Summer Fellowship Report

On

DRUPAL (Web Development)

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Acknowledgement

This report has been prepared for the internship that has been done in the National Virtual Library of India (NVLI), Janpath Office (National Mission on Libraries Janpath Bhawan), Delhi in order to study the practical aspects of the Drupal its implementation in the real field with the purpose of learning and exploring in the mentioned field and for professional development.

The aim of this internship is to be familiar with the implication of Drupal and uses of concerned theoretical knowledge and clarifying the career goals so, I have successfully completed the internship and compiled this report as the summary.

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Introduction

National Virtual Library of India

Recognizing the ongoing need to position itself for the digital future, NVLI is an initiative by the Ministry of Culture, a platform that hosts data of cultural relevance from various repositories and institutions all over India.

Research, academics and also general users from various sectors are today depending more on digital information. Corresponding to this demand an increasing amount of digitized data and services based on such data are being initiated. Digital Information today serves as an important knowledge asset.

While the proliferation of digital data and information services heralds a new and exciting era, it also presents many issues and challenges. The common user is often clueless about the existence of useful resources. The problem is akin to having a large collection of printed materials in the form of books and journals but only when it is organized and services are provided, it is called a 'library'. An immense amount of information is digitized under several projects carried out by various Agencies and Govt. Departments like MOC, HRD, DIT, Prasar Bharati, AIR, State Govts, etc. Most of them are available on the web but are dispersed. There is no comprehensive database built for all such resources. The true potential can only be exploited for use by the masses when it is usefully organized and presented in user-friendly services including multilingual services.

Digital era has also brought in 'digital divide' and has marked the society into digital haves and have-nots. It is no longer a matter of choice but rather a compulsion to find ways and means of bridging the gap between the two sections. The virtual library will go a long way in filling up the gap.

The target users of NVL will be: students, researchers, doctors, professionals, and novice users, including educationally, socially,

economically, physically disadvantaged groups. They can be built incorporating many modules to cater to information needs

The objective of National Virtual Library of India (NVLI) is to facilitate the creation of a comprehensive database on digital resources of India on information about India in an open-access environment.

Salient features of NVLI are : -

● Allowing easy access to digital information present in the form of books, texts, videos, audios, and similar artefacts in multiple languages.

● Collecting, combining, and standardizing all available digital assets in an easily searchable form.

● Educating people to use the NVLI portal and enabling them to contribute by submitting digital artefacts.

● Ensuring the preservation of digital content for the future generation.

DRUPAL

Drupal is a free and open-source content management framework written in PHP and distributed under the General Public License(GNU). Drupal provides a back-end framework for at least 2.3% of all websites worldwide ranging from personal blogs to corporate, political, and government sites.

The standard release of Drupal, known as Drupal core, contains basic features common to content-management systems. These include user account registration and maintenance, menu management, RSS feeds, taxonomy, page layout customization, and system administration. The Drupal core installation can serve as a simple website, an Internet forum, or a community website providing for user-generated content.

Although Drupal offers a sophisticated API for developers, basic Web-site installation and administration of the framework require no programming skills because of which the user with minimal knowledge of coding can build a website with Drupal. Drupal runs on any computing platform that supports both a web server capable of running PHP and a database to store content and configuration.

Drupal is a content management software. It's used to make many of the websites and applications you use every day. But what sets it apart is its flexibility; modularity is one of its core principles. Its tools help you build the versatile, structured content that dynamic web experiences need. For any special functionality, one needs in his website can be attained by modules provided by Drupal.

Drupal makes it easy for the user to build a website. Drupal is one of the CMS because:

(1) Drupal comes with the option of choosing from the variety of modules and third-party integrates that can be used for developing a website adhering to your preference.

(2) Drupal comes with clean markup code out of the box that makes it easy for developers to manage content publishing.

(3) The competency of Drupal lies in its versatility. Since it is an open source, any web developer can work on it and provide the user with numerous choices.

