

## UNIT 5

### User Interaction and Content Management with Joomla and Drupal

#### 5.1 CREATE DISCUSSION FORUMS AND TOPICS

Encourage your learners to share thoughts on course material with peers by setting up forums and topics for learners to ask questions, discuss course content and assignments, and work together in assigned groups and sections. You must create a discussion forum first, which will contain associated discussion topics. Discussion forums organize course discussions topics into categories such as weekly discussions, open discussions, and group discussions.

You can start the creation of a discussion forum or topic using the following options:

- Create a discussion forum in the New Content Experience (Lessons)
- Create a discussion forum in the Classic Content Experience
- Create a discussion forum in the Discussions tool
- Choose one of the workflows below according to your organization's setup.

#### Best practices for using Discussions

- **Ensure that there are discussion topics created for your discussion forum(s)**

Forums are used to group topics into predetermined themes, course units, etc. You can only post in discussion topics. If there are no topics created for a forum, then learners will not be able to participate in discussions.

On the course homepage, click Discussions. Make sure that there are topics nested under the discussion forum. If you do not see topics nested under the discussion forum(s), you must create topics.

- **Ensure that discussion forums and topics are not unintentionally hidden**

The option to hide a discussion forum or topic is located on the Discussion List page, in the context menu for each forum or topic. The Hidden icon appears beside any topics or forums that are currently hidden. Forums and topics can also be hidden on the New Forum or New Topic page (or the Edit page for existing forums and topics), in the Restrictions tab's Availability section.

If you selected Hide this [topic or forum], then learners cannot see it. If a discussion forum has this setting enabled, all of the topics nested under it are also hidden.

- **Ensure that there are no unwanted date restrictions set for the discussion forum or topic**

Learners cannot access topics that fall outside of set date restrictions. If a discussion forum has date restrictions attached, then all topics nested under it will be hidden outside of those date restrictions.

The option to set date restrictions is located on the New Forum or New Topic page (or the Edit page for existing forums and topics), in the Restrictions tab's Availability section.

- **Ensure that the appropriate group restriction settings are applied**

If group restrictions are enabled for the discussion forum or topic, then only learners within the group selected can see the discussion.

The option to set group restrictions is located on the New Forum or New Topic page (or the Edit page for existing forums and topics), in the Restrictions tab of the Group and Section Restrictions section. Select Restrict this forum to the following groups and sections to enable group restrictions for a forum or topic.

## **5.2 CREATE A DISCUSSION FORUM IN THE NEW CONTENT EXPERIENCE (LESSONS)**

You can create a discussion forum in the New Content Experience (Lessons). This adopts creation elements from Assignments and Quizzes, making it familiar and easier to create great course content.

To create a discussion forum

- Navigate to Content.
- Click Create New.
- Create New button to start creating a new discussion forum.
- Click Discussion.

A forum is automatically created using your new topic name. You can complete the discussion creation process to create a topic associated with that forum. If desired, you can change the forum associated with your discussion topic.

- To change the forum using the streamlined forum selection workflow From the New Topic page, click Change Forum.
- From the New Topic page, click Change Forum.
- The Change Forum option on the New Topic page. Click Change Forum on the New Topic page.

- From the Change forum dialog, do one of the following:
  - The Create a Forum option of the Change Forum dialog.
    - Select Create a Forum and enter a Forum Title.
    - Select Choose an existing forum.
    - Click Apply Changes.
    - Your new discussion topic forum is changed.
  - To change the forum using the explicit forum selection workflow
    - From the New Topic page, click Forum and select the desired forum from the drop-down menu.
    - Click either Save or Save and Close.
    - Your new discussion topic forum is changed.
    - Create a discussion forum in the Classic Content Experience
    - You can create a discussion forum in the Classic Content Experience.

### **To create a Discussion forum in the Classic Content Experience**

- From your course homepage navbar, navigate to Content.
- Click Upload/Create.
- Click New Discussion.
- Click New Forum.
- From the Create Discussion Forum page, enter the following
  - In the Create Discussion Forum field, enter a forum title.
  - In the editor, enter any forum details you want to include.

