

DRUPAL: DEVELOPING LIBRARY PORTAL USING OPEN SOURCE CONTENT MANAGEMENT SYSTEM

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Abstract: The information and Communication Technology (ICT) has changed rapidly over the past two decades. Internet and related technology changed the communication and learning habits of society. The emergences of these technologies have changed the face of the traditional libraries from just being a paper-based information resource to digital or web-based libraries. It forces the librarian to use IT tools to render his services effectively. Library portal plays a vital role in extending library services and assists in sharing knowledge. Drupal is an Open Source Content Management software powering millions of websites and their applications. Drupal includes features to enable content management systems, blogs, collaborative authoring environments, forums, newsletters, picture galleries, file uploads & downloads, and many more. Drupal is written in PHP and distributed under the GNU General Public License. This paper describes a live project carried out towards the development of a dynamic web site of Dravidian University Central Library, Kuppam, Andhra Pradesh; using Drupal is as a pilot project. The purpose of this paper is to inform LIS professionals about the benefits of using Open Source Content Management Software -Drupal.

Keywords: Drupal, Content Management System, CMS, Content Management Software, Open Source Software, Web Content Management, WCMS

1. Introduction

The emergences of enhanced information technologies and telecommunications systems have changed the face of the traditional libraries from just being a paper-based information resource to digital or web-based libraries. It forces the librarian to use IT tools to render his services effectively. Library portal plays a vital role in extending library services and assists in sharing knowledge.

A web content management system (WCMS) is a software system that provides website authoring, collaboration, and administration tools designed to allow users with little knowledge of web programming languages or markup languages to create and manage website content with relative ease. A robust WCMS provides the foundation for collaboration, offering users the ability to manage documents and output for multiple author editing and participation. Most systems use a database to store page content, metadata and other information assets that might be needed by the system. In library Content Management System, necessary measures have to be taken to show how it is easy to use and how it provides right information to right user who uses it. It is quality or characteristic feature of content. It is to know whether the content is efficient, effective and satisfying those who use it.

Drupal is an Open Source Content Management software powering millions of websites and applications. Drupal includes features to enable content management systems, blogs, collaborative authoring environments, forums, newsletters, picture galleries, file uploads and downloads, much more. Drupal was written in PHP and distributed under the GNU General Public License.

The Drupal project was started in 2000 by a student in Belgium named Dries Buytaert. The code was originally designed for a site called Drop.org. In 2001 the source code for this project was released as Drupal. Drupal 7 was released on January 5, 2011 in many countries. With the release of Drupal 7, maintenance for Drupal 5 has stopped. Only Drupal 7 and Drupal 6 are maintained. The latest version is Drupal 7.31 released on 6th August 2014.¹

2. Technologies needed to work with Drupal

To work with Drupal and make it functional one requires the web server, or the service provided by the web host which meets the minimum requirements. They are:

- PHP 5.2.5 or above version
- MySQL 5.0.15 or above version
- Apache 1.3 or above version

2.1. Implementing the technical requirements: A Preconfigured Approach

There are two ways in which these requirements can be fulfilled. First way is to install all the three components individually. The second option is to use a preconfigured package such as WAMP or XAMPP the two of which have been creating a complete development environment with the ingredients like Apache, MySQL, PHP, Perl, and various extensions.²

Pre-configured package was used for installation. It was easy and less time consuming. Moreover, using use of pre-configured packages for installation is easy and less time consuming provide additional functionalities.

2.2. Install XAMPP for Windows

XAMPP for Windows is a free and open source cross-platform web server provides an easy to install Apache-MySQL-PHP-PERL-framework. XAMPP saves time and effort and provides the software support for web frameworks like Drupal, Joomla, Moodle, or wikiMedia on any Windows PC. Just download from the website www.apachefriends.org and install with using simple steps.



