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Enhanced E-Learning through Online Examination in BIT Campus

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Abstract: Examination System is helpful to separate teaching and testing. An Online Examination System is a web software solution, which allows any institute or industry to set up, direct and manage examinations via an online environments. Online examination is one of the crucial parts for online education systems like e-learning courses. e-Learning research is an expanding and diversifying field of study which is a progressive development in Information and Communication Technology that provides teachers with great opportunities for enhancing the effectiveness of classes in educational communities and students to utilize the technology to the most to obtain knowledge. The aim of this project is to provide the college students with online examinations combined with the e-learning courses. This helps the students to enhance the subject knowledge and also evaluate their knowledge using the examinations. This project also help the faculties of the college to easily monitor the students' educational activities. This project Online examination in enhanced e-learning focuses on the welfare of the students and the ease evaluation of their progress by the faculties.

Keywords : web application; online Examination; video uploading; books uploading

I. INTRODUCTION

A. Online Examination

Online examination system is the one which allow students or trainees to do exercise or tests through computer to measure the knowledge of the participants on a given topic. It not only reduces the workload of teachers, but also achieves the objectivity and impartiality of examination. In the olden days everybody had to gather in a classroom at the same time to take an exam. With online examination students can do the exam online, in their own time and with their own device, regardless where they live. Online examination is conducting a test online to measure the knowledge of the participants on a given topic. In the olden days everybody had to gather in a classroom at the same time to take an exam. With online examination students can do the exam online, in their own time and with their own device, regardless where they life. You online need a browser and internet connection. In such an exam system you can create questions and add them to the exam. You can choose between multiple choice questions or free text questions. The students are provided with a link to the online exam, they sign up and can take the exam. They see the results immediately afterwards. The big benefit of online examination is the reduction of costs and time, both from the student as from the teacher. The biggest limitation is that you have to be online to use an online examination system. Hence the name "online". Obviously it must be possible to make an exam and create questions. Preferably the exam provides for the option to create a question bank.

B. E-Learning

The term e-learning is electronic learning which is a new education concept by using the Internet technology, it deliveries the digital content, provides a learner-orient environment for the tutors and learners which is most frequently used to refer to computer-based training which incorporates technologies that support interactivity beyond that which would be provided by a single computer. An online educational service or e-learning service is a website which teaches and helps students improve knowledge in certain subjects. These are normally used by to let students learn from home and complete online homework. The advantages of e-learning are flexibility, mobile nature, avoids travel, cost effective, immediate and unrestricted, can be tailored to different needs, gives personalized training experience, updated immediately, eco-friendly and global. Potential challenges of e-learning are motivation, less face-to-face interaction, access to technology and requires self-discipline. Importance of e-learning in developing countries is, that it reduces costs traditionally associated with education (such as for classrooms and educational material) and enhance the potentiality of the countries finance. e-Learning, which facilitates education using communications networks, has made learning

possible from anywhere at any time using the Internet. It is as an approach to instruct and learn that utilize information and communication technologies to communicate and collaborate in an educational milieu. This includes technological expertise that supplements traditional classroom training with web-based components and learning environments where the educational process is experienced online.

II. LITERATURE SURVEY

According to the paper “Online Examination System” by Deepankar Vishwas Kotwal, Shubham RajendraBhadke, Aishwarya Sanjay Gunjal, Puspendu Biswas published in IRJET, Volume: 03, Issue: 01, January 2016, provides a software solution, which allows any industry or institute to arrange, conduct and manage examinations via an online environment. It can be done through the Internet/Intranet and/ Local Area Network environments. From the paper “Research and Development of Online Examination System” by Zhao Qiao-fang, Li Yong-fei published in the journal ICCIA, provided the functions, including question management, paper generation and test online. Also the combination of client-side programming and server-side programming techniques were used and analyzed. Using the paper “Analysis Process of Design and Development of Online Examination System” by Vishnu Patidar, Vishal Kadam published in IJIRCE, Volume. 4, Issue 2, February 2016, the main objective is analyze process of design & development of online Examination System to provide better student evolution process. Creates strong and secrete data base that allow for any connection in secret way to prevent any outside or inside cyber attacks. The features include the administrator, examination instruction, valid time of examination, Students, Examiner and release of the examination results. Using the paper “Comparing Online and Paper Exams: Performances and Perceptions of Saudi Students” by Majdi Al-Qdah and Islam Ababneh published in IJIET, Volume 7, No. 2, February 2017, investigates the effects of online exams on students' achievements and the students' perceptions of online and paper exams. The Moodle Quiz tool was used to design and conduct the online exams. The results of the online exams were compared with similar designed paper based exams. The students' performances in exams were measured in each question type (MCQ, TF, short, essay, numerical, and descriptive). From the survey, the students prefer certain aspects of online exams such as automatic results and feedback. The research paper, “A Model of an E-Learning Web Site for Teaching and Evaluating Online” by Mohammed A. Amasha, Salem Alkhalaf published in IJACSA, Volume 4, No. 12, 2013, is endeavoring to design an e-learning web site on the internet having various courses which is to be taught online and then is designed to evaluate students' performance electronically. The use of modern technology contributes to improving the educational product and enhancing quality of the learner. The provision of an electronic means to evaluate the students performance makes it easier for the staffs do their duties and give them plenty of time to unleash their creativity and achievement in their field of specialization.

