

Open Source Content Management System – JOOMLA

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Abstract— This document gives a look at the concept of Content Management System (CMS) particularly in Joomla. Joomla is used to develop professional websites where the codes are written inbuilt. This document provides step wise approach to build a professional website in Joomla CMS.

Keywords— Joomla, CMS, Xampp, Web-Development

INTRODUCTION TO CMS

A Content Management System (CMS) is a computer application used to create, edit, manage, and publish content in a consistently organized fashion. CMSs are frequently used for storing, controlling, versioning, and publishing INDUSTRY-specific documentation such as news articles, operators' manuals, technical manuals, sales guides, and marketing brochures. The content managed may include computer files, image media, audio files, video files, electronic documents, and Web content.

JOOMLA

Joomla is a free CMS used to create websites. Joomla allows web designers to construct sites by combining modules, and requires no knowledge of programming to use. Joomla's framework is written in the PHP programming language and uses the MySQL database by default, as are the modules used to customize websites. There is a wide variety of modules available, including RSS feeds, polls, and language internationalization, which make it easy for Joomla users to publish content to the web, even with minimal web design experience. Joomla can also be used to publish information on intranets, making it a useful organizational tool.

Joomla's building bricks are: Template, Articles, Components, Modules and Plugins. There are thousands of free Templates available and hundreds Professional commercial ones. The main functionality of Joomla is Article publishing. We can write articles in you administrator content and publish them on the front page or other menu items. The strength of Joomla lies in its components / Extensions. These are building blocks that can by far exceed any simple article website. We can install eCommerce extensions, Property management extensions, Auction Extensions, and many more type of components.

Articles are basically 'articles' or 'posts' that we write, which make up the better part of your website. Because Joomla is organized like a magazine, newsletter, or blog, content items represent individual articles.

JOOMLA INSTALLATION

The First Step is to download the 1.5 (latest stable) release from www.joomla.org, then we have to download and install XAMPP on Linux from www.apachefriends.org/en/xampp.html. XAMPP comes with the MySQL database and Apache Web server, which will be used to run Joomla. We have to follow the XAMPP installation and operational instructions from the site as it is outside the scope of this article. Then we have to extract the downloaded Joomla zip file into the `<xampp installed folder>/htdocs/www` directory.

START XAMPP

Starting MySQL and Apache Web server services in XAMPP. Enter the following URL in the browser:

<http://localhost/www/yoursite/installation/index.php>

The Joomla installation page must come up as shown in Figure 1. Here are the configuration steps.

Step 1: Language: We have to select the language of your choice and click *Next*, located on the top right corner of the Web page.

Step 2: Pre-installation Check: Then we make sure that there is a *Yes* next to each item. If *No* appears next to any item, you will have to take the necessary action to correct the problem. If all the pre-requisites are met, we click on *Next*.

Step 3: Licence: Accept the licence and click on *Next*.

Step 4: Database: This is where we need to specify our database details. We will follow these steps to create a database for our Joomla Installation:

- First download phpMyAdmin.
- Then extract it in `<xampp installed folder>/htdocs/phpmyadmin`.
- Next is to stop Apache and MySQL services in XAMPP, if they are already running.
- Then start Apache and MySQL services in XAMPP.
- Then enter the following URL in the browser: <http://localhost/phpmyadmin/>. We will see a page similar to what is shown in Figure 2.
- Then we enter Joomla15 as the new database name in the Create new database text field and select utf8_unicode_ci from the drop-down list next to it.
- Lastly we click on the Create button to create the Joomla15 database in MySQL. A success message showing that the database has been created will appear as shown in Figure 3.



