E Learning Ecosystem Using CMS

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Abstract— *Content management systems (CMS) are information systems designed dominantly for managing different types of publicly available web content although they could be used for various other purposes. Today, CMS open source solutions are one of the most   popular platforms for developing web sites, portals, web shops and other publicly available content and services. Main problem in this area is lack of proper understanding of security issues and procedures which are frequently leaving content and services vulnerable for various types of attacks. This work focuses on risk analysis of main CMS open source systems from the point of security of data and services. Usual "points of failure" are analyzed, compared to similar solutions and final measures for full protection are proposed. Knowledge Management (KM) refers to a range of practices used by organizations to identify, create, represent, and distribute knowledge for reuse, awareness and learning across the organization. Knowledge Management programs are typically tied to organizational objectives and are intended to lead to the achievement of specific outcomes such as shared intelligence, improved performance, competitive advantage, or higher levels of innovation. Here we are looking at developing an online intranet knowledge management system that is of importance to either an organization. This system can be used as a knowledge/information management system any type of organization or an educational institution.*

Keywords*: Content Management System-create and manage in digital content,Learning Content Management System-Help the instructor to deliver material, Virtual Learning Environment-Set of teaching and learning tools.*

I. INTRODUCTION

Learning system in education institutions has changed lot due to advancement of technology in recent days. E learning contents and e-learning companies has been a big game changer in this industry. In conventional method teachers used

board to describe their content to students. When the technology developed they changed to projectors and other media for handling their classes. In both the conventional method and new technology a faculty has to prepare a content for the student and he have to deliver it to the student. Most likely the content which is delivered not reaches the student in a complete manner. So student might get the content from the staff or faculty in the form of hard copy or a soft copy and share among them. Even by this the content won't reach the entire student of the class room. So a simple content management is developed keeping in mind all the content developed by the faculty reaches the student using a latest technology.

Using the proposed system faculty member can update the content prepared, Students can login at any time and can download the content for their preparation from any part of the world. So a effective means of sharing content between the staff and student is established.

Apart from sharing of content, faculty can share model question papers, assignments and other relevant educational content to their students. So it becomes a very necessary part of any education institution. Knowledge and Content Management System is developed in this basic regard. The system support variety of media contents shared between faculty and the students. System supports variety of formats like image, audio, video, pdf, doc and html files. So whatever format faculty prepares for the student they can share with students.

II. RELATED WORK

Research on the Knowledge Management System of the Vicarious Management Corporation Guodong Ni, Wenshun Wang, Jianping Wang, ZhifangZong, MengXie This paper analyzed the importance that the vicarious management corporation (VMC) carried out the knowledge management in its work, discussed the contents of the knowledge management of the VMC, and obtained the knowledge management model. In order to better knowledge management work, the paper put forward Work in Progress-An Evaluation Model for Learning Content Management Systems: from a erspective of Knowledge Management Liyong Wan , Chengling Zhao, Qingtang Liu, Junyi Sun The new crop of learning content management system (LCMS), designed to create, store, assemble and deliver

personalized e-Learning content at the object level, are likely the closest application yet to bridging knowledge management and learning management. Selecting and implementing a LCMS will be one of the largest IT projects tackled by many organizations. With so many vendors and products, it is very hard to compare between them. An effective evaluated approach is critical. From a perspective of knowledge management, a LCMS must include these six features: learning content creation, publishing, content management function, presentation, communication & collaboration function and standard compliant. This paper analyzed these features and proposed a six -dimension and three-level (mandatory level, advanced level and recommended level) evaluation model for LCMSs. This model will help organizations choose a proper LCMS for identifying actual requirements.

A guide for Selecting Content Management System for Web Application Development VimalGhorecha; Chirag Bhatt This research paper aims to help for the Website by offering a survey of some methods of PHP comparisons and evaluation studies of Content Management System. This survey shows the good CMS will helpful for users to include different features in the website using plugging and the widget. Here we define the modular architecture and its user interface is modelled (customized) using PHP. We also use the content management system (CMS) to manage the content of the web site by some methods of PHP like Joomla, Wordpress and Drupal. This survey defines the content sector need to undertake more comprehensive and serious studies about the CMS comparisons and evaluation with strength, drawbacks, features etc.

III. PROPOSED SYSTEM

The objective of our proposal is to create knowledge and content management system for educational institution and it is going to be designed using WEB APPLICATION ARCHITECTURE.

Our work aims to overcome the failure factors of the existing system.

We implemented an e-learning web ecosystem enriched with an educational information according to an educational information model of our institution and a domain-specific model, so we are going to provide faculties and students with a separate login.

IV. SYSTEM REQUIREMENTS

HARDWARE SPECIFICATION

System   :   Pentium Dual Core 2.4 GHz.
Hard Disk   :   120 GB

RAM   :   2GB

SOFTWARE SPECIFICATION

Operating system   :   Windows 7 / 8
Coding Language   :   PHP
Database   :   MYSQL
Designing Tools   :   Adobe Photoshop
CS3 Internet Server: Apache Tomcat
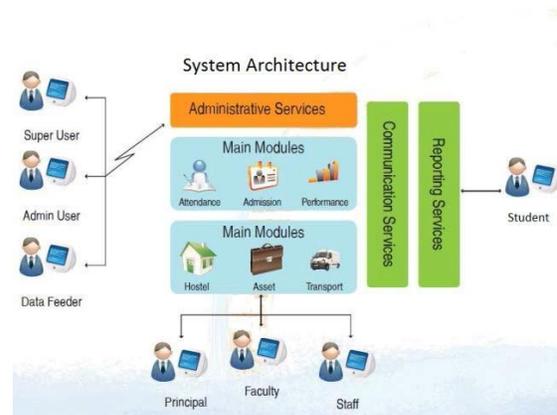
V. SYSTEM DESIGN SYSTEM ARCHITECTURE