III. EXSISTING SYSTEM

The existing system has modules to attend quiz. Soft copy of notes for every subjects in the syllabus for every department. Quiz is available only for limited subjects based on syllabus. No restriction against malpractice for quiz.

IV. PROPOSED SYSTEM

To provide a consultancy system. Only college students can attend the online exam within the specific schedule. The existing system has no restriction for the quiz like detection of malpractice, and this system has restrictions like opening a new tab will be marked as breach of ethics. This system is not limited only to the subjects in the syllabus but also various other topics and placement related topics. Paper Validation is made simple and results are available immediately that helps to analyze our growth. Students performance can be viewed by faculties anytime. The proposed system architecture is explained below.

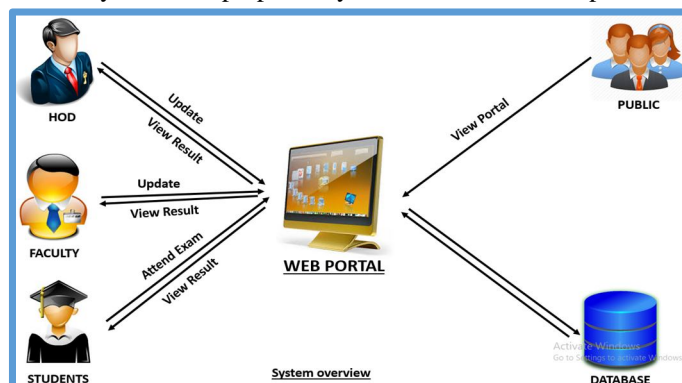


Fig.4.1. The architecture of the proposed system

The System design is as follows.

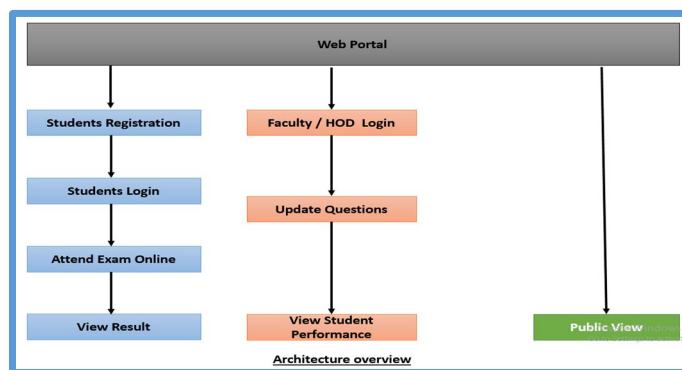


Fig.4.2 System Overview

V. IMPLEMENTATION

The implementation of the web application is done in the following manner. The hardware requirements are Processor - Basic Pentium IV 2.4GHz processor and all upgraded processors, Memory - 128MB RAM, Monitor - Screen resolution (full screen support) and Hard disk - 500MB of free space. The software requirements are Operating System-Windows XP and above, Front end - HTML & CSS, Back end - MySQL along with PHP, Web Browser - any web browser. The modules are Login and Registration module, Upload Contents, Questions Randomization, Evaluation & Report SMS Alert and Email Alert module. The Use case diagram is a graphic depiction of the interactions among the elements of a system. The use case diagram for the web application is,

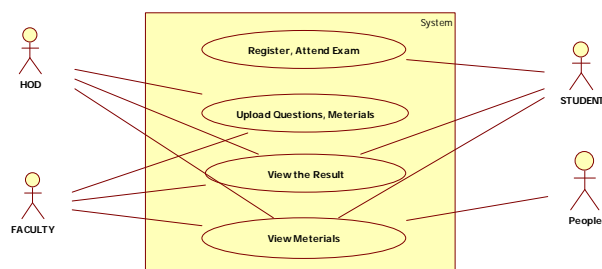


Fig.5.1. Use case diagram

The Activity diagram is the graphical representations of workflow of stepwise activities and actions with support for choice, iteration and concurrency. The activity diagram for the application is,