Figure 1: Language selection screen during installation



Figure 2: Setting up database using phpMyAdmin

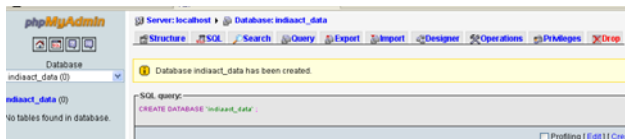


Figure 3: Success message after database creation

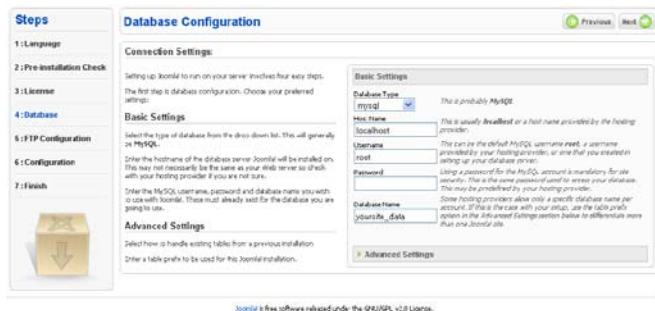


Figure 4: Database configuration in Joomla

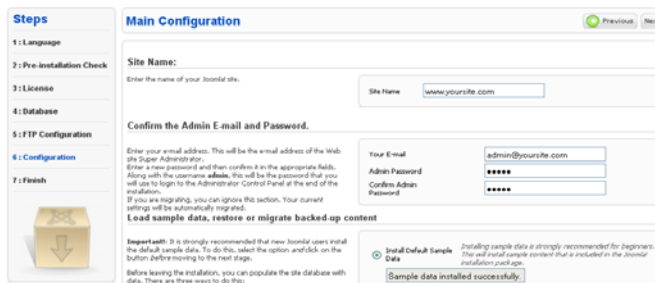


Figure 5: Sample data installed

Now that we have created the database, we go back to the Joomla Installation screen and specify the following database details under the *Basic Settings* section:

- Database Type – mysql
- Host Name – localhost
- User Name – root
- Password – < leave empty if you have not set up any password for the root user, which, generally, is the case>
- Database Name – joomla15

Click Next!

Step 5: FTP Configuration: We specify the FTP account detail in case you need it; otherwise, we can safely skip this configuration. Then we click on *Next!*

Step 6: Configuration: Entering the following details:

- Site Name: <your site name>
(e.g. indiaactive.com)
- Our E-mail: <your e-mail id>
(e.g. admin@indiaactive.com)
- Admin password: <a valid password>
- Confirm admin password:
<the valid password specified above>
- Install default sample data is checked, by default.
- Clicking on Install Sample Data button

Then click on the *Next* button on the top-right corner

Step 7: Finish: This completes the Joomla 1.5 installation. we will see the greeting message with the administrator login details, an important security related message, and two icons—site and admin—on the top-right corner.

Step8: The administrator user ID is admin. We delete the <xampp installed folder>/htdocs/joomla15/ installation directory. This is required for security reasons. Unless this directory is deleted, Joomla will not allow further activity. It is also indicated on the installation page as shown in Figure 6.

The installation creates two interfaces. These are indicated by the *Site* and *Admin* icons on the top-right corner. *Site* provides us a front-end interface to view your website content, and *Admin* provides us a back-end interface to administer our website content.

FRONT END (SITE)

Let us take a look at our default website first. We click on the *Site* button on the top-right corner. On your default website, there are three different categories:

- Menus
- Contents
- Logo Area

MENUS

Menus provide the navigation support to a website. Joomla has three kinds of menus in the example website. We can add as many menus to our site as our wish.

Top menu: This appears on the top of the page. The items are aligned horizontally. Usually, this menu is created to provide quick and direct access to important site content. For a business organization, this menu may contain headings like services, products, contact us, about us, client list, and everything else that is important for the business.

Main menu: This appears on the left-hand sidebar. It is the main navigation area of the website. It is created to provide navigational links to the complete site content. This, usually, should have more links than the top menu. Links, like articles, blogs, forums, reviews, etc, may appear only in the main menu for many organisations. This menu should appear on all the pages at the same position.

Other menu: This is an additional menu, which can be added based on the site content and context.

User menu: This menu appears when a registered user logs into the site—for example, a registered user writing a blog after logging into the site can be facilitated by the user menu.

