

Design an On – Line Learning Education for Software Engineering Department using Moodle Application

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Abstract

E-learning (also called electronic or distance learning) is a method of leadership and education. It's make the learning procedures possible in any place, any time and any speed.

This paper presents idea of E-learning system based on Technical College of Kirkuk/Software Engineering Department. It listed lectures of all Vocabulary for each subject for this department with a many types of media that deliver text audio, image, animation, streaming video and includes discussion forums, Chat rooms, Wiki spaces, Online Messaging, Journals.

It can be assessed on an ongoing basis through Online and offline assignments Quizzes Collaborative activities which may make use of some of the interactive communication tools.

The Software used in this representation is Moodle software. Moodle is an Open Source web software package in LMS (Learning Management System) for producing internet-based educational and training courses within the web environment. The prepared system called OLLESE.

Introduction

E-learning means aided didactics by use of personal computers connected to the Internet and permits teaching and graduating the studies without necessities physical presence in lecture room. The e-learning system is a purposely separated whole, composed from parts and connections between them, meaning, that it is an advisable composition (intentional by his creator), can realize aims in one or on many manners, doesn't have part isolated in relation to other of his elements, connections between parts and with whole (of system) rely familiar, that every part of system has to contribute to successes of whole [1].

E-learning systems are found as separating lectures from student in time and space for the greatest duration of lectures, identity of technology of remittance for teaching and studying persons, disengagement of communication between lecturers and students, individualization of programs of student occupations, high level of self-observation and self-control of progress of studies by the students themselves.

An advantage of an e-learning system is this same repeatable quality of education process. There are no limitations, if goes for time, place and number of studying persons. Estimations of results are made by the computer, always according to identical criterions

Content Management System (CMS)

The definition of a CMS is an application that provides capabilities for multiple users with different permission levels to manage content, data or information of a website project, or internet / intranet application.

Content Management Systems (CMS) are systems that assist in organizations to collect, support, organize and publish information on the Internet, intranet and extranet. CMS are gaining popularity in both large and small businesses due to the increasing need to handle the expanding amount of information on the web today [2].

Content Management Systems (CMS) [2] typically aid in easy storage and retrieval of corporate or user data. They allow people to contribute to and share stored data concurrently. In addition, functionality available at some of these systems includes easy report writing, means for reducing repetitive duplicate input, communication means between users etc. In practice, security functions respecting access rights of individual users based on their user roles (read, update, publish, etc.) are also very important. Many commercial as well as open source CMS solutions are available. Concerning the open source CMS systems, very popular , which can be used for community sites, forums, weblogs, and corporate websites.

MOODLE

MOODLE (Modular Object-Oriented Dynamic Learning Environment) is a content management system that is used to create online courses and web-based learning websites. It is a free software e-learning platform, also known as a Learning Management System, or Virtual Learning Environment (VLE). Launched in Perth Australia on 20 august 2002, designed for the education sector, Moodle is the leading open source learning management system[3].

Moodle is an open source Course Management System (CMS) that university, community colleges, schools, businesses, and even individual instructors used to add web technology to their courses. More than 30,000 educational organizations around the world currently use Moodle to deliver online courses and to supplement traditional face-to-face courses. Moodle is available for free on the Web (<http://www.moodle.org>), so anyone can download and install it (see fig.1) Moodle is the best CMS available because it is an open source developers from around the world works with collaborative effort.[4].

Moodle is a software package written in PHP language designed to help educators in creation of quality online courses[5]. The stated philosophy of Moodle includes a constructivist and social constructionist approach to education, emphasizing that learners (and not just teachers) can contribute to the educational experience. Using these pedagogical principles, Moodle provides a flexible environment for learning communities.

