



Summer Fellowship Report

On

Drupal8

Submitted by

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Under the guidance of

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Chapter 1

Introduction

1.1 Drupal

Drupal is a free, flexible and open source content management software which is coded in PHP. You can broaden the work you do with Drupal with any one, or many, of thousands of additional items. Modules extend Drupal's usefulness. Themes let you alter your the content on the UI. Distributions are bundled Drupal packs you can use as starter-units. Blend and match these parts to upgrade Drupal's center capacities. Or on the other hand, coordinate Drupal with outer administrations and different applications in your foundation. No other content management software is this incredible and versatile.

1.2 Distributions

Distributions are full duplicates of Drupal that incorporate Drupal Core, alongside extra softwares and programming, for example, themes, modules, libraries, and installation profiles. There are two principle sorts of Drupal distributions:

1. Full-highlighted distributions: complete answers for particular use cases.
2. Different distributions: quick-start tools, beginning stages for designers and site manufacturers.

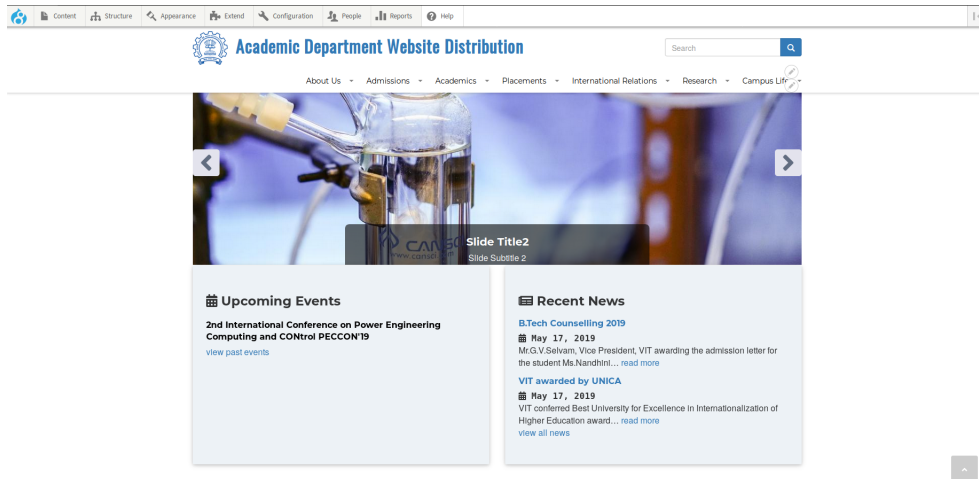
For our project we were given the academic distribution to work with.

1.2.1 Academic Distribution

The academic distribution is a full duplicate of what a drupal site would be but with modified themes, so that it suits the site of a college website. Here we did not use the by default Bartik theme but the Academix theme.

Along with this some of the modules for example of Migrations, paragraphs that wouldn't be existing in the normal default drupal site were enabled here.

Below is the screenshot of the distribution we had worked upon .



Chapter 2

Installing required softwares

2.1 LAMP server

To use Drupal in your system, we need a open source platform that can be used to host the sites locally. For Ubuntu systems, we use LAMP server. Following are the steps that need to be followed to download the LAMP server.

1. Install Apache 2.4
2. Install mysql-server package
3. Install latest version of PHP
4. Install the PHP Extension
5. Install the Application Repository, Apache support, and MySQL support:

After this has been installed you need to set up your database.

2.2 Academic distribution

Following are the steps needed to install academic distribution in our system

1. Composer installation, once the composer gets installed test its working
2. run the `composer create-project iitbombayweb/acaddeptwebproject` command.
3. after running the above command `composer.json`, `composer.lock` and `README.md` files and `docroot` and `vendor` folders will appear in the directory

Chapter 3

Content types in distribution

3.1 Introduction

Content Types license the making of a lot of fields that are related together in some significant manner.

Content Types are the basic elements for organizing and creating in Drupal. content types regularly work with the Views, which is one way you can present content to your end clients; you can control the content types that show up and the request where they show up.

I had made 11 content types in my distribution, 5 content types were pre enabled in the distribution.

