Modular Object Oriented Dynamic Learning Environment (MOODLE)

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Abstract— This paper entitled “MOODLE” has its application in client-server architecture. Objective of the paper is to demonstrate advanced learning management system on online network system. Now a day e-learning management system is part of learning environment in school, colleges and universities. This dynamic learning management system is used to interact with student and teacher, if the network is online or online. Teachers can upload study material on server and each student can access that material using their own login. In this system notice should be provided by main authority is notified by every staff member on their mobile. When user wants to use this application he has first login then he can upload or download information on the database. This system provides some extra facilities event calendar for departmental event notification. Moodle provide android application for Attendance. This learning management system quite useful in educational and business environment in day today life. This paper presents an enhanced solution for running Moodle in online Mode to improve asynchronous learning [1]. This solution allows learners to continue e-Learning activities in cases where Internet connection is unavailable. The presented solution uses transparent and automatic end users PC or laptop. After the connection is restored, all online activities will be synchronized to the principal Moodle platform.

Key words: ELearning, Moodle, Connectivity, online, LMS

I. INTRODUCTION

The improvement and the rapid growth of Information and Communication Technologies (ICT) have promoted the adoption and diffusion of these in the education community. Indeed, ICTs, accompanied by advances in cognitive science and educational methods are changing rapidly institutional structures, training methods and more particularly, methods and practices of teaching and learning. In summary, the integration of ICT in Education and the spectacular breakthrough of the Internet have led to changes in our teaching approaches. In developing countries, higher education is an essential vehicle of this process. ICT development, telecommunication infrastructures and the Internet have especially a strong impact in the education sector with the advent of distance learning that is becoming more important. Moodle is one of the most popular LMS with several currently active sites. In Moodle, learners must be connected online all time to do eLearning activities. Learning Management System (LMS) have emerged from an auxiliary role to a critical one in higher education. Interne have strong impact in the education sector especially with the advent of Distance Learning that is becoming more important. The presently available system in our department is totally paper based but in today we run in new technologies. And LMS is of them which provide Modular Object Oriented Dynamic Leaning Environment in [1]. With the help of MOODLE student can interact with new technology like eLearning. MOODLE can reduce the paperwork submission and provide facilities to online submission, upload-download notes, Quiz, academic calendar, notice. Moodle can work in offline or online. In short, Moodle [2] [4] [5] is one of the most popular Learning Management Systems (LMS) with several currently active sites. It is a course management system designed to help educators who want to create quality online courses. On the other hand, the evolution of the web based education platforms is becoming increasingly important in education system.

II. LITERATURE REVIEW

“Modular Object-Oriented Dynamic Learning Environment” is a course management system for online learning. It is a software package for producing Internet based courses and web sites. It has many features expected from an e-learning platform including Forums, content managing (Resources), Quizzes with different kinds of questions and several activity modules. Moodle also has several contributed modules. The design of Moodle is based on socio-constructivist pedagogy. This means that goal is to provide a set of tools that support an inquiry and discovery-based approach to online learning. One of the advantages of Moodle is that it has been developed as an Open Source software project. It is entirely supported by a team of programmers and the user community. This also means that Moodle is available free of charge under the terms of the General Public License (GNU) and has no licensing cost attached.

For the literature we visit the various web sites to collect the information about Learning Management System. We get some software like IIS web browser, Android ADT, JDK 1.7.0, SQL Server 2008. For the Moodle we need to whole Department in the single network it means that each system in the lab is connected to server to access that server. For offline work we need to design Intra domain system using Wi-Fi or LAN. Georgouli et al., in [3], propose the experience of using an asynchronous e-learning platform, called cs e-Class, to enhance traditional classroom instruction by incorporating a number of online activities. Moodle runs without modification on Unix, Linux, Windows, Mac OS X, NetWare, and many other systems that support PHP (HTML-embedded scripting language), including most Web host providers. Moodle is also a template-based system to which content must be is added. This makes Moodle’s interface very intuitive and allows for easy navigation. The whole page is presented in a “flat view” format. The Moodle learning management system makes use of asynchronous communication software to provide instruction and facilitate communication between teachers and learners. Asynchronous communication indicates that lesson delivery and teacher/student communications are not done in real time. Participants do not have to be at their computers at specific times. Learners...
log into the system at their convenience to read lessons, view videos and presentations and submit assignments. The Moodle Offline Project from the Open University, in [6], provides a description of an offline mobile Moodle client that can be used to work offline and synchronize with the Moodle server but also remains a theoretical report.