Figure 1: Downloading Xampp for Windows

2.3. Downloading and Installing Drupal

Once XAMPP is installed means ready for the installation of Drupal (Figure 2)

2.4. Downloading Drupal

The main distribution files for Drupal can be downloaded from <http://www.drupal.org>. The file will be in the form of compressed archive, which needs to be uncompressed or unzipped by using a utility. This is available either locally or on one's host server. There are many freely available e.g. WinZip or WinRAR. Figure 1 shows the screen shot of the Drupal website.³



Figure 2: Drupal Web Site

2.5. Installing Drupal

Drupal can be installed locally or remotely. Assuming that XAMPP has been installed and configured to meet the requirements of Drupal, unzip the distribution file into a directory under one's web server root. In windows OS, this is typically c:/xampp/htdocs but it may vary on hosted servers and among different brands of operating systems. To install remotely one must check the facilities on the host regarding control panel software and connection resources & the acquired skills of users.

Once the files are uploaded one should navigate to the sites/default folder and make a copy of the default.settings.php file so that the name of the new file is settings.php.

The next page configures the MySQL database which is step 1 of the installation process. Step 1 of the installation deals with the configuration of the MySQL database. Enter the configuration of MySQL database. The hostname of database is usually localhost. This means the database server is running on the same computer as web server. Host providers, using control panel, usually allows one to set up his won User Name, Password and Database Name.

Now, it is time to confirm that are a few steps completed before we move forward.

- Have you uploaded the Drupal 7 files to the root directory of your website?
- Have you created a copy of the default.settings.php file and renamed it to settings.php?
- Have you created a MySQL database and noted the database host, database name and database password?

If you answer is 'yes' to all of those questions it is time to move forward with the Drupal installed by navigation to the root of your website. Once you navigate to the root of your website you should see the screen below. If you don't see a screen like that, then you need to go back and check your setup steps.