3.2 List of Content types

The list of content types that have been added to my distribution are :-

1. Academic research - This content type talks about the the various research activities that are conducted in college. The fields of this content type are :-
 - (a) Body
 - (b) Lab Facilities
 - (c) school
2. Administrative offices - This content type talks about the the list of administrative offices functioning in college. The fields of this content type are :-
 - (a) Body
 - (b) Office details
3. Events - Events content type which can be given a start and end date, thus appearing in the events calendar. You can include talks, seminars, CEP courses, etc.. The fields of this content type are :-
 - (a) Body

- (b) End date and time
 - (c) Event Name of Speaker and Affiliation
 - (d) Event poster
 - (e) Event types
 - (f) End venue
 - (g) Start date and time
4. Faculty page - Content template for opening Faculty Page. The fields of this content type are :-
- (a) Body
 - (b) Email
 - (c) Faculty Photo
 - (d) Faculty designation
 - (e) Faculty CV
 - (f) Mobile number
 - (g) reserach area
 - (h) room no.
5. Fest- This content type talks about the the various Fests that are organised in campus.The fields of this content type are :-
- (a) Body
 - (b) Fest pics
 - (c) Fest website
 - (d) Fest youtube link
6. Iternational Transfer program - This content type talks about the various foreign universities that the college is affiliated with. The fields of this content type are :-
- (a) Country
 - (b) Courses offered
 - (c) Link
7. News Item - Provide news information to be put up on the main page. The fields of this content type are :-
- (a) Body
 - (b) News date
 - (c) News Images
 - (d) News location

- (e) News type
8. Student chapters- List of various student chapters in college. The fields of this content type are :-
 - (a) Body
 - (b) chapter category
 - (c) chapter facebook link
 - (d) chapter logo
 9. Student clubs - List of various student clubs in college. The fields of this content type are :-
 - (a) Body
 - (b) Facebook link
 - (c) logo of organisation
 - (d) organisation category
 10. Reserach centers - This content type talks about various reserach centers of vit. The fields of this content type are :-
 - (a) Body
 11. testimonials - testimonials given by students of the college. The fields of this content type are :-
 - (a) Body
 - (b) country
 - (c) program
 - (d) Student image
 12. programs offered - The list of programs offered by the college. The fields of this content type are :-
 - (a) courses
 - (b) admission procedure
 - (c) check list
 - (d) counselling procedure
 - (e) eligibility
 - (f) hostel details
 - (g) how to apply
 - (h) information brochure
 - (i) required documents

13. sae teams - Various sae teams of vit. The fields of this content type are :-

- (a) Body
- (b) sae facebook link
- (c) team photo
- (d) youtube link

14. startups - Various startups in campus. The fields of this content type are :-

- (a) Body
- (b) facebook link
- (c) startup image
- (d) twitter link
- (e) website ink

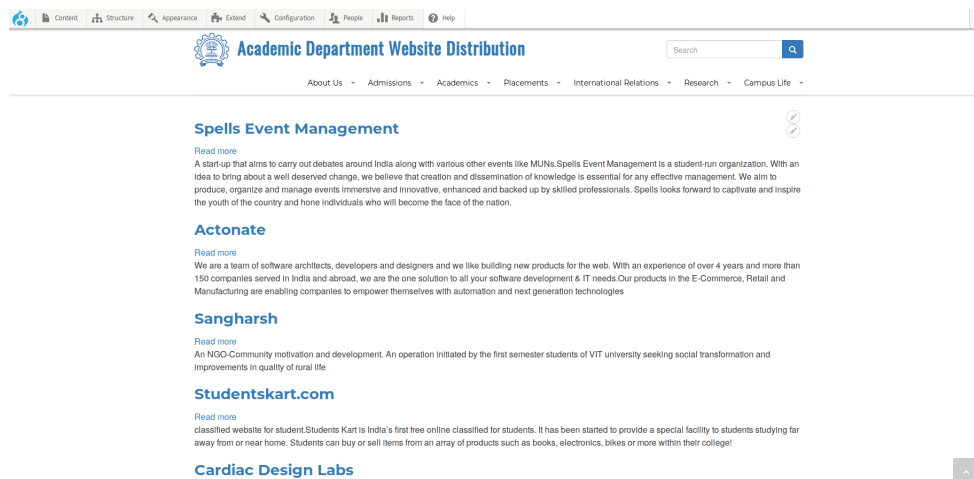
Chapter 4

Views and Basic Pages

4.1 What are Views

A view is a posting of content on a site. The cardinal Views module handles the showcase of perspectives, and the Views UI module enables you to make and alter them in the UI. When you characterize views, you are keen on taking information from your site and showing it to the client. A view could be either a page view or a block view, depending on how the content needs to be displayed on the website.