Some examples of websites developed with Drupal are-
(1)Gap
(2)Worldpay Help Centre
(3)Imperial War Museums

MODULE

A module is a set of PHP, JavaScript, and/or CSS files that extends site features and adds functionality. All the additional functions user need in his site are provided by Drupal in the form of modules. Modules are the elements which provide Drupal with its flexibility and make it one of the best CMS out there.

The user can turn the features and functionality on by installing the module and can turn it off by uninstalling the module but before uninstalling, the user may need to remove data and configuration related to the feature or functionality. Each module that is installed adds to the time needed to generate pages on your site, so it is a good idea to uninstall modules that are not needed.

The basic functionality needed to develop a website is provided by Drupal in its core itself. The user just needs to enable it from the extension. The core modules make it easy to add content, publish them and create pages. The module gives the user full control over how they want their website's functionality.

We worked on the modules to meet the requirements for the NVLI website. We got to learn about the module its functionality and how to implement it on the site. Also about there dependencies so that they can be enabled on the site.

STATISTICS

Related Task:

(1) To get the total view count of any content type.
(2) To get the total comment count.

Functionality:

The Statistics module shows you how often a given page is viewed, who viewed it, the previous page the user visited (referrer URL), and when it was viewed. These statistics are useful in determining how users are visiting and navigating your site. It provides a customisable "Popular content" block that can be added to your theme.

Step for implementation (Total views):

1. The module is already installed in drupal by default.

2. Go to extend and enable the module Statistics.

3. Go to Configuration->Statistics then tick the checkbox for "Count Content Views".

4. Then to implement it go to view setting in which we need it.

5. In fields add new field Total views and create a label for a better look of views.

6. Go to permission in people and give access to anonymous so that they can see total views.

Step for implementation (Total Comment count):

1.   The module is already installed in drupal by default.

2.   Go to extend and enable the module Statistics.

3.   Go to Configuration->Statistics then tick the checkbox for "Count Content Views".

4.   Then to implement it go to view setting in which we need it.

5.   To add comment count add field Comment count and label it.

6.   Go to permission in people and give access to anonymous so that they can see the comment.

LIKE/DISLIKE

Related Task:

To get like and dislike button on the content.

Functionality:

Like/Dislike module can be used to Like and Dislike actions on any content. It is powered by Drupal field concept. It also gives the count of likes and dislikes if any.

Step for implementation:

1.   Once the module is installed from drupal.org.

2.   Enable the module on your Drupal site.

3.   Go to the manage field of the content type add like and dislike field.

4.   If you want to show it in any view then add a field like and dislike in the settings of the view.

5.   For the like count in the views add a field like and dislike.

PDF PREVIEW

Related Task:

To create a thumbnail of the first page of any pdf.

Dependencies:

Image module(Already there in drupal), ImageMagick.

Functionality:

This module lets you show a preview of PDF files uploaded through FileField.

This module uses ImageMagick to extract the first page of a PDF file to a PNG or JPG image which is used as a preview image linked to the file.

Instead of convert pdf files onto a set of images like PDF to ImageField does, and lost any connection to the PDF file, PDFPreview extracts only the first page and uses it as a link to PDF file.

The images are stored on a configurable folder inside your files folder, so it's fully compatible with multisite installations. If the image is missing at display moment it will be created.

Installation of ImageMagick PHP extension on windows:

1. Download it from here

2. **During installation check the checkbox installation of.convert file**

3. To check if it is installed type magick -version on command prompt.

4. Download PHP extension from here.

5. Download latest version

6. Then copy the **php-imagick.dll** file to **Xampp->php->ext**.

7. Then go to **xampp->php->php.ini** do extension for imagick.dll file.

8. Download the binary file for ImageMagick according to the architecture from here

9. Extract the file and then go to bin copy all **.dll file**

10. Paste them in **xampp->apache->bin**Restart server

11. Now check phpinfo

12. Add the path **C:\xampp\apache\bin** in an environment variable of system setting.

Step for implementation:
1. Go to extend and enable the module.