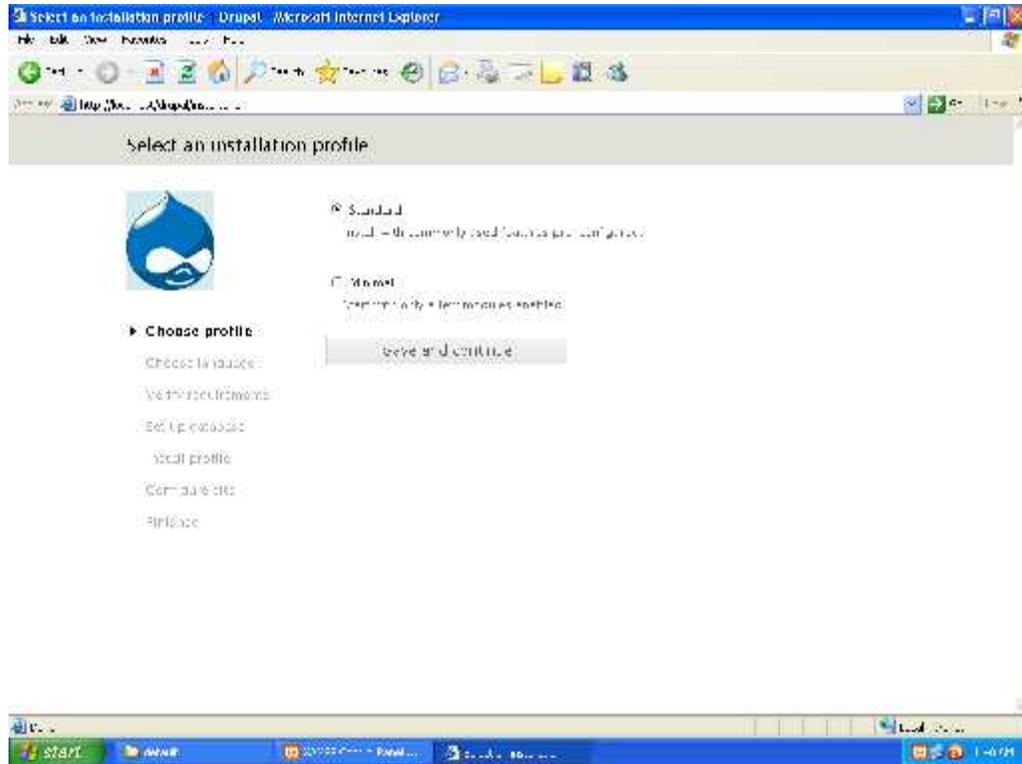


Figure 3 : Drupal Install Screen

Click Save and continue to move to the next option which will be to choose your language. Click Save and continue again to move to the *Set up database* window which will look like the image below.

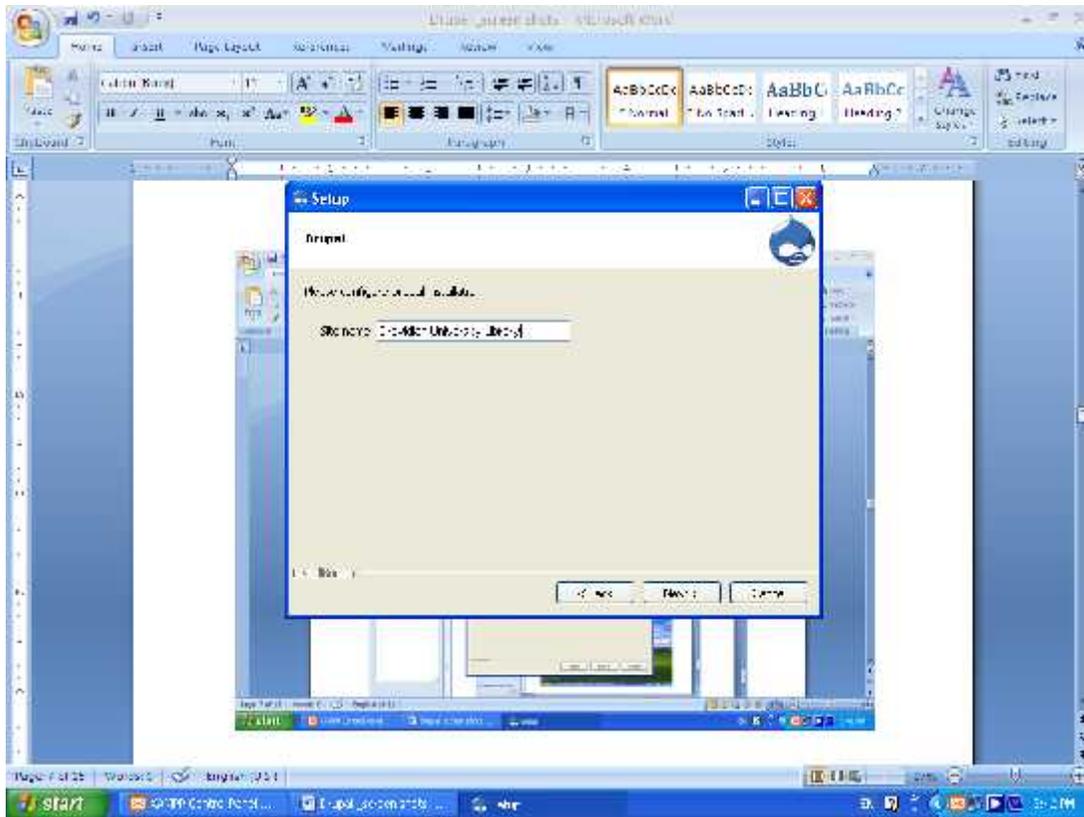


Figure 4: Database Configuration

Enter the values that you copied after creating your database then click the Save and continue button. Drupal will take a few minutes to go through the setup process and if everything completes properly you will be prompted for three things:

1. Site Information;
2. Site Maintenance Account;
3. Server Settings.

Once you have filled out the relevant information and clicked Save and continue you will see the following window.