Note: The editor field has a character limit of 65,535 characters.
- Click Create.

A new forum is created using the Classic Content Experience. You can now create topic associated with that forum.

### **To create a discussion forum from the Discussions tool**

From your course navbar, navigate to Discussions.

- Click New> New Forum.
- Navigate to the Properties tab of the New Forum page and set the following: Enter a Title for your new discussion forum

- Use Brightspace Editor to add a Description. Note: The Description field has a character limit of 65,535 characters.
- Click to select additional forum options, including Allow anonymous posts, participation requirements, and Display forum description in topics
  - Allow anonymous posts: Enables users to post anonymously.
  - A moderator must approve individual posts before they display in the forum: Ensures that posts are approved by a moderator before they display in the forum.
  - Users must start a thread before they can read and reply to other threads in each topic: Ensures user participation by making thread creation mandatory.
  - Display forum descriptions in topics: Provides instructors the option to display a discussion forum description within a discussion topic description.
- Click the Restrictions tab and do one or more of the following:
  - Under Availability, define the date range when the discussion will be available to users.
  - Add automated conditions for access using Release Conditions.
  - Apply restrictions to groups or sections.
- Click Save and Close to create the forum; or Save and Add Topic to create a discussion topic within your new forum.

You have created a discussion forum using the Discussions tool.

### **Create a discussion topic in the New Content Experience (Lessons)**

You can create a discussion forum in the New Content Experience (Lessons). This adopts creation elements from Assignments and Quizzes, making it familiar and easier to create great course content.

To create a discussion topic

- Navigate to Content.
- Click Create New.
- Click Discussion.
- On the New Topic page, do the following:
  - Enter a Topic Title.
  - Click Change Forum to change the forum where your topic will go, if necessary. Note: Depending on how your organization has configured your course, you may need to explicitly select the forum from the Forum drop-down menu instead.
  - To add your topic to your grade book, enter a value in the Grade Out Of field.

- Enter a Description for your topic using Brightspace Editor. Note: The Description field has a character limit of 65,535 characters.
- In the Availability Dates & Conditions accordion, enter the following:
  - Enter a Start Date and End Date.
  - Adjust the Before end and After end restrictions based on your preferences by clicking each option.
- Click Add Release Condition to create a new release condition or add an existing one.
- Under Group and Section Restrictions, you can set different restrictions if you have Groups or Sections set up in your course.

### 5.3 JOOMLA

Joomla is an open-source content management system (CMS), which is used to build beautiful web sites and powerful online applications. It is written in PHP and developed by Open-Source Matters, Inc. It is built on a Model-View-Controller web application framework, which can be used independently of the CMS. It is free and uses object-oriented programming and software design patterns.

It is free, extendable, and separated into front-end and back-end templates (runs from administrator side). It is built on a model-view-controller framework which can be used independently of the CMS.

Joomla is a platform which is based on PHP and MySQL. Joomla also supports third-party extensions and templates, which allow us to make further customization to meet specific requirements. It is open to anyone who wants to develop the extensions and templates.

#### Why use Joomla?

There are basically three most popular CMSs available, i.e., Joomla, Drupal, and Wordpress. Other than that, there are endless other less popular CMSS available. The differences between them may be quite significant, although they all are basically developed to do the same thing. Their main purpose is to help you create and manage your website.

Joomla is the perfect tool that is easy to install and set up. There is no need to be an advanced user to use Joomla. One can use it with little-knowledge of HTML and CSS. There are thousands of extensions available in the Joomla Extension Directory, which can be applied to enhance the functionality. Joomla also contains a powerful application framework that helps the developers to create sophisticated add-ons that increase the power of Joomla into virtually unlimited directions.