Fig – 1 System Architecture

TABLE I

Sample Data Base – Table Structure

S.No.	Field Name	Type	Key
1	rdate	date	
2	sregno	text	Primary Key
3	sname	text	
4	sgender	text	
5	sdob	date	
6	fname	text	
7	foccup	text	
8	spreaddr	text	
9	sphno	number	
10	cid	text	
11	cname	text	
12	cdept	text	
13	cdur	text	
14	ccat	text	

VI. IMPLEMENTATION

A. Module List
This is the overall structure of The Knowledge and content management system for Educational Institution. The total project is integrated into following modules

1. Administrator Module
2. Faculty Module

3. Student Module

B. Module Description

The Knowledge and content management system for Educational Institution is developed for sharing of materials and e-contents related to academics through a portal. This facilitates a new way of sharing of knowledge between the staff and the student. The software is kept in a mind that all the entities of the existing academic institutions will get involved in the software. The management will have the entire rights for the software and they can manage the overall run of the software. They can have a control over the knowledge transfer between staff and students.

The major part of software has the 3 major entities Instructor (HOD or Dean), Teacher or Staff and the student. Instructor can add staff member inside the software. He can also manage the content posted by the staff members. Staff can add the contents he want to share with the student. And the student can able to view the academic content which is shared with him by the staff members.As an additional feature portal is included with Project module where the final year students who have completed their project can upload their project document in the system. The students can able to view those documents and they can gain their knowledge.

C. Administrator Module

This module is designed as the administrator module the whole portal relies on the support of the management module and it has the overall control of the portal. Administrator can create the other users of the system like Instructor, Faculty and Student. This makes the portal a tool for management to know the quality and what sort of knowledge is being transferred by staff members to their students.
It helps them to keep an eye over the entire academic process. They can easily track what are all the chapters have been covered etc by checking with the software.

D. Faculty Module

Faculty is generally Professors, Lecturers or other teaching staff of the college. They can add contents they prepare for students for their academics. They can add content of following forms

- PDF
- DOC / DOCX
- XLS / XLSX
- PPT / PPTX
- HTML / XHTML
- JPG
- MP4 / DIVX / DAT (Video formats)

- Mp3 (Audio formats)

Since the portal supports versatile formats of file systems whatever the content prepared can be easily downloaded by the student and they can use it from anywhere in the world. In addition to this even staff can provide assignment works and share previous year question papers to the students.
The content updated by the staff member will be validated by the instructor and only after his approval the data will be share with the students.

E. Student Module

Student's module is the simplest of all the modules in the portal. Here the student can download the content which is shared by the staff members and they can view them. They can search based on the papers and subject based on year and select the needy documents as per their wish. Students have to regularly visit the portal to have the updates in their academic.
System have been entirely coded in php and implemented. The code have been successfully tested and implemented.

II Table Sample Test Case

Fig – 2 Sample Screen

VII. CONCLUSION

The aim of this project was to develop a Content Management System for our college. The project went through three main phases to achieve the above objectives, analysis, synthesis, and evaluation phase.

In the analysis phase, we highlighted some of their advantages and disadvantages; we also identified a number of commercial systems in the market and identified their features in order to implement them in product.

The analysis phase helped us to identify and find available techniques to capture our college's requirements for managing content management from our guide and various staff members. Those requirement into three main categories, functional, non functional and usability requirements. A number of programming languages and technologies were identified in this phase. The findings helped determine the programming language and technology to choose to develop the product. The synthesis section mainly covered issues related to the development of the product, we produced a number of UML diagrams in order to model the system; a use case diagram is produced to identify the systems functionality based on staff and students requirements gathered in the analysis section, use case descriptions constructed for each use cases to describe all the possible scenarios involved in each use case, such as primary, alternative, and exceptional scenarios. thought establishing the knowledge management system of the VMC which included six parts: knowledge management organization, knowledge management culture, knowledge management rules and regulations, knowledge management organization motivation, information platform for knowledge management and performance evaluation for knowledge management. The paper probed into every part in-depth, and drew a conclusion finally that the VMC need to build the virtual-learning knowledge management organization, develop the learning organization culture, stipulate for the sound knowledge management rules and regulations, pay attention to carry out the incentive of spirit and competition within the organization, build efficient information platform for knowledge management, and constantly improve the level of knowledge management through the performance evaluation for knowledge management.

VIII. FUTURE ENHANCEMENT

The ECS gateway plays a middle ware job in the current Although the product development meets user's expectation, there are some works identified by us that can make the system more robust, usable and functional. Currently, the system allows administrators unlimited attempts to login if they are not successful, therefore recommend to limit the number of failing times to login to improve system security.

The user interface could be further enhanced to make it more user friendly and aesthetic by making further use of graphics and images that matches real world objects. Moreover, it is recommended to implement options for people with impaired vision to make improved system accessibility, this can be achieved by providing visitors options to change font size, text colour, back ground colour, etc.

Since the system is developed as a web application the system can be converted into a responsive web portal so that it can be accesed from any mobile or handheld devices so in near future the application can be developed as a mobile application

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