DESIGN OF AN ACADEMIC WEB PORTAL PROVIDING E-FACILITIES

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ABSTRACT

Increasing numbers of institutes have set up facilities on their Web portal as a way of providing users (i.e. Students and Faculties) with information about their facilities and features. Generally in colleges, things are done manually such as submission, handouts, notice, results, records, examinations, etc. so to avoid this we are designing a web portal for our institute, which will be helpful in following features like time saving, easy access and user friendly, etc. E-Cl!k Portal aims to design a web portal for institutes where all the facilities will be provided online for various things like E-Submission, E-Alerts, E-Learning, E-Examination, E-Records, E-Result, etc. This portal provides useful facilities for students and faculties who wish to access the portal at desk of one click sitting anywhere.

KEYWORDS: Web Portal, Web Application, Web Service, Academic Portal

INTRODUCTION

An institute is a highly interactive environment and collaboration between various entities is an integral part of its functioning. This collaboration takes place not only in the class room (i.e. between teachers and students) but also between department and students, among students, among teachers etc. In institutes, traditional methods of information sharing are like notice boards, notes, hand-outs etc. These traditional methods are not providing efficient access to information. Nowadays students would find it almost impossible to wait till next morning to meet their teachers just to get some reference material or to ask some difficulties. And certainly the teacher would also not want the students to wait.

Today's education scenario is rapidly changing and demanding. Students demand a higher level of access to information about their options, their performance, their learning environment and their future. They also demand that technology resources be an integral part of their learning experience. The standard for access to faculty and student services will change as students come to expect virtual access to faculty and student services resources.

This can be achieved by creating a web portal because portals are nowadays becoming increasingly popular by enabling the development and maintenance of specific communities of interest on corporate intranets or the Internet. We are designing a web portal E-Cl!k for our institute, which will provide facilities such as submission, handouts, notice, results, records, examinations, etc to students.

BACKGROUND

A web portal is not a single technology, but it brings together a wide range of technologies and enables them to work together for the benefit of the individual. Web portal is considered as a type of information systems used to gather, manage, share, and utilize information that has been stored in database.

In other words we can define portals as applications getting data from different data sources and displaying the stuff under a consistent look and feel umbrella which in other case would have been different applications or sites altogether [6].

Portals are classified into two groups: horizontal portals and vertical portals.

- A horizontal portal is used as a platform to several companies in the same economic sector or to the same type of manufacturers or distributors.
- A vertical portal is a specialized entry point to a specific market or industry niche, subject area, or interest

The web portal has following features [1]:

Content Management: User can adjust data according to their requirement.

Integration: Data existing in different data format is integrated and presented to a unified interface.

Security: It provides secure access to resources by describing levels of access to each user.

Search Ability: User can retrieve required information directly by using search engine.

Collaboration: It provides collaborative tools needed to enforce and optimize work and process collaboration inside and outside the organization.

Scalability: The system can be expanded by adding more features.

Accessibility: which describes the ability to access the system from anywhere at any time.

When portals are used they can improve following factors such as:

1. Delivery of contents and applications
2. Updates which are made become more visible in portals, because the data and contents of application are being filtered.
3. Portalization allows users to customize or personalize the content as to fit according to their interests.

LITERATURE REVIEW

- Zhilin Yang et al. [2] developed and validated an instrument to measure user perceived service quality of portals based upon IS and technology adoption. They validated a five-dimension service quality instrument involving: usability, usefulness of content, adequacy of information, accessibility, and interaction. This scale provides a useful instrument for researchers who wish to measure the service quality of Web portals and for portal managers who want to improve their service performance.
- Rex P. Bringula et al. [3] study investigated the factors that might significantly affect web portal usability. Descriptive statistics utilized questionnaire data from 82 faculty members. The data showed that most of the respondents were relatively young, were Master's degree holders, were skilled in using the computer and the internet, had internet access at home, and were committed to using the web portal. Multiple regression analysis showed that information content as a web portal design-related factor was the only significant predictor of web portal usability. Thus, the null hypothesis stating that faculty-related and web portal design-related factors do not significantly affect faculty web portal usability is accepted except Information Content.
- Heila Pienaar [4] investigates the factors that must be considered during the design and development of an academic portal. Personal interviews were conducted with academics in order to identify the content, functions, appearance and value of an academic portal. A working academic portal, the Infoportal, was developed to support academics' task performance.