Figure 5: Install Complete Window

Click on the Visit your new site link and you'll be ready to move to the next phase.

2.6. Post Installation Configuration

If your installation was successful then you will be ready to perform some basic configuration on your new Drupal site. In order to do that you will need to feel comfortable with the administration menu bar (pictured below) at the top of the screen.



Figure 6: Administration Menu Bar

If you look at the rest of the front page you'll see that the site name you entered earlier now populates the header of your site, along with the standard Drupal logo.

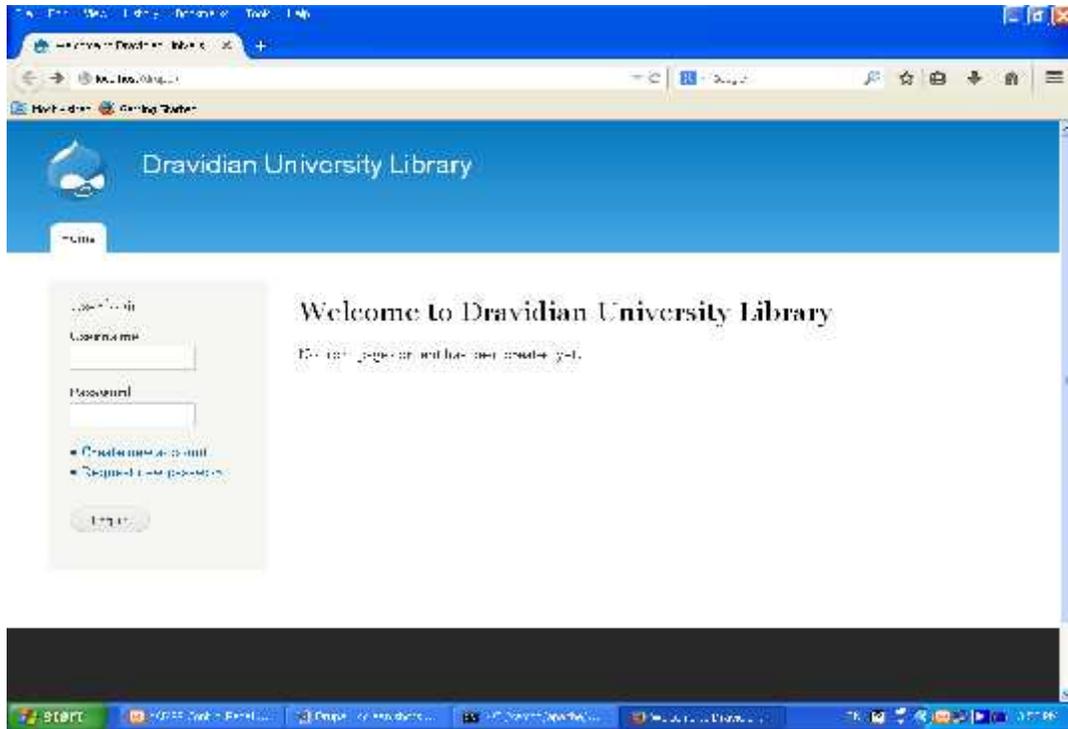


Figure 7: Front Page

The set up has now been completed and one is ready to use Drupal.

3. Drupal Architecture

Three main building blocks of Drupal are: Nodes, Core Modules and Themes. Its architecture is modular. It has core modules which have functions for content and user management. Node is the basic information element. A node is constituted of a title, a teaser and a content block. It has also some properties like the place published, the comments options, the classifications, etc. Theme describes the look and feel of the website. Drupal comes with a set of default themes which can be used to change the layout of the website.⁴