In my distribution I had made views for each and every content type. Below is the screenshot of the startup page view.



4.2 What are basic pages

The Basic Page is typically used for content that is static, or rarely changes. An example commonly found on websites is an About Us page. These types of pages are most commonly linked to the menu bars within your website. Basic pages are like views but the only difference being that in views the content is of various field but here in basic pages there is only 1 field and all the static content like text, images, file links are placed there.

Below I have given screenshot of some of the basic pages I had created.

The screenshot shows a web page titled "Academic Department Website Distribution". The page features a navigation menu with items like "About Us", "Admissions", "Academics", "Placements", "International Relations", "Research", and "Campus Life". The main content area contains text about placement records, mentioning Wipro Technologies and Deloitte. Below the text is a "PAT STATUS" section with a "2019 PLACEMENT STATISTICS" infographic. The infographic displays various metrics: 135.30 EPA, Average CTC of 16.05 Lakhs, Total Offers of 6180, Total Companies of 690, 1926 Internship Offers, 203 Fresh Recruiters, and 9496 Placements. It also includes a pie chart for "PLACEMENT CENTRE" with categories like IT Products (21%), IT Services, and others.

The screenshot shows the same web page with the "Eateries" and "All Mart" sections. The "Eateries" section includes a photograph of a building and text stating "VIT is foodies paradise with eateries located across the university campus. These serve wholesome cuisine for the health consciousness and fast food for those intended in a quick bite between classes." The "All Mart" section includes a photograph of a shopping mall and text stating "All Mart is a multi-purpose shopping mall spread over 3000 square feet. It stocks a variety of student needs from food to mattresses, clothing and accessories to greeting cards. Students and faculty also have access to a tailoring facility on campus."

Chapter 5

Taxonomy and Paragraphs

5.1 Taxonomy

Taxonomy, a substantial module, gives your distribution use of the keywords referred to in different frameworks as classes, labels, or metadata. It enables you to associate, relate and order your site's substance. In Drupal, these terms are assembled inside "vocabularies". The Taxonomy module enables you to make, oversee and apply those vocabularies.

Drupal 8 can add Taxonomy fields to vocabularies and terms.

Taxonomy is the act of arranging content. It will prove to be useful for everything from menu and route plans to view and show choices.

The taxonomies that I had created for my site were:-

1. Chapter Category
2. Club Category
3. Country
4. program pursuing/completed
5. Research area
6. school's pf vit
7. Vit category

5.2 Paragraphs

Rather than putting all their contents in one WYSIWYG body field including pictures and recordings, end-clients would now be able to pick on-the-fly between pre-characterized Paragraph Types independent from each other. Paragraph Types can be anything you need from a straightforward content or picture or links to an convoluted and complex slideshow.

Paragraph module accompanies another "paragraphs" field type that works as reference Entity's.

In my distribution I had added just 2 paragraph types, the description of which is given below.

1. Lab facilities :- This paragraph type was part of Academic research content type and consisted of the following fields
 - (a) Classrooms
 - (b) Laboratories
 - (c) Learning Ambience
 - (d) photos
2. Office details :- This paragraph type was part of Administrative offices content type and consisted of the following fields
 - (a) Contact Details
 - (b) Locations

Chapter 6

Custom modules

6.1 About Custom modules

The greatest attribute of CMSs like Drupal is their capacity to make sites without the requirement for clients to dive into coding. Be that as it may, the genuine power is released when you get the chance to make your very own custom modules and alter them as per your needs.