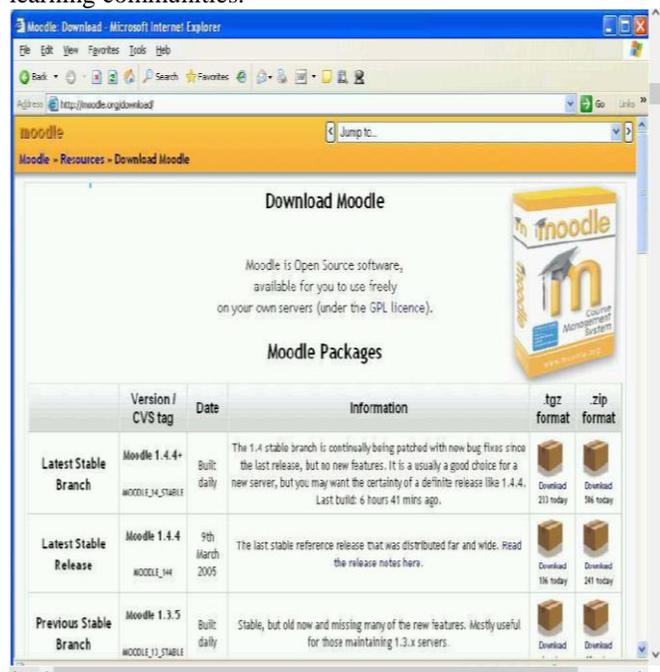


Figure 1 – represent the Web site of MOODLE

Because Moodle is open source software, Moodle can be customized to fit academic needs for students, instructors and the Moodle administrators. More recently Moodle has been adapted to meet the needs of the corporate sector, and the time appears to be right for open source LMS to become mainstream in the world of business[6].

Learning Management System (LMS)

A learning management system (LMS) is a software for the administration, documentation, tracking, reporting and

delivery of electronic educational technology (also called e-learning) education courses or training programs.[7]

LMSs range from systems for managing training and educational records to software for distributing online college courses over the Internet with features for online collaboration. Colleges, universities, school districts, and schools use LMSs to deliver online courses and augment on-campus courses[8]. LMSs also act to augment the lessons the teacher is giving in a brick and mortar environment not just replace them. Corporate training departments use LMSs to deliver online training, as well as to automate record-keeping and employee registration. For many institutions, the Learning Management System, or LMS, is the most significant enterprise system for teaching and learning. Accordingly, we need to regularly evaluate our LMS to be sure that it is supporting the academic mission and strategic goals of the university[9]. We know that we need to adapt to pedagogical change more rapidly and need an LMS system that is equally flexible. In addition to identifying the best system for Butler University, we intend that this evaluation process will engage the campus community in discussion around interesting and effective teaching, raise awareness that an LMS system is more than a course website and that a good LMS can provide tools for engagement and collaboration that support active learning[10]. This tool must be interoperable and integrate well with our current systems. It must be flexible and adaptable to changing pedagogical needs. It must be cost effective, easy to support and be easy to use. Finally it has to be both scalable and sustainable.

Open Source Learning System

Open source software is the term used to describe free software whose source code is made freely available through license, allowing the use, modification and distribution[11]. The concept of free software and code sharing has long been established but Open Source as a term and a development model came into its own with the growth of the Internet, gaining prominence towards the late 1990's [12]. The Open Source Initiative was established in 1998. Some familiar names and success stories of open source include:

- Linux – operating system
- Firefox – web browser
- Drupal – content management system
- MySQL – database

Since then a whole industry of open source support has grown up and a variety of applications and platforms have emerged, including several learning management systems, starting with Moodle. OLLESE built as an Open Source Software to be developed [13].

Structure of DOODEL

The DOODEL system prepared in using of E-Learning across our college to enhance the student experience and to facilitate the teaching, learning and advice on the development of E-learning resources. DOODEL work closely with Colleges to help enhance the online curriculum and student experience. Also DOODEL can Explore and Embed new technologies to support learning and teaching. Using OLLESE system to facilities and reflect the excellence of the teaching, learning and advise on the development of E-learning resources, work closely with Colleges to help enhance the online curriculum and student experience, Explore and embed new technologies to support learning and teaching.

Website Home page

The home page of DOODEL system contains different parts, the most important parts as follow:

1. Home page name (DOODEL).
2. Courses.
4. Location of collage.
5. Calendar.

Fig. 2 shows the home page.



