress through a secure, online interface embedded in the college's website. The

system utilizes user authentication, displaying only information necessary for an individual's duties. Additionally, each sub-system has authentication allowing authorized users to create or update information in that sub-system. All data is thoroughly reviewed and validated on the server before actual record alteration occurs.



In addition to a staff user interface, the system plans for student user interface, allowing users to access information and submit requests online thus reducing processing time. All data is stored securely on SQL servers managed by the college administrator and ensures highest possible level of security. The system features a complex logging system to track all users access and ensure conformity to data access guidelines and is expected to increase the efficiency of the college's record management thereby decreasing the work hours needed to access and deliver college records to users.

Previously, the college relied heavily on paper records for this initiative. While paper records are a traditional way of managing student data and college data there are several drawbacks to this method. First, to convey information to the students it should be displayed on the notice board and the student has to visit the notice board to check that information. It takes a very long time to convey the information to the student. Paper records are difficult to manage and track. The physical exertion required to retrieve, alter, and re-file the paper records are all non-value added activities. This system provides a simple interface for the maintenance of student information. It can be used by educational institutes or colleges to maintain the records of students easily. Achieving this objective is difficult using a manual system as the information is scattered, can be redundant and collecting relevant information may be very time consuming. All these problems are solved using online institutional quadro. The paper focuses on presenting information in an easy and intelligible manner which provides facilities like online registration and profile creation of student's thus reducing paper work and automating the

record generation process in an educational institution.

2. LITERATURE REVIEW

Review of literature is an early step for conducting research. It enables to avoid the duplication of research work and broadens the understanding of the research problem. Various research studies related to the present research problem "A Study of the Use of Libraries of Colleges of Education in Punjab" has been conducted in India and other countries of the world (2005). These studies relate to the different aspects of libraries particularly college libraries, including library administration, finance, document collection, library staff, services, physical facilities, use of libraries by students, research scholars and teachers, their information seeking behavior, use pattern and user's satisfaction with the resources and services of libraries, etc. In this chapter, a review of the selective and useful studies related to the research problem has been attempted.

Many institutions have their own management system which provides some facilities online but they do not provide all these facilities. In recent years, there has been an enormous growth in the areas of online courses and virtual schools, customizing instruction to the meet the needs of individual students. According to the Education Week Research Center (as cited in Fox, 2005), 22 states have established state virtual schools and 16 states have at least one cyber charter school (Technology Counts, 2005). During the 2003-04 school years, the Florida Virtual High School became the state's 73rd school district. This is the largest state-sponsored



online high school and gets state funding through per-pupil costs, just like other districts (Technology Counts, 2005).

In early days College management system used to manages all the details manually. Which is difficult in conventional management system which maintains the records manually, which slows the operation of storing, retrieving of records from the files, also led to drawbacks like data redundancy and inconsistency.

In the existing college management system there is no such facility by which we can complete admission process online, registration of hostel online, online exam and which provide all detailed information related to academic as well as non-academic sections of college.

3. CHALLENGES

In case of manual system they need a lot of time, manpower etc. Here almost all work is computerized. So the accuracy is maintained. In early Days College system used to manage all the details manually which slows the operation of storing, retrieving of records from the files, also led to drawbacks like data redundancy and inconsistency. This project is based on carrying out various tasks which goes under college management. It will control all activities for a particular college. To handle all the tasks, system has been divided into different module.

In the existing system the manual process receiving data's from student and staff details are done through manual records. These records are entered in manual process. In these process it takes long time, separate workers are needed to maintain the database.

All the college details are stored via separate database. It will take long time due to this process time waste, money waste etc. In this process it is very difficult to maintain the fees and accounting reports of college in proper way.

The main objectives of the existing system is to provide a user friendly interface. The system which is proposed, now computerizes all the details that are maintained manually. Once the details are feed in to the computer there is no need for various persons to deal with separate section. Only a single person is enough to maintain all the reports. Thus the security can also be given as per the requirement of institution. Large volumes of data can be store with case maintenance of file is flexible records store data updated now and then. Reports can be generated with case accurate calculation.

In terms of business to save the time and resources the new system will take less time in entering the data, processing it and getting its output. Fewer resources will be used as no large registers, files, Ledgers, pens correctors will be needed or used. To make the processing faster less time will be taken to process the data. This will help to do more jobs in less time. To make the system economical once the money is invested in the system, no further expenditures will be made. While on the other hand, currently the new system needs to invest a huge sum of money when registers, files, pens, etc are bought.

To reduce the number of workers after the system will be computerized only a single computer operator will be needed to operate the system while now more than one workers work in the system. To reduce the space



being used every data will be stored in the computer memory whereas now it is stored in registers and files which are then stored in bookshelves or cupboards and they need a large space. To reduce the work load as the new system will be computerized, the database will be automatically updated at the time of entry. Everything will be done automatically just by clicking few buttons. There will be no need to maintain any files or registers.