The core Joomla framework helps developers to quickly and easily build:

- Inventory Control Systems
- Data Reporting Tools
- Application Bridges
- Custom Product Catalogs
- Integrated E-commerce Systems
- Complex Business Directories
- Reservation Systems
- Communication Tools

### **Applications of Joomla**

Joomla can be used for:

- Corporate websites or portals, intranets, and extranets
- Small business websites
- Online magazines, newspapers, and publications
- E-commerce websites and online reservations .
- Government, non-profit and organizational websites
- Community-based, school, college websites or portals .
- Personal blogs or family homepages

### **Advantages of Joomla**

- It is a freely available open-source platform.
- It is quite simple to install and set up.
- It uses WYSIWYG (What You See Is What You Get) editor, which helps to edit the content very easily.
- Almost all the browsers support it by default.
- It has an easy menu creation tool.
- It provides several templates and themes which are very flexible to use.
- It can be migrated to any server, and most of them work with any database.
- It has broad community support where it is easy to ask questions and receive the solutions.
- It is based on PHP scripts, and so the compatibility issues will be limited while using its framework.

- It ensures the security and safety of the data content and does not allow to edit the data without administrator privileges.

### **Disadvantages of Joomla**

- It has a compatibility issue when several modules, extensions, and plugins are installed simultaneously.
- Some of the important plugins and modules for Joomla are paid ones
- However, it has many modules, add-ons, and templates, and it is still limited for more advanced users.
- It is quite complex and makes it difficult to get custom designs without developer experience.
- It is not much SEO (Search Engine Optimization) friendly.
- It makes websites heavy to load and run, resulting in more time.

### **Features of Joomla**

Joomla contains thousands of verified third-party extensions, which can be found on Joomla extensions directory (i.e., [extensions.joomla.org](http://extensions.joomla.org)). There are several high-end templates available, and most of them are free to use. However, there is also an option to use paid themes that come with support. Templates are used to get different types of user interfaces, which allow us to change the colors, font style, layouts, and features, etc. Some of the important features of Joomla are given below:

#### **Multilingual**

Joomla is one of the most popular and widely supported open-source multilingual CMS platforms in the world, which offers more than 70 languages. A website can be created and presented in multiple languages, without even leaving the Joomla.

#### **Well-Supported**

There are several professional service providers available who can help develop, maintain, and market your Joomla projects. The Joomla community itself includes a vetted directory of such providers at the Joomla Resource Directory.

### **Easy Updates**

There is always a challenge for the developers to keep the software up to date. Joomla consists of an in-built updater to make the updating process easy for the users, and it does not require any professional skills. It contains the "One Click Version Update" feature, which is super easy to use.

### **Integrated Help System**

Joomla also provides an in-app contextual help option that is useful for every level of right side, which helps the users to understand all the options available on that page. There is user to learn how to operate Joomla. Most of the pages include the help button on the tool, which helps you troubleshoot the issues.

### **Banner Management**

There is also an option to easily add advertising and monetize the website with the help of banner management. The banner management tool allows you to create clients and campaigns.

### **Media Manager**

The media manager is a tool that can be used for uploading, organizing, and managing the media files and folders. It is also possible to handle more types of files with the help of configurable MIME settings.

### **Contact Management**

The contact management tool provides you an option to add several contacts, departments, and categories. It is useful because it extends the basic contact information with miscellaneous data as well as an image.

### **Search**

A built-in search tool or smart search feature will help the visitors to find the appropriate information on your website with ease.

### **Content Management**

Joomla is a Content management system and contains some excellent features that help the users organizing and managing the content efficiently. It is very easy to create the content using WYSIWYG (What You See Is What You Get) editor.



## Frontend Editing

Editing the content is very easy and fast. Assume that you are reading through your website, and you see any mistake or any other change that you want to make.