2. Go to configuration setting->and change that setting to ImageMagick (**PS: if you won't follow the marked step it won't enable and won't work)

3. Now in the content type's manage display and change generic file to pdf preview so that thumbnail of new.

4. Then go to views and set Pdf preview in the drop-down window then it would be enabled.

5. All the pdf where pdf preview is enabled will have a thumbnail of their first page created.

ACCESS SPECIFICATION

Related Task:

A user cannot access the website without login Credential

Step for implementation(For front page):

1.   For site, access specification go to configuration basic site setting.

2.   Change the URL to front page **/user/login** and access denied page to **/user/login**.

Step for implementation(For views):

1.   For view access specification while creating a view go to access change it from permission to role and set it to administrator and authenticated user.

2.   If the view is already created then also the above step can be followed so that views access is denied.

3.   Go to the view->edit->page setting->access->permission->authenticated user and administrator.

   4. When you click on the permission change it to the role.

   5. Then choose Authenticated user and administrator.

NODE VIEW PERMISSION

Related Task:

Access specification for content.

Functionality:

Node view permissions module enables permissions "View own content" and "View any content" for each content type on the permissions page. It's as simple as that. The administrator can decide which content will be accessible to which role.

Step for implementation:

1.   For node, access specification download the Node View Permission module.

2.   Go to **/admin/reports/status/rebuild**

3.   In there, rebuild the permission.

4.   Then go to people then permission.

5.   Then give permission to authenticated user and administrator.

6.   Then the anonymous user won't be able to access the content without logging in.

FIELD PERMISSIONS

Related Task:

To hide a particular field of any content type.

Functionality:

The Field Permissions module allows site administrators to set field-level permissions to edit, view and create fields on any entity.

Step for implementation:

1.   For node field access specification download the Field Permissions module.

2.   Then add a field to a content type.

3.   While adding field under field visibility and permission check the custom permission and give permission accordingly.

4.   If the field is already created go to edit of a particular field.

5.   There follow **step 3**.

6.   Now the particular field is only visible to the user you want.

FLAG

Related Task:

The user should be able to create a list of favourite content.

Functionality:

Flag is a flexible flagging system that is completely customizable by the administrator. Using this module, the site administrator can provide any number of flags for nodes, comments, users, and any other type of entity. Some possibilities include bookmarks, marking important, friends, or flag as offensive. With extensive views integration, you can create custom lists of popular content or keep tabs on important content.

Flags may be per-user, meaning that each user can mark an item individually, or global, meaning that the item is either marked or it is not marked, and any user who changes that changes it for everyone.

In this way, additional flags (similar to published and sticky) can be put on nodes, or other items, and dealt with by the system however the administration likes.

Step for implementation:

1. To add flags to the site download the Flag module.

2. Go to structure than to flag and then add a flag. [**admin/structure/flags/add**]

3. Set flag type to content.

4. Continue editing and fill the link text so that whatever you want would appear at the link

5.   Remember to set the scope to personal.

6.   Choose which content type should be flaggable.

7.   Now when you go to any content of that content type you will have a link at the top for flagging it.

How to create a list of favourite items:

1.   Go to structure and then in views

2.   Create a view of all content.

3.   Create a block and use the pager while creating the block.

4.   Save and edit the view.

5.   Go to advance setting.

6.   Add relationship content flag.

7.   Make sure you tick the checkbox of the current user.

8.   Include only flagged content.

9.   Go to structure and then block layout

   10. Then save the block and place it at the place you want it to be.

PRINTFRIENDLY AND PDF

Related Task:

The user should be able to print any content and choose which field should be printed.

Functionality:

The Print and PDF button for your Drupal site. Printer Friendly pages without coding, css, or print.css. Fast, easy, and professional.

The Print Friendly & PDF button saves paper and ink when printing or creating a PDF. It's fast, easy, and looks great when printed. Add the button now, and your users will see the difference.

We can use it to customize what we want to print, download the content in pdf form and send the content in the form of email and change the font of the content in the print.