In computer-related terms to make it easy to search any record it will be much easier to find particular record rather than opening such huge files and finding a single record from them. To keep the data secure the data will be much secure from any unauthorized access. It will be made secure by using passwords and by taking other security measures. To edit the records and update the database easily Records will be easily edited and the database will easily be updated at the time of entering a record.

To make the backup easily computer systems use hard disks, compact disks, USB's and other means of storing the data so it is very easy to have a back of the system. To minimize the duplication of data there will be no duplication of the data as the computerized will be used. To make the system user friendly the system will be much more easy to use and the operator will feel no difficulty.

Today all the work at the time of admission of the students is done manually by ink and paper, which is very slow and consuming much efforts and time. It is required to design a computerized system, to speed up and make it easy to use system. The administrator

would maintain the accounts of the student and all authorities related to college. The details are given to admin so all the sections work under the observation of the admin. By reducing those drawbacks we create a web based application for managing the college institution.

Now a day in college, student details are entered manually. The student details in separate record are tedious task. Referring to all these records and updating is needed. There is a chance for more manual errors. By developing the system we can attain the following facilities.

- Assessments can now be taken online, providing students, teachers, and parents with instant feedback.
- Technology has provided a huge improvement in the areas of tracking progress, identifying needs, and effectively designing and managing Instructional programs (U.S. Department of Education, 2004).
- The Core purpose of designing this system is to manage the task related to the college students and to reduce time of searching appropriate candidates in college view.
- As most of the work is done manually or it is based on paper work such as notes, library dues, asking for documents etc.
- System is easy to handle and feasible.



- Manual system takes more time. If we include all the work which will be based on online system, then it can reduce time and work. So this system is fast and convenient.

4. Overview:

Intutional Quadro is a system which links the overall entities in the college environment. It is a computerized system which is developed to facilitate the general administration system to manage the various information of student involved in college so that college can access accurate information quickly and easily whenever required thereby improving its operational efficiency and effectiveness. The world of education is changing, so are the ways of imparting them. This is a web-related system that permits us to get the entire knowledge regarding the college, students, faculties etc. Here we would gain the recent and detail knowledge regarding the students and college campus.

This general application planned for aiding the students of an organization for knowing the details on courses, administration, facilities, events, hostels, faculties, placement and all other information regarding the college and the college campus. It also allows the faculty to know his time-table, upload assignments and issue circulars to the students. The administrator would maintain the accounts of the student and staff and upload the current information regarding the campus.

Institutional Quadro synchronizes the working of all the departments. It looks on all aspects of a college, its students, faculties, departments, marks and other co-curricular

activities. It is the easiest way to manage all functionalities of a college. It is a simple yet powerful one joint integrated platform that connects all the various departments of an institution like Student, Examination and Results, Library, Transportation, Administration, Staff details, Online fee management and many more specialized modules.

Main aim in developing this system is to provide an easy way not only to automate all functionalities of a college. Institutional quadro provides one attractive environment where one can manipulate data and information about students and staff easily. Institutional quadro is also useful for schools, universities and training institutes. The system is user friendly and solves the most complex tasks in educational administration. It fulfills all the entire administrative and academic requirements. Institutional Quadra has education's most flexible and interactive scheduling function, thus meeting the communication and information needs of the entire college community in real time.

Institutional Quadro is fully loaded web-based Software. Web based computing method helps in saving money, time, and infrastructure with the help of this software you can manage your entire work hassle free. It's fully integrated software suite, user friendly and tailor-made software which is designed as a complete suite of all modules and features. That's make it more versatile. Its versatile scheduling system allows you to administer all aspects and functionalities of institutional organizations. It gives a cutting-edge performance and solves the most complicated tasks and also connects all the



Staff, Teachers, Students, and Parents. It fulfils the entire administrative requirements in real time.

The objective of the institutional quadro is to provide comprehensive view that provides complete control that allows you to keep a track of inside out activities and vital information and pushes the staff to execute their work on time and in proper method. As this software helps in managing Student Administration, Fee Management, Classes, Subject, Enquiry Management, Attendance, Examination, Results, Library, Canteen Management, Expense Management, Hostel Management, Placement Cell, etc. It keeps your data private, secure and backed up with the help of firewall, SSL encryption, dual authentication password-protection, and actively monitored server the way safer than vulnerable local computers.

Institutional Quadro is prepared to maintain the day to day operations in a leading college. This software help them to maintain the student and staff. So the maintain become easier. This is a generic type software suitable to all colleges. This software have all the modules to manage college transaction. Seperate division is provided to maintain admission process. Student management, staff management etc. The main goal of these quadro is to maintain records of college.