3.1. Thinking about the Content of the Drupal Way

Before one can go to Drupal, it will be worthwhile to spend some time to think about the content of a typical web site. Even if one has to get one's web portal ready from some service provider, one needs to apply a thought on what is technically called a site map which is indeed a map of requirements of the website. It can be in the form of a flowchart or a table to visualize the main sections, categories and contents as desired in the website or a web portal. When one is sure about with the content structure one creates menu items and links these to the content to facilitate browsing. This is how the content of the website of the present case study related to Dravidian University Central Library, Kuppam, Andhra Pradesh was built as show in Figure 8

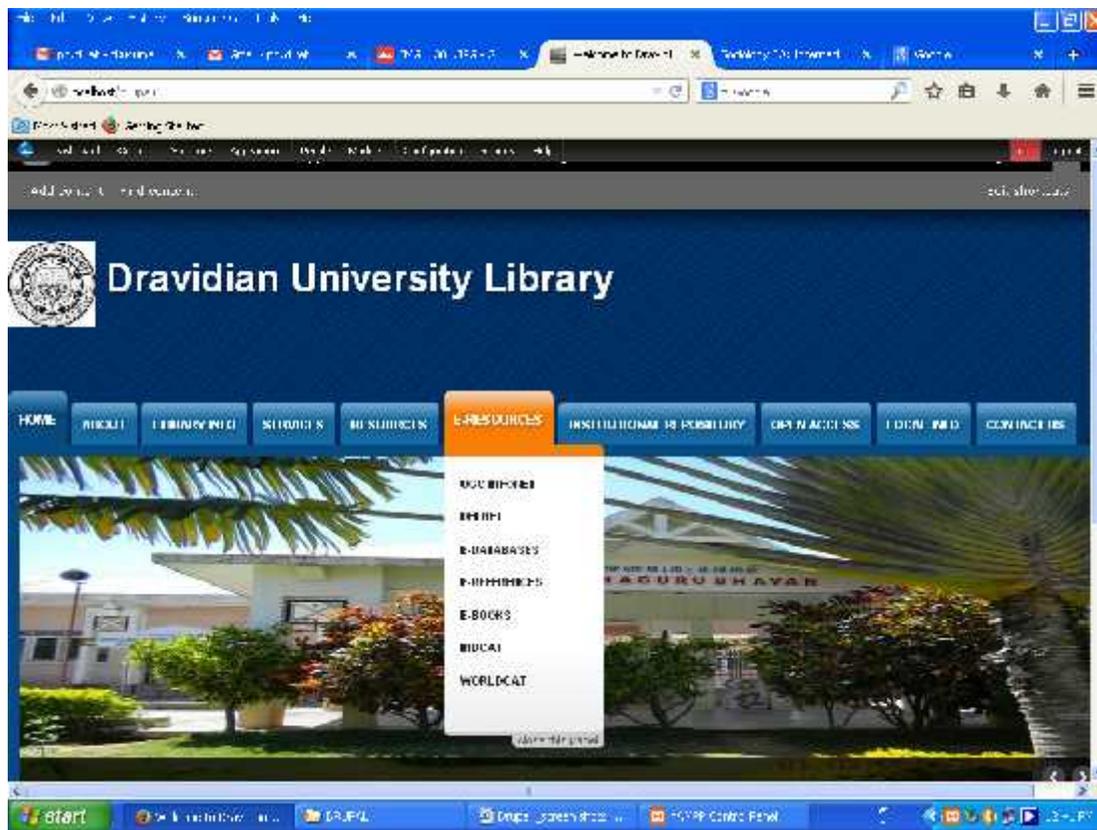


Figure 8: Dravidian University Central Library Portal

4. Conclusion

Drupal is a very powerful Content management System (CMS), most suited to meet the requirements of a Librarian in any university or Institute without much technicality and comparative ease. In many libraries, computer professionals carry out this job and the library professionals assist in collecting and organizing the data. But, to have an effective and efficient Library portal, library professional should get involved right from the stage of planning the contents to final stage of hosting it on server. This not only helps us to know the in and outs of the library portal, but also helps us to gain ability in adopting ICT to library services independently, which is very much essential in this era.

References:

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