Figure 2 Home page

The picture on the home page of the website is reflects the reading and learning online. After choosing the command “Courses” the syllabus of all subjects in all classes (four classes) will appear. There are four classes within this page see fig. 3. When you click on the fourth classes (for e.g.) the web site asks for user name and the password. The user names and passwords had been given to student by admin of the website lecturers, regular people cannot sign in, but they can visit the website as

(guest) so they can't join, read or watch the Courses. If any student writes the right user name and password he (she) can access to course page to be sign in like page in fig.4.

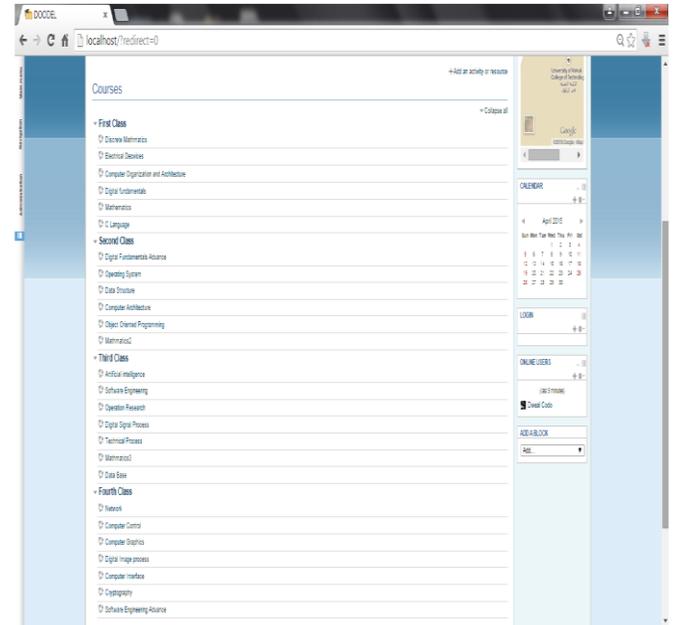


Figure 3 Represent all the syllabuses for each class

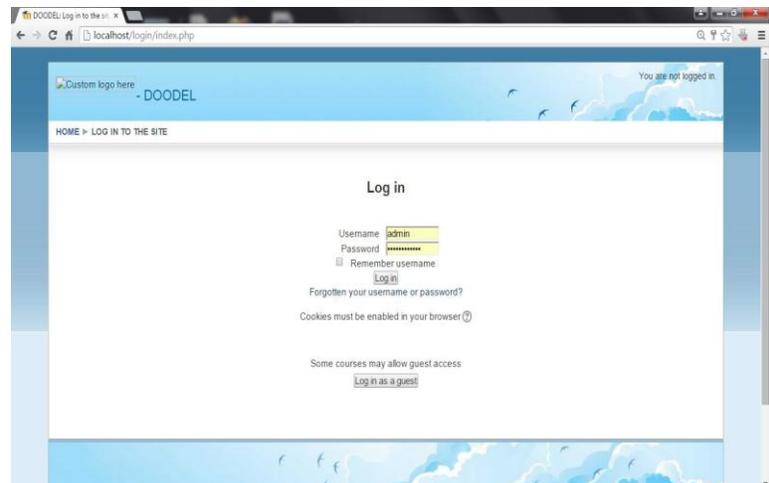


Figure 4- login page

After accepting the user name and password a course page will appear, this page contains:

1. A short history about the each lesson from the resource.
2. The resource about the lesson (syllabuses) for student like PDF that can the student download the source, this resource can add by the teacher or the admin of the website. As shown in fig 5.

3. About the lesson or about the practical part videos are available for student to watch it and to understand the lesson more clearly. The student can add comment about these videos as show in fig. 6.