The custom modules can be created with the help of drupal console, and using the `generate:module` command in the console. After that you'll see that in your directory a custom module folder would be created, it would contain the following files:-

1. `.info.yml` file
2. `.module` file
3. `composer.json`
4. `.html.twig` file

We can start making edits in these files depending on what the clients want

6.2 Why did we create custom modules

In our distribution as mentioned above we have created a number of content types, a number of views and imported the data using migration. In a lot of websites a lot of content types are common like every college would have a specific page about faculty or a specific section devoting the cultural activities of various chapters and societies that exist within the campus. So in future if someone has to create a college website, he/she shouldn't have to go through the trouble of creating the particular content type, then putting fields in it, adding content in it and then making its views. He just needs to enable the custom module that has been created and all the

work will be done with a single click.

So we created these custom modules, exported the content type in it and just to test whether the task had been completely done enable these custom modules on a test drupal site. If they work successfully then I have put these directories in a github repository from where anyone can download and use any custom module

The screenshot shows a GitHub repository page for 'Mansimran7 / custom-modules'. At the top, there are navigation links for Code, Issues (0), Pull requests (0), Projects (0), Wiki, Security, Insights, and Settings. Below this, there are buttons for Watch (0), Star (0), and Fork (0). The repository name is 'Mansimran7 / custom-modules'. Below the repository name, there are buttons for 'Code', 'Issues 0', 'Pull requests 0', 'Projects 0', 'Wiki', 'Security', 'Insights', and 'Settings'. There is an 'Edit' button on the right. Below the repository name, there is a section for 'All the custom modules created' with an 'Edit' button. Below this, there is a section for 'Manage topics'. Below the 'Manage topics' section, there is a summary bar showing '21 commits', '1 branch', '0 releases', and '1 contributor'. Below the summary bar, there are buttons for 'Branch: master', 'New pull request', 'Create new file', 'Upload files', 'Find File', and 'Clone or download'. Below the buttons, there is a list of files and folders with their commit messages and dates. The list includes: 'academic_research' (minor changes to views file, 12 days ago), 'administrative_offices' (minor changes to views file, 12 days ago), 'chapters' (minor changes to views file, 12 days ago), 'fest' (minor changes to views file, 12 days ago), 'international_transfer_program' (minor changes to views file, 12 days ago), 'programs' (minor changes to views file, 12 days ago), 'research_centers' (minor changes to views file, 12 days ago), 'sae_teams' (minor changes to views file, 12 days ago), 'startups' (minor changes to views file, 12 days ago), 'student_clubs' (modified migration of student_clubs, 9 days ago), 'testimonials' (minor changes to views file, 12 days ago), and 'README.md' (Initial commit, 18 days ago). Below the list, there is a section for 'README.md' with an edit icon.

File/Folder	Commit Message	Time Ago
academic_research	minor changes to views file	12 days ago
administrative_offices	minor changes to views file	12 days ago
chapters	minor changes to views file	12 days ago
fest	minor changes to views file	12 days ago
international_transfer_program	minor changes to views file	12 days ago
programs	minor changes to views file	12 days ago
research_centers	minor changes to views file	12 days ago
sae_teams	minor changes to views file	12 days ago
startups	minor changes to views file	12 days ago
student_clubs	modified migration of student_clubs	9 days ago
testimonials	minor changes to views file	12 days ago
README.md	Initial commit	18 days ago

Chapter 7

Theming

7.1 Themes

Themes in Drupal are in charge of the look and feel of your site. They give the HTML markup, CSS, typography, pictures, and intelligent experience that individuals experience when they see your site. Your site's theme is in charge of that quite significant early introduction of your organization (in our case college website) when they visit your Drupal site.

7.2 Important files in theming in Drupal8

1. :- .info.yml - Gives info about the theme
2. :- .libraries.yml - Helps in defining your other js and css files
3. :- .breakpoints.yml - defines the points to fit different screen devices.
4. :- /css - contains all your css files
5. :- /js - contains all the js files
6. - /images - contains all the images that need to be put in you site

We need to create a custom theme folder and put all the above mentioned files and folders in it, and then add html, css, js and bootstrap code (for framework) to add theme and design to your site.

Once the code is written place the themes modules in the directory of your drupal8 and enable it from your system.

Reference

- [Drupal Theming](#)
- [Drupal official site](#)
- [Migrations in drupal](#)
- [Custom modules](#)