- Andrew Large et al. [5] design guidelines for web portals that are based upon focus group and operational evaluations by elementary school students of two prototype web portals designed by two intergenerational teams, each comprising elementary school students and adult designers. The evaluations offer strong support for involving children throughout the design process for portals.

- Amjad Farooq et al. [6] proposed a portal which covers almost all major aspects related to students and teachers. Its high speed, dynamic rendering and asynchronous communication with data sources make things snappy and very responsive. University portal must be complete and provide all features related to students and teachers. This review paper provides a brief comparison of existing web portal and suggests following eye catching and stunning features/modules such as Oral Commands Interpreter, Oral Dictation, Multitasking, Rental Services, SMS alerts and Software Industry modules.

RESEARCH OBJECTIVE

We are designing a web portal E-Cl!k for our department where we are providing online facilities such as E-Submission, E-Alerts, E-Learning, E-Examination, E-Records, E-Result, etc.

DESIGN

In institutes activities are usually done manually such as submission, assignments, handouts, attendance, notice, etc. So to avoid such manual activities we are designing a web portal E-Cl!k with following facilities

Figure 1: Interaction between Student and Faculty through Portal

Our e-click portal provides facilities such as:

1. **E-Submission**: The efforts for writing journals, programs & question answers will be reduced. The features included in this facility are as follows:
   - Practical Submission
   - Journal Submission
   - Subjective Submission

2. **E-Alerts**: Here, the time required to see the notice board will be saved. The features included in this facility are as follows:
   - Notice for any test, campus recruitment, events, and competitions
   - Submission Date Details
   - Exam Time table
   - Good wishes will be sent via portal to mails and to cell.

3. **E-Learning:** The features included in this facility are as follows:

- Handouts of respective classes

- Assignment list for the practical session

- Video lectures

4. **E-Examination**: The features included in this facility are as follows:

- MCQ test

- Aptitude test

5. **E-Records:** The features included in this facility are as follows:

- Class Attendance

- Defaulter list

- Any test attendance
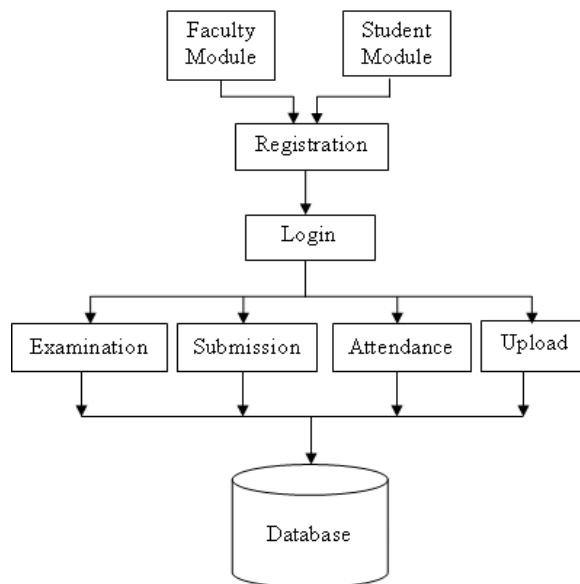
The system overview of E-C!k portal is shown below:

Figure 2: System Overview of E-Cl!k Portal

Different user can use the portal like staff and student. The system will be analyzed in the following.

- **FACULTY MODULE**

  1. Update resources like assignments, notes, results etc.

  2. Submission of journals, practical and assignments.

  3. Notifications about exam, events, submission.

  4. Arrange tests with MCQ.

  5. Attendance of theory and practical's.

- **STUDENT MODULE**

  1. This module has interface that allow students to register themselves on portal.

  2. Check their notifications, news and events.

  3. Student can download the attachments or notes loaded by faculty.

  4. Appearing for tests.

CONCLUSIONS

As today's world is computerized world, the usage of Internet has been extended to large volume. Internet provides an exciting feature Web Portal. Web portal bring vast resources and services, which are available to many users within the same department in an effective manner. Our E-C!k portal provides a much better control over processes, the workflow is faster, less of paperwork etc. It gives easy and user-friendly environment for the interaction of the faculty and students with the system through a conventional web browser. E-C!k Portal Supports a co-operative mechanisms for assisting the student whenever necessary.

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