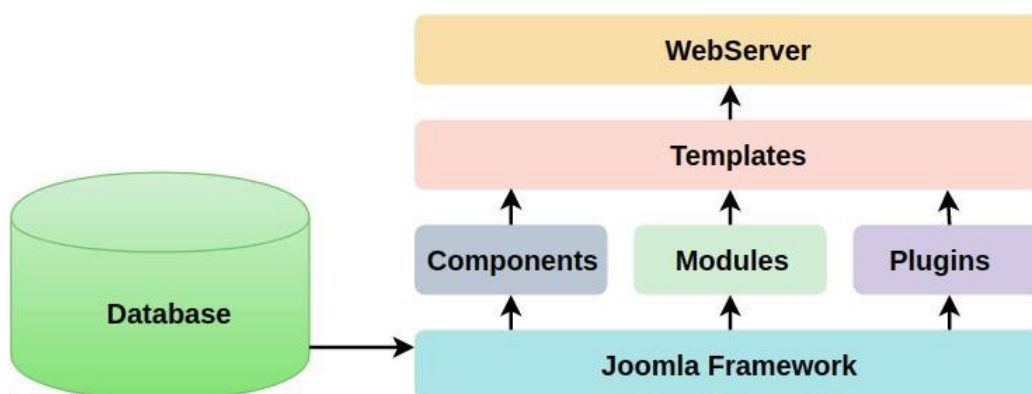
## Powerful Extensibility

Joomla has a powerful extensibility feature. You can get over 7500 extensions to extend your website and broaden its functionality. You can use Joomla extension finder or Joomla Extensions Directory to get several ways to enhance Joomla as per your needs.

## Architecture of Joomla

Joomla is written in PHP and based on MVC (Model-View-Controller) design pattern. It uses MySQL (MS SQL version 2.5 or above, and PostgreSQL version 3.0 or above) to store data. There are various features (e.g., page caching, blogs, polls, language internationalization support, and RSS feeds, etc.), which make Joomla an excellent choice for CMS (Content Management System).

The below diagram shows the structural architecture of Joomla:



**Joomla Architecture**

The architecture of Joomla includes the following layers:

- Database
- Joomla Framework
- Components
- Modules
- Plugin

- Templates
- Web Server

## **Database**

The Database consists of data except image files and documents which can be stored, manipulated, and organized in a specific manner. It includes the user information, content, and other required data of the site. It also contains the administrative information so that an admin can securely access the site and manage it. Joomla database layer is one of the most important factors which ensure the maximum flexibility and compatibility for the extension.

## **Joomla Framework**

The Joomla Framework contains the collection of open-source software libraries/packages, on which Joomla content management system is built on. There is no need to install the Joomla Framework to use the CMS or vice-versa. Joomla Framework provides a group of files which is useful to create both web and command-line applications.

## **Components**

Components are referred to as mini-applications which contain two parts:

Administrator and Site

The Administrator part manages the different aspects of the component, and the site part helps in rendering the page when any site visitor makes a request. Components are known as the important functional units of Joomla.

## **Modules**

Modules can be defined as the lightweight extensions used to render pages in Joomla. They are used to display new data from the component. They can stand on its own and are managed by the 'Module Manager', which is itself a component. They look like boxes, such as the login module. They also help to display the new content and images when the module is linked to Joomla components.

## **Plugin**

The Plugin can be explained as a very flexible and powerful Joomla extension, used to extend the framework. Plugins are few codes that execute on occasion of specific event triggers. It is generally used to format the output of a component or module when a page developed.

## **Templates**

Templates are used to manage the look of the Joomla websites. There are basically two types of templates available; Front-end and Back-end. The Front-end template is a way to manage the look of the website, which is seen by the users. The Back-end template is used to manage or control the functions by the administrator.

## **Web Server**

It is a server used to connect users to the site. It provides web pages to the client. The HTTP (HyperText Transfer Protocol) is used to communicate between the client and the server. Lastly, a website is that where you and your users interact with.

## **5.4 DRUPAL**

### **What is Drupal?**

Drupal is a free and open-source Content Management System (CMS) that allows organizing, managing, and publishing your content. It is built on PHP-based environments. This is carried out under GNU, i.e., General Public License, which means everyone can download and share it with others. Drupal is used on million sites such as WhiteHouse.gov, World Economic Forum, Stanford University, Examiner.com, and many more.