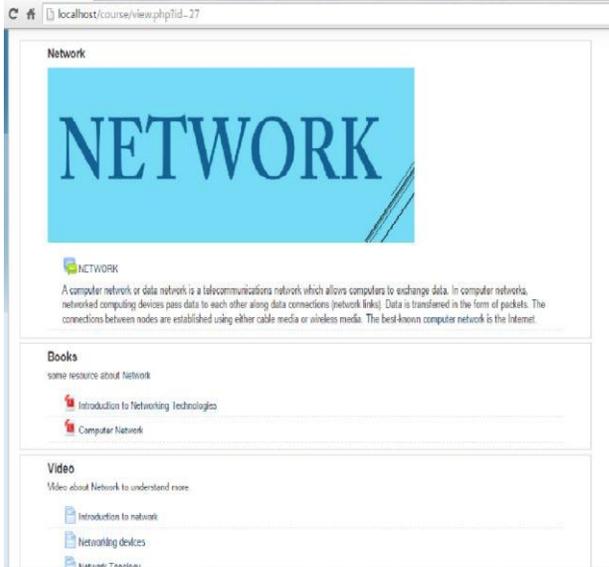


Figure 5 – Course page

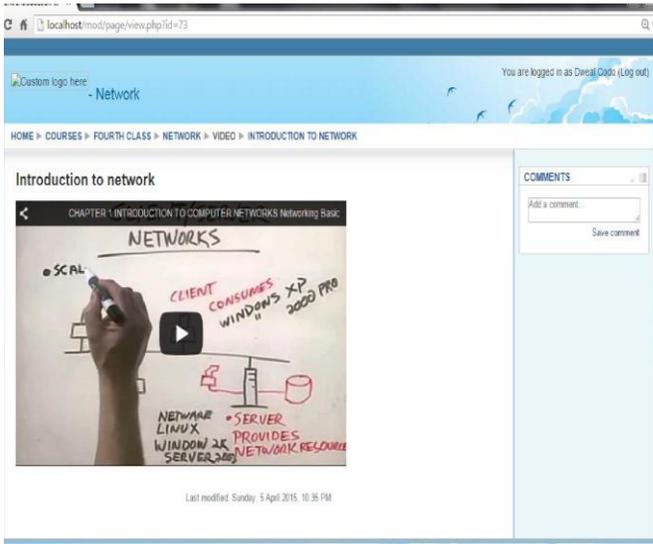


Fig 6 videos page

4. Chat class room is a chat box so teachers and students can chat between each other's. They can discuss the lessons, homework, questions and instructions given by the teacher. As shown in fig 7.

5. Icon for Facebook it created a page for Facebook to add there news about a new lessons. As shown in fig 8.

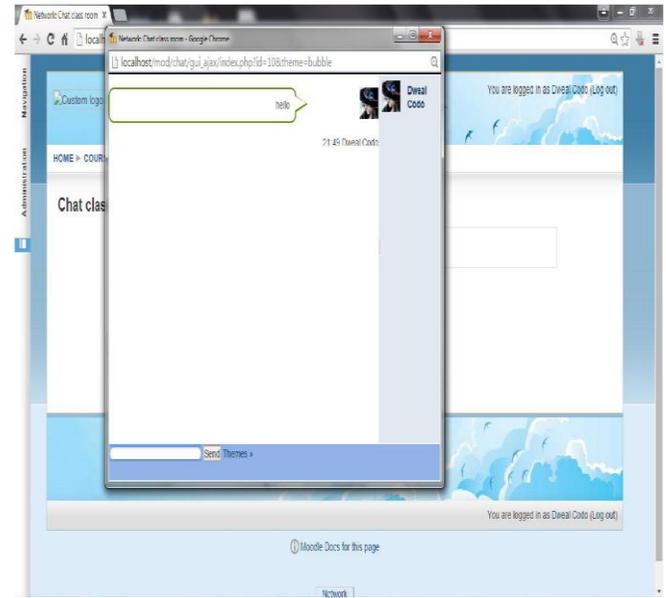


Figure 7 Chat room



Figure 8 The page in Facebook

5. Finally, when you click on (Exam bottom) so you can make test in this lesson. This exam shown in fig. 9. After ending the test the result of testing from 100, correct and wrong answered were appear as shown in fig 10.