CONTENTS

Shown below are the different ways Joomla generates site contents:

1. Static content: This is the simplest way of creating a site's content. But, as the name suggests, the content is static. Once written and published it will not change until it is re-edited. The content will not vary based on time and context. Static content is created using

the *Article Manager* under the *Content* menu on the Joomla administrator page. The static content is also called uncategorized content, as it does not have any section and category associated with it. Content can appear on the front page if the *Yes* radio button is

selected next to *Front Page* while creating an article in *Article Manager*. There is a one-to-one relationship between the static content item and the page on the website.

2. Dynamic content: Dynamic content is organised using *Section* and *Category*. The content item is in a category and the category is in a section. We have multiple categories for a section.

3. Component content: On the Joomla administrator page, We can see a *Components* menu. The items in this menu are the components, which are installed in your Joomla installation—for example, the banner, search, news feeds, etc. Components are small applications, which are displayed in the main content area of the Web page when they are linked with a menu item.

4. Module content: Unlike static, dynamic, and component contents, module contents can appear anywhere on our Web page. Most of the time we will see it on the top, bottom, and sides. The installation comes along with many modules such as menus, login form, polls, etc.

LOGO AREA

This appears on the top of the page. It should contain the logo and the punch line of our organisation.

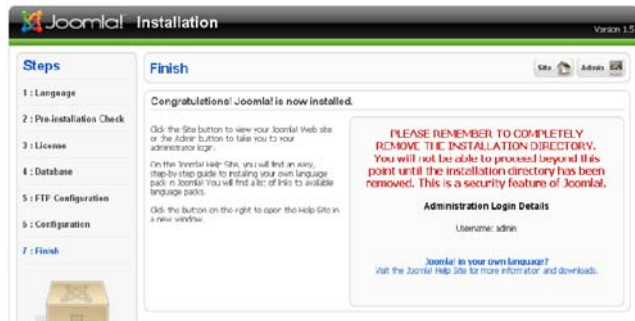


Figure 6: Installation complete

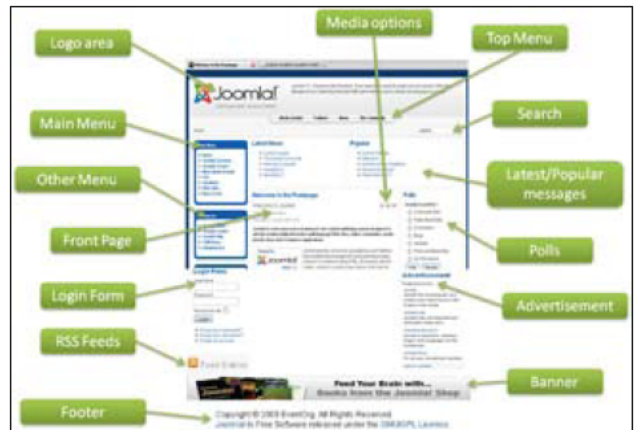


Figure 7: Default site layout



Figure 8: Joomla administrator login panel

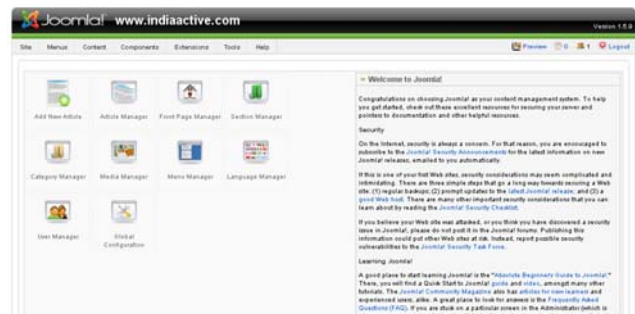


Figure 9: Joomla administration page

BACK END (ADMINISTRATION)

Though the default site looks great, we will need to customise content to suit our requirements. The customisation may include changing the logo, changing the menus, changing the static content, removing some modules, adding new modules, etc. Joomla provides an administrator page to control and manage your site content.

To go to the administrator page, we have to click on the *Admin* button on the top-right corner on the installation page or enter <http://localhost/www/indiaactive/administrator/> in your browser.

The URL will display a Joomla administrator login panel as shown in Figure 8. We specify the administrator's username and password, which we had noted down during the installation, and click on the login button to log into the administrator page. On a successful login, we will see the page as shown in Figure 9.

