



# Summer Fellowship Report 2020

On

## Drupal

UNDER FOSS NAME

## Web Development

Submitted by

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# Acknowledgement

This report has been prepared for the internship on **Theme Development in Drupal** via Work from Home mode in order to study the practical aspects of the Drupal its implementation in the real world 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 .

I would like to express my sincere gratitude to my mentors **Tejas Vaidya, Drupal developer** and **Ruchi Kumari, Project Research Assistant** who have given me this valuable opportunity to work in such a learning environment to get an industrial based experience. Their constant supervision and support was truly helpful in completing my tasks and my internship. I am also grateful to my fellow interns who have constantly supported and helped me throughout the internship.

**Tejas Anand Srivastava**

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# 1. Introduction

## Introduction to Drupal

Drupal is a free and open-source web content management framework written in PHP and distributed under the GNU General Public License. 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.

### Core themes

Drupal includes core themes, which customize the "look and feel" of Drupal sites, for example, Garland and Bartik.

The Color Module, introduced in Drupal core, allows administrators to change the color scheme of certain themes via a browser interface.

### Themes

As of December 2019, there are more than 2,800 free community-contributed themes. Themes adapt or replace a Drupal site's default look and feel.

Drupal themes use standardized formats that may be generated by common third-party theme design engines. Drupal 8 and future versions of Drupal integrate the Twig templating engine.

Community-contributed themes at the Drupal website are released under a free GPL license.

## Defining a Drupal theme

To create a Drupal 8 theme you need to first create a THEMENAME.info.yml file that provides meta-data about your theme to Drupal. Create the .info.yml file in the root of your theme folder. The folder should have the same name as the .info.yml file. The theme name must be a unique name in the Drupal setup. Otherwise, the theme components will not be properly loaded. Replace spaces in the theme name with underscores in the folder name (and .info.yml file name).



```
name: Test_Theme
type: theme
description: 'A test theme to show how to define themes.'
dependencies:
  - drupal:views
  - paragraphs:paragraphs
  - components:components (>=8.x-2.x)
package: Core
core: 8.x
php: 5.5.9
version: 8.x-1.0
libraries:
  - test_theme/global-styling
libraries-override:
  contextual/drupal.contextual-links:
    css:
      component: /core/themes/stable/css/contextual/contextual.module.c
ss: false
libraries-extend:
  core/drupal.user:
    - classy/user1
    - classy/user2
base theme: classy
hidden: true
engine: twig
logo: images/logo.png
screenshot: test_theme.png
regions:
  header: Header
  content: Content
  sidebar_first: 'Sidebar first'
  footer: Footer
regions_hidden:
  - sidebar_last
features:
  - comment_user_verification
  - comment_user_picture
  - favicon
  - logo
  - node_user_picture
stylesheets-remove:
  - core/assets/vendor/normalize-css/normalize.css
  - '@classy/css/components/tabs.css'
ckeditor_stylesheets:
  - https://fonts.googleapis.com/css?family=Open+Sans
  - css/base/elements.css
```



## **Key/value pairs**

The following key/value pairs provide meta-data about your theme and define some of the basic functionality.

### **name (required)**

The human-readable name. This will appear on the "Appearance" page where the theme is activated.

### **type (required)**

Indicates the type of extension, i.e., "module", "theme", or "profile". For themes this should always be set to "theme". This value is case-sensitive.

### **description (optional)**

The description, displayed on the "Appearance" page.

### **dependencies (optional)**

An array of dependency strings.

### **package (optional)**

Specifies a "package" that allows you to group themes together.

### **core (required)**

Specifies the version of Drupal core that the theme is compatible with.

### **php (optional)**

The minimum version of PHP required. Defaults to the value of

### **version (optional)**

Specifies a version. For themes hosted on drupal.org, the version number will be filled in by the packaging script. Do not specify it manually, but leave out the version line entirely.

### **libraries (optional)**

A list of libraries (which can contain both CSS and JavaScript assets) to add to all pages where the theme is active.

### **libraries-override (optional)**

A collection of libraries and assets to override.

### **libraries-extend (optional)**

A collection of libraries and assets to add whenever a library is attached.

### **base theme (required)**

A theme can inherit the resources from another theme by specifying it as a base theme. It is recommended to use classy or stable9 (or stable if using Drupal 8). If set to false, no base theme is being used.

### **hidden (optional)**

Indicates whether or not to hide the theme from the "Appearance" page so that it cannot be enabled/disabled via the UI.



**engine (optional)**

The theme engine. Defaults to "twig".

**logo (optional)**

The path to logo relative to the theme's .info.yml file. By default, Drupal will look for a file named "logo.svg" in the root of your theme folder and use that as the theme's logo.

**screenshot (optional)**

The path to screenshot relative to the theme's .info.yml file. By default, Drupal will look for a file named "screenshot.png" in the root of your theme folder and use that as the theme image on the "Appearance" page.

**regions (optional)**

A list of theme regions. (Note that region keys are not preceded by a dash.) A content region is required.

**regions\_hidden (optional)**

A list of inherited regions to remove.