### **Why we should use Drupal**

Drupal CMS is more flexible if you develop a website with a content management system than any other CMS. Drupal is mighty and can be used for building large, complex sites. It is PHP based template and allows non-technical users to add and edit the content without any HTML or Web design knowledge. Furthermore, Drupal CMS makes it easy to interact with other sites or technologies as Drupal can handle complex forms and workflows. It is available with more than 16000 modules which can be addressed with Drupal core and add-on modules.

### **Features**

- Drupal makes it easy to create and manage your site.
- Drupal translates anything in the system with built-in user interfaces
- Drupal connects your website to other sites and services using feeds, search engine connection capabilities, etc.

- Drupal is an open-source software hence requires no licensing costs.
- Drupal designs a highly flexible and creative website with adequate display quality, thus increasing visitors.
- Drupal can publish your content on social media such as Twitter, Facebook, and other social mediums.
- Drupal provides more customizable themes, including several base themes to design your themes for developing web applications.
- Drupal manages the content on informational sites, social media sites, member sites, intranets, and web applications.

### **Advantages**

- Drupal is a flexible CMS that allows handling content types, including video, text, blog, menu handling, real-time statistics, etc.
- Drupal provides several templates for developing web applications. There is no need to start from scratch if you are building simple or complicated web applications.
- Drupal is easy to manage or create a blog or website. It helps to organize, structure, find and reuse content.
- Drupal provides some interesting themes and templates which give your website an attractive look.
- Drupal has over 7000 plug-ins to boost your website. Since Drupal is open-source, you create your plug-ins.

### **Dis-advantages**

- Drupal is not a user-friendly interface. It requires advanced knowledge and few basic things about the platform to install and modify.
- Drupal is a new content management system. Therefore, it is not compatible with other software.
- Performance is low compared to other CMS. The website built using Drupal will generate big server loads and never open with a slow internet connection.

### **Modules**

Contributed modules offer such additional or alternate features as image galleries, custom content types and content listings, WYSIWYG editors, private messaging, third-party integration tools, integrating

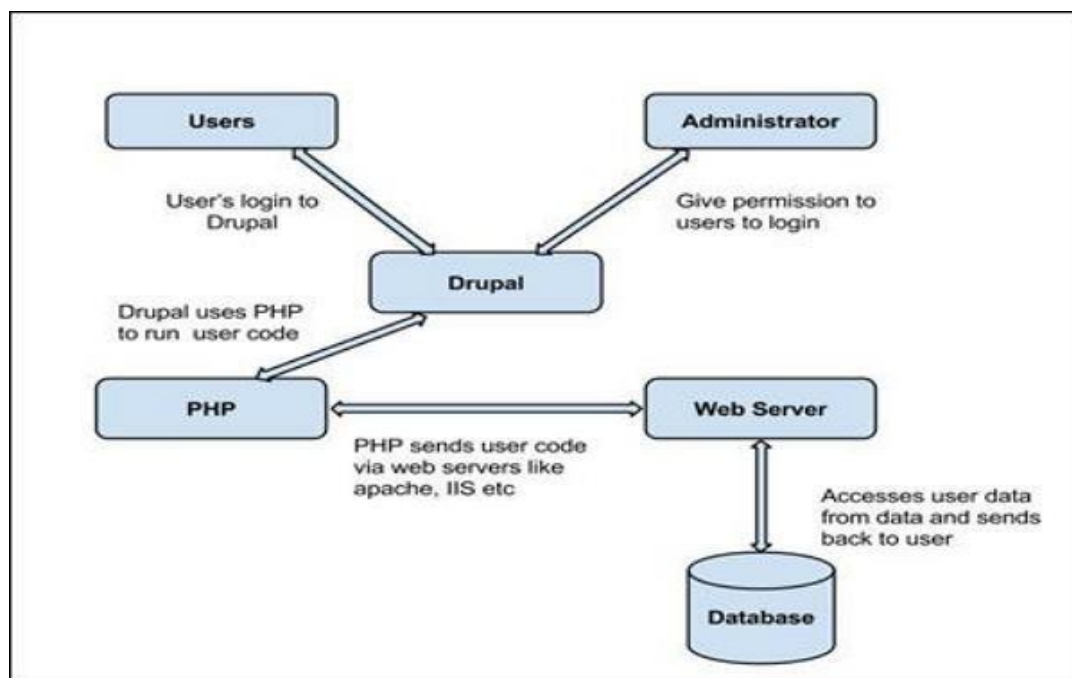
with BPM portals, and more. As of December 2019, the Drupal website lists more than 44,000 free modules.

