



Summer Fellowship Report

On

Web Development

Submitted by

Navonil Das

Under the guidance of

Prof.Kannan M. Moudgalya
Chemical Engineering Department
IIT Bombay

July 5, 2018

Acknowledgment

I would like to thank Prof. Kannan Moudgalya and the team of FOSSEE for establishing FOSSEE Summer Fellowship.

I would like to express my thanks to my mentors Ms. Sashi Rekha and Mr. Prashant Sinalkar who gave me the golden opportunity to do this wonderful project of Drupal module and theme development, which helped me in a way to become a full stack developer and I came to learn about so many new things.

I would also like to thank my fellow interns and peers who helped me find bugs and giving me suggestion to solve those bugs and make my module more perfect.

Contents

1	Introduction	3
2	Drupal 7 Module	4
2.1	Requirements for Development	4
2.2	Requirements for the module	4
2.3	Installation of the module	4
2.4	After Installation	5
2.5	Working with the module	5
2.5.1	Lab Migration Page	6
2.5.2	Textbook companion Page	7
2.5.3	Workshop Page	7
2.5.4	Circuit Simulation and Flowsheeting Project Pages	8
2.5.5	All College Page	8
2.6	Problem during development	9
2.6.1	Database Problem	9
2.6.2	Scilab Website	10
2.6.3	Search Result	10
2.6.4	Some bugs	10
3	Drupal 8 Module	11
3.1	Difference between Drupal 7 and Drupal 8	11
3.2	Installation of the module	11
3.3	After Installation	12
3.4	Problem during development	12
3.4.1	Suggestion list	12
4	The Drupal Theme	13
4.1	Working with the theme	13
4.1.1	The Front page	13
4.1.2	Error Page	13
4.1.3	Menu bar settings	13
4.1.4	Theme Settings	13
4.1.5	Problem during Development	14

Chapter 1

Introduction

The FOSSEE Website display the detail about each project which is conducted under FOSSEE . It provides you link to the source code or the documentation or the reference about the project.

This project is about to develop a Drupal 7 module that tells us all the lab migration proposal, textbook companion proposal, workshop conducted, eSim circuit simulation proposal and DWSIM flowsheeting proposal based on the college name. The module was fetching data from different databases.

The next task was to migrate the above Drupal 7 module to Drupal 8.5.4 as it is the latest version on June 2018 and to write a Python script that removes duplicate college names from the table.

The final task was to develop a theme for the FOSSEE website in Drupal 8. Theme are the Front end part of a website.

Drupal is content management software. It's used to make many of the websites and applications you use every day. Drupal has great standard features, like easy content authoring, reliable performance, and excellent security. 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.

Chapter 2

Drupal 7 Module

2.1 Requirements for Development

For windows you can use XAMPP.

- Apache Server
- MySQL
- Text Editor (Vs Code)
- Browser (Google Chrome)

2.2 Requirements for the module

The module does not need any extra dependencies however it depends on the data stored in the databases keep in mind that the databases should be defined in the settings file.

2.3 Installation of the module

The procedure to install the module is very straight forward.

- First you need to clone the Github repository to your `<drupal7> /sites/default/modules` folder where 'drupal7' is the path where you have installed Drupal 7.

- Second step is to enable the module to enable the module open the your Drupal 7 website log in as admin now on the menu bar you will find the 'Modules' click on it a new page will appear find your 'College Profile' and enable the Checkbox finally save the configuration.

2.4 After Installation

To insert data to the suggestion table import the 'insertdata' sql file present inside the cloned directory. Now to remove duplicate college names from the table we use a python script. The script is inside the module folder / script folder. Open the script on any text editor then change the database name if required. Execute the script it generates a file import the file to MySQL.

2.5 Working with the module

The module is very easy to use. Open the drupal link /cprofiles it will give you a search box. Type the college name and search it. There will be tabs for lab migration, textbook companion, workshop, circuit simulation, flowsheeting project, case study project. In each tabs there are links. on clicking those links it redirects you to the new page.

College Profiles

iit b

(Country : India State :Maharashtra City : Ahmednagar)

Lab Migration	Textbook Companion	Workshop	Circuit Simulation	Flowsheeting Projects	Case Study Project
1	Design Lab for Chemical Engineering				
2	Analog ckt				

2.5.1 Lab Migration Page

This page display details like the name of the user that proposed the lab migration, the name of the person who provided the solution and it displays whether the lab migration is in progress or it is completed.

Lab Migration

Title	Design Lab for Chemical Engineering
Lab Type	OpenFOAM
By	Dr Prof. Yogendra Shastri
Department	Chemical Engineering
University	IIT BOMBAY
City	Achalpur
Country	India
Progress	Completed
Solution Provider Name	Dr Prof. Yogendra Shastri
Solution Provider Department	Chemical Engineering
Solution Provider University	IIT BOMBAY

[Back](#)

[Main Website](#)

2.5.2 Textbook companion Page

This page display the author name, publisher, edition and ISBN. To download the codes or the book it gives you a link to main website if the book is not in progress.

About The Book

Book : Principles Of Electric Machines And Power Electronics

Type : Scilab

Author : P. C. Sen

Publisher : John Wiley And Sons, Australia

Edition : 3

Year : 1989

ISBN : 0-471-61717-2

Proposed By

Name : giridharan

Course : electrical engineering

Branch : Electrical Engineering

University : IIT Bombay


[Back](#)

[Main Website](#)

2.5.3 Workshop Page

This page displays the detail of the workshop , the starting , ending date and the Images related to the event. You can view those images in full screen by clicking on them.

