Content Management System-Drupal in Educational Institute for Teaching-Learning

Amar Rajendra Palwankar
Department of Information Technology
Assistant Professor
Finolex Academy of Management & Technology,Ratanagiri,Maharashtra
amarpalwankar1296@gmail.com

S.Sankareswari
Department of Information Technology
Assistant Professor
Finolex Academy of Management & Technology,Ratanagiri,Maharashtra
sankari6755@gmail.com

***Abstract* - we have several ways to organize huge amount of information, to publish, to collect from users who are geographically apart, to conduct online examination with time constraints, to conduct a survey, to display examination result in sorted order. But to make it possible, one need to be a web developer. This open source web development tool called drupal made it easy for the users who are not web developers and programmers. This paper describes methodology to build a web site for an educational institute along with sequence of steps to install, configure and use of drupal on open source operating system.**

Keywords-CMS, drupal, open source, web 2.0, drupal module

I. INTRODUCTION

A web Content Management System [1](CMS) is computer software that allows publishing, editing, modifying and managing the web content of a website or internet portal from a central user interface. Content of a website can be simple text, documents, images, audio or video files. The major advantage of using CMS is that a complete website can be built without any programming skills and within a short period of time. There are many popular open source CMS software available like Wordpress, [2] Joomla and Drupal. In this paper, review of open source Drupal CMS has been done for building an intranet portal for an educational institution. Drupal has been selected because it is a flexible CMS that can not only be used for building complex corporate/government web sites or portals, e-commerce applications but also for small business web sites, personal or family homepages and community based social network sites etc. Drupal is an open source mobile ready platform based on PHP and MYSQL which anyone can use, share, and support. Drupal offers granular user and role management which can be used to control access to functionality within CMS.Drupal has a very rich repository of plug-ins.Drupal [1] is being used for developing websites in various organizations, some popular examples are [2]"war child" which is a charity based website, University of Canberra Alumni, Treasure Explorer's website, NASA, Wikipedia, and Yahoo etc. In the education field it is being used by various institutes like Prince of Wales, Provides details on the procedure and technique to customize a Drupal template for building a website for a research institute's needs. The Drupal software is free to download and use, and there are no license fees. So in most cases, the only cost for a new website is the design and development time. It offers high performance, with built-in caching and scalability to multiple servers. Drupal is more secure than wordpress and Joomla.

II. OBJECTIVE

The objective of this study is to build an intranet based website for an educational institute using open source Drupal platform that will provide facilities like viewing information regarding the courses, teachers, time-table, sharing of information among the students, student's login account, chat, important contact details, submission of IT and office related complaints, notice, downloading of various documents like assignments, list of experiments, syllabus, online examination, blogs etc.

III. TOOLS AND METHODOLOGY

The various tools required are: Server Side: Apache web Server, MySQL 5.5.34 Database server, PHP 5.4.22, drupal-7.0 Client Side: Simple Browser The methodology of development of the web application is as follows

Step 1: Install the required packages
#yum install php-mbstring php-xml php-gd mysql-server httpd php php-pdo php-mysql

Step 2: Setup Apache
If this Drupal installation is going to be the only website running on your server there is not configuration required or you can proceed with Step 3 where your document root will be a default /var/www/html/ directory. If you wish to add drupal as additional website you need to create VirtualHost. This will use default /var/www/html directory. For any changes restart Apache webserver with:
service httpd restart

Step 3: Download and decompress Drupal CMS
cd /var/www/html
wget http://ftp.drupal.org/files/projects/drupal-7.0.tar.gz
tar xzf drupal-7.0.tar.gz
mv drupal-7.0/* .; rm -fr drupal-7.0 drupal-7.0.tar.gz
chown -R apache.apache /var/www/htm

Step 4: Setup Drupal
cd /var/www/html/sites/default/
cp -p default.settings.php settings.php

Step 5: Create mysql database
Open terminal of fedora 15 and start mysqld service
#service mysqld restart
mysql
mysql> create database drupal_db;
Query OK, 1 row affected (0.00 sec)
mysql> CREATE USER 'amar'@'localhost' IDENTIFIED BY 'testpassword';
Query OK, 0 rows affected (0.00 sec)
mysql> grant all privileges on drupal_db.* to amar@localhost;
Query OK, 0 rows affected (0.00 sec)
mysql> quit
Bye

Step 6: Proceed with Drupal installation
At this point everything should be ready to proceed with Drupal installation. Open your browser and point your browser to your webserver by typing http://127.0.0.1. After this point the installation is rather self explanatory.