This software is helpful to the colleges to maintain the student and staff management. This software provide them very easier option to search for the student details, his fee status, attendance, test marks, test result etc. At present in colleges all records are maintain manually. There are thousands of student joining each year as the years goes

then the number of students also get increase, for the staff to maintain all these students records is very tedious and time consuming.

Update fee, test marks, test result all these need to be done in time to achieve college management need to recruit more peoples. To solve this problem institutional quadro is prepared which helps the management to maintain the records accurately.

5. Objectives and Scope:

The objective of the institutional quadro is to provide comprehensive view that provides complete control that allows you to keep a track of inside out activities and vital information and pushes the staff to execute their work on time and in proper method. As this software helps in managing Student Administration, Fee Management, Classes, Subject, Enquiry Management, Attendance, Examination, Results, Library, Canteen Management, Expense Management, Hostel Management, Placement Cell, etc. It keeps your data private, secure and backed up with the help of firewall, SSL encryption, dual authentication password-protection, and actively monitored server the way safer than vulnerable local computers.

- Student tracking could be done if any company wants to check the summary about the student so that they will be able to choose the particular students for their campus placement.
- Student's performance in exams can be known.



- The faculty can upload the marks of student in each exam which is conducted by college such as midterm.
- Expanding effectiveness of college record administration.
- Events and activities can be known on the daily basis.
- Overall facilities which are provided can be used through this institutional quadro.
- Various courses materials, pdf files, assignments, etc will be available online.
- It also includes online fees management system in which student can pay their fees online.
- Reduction of Administrative Costs.
- Improved Service through Online Community.
- Enhance communication with Customers.
- Provide a more Flexible Offering Framework.

6. Modules

6.2 Student Administration

Student Administration module will contain the detail information about the student. The various sub modules which will be included

under this could be timetable, student attendance. Fees management creates and manages fee types, frequency, late fees, waiver, concession, scholarship, installments. Generate individual student fee-card. Manage student payments and receipts. Track cheque return from the bank Generate reports pertaining to fees collections, late payments, special fees, cheque return, and student outstanding amount.

This module deals with the most important feature of any institution, admissions. The entire process is very lengthy and requires a lot of paper work and resources. This module facilitates the admission department by managing all the required data at the finger tips. This includes applicant's details, procedure details etc. The admission of the applicant is done by filling unique form.

Authorized users can create templates of such forms which vary from one batch to the other. The form can be for admission, hostel admission, and canteen registration. The administration module helps in facilitating the administrative work of institution. Any administrative work requires mountains of paper work and takes a lot of time to maintain all records. This module reduces the job of entering the master files every time and saves a lot of time. This also helps in maintaining accuracy and error free details.

The most eminent functionality of administration module is 'Assigning Access Rights' to all the users of the system. This includes students, faculty, staff, management, alumni and parents. The features of this module are Dynamic application form it also record maintain of applications and successful registrations. Promoting and



demoting to students from different courses with user defined criteria. Connection with examination module for next year admission. Admission canceling facility. Admitting students to sections and batches with proper management of same.

6.2 Placement Cell

Placement Module helps in the most crucial activity of any institution that is placement. Placement determines the reputation and ranking of the institution. The- institution has tremendous responsibility in terms of good placement for their students. The placement module very efficiently handles everything and reduces the pressure of institutions.

6.4 Faculty Module

Faculty Module is crafted for handling the particulars of all the faculty members. It contains their particulars, personal information etc. This module also organizes the schedules of lectures. It contains attendance details as well. It consists of leave management module as sub module. Subject assigning task gets easier with the aid of this module. Internal Messaging system is provided to communicate within the faculty members.

Features of Faculty Module are helps in understanding the current and past scheduling. Beneficial to management, staff and student. Proper record managing and modifications. Maintain Reports. Login available as per access rights .Reduces the paper work. Fast and error free module. Leave management with enhanced features .Updating the designations with history of

6.3 Facilities

Facilities there are various facilities provided by colleges and all other educational institutions. To have the facilities is not the only important aspect, but to manage them fully is also essential. Library Module comprises of sub modules to maintain the data of books based on authors, titles, publishers, subject, versions etc. The library module keeps the important details of book issue, book return along with the students' particulars to maintain accurate reports.

same.

6.5 Course Module

Course Module is a set of various modules that functions together to manage the course curriculum. It can be said that the course module is the most important module as all the other modules are dependent on the course module and is structured accordingly. This module is used to set and maintain the master files for course, classes and batch curriculum. This module is structured to manage all other specification for a class or batch's requirement.