Step for implementation:

1. For getting the print button the printfriendly and pdf module you should download the module and enable it.

2. After enabling go to extend and in the list find the module

3. Click on the small triangle near description.

4. Then go to help.

5. On that page click on the link read as Configure print-friendly permissions.

6. Give permission to access printfriendly to the authenticated user so that they can print using print friendly.

7. Save the configuration and go back to the page for help.

8. Here click on the link read as Printfriendly.

9. It will take you to the configuration of the printfriendly module.

10. Choose on which of the following content type you want to show which design of button you need in the configuration and save it

11. If you want the printer to take print of images or not.

12. Now when you go to any content on which you applied printfriendly a print button would be visible.

13. When you click on the button a pop up will appear on the screen.

14. Here you can edit the content to be printed create its pdf and send it as mail to anyone.

15. The size of the font can also be changed.

For printing in a view:

1. Go to structure and then view.

2. Go to any view's edit option.

3. In the edit go to header and click on add.

4. Then add text area in the header.

5.   Change text from basic HTML to full HTML.

6.   Write this code
** print button**
 in the text area.

7.   A print button link will be created to print.

USER (Available in core)

Related Task:

To create a user profile.

Functionality:

The user module allows users to register, log in, and log out. Users benefit from being able to sign on because this associates content they create with their account and allows various permissions to be set for their roles.

The user module supports user roles, which can be set up with fine-grained permissions allowing each role to do only what the administrator permits. Each user is assigned one or more roles. By default there are three roles: **anonymous** (a user who has not logged in) and **authenticated** (a user who is registered), and **administrators** (a signed in user who will be assigned site administrator permissions).

Users can use their own name or handle and can fine tune some personal configuration settings through their individual my account page. Registered users need to authenticate by supplying their username and password, or alternately an OpenID login.

A visitor accessing your website is assigned a unique ID, the so-called session ID, which is stored in a cookie. For security's sake, the cookie does not contain personal information but acts as a key to retrieving the information stored on your server.

Step for implementation:

1.   User module is needed for the mentioned purpose.
2.   Just go to configuration and then to account settings.[**/admin/config/people/accounts**]

3. In here, go to manage fields

4. Add the fields as we add in the content type.

5. Do changes in manage display as you want it to be displayed.

6. Now when you create a new user they will ask for these fields.

7. In the profile also these fields would appear.

INDIC SCRIPT

Related Task:

To add a phonetic keyboard to the site so that we can type in more than one language.

Functionality:

This Module enables IME (Transliteration Input Method) for Indian Languages in Drupal Text Fields and Text Area Fields So that users can create their content in their own Language within Drupal without installing any additional software.

Indic Script module supports Typewriter (TW) as well as Phonetic typing for the following languages.

- Tamil, Tamil Tw, Tamil 99
- Hindi, Hindi Tw, Hindi Remington Tw
- Malayalam, Malayalam Tw
- Bengali, Unijoy, Bengali Tw
- Gujarati, Gujarati Tw
- Kannada, Kannada Tw
- Oriya, Oriya Tw
- Punjab, Punjab Tw
- Telugu, Telugu Tw & Telugu Apple Tw

Step for implementation:

1. To get the phonetic keyboard install and enable the Indic Script module.

2. After enabling go to configuration.

3. In configuration go to Indic script.

4. In Indic script change the configuration.

5. The phonetic keyboard is used when you want

TAXONOMY

Related Task:

To get a dynamic count of the number of books in each library.

Functionality:

Taxonomy, a core module, gives your sites use of the organizational keywords known in other systems as categories, tags, or metadata. It allows you to connect, relate and classify your website's content. In Drupal, these terms are gathered within "vocabularies". The Taxonomy module allows you to create, manage and apply those vocabularies.

Drupal 8 has the ability to add taxonomy fields to vocabularies and terms.

Taxonomy is the practice of classifying content. It will come in handy for everything from menu and navigation schemes to view and display options.

Taxonomy can be used in workflow, to customize defined sections of your website with different themes or to display specific content based on taxonomy terms. Although taxonomy can be used in various ways, probably the most important use of taxonomy in Drupal is to relate content.

