

Smart Content Authoring System

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Abstract— Due to advancement of technology sharing of knowledge and content is very easy. Most of universities and colleges are adopting e-learning process to improve the traditional delivery of education and developing an interactive environment. To develop interactive environment content management plays a vital role. In this paper “Smart Content Authoring System” (SCAS) is a digital environment which is design to manage content and provide better delivery of required content and resources to learners. It is enhancement of the traditional classroom. The system has information about learner and their course and content. Through this environment, content may access anywhere and anytime. By this system the quality of learners is increased and saves the time of learner as he/she get better content just in time. In this system, content is bifurcated in three level-beginners, average and extra ordinary along with this a discussion board is provided to resolve any query and learners may also contact to expertise to resolve their query.

Key words: Smart Content Authoring System (SCAS), E-Learning, Discussion Board, Learning Management System

I. INTRODUCTION

With the rapid increase in information and communication technology (ICT) introduced a new method of learning. E-learning is a learning process takes place in networked environment through constant communication with central server [1][2]. The goal of proposed paper is to provide user friendly environment to learners and manage the content in proper organized manner. Our project title “Smart Content Authoring System (SCAS)” is composed of two terms learning management system (LMS) and learning content management system (LCMS).

A Smart Content Authoring System (SCAS) is a digital environment is based on server side. It is an application for managing content and distribution of courses and content to learners.

Smart content authoring system is defined as “organizing of content and tracking of content and delivery of required and better content just in time”. Smart Content Authoring System is required because on the web we have huge content and to get required content, we have to spend so much time so by this system we get required content according to our understanding level in few seconds. The feature of Smart Content Authoring System (SCAS) is as follows:

- Centralized control of content and administration.
- Guide learners to which type of content they should focused.
- Provide discussion board to resolve their queries.
- Smart Content Authoring System (SCAS) has following module:
- Registration of learners and tutors
- Evaluation of the learner understands level, and it’s performance metric
- Organizing content in three levels beginners, average and extra ordinary (Adding and deleting content)
- Again evaluation of learner so that he/she can promote to next level.
- Discussion board to resolve queries

By this system quality of education and efficiency of learner’s is improved and change and enhance the concept of traditional class room. The organization of paper is as follows section II describes the review of literature, section II explains the content authoring system, section IV explains the learner’s profile and management, section V describes the proposed system screenshots and last section VI gives the conclusion and future work.

II. REVIEW OF LITERATURE

Smart Content Authoring System (SCAS) is not only focus on better delivery of resources but also on content authoring and its management. By growth of internet technology has changed the accessing method of multimedia. It also changes the concept of e-learning. So there is need for improving the e-learning process. For this format of content is also playing an important role. At present content may be in any format like text, audio, video and animation which help the learners to understand and improve their knowledge of understanding [3].

LCMS (learning content management system) is virtual learning environment or online study portal. The LCMS include not only study activities but also their monitoring. The main features of LCMS [4][7] is create, store, update and modification and reuse the content through central object repository, usually a database. Some of universities adopted the in-house LCMS system to improve the concept of traditional classroom and education or learning process. There is vast amount of information over the internet and finding some concept is like searching a valuable thing in deep water. So the content organization and retrieving content form huge information is time consuming and also have various issues [5] and challenges.

There are various LMS (learning management system) such as Moodle and Joomla [6] etc. Moodle (modular object oriented dynamic learning environment) is an open source e-learning platform and also have feature of content management.

This helps the developer to create quality online course where as Joomla creates web application. But Moodle is specifically education oriented. So it comes with the components and modules ready for this type of use.

Reference [8] described distant learning process (Artemis) with help of live lectures and also gave the services of learner assignment and course management. It is a real time communication based on IP multicast network by which learners can access the live lecture from anywhere via internet technology. The Artemis also gave the static content also like graphics and text.

III. DESIGN OF SMART CONTENT AND AUTHORING SYSTEM

Use and Design of any system can be easily understand with help of diagrams in which interaction of its user and system is described.

A. Use Case Diagram of SCAS:

Use case diagram is visual representation of its user and its requirement. The proposed system has three actors: administrator (course creator and manager), learners and expertise the diagram explains the various role played by learners and administrator.

In reference of IT (information technology), content management system (CMS) is a system [8] [9] that provides the facility of creation, getting required content in less time and manipulating and updating of content/information in digital environment including any content format like images, text, audio, video or animation etc. as needed. To manage content we need database which enable the learners to access these content in very less time.

B. Content Organization

For success of digital education content organization plays a key role. In our proposed system for content organization, content is divided into three categories: beginner, average and extra ordinary and each level is also divided into small set of lessons.

In beginner level, content is very easy. In this any new learner can start to learn new concepts. All concepts are explained with appropriate examples. The examples are in either text or image format which makes the learning activity more interesting. In this we also provide the small set of assignments to track their performance or to understand their understanding level. By tracking user performance, administrator guides the learners on which level they should focused.

In average level, content is for average learners. In this assignment and exercises are somewhat difficult by which learners mind is started to think that how the basic concept is applied.