6.6 Notice & Event Module

Notice & Event Module Updating the students and visitors with the latest updates of institution can be handled by the Notice module. This module provides the aid of



quickly updating the website by adding articles, press releases, news, information and other content of the website. Every institute is filled with events round the year. It's very important to plan everything accordingly, including dates, facilities and other details. Event management module handles everything and organizes event with prior planning.

6.7 Sports Module

The sports module, as the name signifies, helps the sports department to facilitate their process. It keeps a record of all the instruments, equipments and students particulars and their strengths. Sports Module also maintains the class details as per each batch, grade and section. It sees to it that neither the sports facilities are clashing with each other and or the classes. This helps in reducing the paper work and saves a lot of time.

6.8 Examination and Result module

The examination and result module can be set by faculty members and staffs for the entire course curriculum.

They can upload the question in the data base and questionnaire is formed. The faculty can make separate examination for a class as per required. Report cards can be obtained and printed with the help of this module. It calculates the grades and credit points depending on the student's marks.

The examination module can be set by faculty members and staffs for the entire course curriculum. They can upload the questions in the data base and questionnaire is formed. The faculty can make separate examination for a class as per required.

Features of Examination Module are Providing faster feedback results to the programs and their students. Providing the programs and their students with an assessment tool that mimics the national board certification exams. Minimizing and eventually eliminating paper-based assessment tests, as well as the administrative efforts associated with current processes. Providing test preparers with a platform for populating a bank of questions during the course of the year and reducing the time spent in question preparation. Eliminating the cost of printing and distributing test booklets through state-of-art technology that facilitates Web-based administration of tests.

6.9 Online Fee Management

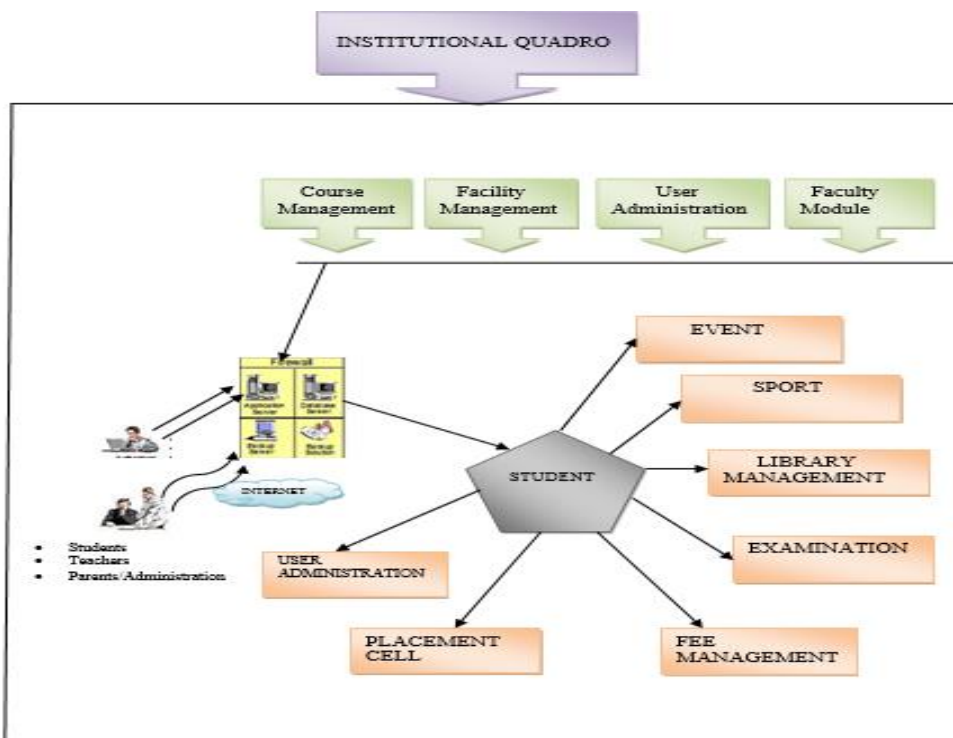
In online fee management module student can pay their fees online. It online fee management is very important type of module to avoid rush. Because of online fees management module student can pay their fees from home.



6.10 Library Management

Library Module comprises of sub modules to maintain the data of books based on authors, titles, publishers, subject, versions etc. The library module provides students and faculty with search options with the help of Book ID number, title, author, subject or any other relevant keyword. It manages the library inventories and their information.

The payment of fines, book lost payments etc are integrated with the payment module. The library module keeps the important details of book issue, book return along with the students' particulars to maintain accurate reports.





CONCLUSION

This type of system can be used to manage the data of all type of educational institutes. The system reduces the manual work which was previously being done in the colleges. This system will work on the network. Students get their desired information without any delay.

Institutional Quadro provides the detail structure of the college campus and its departments. It synchronizes the working of all the departments. It looks on all aspects of a college, its students, faculties, faculty and various different modules of an institution.

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