TABLE 1: THE LIST OF CHANGES AND CUSTOMISATIONS TO THE DEFAULT JOOMLA INSTALL

Changes	Customisation action
Site look and feel needs to be different	Finding a different joomla template, installing it, and using it for the website
Main menu must have the following options: • Home • Services • The News • Web Links • News Feeds	Remove the following items from Main Menu: • Joomla Overview • Joomla Licence • More about Joomla • FAQ Add the following menu item to Main Menu: • Services
Change about joomla! To About eventorg on the name Top menu	Change the top menu item
No polling, please!	Un-publish/Remove the Polls Module
Replace the front page content with my content	Change the front page static Content



Figure 10: Template install success

The administrator age will display your website's name (for example, *indicative.com* in this case), which we had specified during the installation process. We take some time to explore the menus and other options available on this page, and try to relate the entries (sections, categories, articles, front page, etc) and their content with your website's content. Now that we have explored the administrator page, let us get into the real thing. Let us see how we can customise the website. The very first thing that comes to our mind when we look at

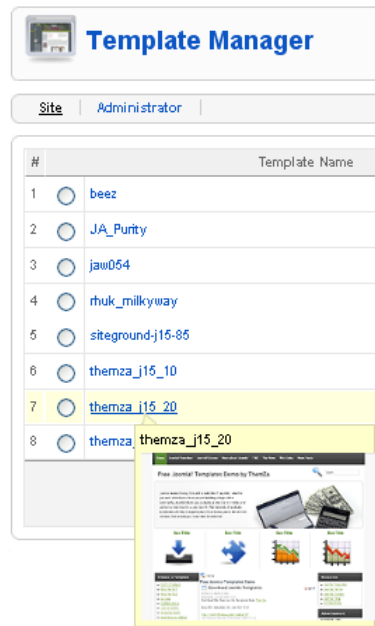


Figure 11: View installed template

INSTALLING A NEW TEMPLATE

There are numerous free as well as commercial templates available on the Internet. We can choose one template that matches with the look and feel (colour and content placement) that we have in mind. Let us say, we finalise a template from <http://www.themza.com/joomla1.5/>

We can then install the template by following these steps:

- On the Joomla Administrator page we click on the Extensions ® Install/Uninstall menu option.
- We specify the package file and click on Upload File & Install button.

Then we click on the *Extensions* ® *Template Manager* menu option and verify that our newly installed template appears in the list. On the *Site* tab, select the radio button next to the new template then we click on the *Default* button. A star will appear in the *Default* column of the new template entry.

Now, access <http://localhost/www/indiaactive> from your browser and we will notice our website using the new template of our choice.

CHANGING MAIN MENU

Following are the Steps used for changing the menu.

- Going to the Administrator page.
- Then we Click on Menus menu item and choose the Main Menu option .
- We select the following entries:
 - Joomla! Overview
 - Joomla! License
 - More about Joomla!
 - FAQ

the default site is: “I don’t like this... I don’t like that!” So, let us do some planning and clearly jot down what changes we want to make to the default site. The list of changes I have come up with and the customisation actions I have identified in our example case is listed in Table 1. Great! Now that we have the requirements clarified and actions identified, it’s time to get started with the real action.

And then clicking on the *Unpublish* button on the top. A red coloured cross will appear in the *Published* column of the above listed entries. The unpublished items do not appear on the site.