Some of the most commonly used contributed modules include:

- Content Construction Kit (CCK): allows site administrators to create content types by extending the database schema dynamically. "Content-type" describes the kind of information. Content types include but are not limited to events, invitations, reviews, articles, and products. The CCK Fields API is in Drupal core in Drupal 7.
- Views: facilitates the retrieval and presentation of content to site visitors through a database abstraction system. Basic views functionality has been added to core in Drupal 8.
- Panels: drag and drop layout manager that allows site administrators to design their site visually.
- Rules: conditionally executed actions based on recurring events.
- Features: enables the capture and management of features (entities, views, fields, configuration, etc.) into custom modules.
- Context: allows the definition of sections of the site where Drupal features can be conditionally activated
- Media: makes photo uploading and media management easier
- Services: provides an API for Drupal.

### Architecture of Drupal

The below diagram shows the structural architecture of Drupal:



The architecture of Drupal contains the following layers:

- **Users**
- **Administrator**
- **Drupal**
- **PHP**
- **Web Server**
- **Database**

### **Users**

These are the users on the Drupal community. The user sends a request to a server using Drupal CMS and web browsers, search engines, etc. acts like clients.

### **Administrator**

Administrator can provide access permission to authorized users and will be able to block unauthorized access. Administrative account will be having all privileges for managing content and administering the site.

### **Drupal**

Drupal is a free and open source Content Management System (CMS) that allows organizing, managing and publishing your content and is built on PHP based environments. Drupal CMS is very flexible and powerful and can be used for building large, complex sites. It is very easy to interact with other sites and technologies using Drupal CMS. Further, you will be able to handle complex forms and workflows.

### **PHP**

Drupal uses PHP in order to work with an application which is created by a user. It takes the help of web server to fetch data from the database. PHP memory requirements depend on the modules which are used in your site. Drupal 6 requires at least 16MB, Drupal 7 requires 32MB and Drupal 8 requires 64MB.

## Web Server

Web server is a server where the user interacts and processes requests via HTTP (Hyper Text Transfer Protocol) and serves files that form web pages to web users. The communication between the user and the server takes place using HTTP. You can use different types of web servers such as Apache, IIS, Nginx, Lighttpd, etc.

## Database

Database stores the user information, content and other required data of the site. It is used to store the administrative information to manage the Drupal site. Drupal uses the database to extract the data and enables to store, modify and update the database.

## Joomla Vs Drupal

	<b>Joomla</b>	<b>Drupal</b>
<b>Ease of use</b>	Provides an easy to use Control Panel as soon as you log in to Joomla account	Does not offer powerful dashboard like Joomla. It contains limited options in dashboard
<b>Customization</b>	Provides the customization options with templates and extensions	Same as Joomla
<b>Popularity and Costing</b>	More support is given from community, blogs and forums. Core knowledge of any language is required.	More complicated for beginners as it needs to have a better understanding of HTML, CSS and PHP
<b>Security</b>	High-end security	Relatively weak security
<b>Release Time</b>	2005	2001
<b>Number of downloads</b>	>30 million	>15 million
<b>Performance</b>	Needs adjustment to prevent quick resource consumption	Loads quickly and has faster response time