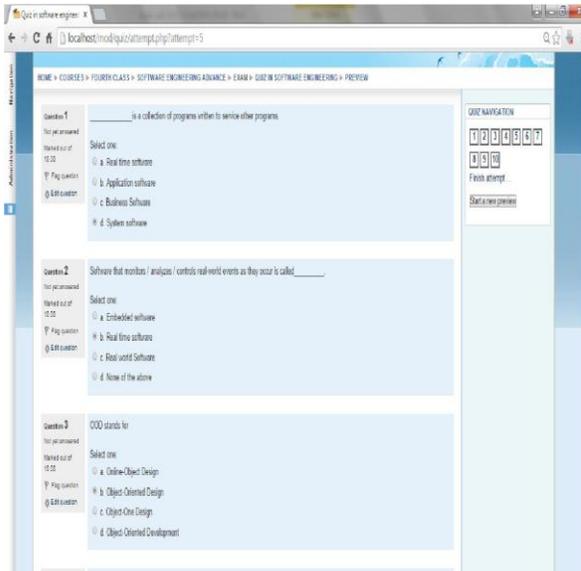


Figure 9 Exam page

The person who received the highest mark will be shown as in fig 11.

an online system which gives learners access to all prepared e-learning courses. It's effectively an online site which have no license fees, good interface and easy to access/easy to use.

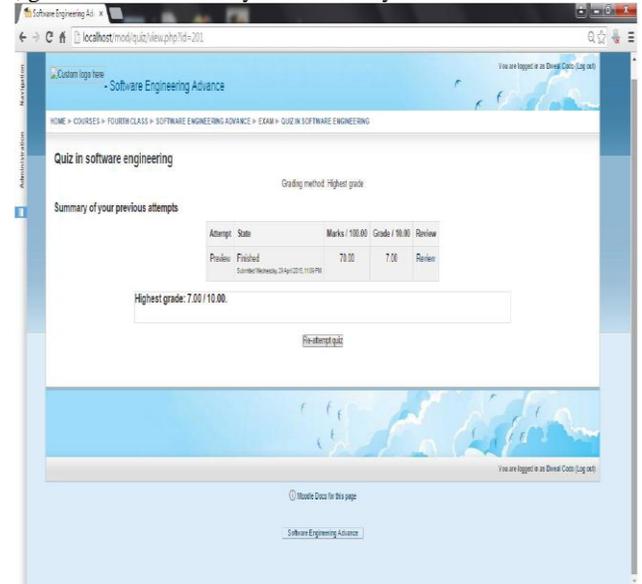


Fig. 11 Highest mark

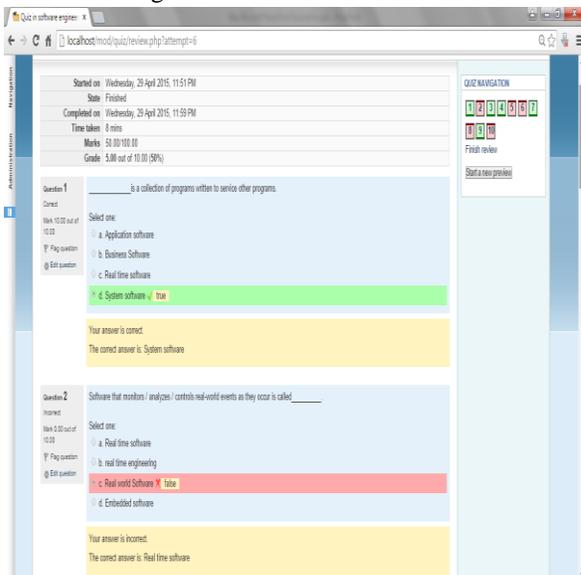


Figure 10 Exam result

Recommendations

A Cooperative Learning appears by Students work together in small groups and learns through interaction with each other while the teacher coaches the process.

Using E-Learning to improve Mobile technology learning environments, and engage students in new and exciting ways. Development a Certificate for this E- learning web site. Development a Global E learning for all Iraqi universities together.

Acknowledgments

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Conclusion

E learning is a technology enables people to learn anytime and anywhere.

E-learning makes good use of database and CMS (Content Management System) technologies. These two work hand in hand to store the contents of the course content, test results and student records. The data is stored in the database and the CMS provides a user interface for the student to add, update and delete data. A good LMS (Learning Management System) will often provide reporting tools to generate and store progress reports.

The world's most popular LMS is called OLLESE. It co-developed a distribution of Moodle called OLLESE . OLLESE is

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