Step for implementation:

1. In Drupal core, there is view already created called as taxonomy term.

2. In format change content to fields.

3. Then add field Content:Title and hide it from the display.

4. Add Global: Custom text.

5. Leave the custom text blank.

6. In Advanced Settings go to Relationship

7. Add Content with the term in relationship.

8. Tick the checkbox requires the relationship.

9. In header Add Global: Result Summary.

10. In that add [**Total no. of books @total]**

INTERFACE TRANSLATION

Related Task:

To change the language of the interface and import the language translation file.

Functionality:

Interface translation is the module which help the user to buit multilingual site. This module can be used to get translation file for Drupal.It can be used to save the translation override the translations of all the words used in drupal core.

Importing Translation File:

1.   To translate the site we need to import translation file.

2.   For importing the translation file we need to go to configuration.

3.   In the configuration go to user interface translation in regional and language.

4.   There go to Import.

5.   Click on the link **Drupal translation server** choose the language which you want from the drop-down.

6.   When you will open the above-mentioned link the page with the languages and link will open.

7.   Click on the link of the language you selected in the dropdown.

8.   Click on the overview and download the translation file according to your drupal version.

9.   Then come back to import page choose file to import the translation file you just downloaded.

   10. Click on all the three checkboxes given below and click **Import**

   12. Now the translation file will take time to get imported.

   13. Now the translation file is successfully imported.

Step for implementation:

1.   Whenever a translation file is installed it does not have all the translation only some percentage of the translation is done.

2.   To check the percentage of translation in the translation file.

3.   Go to the configuration in there go to languages in regional and language. (for this you need to install language module)

4.   In there you can see the name of the language and in front of it the percentage of the translation done by translation file.

5.   To translate manually we can go to user interface translation in the configuration.

6.   Choose the language in the drop-down and change the translation accordingly and save the translation.

   7. Now that translation is implemented.

CONTENT TRANSLATION

Related Task:

To translate all the content shown in the page.

Functionality:

The Content Translation module allows you to translate content, comments, custom blocks, taxonomy terms, users and other content entities. Together with the modules Language, Configuration Translation, and Interface Translation, it allows you to build multilingual websites. For more information, see the online documentation for the Content Translation module.

Step for implementation:

1.   For content, translation go to configuration.

2.   In configuration go to content and translation in regional and language.

3.   There select the translation you want to do.

4.   When you tick any of the checkboxes a window is opened below.

5.   In that, you see which of the following part you want to translate.

6.   There is default language,u must choose Interface text language selected for page.

7.   And also tick the checkbox and show language selector on create or edit page.

Translation of main navigation menu item/view

1. For the following go to views in structure.

2. In that view rather than edit go on translate the view.

3. In that choose the language you want to do the translation in.

4. Here change the title of the view as shown in the figure below.

5. The menu bar will appear in that language.

Translation of block

1. It same as the translation of view.

2. Go to block layout in the block you want to go to translate rather than configure.

3. Here you can translate the block.

Translation of Site name

1. Go to the configuration in there go to interface translation.

2. Choose the language in the dropdown and write welcome and filter.

3. In front of the **Welcome to [site:name]** change it to that language.

4. Go to the basic site setting in there go to the translation of site information and In there, select the language and translate site name.

Translation of content

1. After all the above-mentioned changes when you can translate a particular content.

2. When you go to a particular content instead of edit go-to translation.

3. In there, select the language for translation.

4. Then you would be able to translate the given content.

LANGUAGE SWITCH DROPDOWN

Related Task:

To translate the language and create a language switch block

Functionality:

Language Switcher Dropdown is a very simple module that exposes a new block, similar to the default Language Switcherblock provided by Locale module.

The new block allows site visitors to switch languages using a drop-down select list instead of using hyperlinks.

Step for implementation:

1.   After installing this module enable it.

2.   Then go to the block layout in structure.

3.   Place the language switcher dropdown in it.

4.   For the translation of language go to languages in the configuration.

5.   There go to the translation of language.

6.   After this language in dropdown would also be translated

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