**features (optional)**

A list of features to expose on the theme "Settings" page.

**stylesheets-remove**

A list of stylesheets from other modules or themes to remove from all pages where the theme is active. Each value must be a full path relative to the docroot to resolve ambiguity when more than one file with the same name exists. In cases where the file is part of a library that belongs to a module or theme, a token in the form @module\_or\_theme\_name can be used in place of the full path. Note that when using the token the value must be quoted because "@" is a reserved indicator in YAML. Note: This key is deprecated and will be removed in Drupal 9. In most cases libraries-override should be used.

**ckeditor\_stylesheets (optional)**

A list of stylesheets to add to the CKEditor frame.



# Twig in Drupal

Twig is a template engine for PHP and it is part of the Symfony2 framework.

## Working with Twig Templates

Drupal allows you to override all of the templates that are used to produce HTML markup so that you can fully control the markup that is shown as output within a custom theme. There are templates for each page element ranging from the high level HTML to small fields.

## Twig Template naming conventions

Drupal loads templates based on certain naming conventions. This allows you to override templates by adding them to your theme and giving them specific names.





## 2. Bootstrap

### What is Bootstrap?

Bootstrap is a free and open-source CSS framework directed at responsive, mobile-first front-end web development. It contains CSS- and (optionally) JavaScript-based design templates for typography, forms, buttons, navigation, and other interface components.

Bootstrap 4 supports the latest versions of the Google Chrome, Firefox, Internet Explorer, Opera, and Safari (except on Windows). It additionally supports back to IE9 and the latest Firefox Extended Support Release (ESR).

### Advantages of using Bootstrap

1. Fewer Cross browser bugs.
2. A consistent framework that supports major of all browsers and CSS compatibility fixes.
3. Lightweight and customizable.
4. Responsive structures and styles.
5. Several JavaScript plugins using the jQuery.
6. Good documentation and community support.
7. Loads of free and professional templates.
8. Great grid system.

### Installing Bootstrap Source Code

1. Download and install Node.js, which we use to manage our dependencies.
2. Navigate to the root /bootstrap directory and run `npm install` to install our local dependencies listed in package.json.
3. Install Ruby, install Bundler with `gem install bundler`, and finally run `bundle install`. This will install all Ruby dependencies, such as Jekyll and plugins.
4. From the root /bootstrap directory, run `npm run docs-serve` in the command line.



5. Open <http://localhost:9001> in your browser, and your local development environment is ready.



### 3. Different blocks of the theme

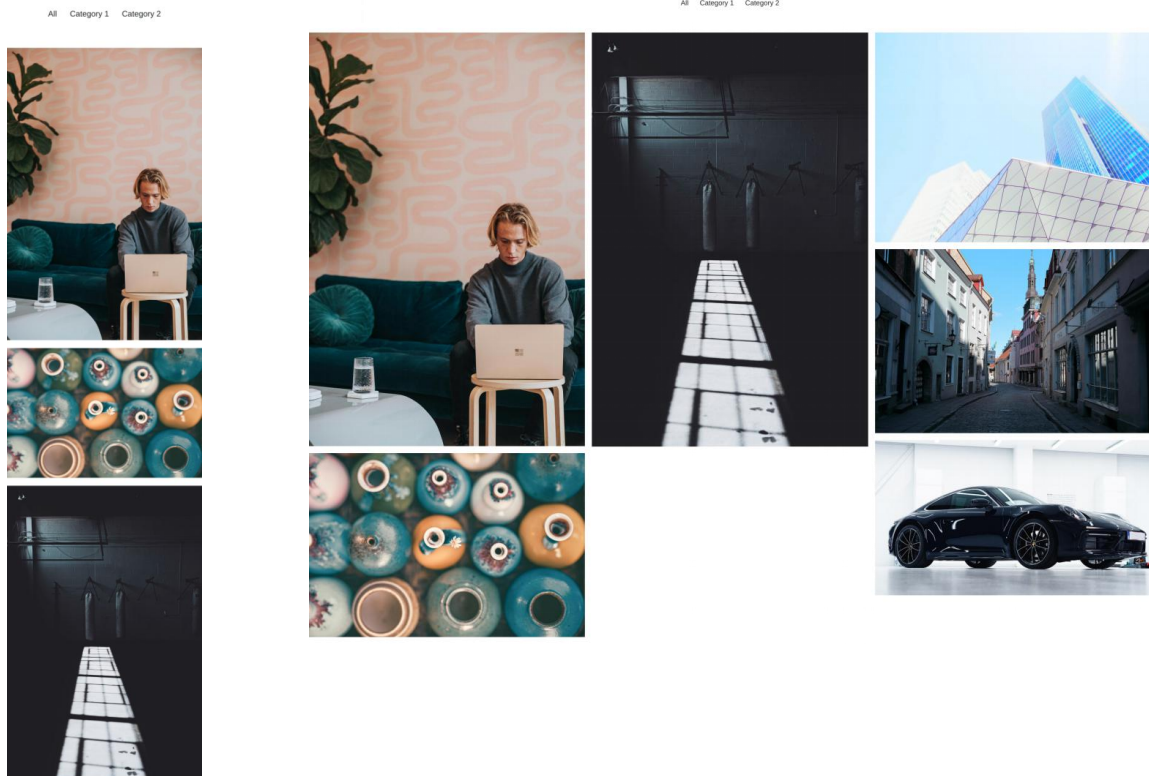
The theme comprises of many blocks which can be used by the user of the theme to customize it as required. The different blocks include almost all of the major components any website will require. They are listed below -