- Before we add a new menu entry, we need to create static content to hold the content for the Services page.
- Then we Create section On the Joomla! administration page, we click on the Content menu item and choose the Section Manager option
- Then we click on the New button on top to create a new section
- Then we set Title—Services
- Then we set Alias—services
- Then we set to Published—Yes
- Next we set to Access Level—Public
- No description is needed. Then we click on the Save button on top.
- Then we create category
- Then on the Administration page, click on Content menu item and choose Category Manager option
- Click on the New button on top to create a new category
- Then we set Title—Services
- Then we set to Alias—services
- Then we set to Published—Yes
- Then we set to Section—Services
- Then we set to Access level—Public
- No description is needed. Then we click on the Save button on top.
- Then we Create article
- Then on the Administration page, We click on the Content menu item and choose the Article Manager option.
- Then we click on the New button on top to create a new article
- Then we set Title—Services
- Then we set to Alias—Services
- Then we set to Section—Services
- Then we set to Published—Yes
- Then we set to Front Page—No
- Then we set to Category—Services
- Next we add to Add the content and click on the Save button on top.
- Then we have to Add the Services entry by following these steps:
- On the Menus --> Main Menu page, we click on the New button to add an entry.
- Expand Articles under Internal Link in Select Menu Item Type.
- We click on the Article Layout under Article.
- Then we enter the following details:
- We set Title—Services
- Then we set to Alias—services
- Then we set to Display in—Main Menu

- Then we set to Parent Item—Top
- Then we set to Published—Yes
- Order—1 (Home) (Services will appear after Home)
- Then we set to Access Level—Public
- On Click, Open In—Parent Window with Browser Navigation
- On the right-hand side, in the Parameters— Basic, enter the following detail:
- We set Select Article—Services
- Then we set to Leave the other Parameters settings to default and click on Save button on top.
- If we want, we can change the order of the menu items in the Top Menu by clicking the up or down arrow in the Order column.
- Lastly we click on the Save button on top.

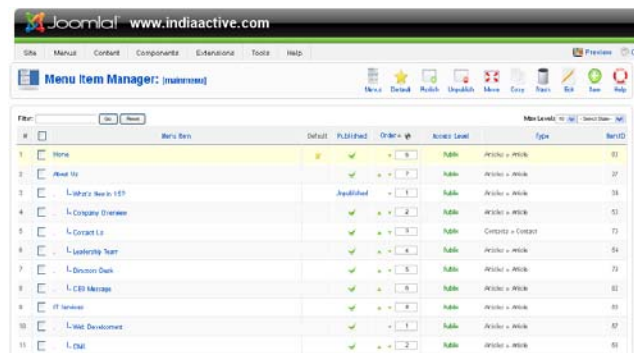


Figure 13: Menu Item Manager after selecting Unpublish



Figure 14: Website after customization

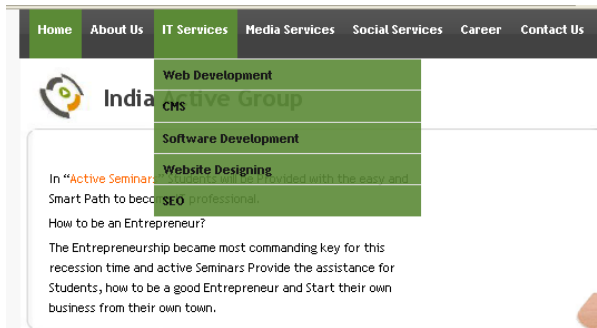


Figure 15: Services

Item ID	Item Name	Item Type	Item Description	Item Date	Item Author	Item Status
1	Events Calendar	Component	Events Calendar	2010-10-10	1234	1
2	Latest Events	Component	Latest Events	2010-10-10	1234	1
3	Events Legend	Component	Events Legend	2010-10-10	1234	1

Figure 16: JEvents download item list

Item ID	Item Name	Item Type	Item Description	Item Date	Item Author	Item Status
17	Events Calendar	Component	Events Calendar	2010-10-10	1234	1
10	Latest Events	Component	Latest Events	2010-10-10	1234	1
19	Events Legend	Component	Events Legend	2010-10-10	1234	1

Figure 17: Install plug-in success



Figure 18: Install component success

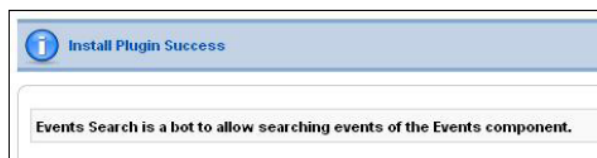


Figure 19: JEvents disabled



Figure 20: Site with new Event Calendar

CHANGE ABOUT JOOMLA! TO ABOUT EVENTORG ON THE

TOP MENU

- First we Go to the Administrator window
- Then we click on Menus and choose the Top Menu option
- Then we click on About Joomla! Entry
- And lastly we Change the Title to About EventOrg and click on the Save button.