Workshop

Name	Technology based Social work using FOSSEE Laptop
Start Date	2016-03-02
End Date	2016-03-02
No. of Participants	184
Venue	Tiruparankundram Government Higher Secondary School, Madurai
Details	Every 2 school students from the VIIIth standard and the IXth standard was assigned with one TCE (Thiagarajar College of Engineering) volunteer and spent 1 hour in teaching the various Free and Open source software (FOSS) and give hands on Libre Office, writer, Calc, Impress, graphical tools like Draw and Browsers training using FOSSEE Laptop. This training was well received by the students.
Images	

[Back](#)

2.5.4 Circuit Simulation and Flowsheeting Project Pages

These page displays the reference of the project, the user name who proposed the project and redirects to the main website if the project is approved.

2.5.5 All College Page

This page displays all the college name present in the database in a list format of 25 names per list. On clicking on the college name it takes you to the result page.

All Colleges

1	Dharmsinh Desai University
2	Jawaharlal Nehru Tehnological University Hyderaba
3	Shri Mata Vaishno Devi University
4	Uttarakhand Technical University
5	A. I. Kalsekar Technical Campus, Mumbai University
6	A.B.E.S ENGINEERING COLLEGE
7	A.B.E.S ENGINEERING COLLEGE, U.P.T.U
8	A.B.E.S. Engineering College, Ghaziabad
9	A.C.PATIL COLLEGE OF ENGINEERING
10	A.I Kalsekar Technical Campus, Mumbai University
11	A.I.K.T.C
12	aa
13	abcf
14	ABES COLLEGE
15	ABES ENG. COLLEGE
16	ABES Engineering College
17	Abes Engineering College Ghaziabad
18	ABES ENGINEERING COLLEGE, GHAZIABAD
19	ABES Engineering College,Ghaziabad
20	Achariya College of Engineering Technology
21	Aditya Silver Oak Institute of Technology
22	Aditya Silver Oak Institute of Technology, Ahmedabad
23	AI'S Kalsekar Technical Campus New Panvel
24	AIKTC
25	AIKTC, Mumbai University

First 2 3 4 5 6 > Last

2.6 Problem during development

2.6.1 Database Problem

The same college has different college name, the college name are null or some alphabet or some random text. This problem cause invalid suggestion of college name. To solve the problem of duplication i created a python script. In eSim textbook proposal table for a same proposal id there is different books.

2.6.2 Scilab Website

To find the details of a lab migration and Textbook companion we need to pass the lab id and book proposal id to the website however the website does not shows any result.

2.6.3 Search Result

As for same college there is different college name this problem is decrease the result value to solve this problem i have to use pattern matching in SQL.

2.6.4 Some bugs

The first bug was that the result tab was not responsive to fixed this bug i added some CSS.

The second bug was that some pages in module were displaying sidebar and the CSS on the toolbar was not attached so using CSS i solved these problem.

Chapter 3

Drupal 8 Module

This module is the migration of Drupal 7 module Project so some process are similar to the Drupal 7 module.

3.1 Difference between Drupal 7 and Drupal 8

Drupal 7 uses PHPTemplate for theme while Drupal 8 uses twig. The ***.tpl.php** files are replaced by ***.html.twig** files. The info files is replaced by yaml file. The hook_menu() is replaced by a routing.yml file. Drupal 8 is moreover object oriented. Many of the drupal 7 function are deprecated in Drupal 8. In Drupal 8 each page needs a controller or a FormBuilder.

3.2 Installation of the module

- To install the module clone the Github repository provided at external links.
- The folder where we clone the repository is <Drupal path>/modules/ where 'Drupal path' is the path where you have installed the module.
- Now open the Drupal 8 website log in as admin. Now on the menu bar you will find a link " click on it search

your module and enable the checkbox and click on 'Save Configuration' at the last of the page.

3.3 After Installation

You have installed your module successfully. Now its time to add some data to the suggestion table for college search. Open your cloned folder you will find a folder name 'script' inside this folder there is a python file named 'insertdata' open the file in a text editor change database name if required save file, execute the file it generates a SQL file import the file to MySQL.

To remove duplicate college name execute the 'script' python file it generates a SQL file import the file to MySQL.

3.4 Problem during development

3.4.1 Suggestion list

I couldn't find the suggestion list for the search box in Drupal 8 documentation that was provided in Drupal 7 so i decided to build my own using AJAX and HTML.

Chapter 4

The Drupal Theme

4.1 Working with the theme

4.1.1 The Front page

The front page contains a Navigation bar, Animating image, cards for project, activities. The footer displays the contacts, license, poster and brochure.

4.1.2 Error Page

This page displays the error number and error message instead of page not found or access denied.

4.1.3 Menu bar settings

Open the 'Structure' in the toolbar menu. Now click on Main Navigation 'add link' to add item in menu bar.

4.1.4 Theme Settings

The setting page contains enable or disable for the project card. You can upload a picture for the logo and also add images for the animation. You can enable or disable data to be displayed in activities.

4.1.5 Problem during Development

- There is no hook_submit for the settings page.
- Drupal's File Delete Was Causing Problem so i have to create my own file delete method.

External Links

- [Drupal 7 Module](#)
- [Drupal 8 Module](#)
- [Drupal Theme](#)

Reference

- [Drupal 7 Documentation](#)
- [Drupal 8 Documentation](#)
- [Stackoverflow](#)
- [Drupal 7,8 Forums](#)
- [PHP Documentation](#)