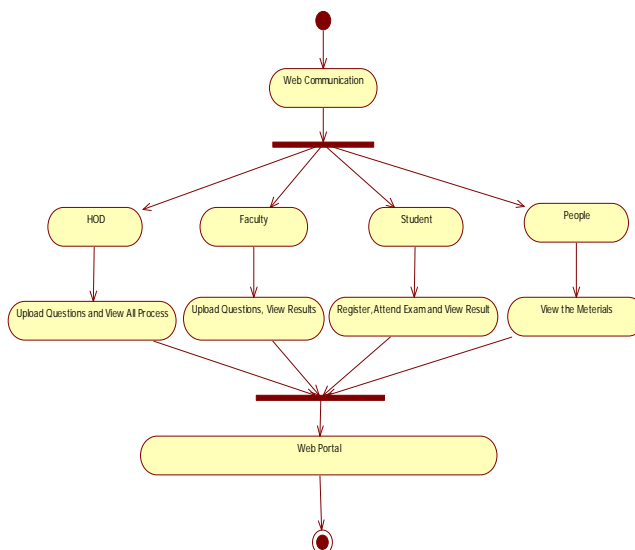


Fig.5.2. Activity diagram

VI. RESULTS

The home page of the website along with the menus is,

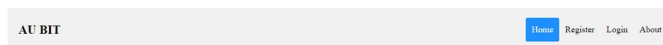


Fig.6.1. The Home page

The Login page which is used by the admin (Admin login) and the faculty members (Faculty Login and HOD login) for uploading the videos, text content along with questions for online exam and Students (Student login) to give permission to attend the online exam along with viewing the text and video contents regarding the subjects.

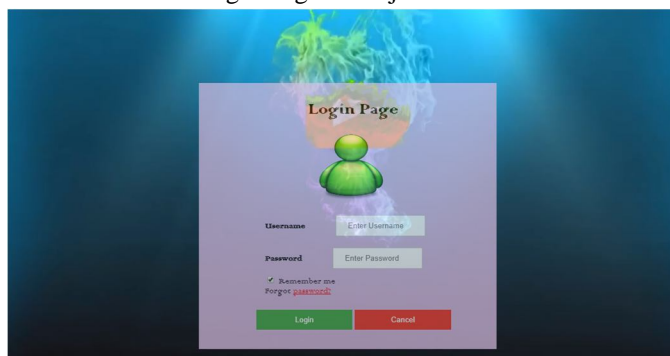


Fig.6.2. The Login Page

Register No	Please Give Register No
Name	Please Give Name
Date Of Birth	Please Give Date of Birth
Department	Please Give Department
Password	Please Give Password
<input type="button" value="Register"/> <input type="button" value="Clear"/>	

Fig 6.3. Student Registration Page.

The web page to Choose the Subject to attend Online Exam,

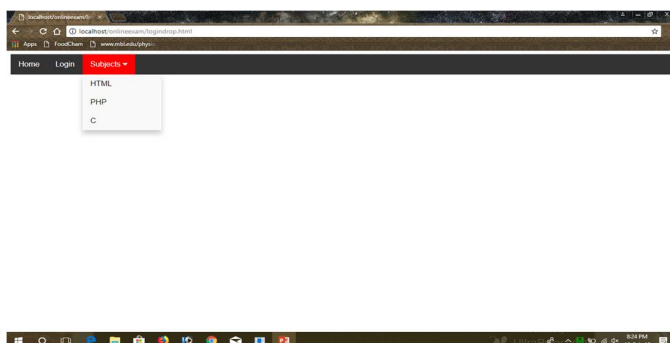


Fig 6.3. Select Subject.

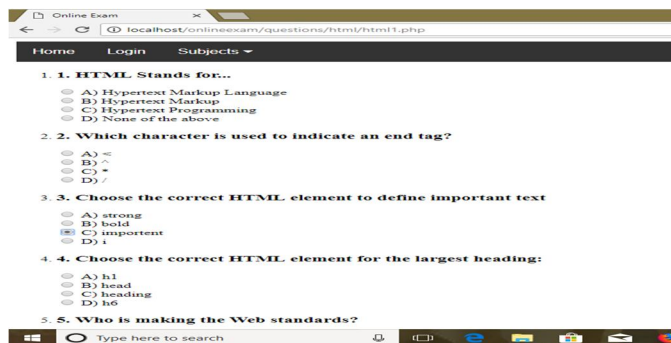


Fig.6.3. Aten Exam

The web page to Attend Exam

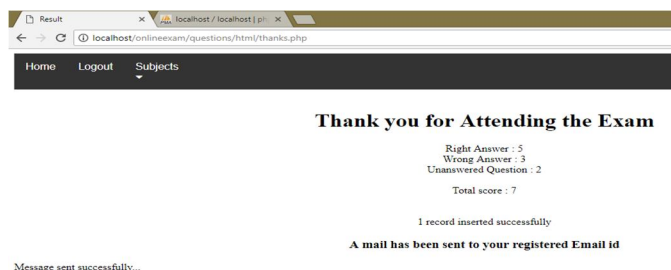


Fig.6.3. View Result.

VII. CONCLUSION

The web application developed for the BIT campus is to facilitate e-learning with Online examination is to provide enhanced education to the emerging students. This helps the students to gain more knowledge and reduce the unnecessary work load of correcting papers by the faculty. This reduces the work load of the staffs and also makes the student to know more about the subjects in more user friendly way.

VIII. ACKNOWLEDGMENT

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