In extra ordinary level, problems are assigned which is application based or real time based by which learners also becomes an expertise.

In this system, link of the video lecture is also added to make learning concept more interesting. As we know reading the text book is not interesting and also feels the bored so to make easier and interesting video link is also provided.

C. Discussion Board

For better understanding of any concept we should ask question and discussed with expertise and our group. So in our proposed system we made a discussion board. On discussion board any question is asked and any expertise and student can give the answers.

IV. LEARNER'S PROFILE

For any system user profile is also very important. In our proposed system whenever any user either learner or expertise wants to learn any course, they can register themselves and select their course. After successfully registration of learner, a test is given to learner to guide on which level of content they should focused.

A. Evaluation and Performance Metric

When learner starts learning, course designer gives the exercise and assignment to test user's skill and understanding level. After evaluation, course designer guides the learner and also maintain their performance metric which is viewed by both administrator and learner. Learner can view its performance and try to improve it by accepting the advice of administrator.

B. Feedback

As we know any system is design for its user so their feedback is very important to get success. So learners can also give their feedback by which improvement is done to make system more users friendly.

1) Use Case Diagram of SCAS

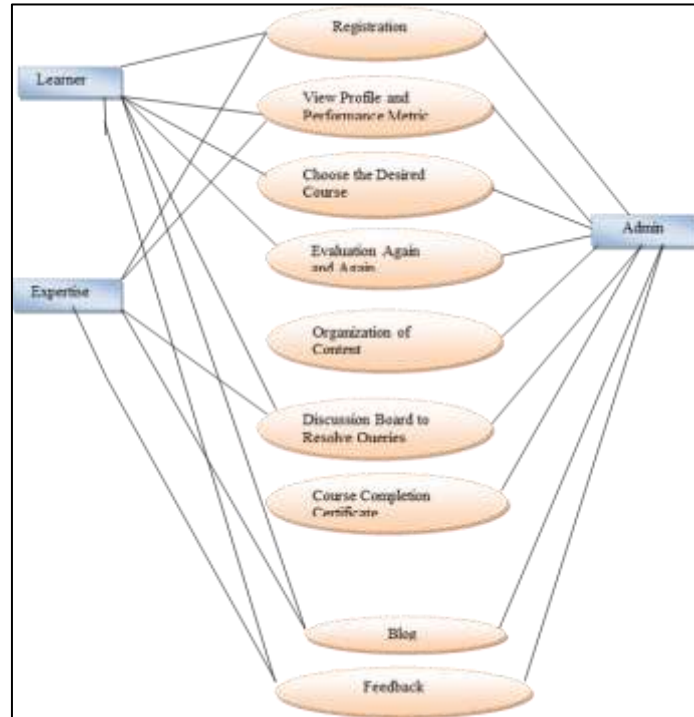


Fig. 1: Use Case Diagram of Smart Content Authoring System

V. PROPOSED SYSTEM SCREENSHOTS

The main screenshots are shown as follows:



Fig. 2: Home Page

It is first screen or home page here where user can register by click on join us. When we select any featured question we get the answer and redirect to discussion board. After successfully registration user can view its performance metric



Fig. 3: Blog Page

In blog page administrator gives the scenario of recent trends and technologies. In learn tab course contents is displayed and under check your skills tab twenty set of question is display to test your skill.

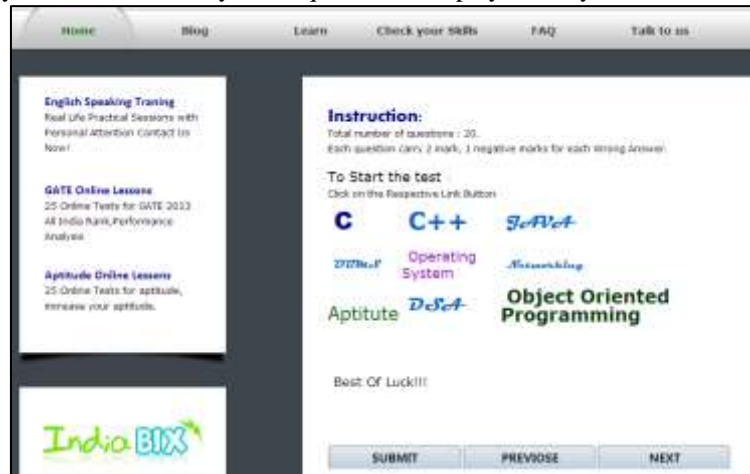


Fig. 4: Check Your Skill Page

In this page testing of learned course is performed after which learner can watch or analysis his performance and improve.

VI. CONCLUSION AND FUTURE WORK

The proposed system is very simple and user friendly web application. It enhances the quality of traditional classroom and enables the learner to learn from anywhere and resolve their queries also makes the learners to start think on real life problems. It also save the time and provide quality services. There is feedback feature is also provided for the improvement. In near future, we can provide the chat with expertise and video conferencing to discuss and resolve the query.

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