Step 7: Download and install required modules and set appropriate permissions

Login form is shown in Figure 1

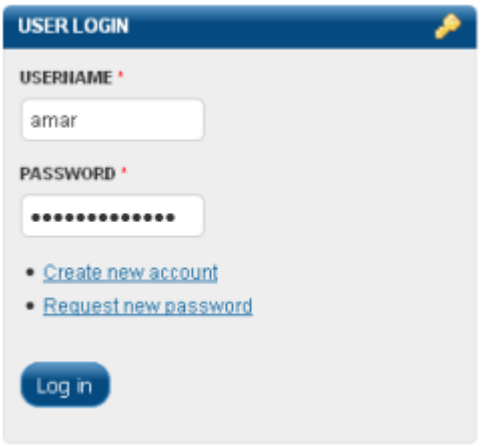

FIG. 1: DRUPAL HOME PAGE

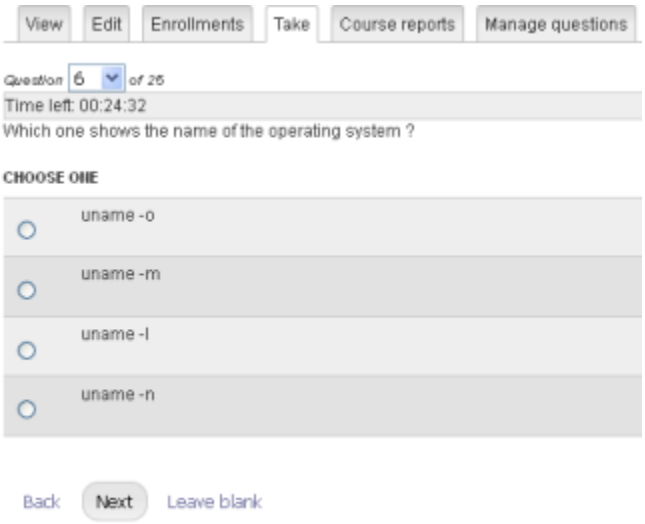

FIG. 2: DRUPAL EXAM MODULE INTERFACE

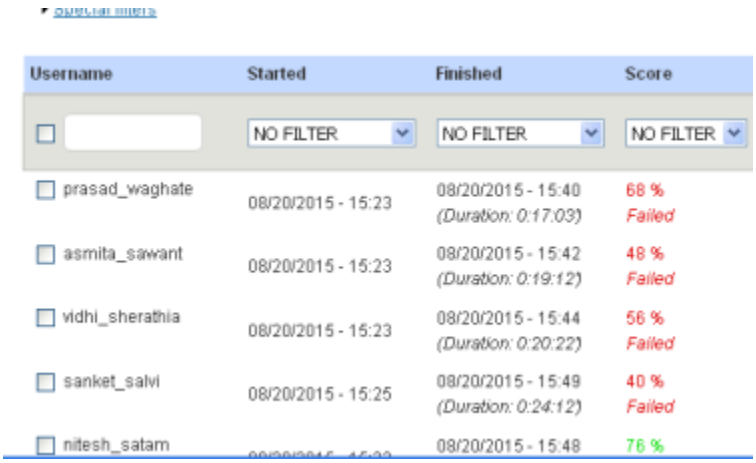

FIG. 3: QUIZ RESULT

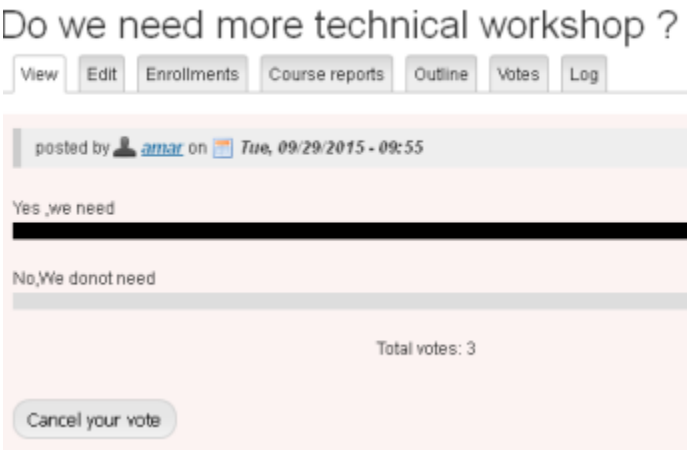

FIG. 4: DRUPAL POLL MODULE INTERFACE

IV. CONCLUSION

Drupal should be preferred to build simple, low cost websites which don't require much complex features. Similar methodology can also be used to build websites for small business, shopping carts, community based social networking etc. Since it is open source, the core Drupal framework can be used by the developers to build complex web based information systems for educational institutes, intricate inventory control systems, integrated e-commerce systems, communication tools, online [4]quiz reservation systems and complex business directories etc depending upon the requirements of the project. This paper describes of a custom Drupal-based website to support blended learning in an introductory graduate course about foundations and current issues in educational technology. The author found that Drupal was an effective supplementary tool and an excellent alternative to some third party Web 2.0 sites available online, and yet Drupal does not completely replace the classroom or full-fledged learning management systems such as Moodle. However, if one is teaching a class in which cooperative learning, writing, and knowledge creation are components, Drupal can be particularly helpful. Here author has created three categories of users namely anonymous user, uploader and administrator. Admin is responsible for managing the user and all other modules. Uploader is responsible for uplaoding questionaires for online examination and lastly students will use the site in intranet. User's credentials are fully encrypted before they are transmitted for further authentication using https module. Website is fully protected from brute force attack using attempt module.

V. REFERENCES

[1] http://https://www.drupal.org
[2] http://www.joomla.org
[3]http://www.creativebloq.com/drupal/examples-of-drupal-websites-7133440
[4] Creation of an Intranet Website for an Educational Institute Using Open Source Joomla CMS, IJCST Vol. 5, Issue 1, Jan - March 2014
[5] https://www.drupal.org/project/quiz
[6] B V Wakode, D N Chaudhari "STUDY OF CONTENT MANAGEMENT SYSTEMS JOOMLA AND DRUPAL", IJRET: International Journal of Research in Engineering and Technology
[7] Patel, Savan K., V. R. Rathod, Jigna B. Prajapati. "Performance Analysis of Content Management Systems-Joomla, Drupal and WordPress", International Journal of Computer Applications 21.4 (2011), pp. 39-43.
[8] Comparing Open Source CMSs: WordPress, Joomla, Drupal, and Plone, http://www.base.ngoinabox.org/files/basebox/Idealware_joomla_drupal_plone.pdf