III. PROBLEM DESCRIPTION

Thus with a view to setting up a solution overcoming the problems of connectivity, this paper proposes research based on a production platform for using Moodle in offline Learning. Our solution is based on a central platform and a lightweight client platform. The installation of Moodle for end users is doing in automatic way. This solution allows learners, which are in disturbed Internet connection zones to continue distance-learning activities on their own computers. Our proposition provides a power full environment for asynchronous distance education. To implement open network Learning Management System for many registered user who interact through the Moodle for eLearning.

In this project we provide several features considered typical of e-learning platform in addition to some original like filtering system. We implement software called as Moodle which are going to provide Learning Management System by using login id to each student and teacher. Main authority can display any notice or information regarding department. Each teacher has home page and on that page teacher can upload notes, assignment, aptitude question etc. to the server and each student can access data using their login id. Mobile notification provided for the notice alert. Moodle provide extra facilities like chat for student, event calendar, online exam.

IV. IMPLEMENTATION

First run Moodle application on server sides. If user have internet connection or LAN then user can access the Moodle. Server administrator provides a username and password to new users. A user can pass the URL of the Moodle then gives it is specified the name and password of the user who is first on the centralized platform. After the connectivity test is successful, the download and installation of the local platform is done. Then, application identifies each user according to his username and password (figure 1).

After successful identification of the central Moodle platform, the following message is displayed, otherwise an error message. If administrator creates a new user account then Moodle automatically generate the password and send to the emails. The general system architecture (shown in figure 2.) consists of the following parts: In this architecture, we have a set of client platforms "light Moodle" connecting from an Internet connection to a server with a Moodle platform. Thus, we have two parts: client and server.

V. RESULT ANALYSIS & DISCUSSION

Based on the result of the survey, students can upload the submission and teachers can upload the notes. Moodle is
providing the Quiz module for the users. Teachers are taking the online exam by using the Quiz module of Moodle in [7].

A. Moodle Provides the Facility Of Are:

Membership Management Module: - In this module user-id and password will be provided to each user for the authentication. Using this registration user can interact with function Moodle.

1) Upload Module:
This module provided to teacher to upload the notes, tutorial, event based material on Moodle server with their login. Student can upload the submission in to particular practical.

2) Download Module:
In this module student can download that notes, study material with help of their login.

3) Event Organizer Module:
In this module academic calendar shows all event organized by department in year.

4) Backup and Recovery Module:
In this module backup and recovery done in case of loss lost or forgot password.

5) Quiz:
Provide multiple choice questions for student with the Moodle server.

6) Communication Model:
Exchange message over the network, with message alert system.

7) Online Submission:
Upload submission in the college department intranet.

VI. CONCLUSION & FUTURE DIRECTION

The Moodle Server module is a Moodle platform where are centralized all resources and courses activities. As an application system we first targeted the distance learning system of teachers-students who act critical role in rural area education system. Constrained to stay in this degraded connectivity environment for training students and studying on distance learning system, our solution will permit these teachers-students to optimize their activities. After validation of all tests and users feedback on our first target, we plan to provide a package allowing distance learning system Moodle based to be used overcoming connectivity constraints, representing a real problem in developing countries.

The proposed solution is on one hand based on three side modules: ASP, Ipref and Moodle. The ASP client module is the client side main process unit that manages installation, update and upload to server. The Ipref client module gives information about connectivity between client and server. Moodle client module is a lightweight Moodle customized with the subscriber user information only. On the other hand four server side module, ASP, Ipref, SMS and Moodle. As an application system we first targeted the technical e-Learning system of teacher-student. With the help of Moodle design Learning Management System for department which is today’s needed.

REFERENCES