No polling, please!

- First we Go to the Administrator window.
- Then we Click on the Components menu item and choose the Poll option.
- Next we Select the check box next to the Joomla! Is used for? and click on the Unpublish button on the top.

REPLACE THE FRONT PAGE CONTENT WITH MY CONTENT

- First we Go to the Administrator window.
- Then we click on the Content menu item and choose the FrontPage Manager option.
- Then we click on Welcome to Joomla!
- Then we Edit the content and click on the Save button on top. Well, that's all! We are done with our customisation. Now, if you access your site it will reflect all your changes. If we click on *Services* in the *Main Menu*, your services content will show up. Congratulations! We are now ready to launch our website.

ADDING NEW EXTENSIONS

Many a time, the default installation will not have the required components and modules that suit our website's needs. For example, we are launching an event organisation portal, which demands an event calendar. This is not available as part of the default installation. On similar lines, the default installation provides certain components/ modules, but we are not satisfied with it. For example, the default installation provides a JoomlaBoard as the forum component but we prefer FireBoard. In these situations, we will have to find suitable Joomla extensions, install them, and use them on our website. Let us take our site requirements into consideration now. As EventOrg, you require an event calendar on our site. After exploring the Joomla extensions, let's assume we have selected the JEvents extension.

Installing a JEvents extension for the event calendar:

- Firstly we Download the JEvents installation packages from <http://joomlancode.org/gf/project/jevents/frs/>
- On the Administrator page, We click on the Extensions menu and select the Plugin Manager option.
- Then we Search for the text—legacy. The search result will show a plug-in by name System-Legacy with a red cross in the Enabled column. This shows that the plug-in is not enabled.

- Then we click on the red cross to enable the plug-in. We will see a green tick in the Enabled column showing that the plug-in is enabled.
- Then we click on Extensions and then choose the Install/Uninstall menu option.
- We browse through your filesystem, select the bot_events_search1.4.3beta_joomla1.5 archive, and then we click on the Upload File & Install button.
- Repeat the previous step for the following:
 - mod_events_cal_1.4.3beta.zip
 - mod_events_latest_1.4.3beta.zip
 - mod_events_legend_1.4.3beta.zip
 - com_jevents1.4.3beta.zip

The JEvents extension is now installed and ready for use.

SHOWING THE EVENT CALENDAR ON THE SITE

Now, let us say that we want to display the event calendar below the *Advertisement* on the right-hand side. To do this, we have to follow these steps:

- First we click on Extensions and choose the Module Manager option. We browse through the list and we will find the three modules related to the events, which we recently installed.
- We enable these three modules by clicking on the red cross in the respective Enabled column.
- The default position is left. We change this to right as we want to display the event calendar on the righthand side.

- Now we go back and access your site URL. Wow! A nice event calendar appears on the right-hand side below the Advertisement module as shown in Figure 20.

This brings us to the end of this article. We journeyed through the basics of Joomla, installing and customizing it to fit our requirements, and added new extensions to it.

CONCLUSIONS

In this paper we defined the concept of Joomla CMS & its smart usage in building professional website. It also introduces the concept of installing and creating a new template using the list of menus and if event contents of the sites. Joomla is easy to install and configure, many web masters are lax when it comes to implementing proper security.

Joomla system does everything it can to prevent hacker breaches for which it uses four interlocking server technologies – Apache, php, MySQL, Joomla .

REFERENCES

- [1] Dan Rahmel , “Professional Joomla”, Wiley India Pvt. Ltd.-2007
- [2] XAMPP Download- <http://www.apachefriends.org/en/index.html>
- [3] Joomla 1.5 download- <http://www.joomla.org/>
- [4] Free Joomla 1.5 Templates - <http://www.joomla24.com/> , <http://www.siteground.com/joomla-hosting/joomla-templates.htm/>, <http://www.themza.com/joomla1.5/>
- [5] Joomla Extensions page - <http://www.extensions.joomla.org/>