- Navigation Menu
- Side Bar
- Slider
- Alert
- Gallery Section
- E-Commerce Section
- Login form
- Sign-up form
- Main Content
- Testimonials Section
- FAQs Section
- Footer

Some of the screenshots of the above sections are listed below alongside their codes -



# Gallery



The above pictures are the screenshot of the gallery section as visible on a smart-phone(left) and a desktop(right).

```

<br>
  <div class="row">
    <div class="col-md-12 d-flex justify-content-center mb-5">
      <button type="button" class="btn btn-outline-black waves-effect filter" dat
a-rel="all">All</button>
      <button type="button" class="btn btn-outline-black waves-effect filter" dat
a-rel="1">Category 1</button>
      <button type="button" class="btn btn-outline-black waves-effect filter" dat
a-rel="2">Category 2</button>
    </div>
  </div>
  <div class="gallery" id="gallery">
    <div class="mb-3 pics animation all 2">
      
    </div>
    <div class="mb-3 pics animation all 1">
      
    </div>
    <div class="mb-3 pics animation all 1">
      
    </div>
    <div class="mb-3 pics animation all 2">

```



```

</div>
<div class="mb-3 pics animation all 2">
  
</div>
<div class="mb-3 pics animation all 1">
  
</div>
</div>
<br>
```



# E-Commerce



## Camera

Vintage No.123456

Lorem, ipsum dolor sit amet consectetur adipiscing elit. Illum quia veniam soluta ad voluptatibus. Doloremque!

★ ★ ★ ★ ☆ 61

Write a Review

\$120.00

+ 1 -

Add to Cart

In Stock

Add to Shopping List

To order by telephone, please call 9876543210

Description Features Notes Reviews



## Camera

Vintage No.123456

Lorem, ipsum dolor sit amet consectetur adipiscing elit. Illum quia veniam soluta ad voluptatibus. Doloremque!

61 Write a Review

\$120.00

1 Add to Cart  
In Stock Add to Shopping List

To order by telephone, please call 9876543210

Description Features Notes Reviews

Lorem ipsum dolor sit amet consectetur adipiscing elit. Autem eos dolor eveniet, laborum quod quo non nemo quidem exercitationem vitae! Perferendis doloremque similique ipsum earum vel voluptate magni architecto voluptatibus quod quisquam pariatur quos rerum a dicta illo fuga nam, nulla veritatis optio tenetur exercitationem, iure aliquam accusamus? Illo praesentium iste maxime, magnam accusamus dignissimos eveniet aspernatur pariatur asperiores reprehenderit adipisci non, rerum explicabo necessitatibus perspiciatis velit ipsa soluta possimus, eligendi consequuntur. Possimus excepturi, distinctio dicta aperiam velit odit sint optio doloremque ullam voluptatem obcaecati ducimus nesciunt fuga aspernatur nihil tempore dolores molestias rerum accusamus aliquid soluta perspiciatis facilis quasi?

The above pictures are the screenshot of the e-commerce section as visible on a smart-phone(left) and a desktop(right).

```
<div class="container">
  <div class="row">
    <div class="col-md-6">
      
    </div>
    <div class="col-md-6">
      <div class="row">
        <div class="col-md-12">
          <h1>Camera</h1>
        </div>
      </div>
      <div class="row">
        <div class="col-md-12">
          <span class="badhe badge-secondary">Vintage</span>
          <span>No.123456</span>
        </div>
      </div>
    </div>
  </div>
</div>
```



```

<div class="row">
  <div class="col-md-12">
    <p class="description">
      Lorem, ipsum dolor sit amet consectetur adipisicing elit. Illum quia ve
      niam soluta ad voluptatibus. Doloremque!
    </p>
  </div>
</div>
<div class="row">
  <div class="col-md-3">
    <span class="sr-only">Four out of Five stars</span>
    <span><i class="fas fa-star"></i></span>
    <span><i class="fas fa-star"></i></span>
    <span><i class="fas fa-star"></i></span>
    <span><i class="fas fa-star"></i></span>
    <span><i class="far fa-star"></i></span>
    <span class="badge badge-secondary">61</span>
  </div>
  <div class="col-md-3">
    <span>Write a Review</span>
  </div>
</div>
<div class="row">
  <div class="col-md-12">
    <h2>$120.00</h2><hr>
  </div>
</div>
<div class="row">
  <div class="col-md-6">
    <span class="btn btn-light">
      <i class="fas fa-plus"></i>
      <input class="btn" value="1"/>
      <i class="fas fa-minus"></i>
    </span>
  </div>
  <div class="col-md-4">
    <button class="btn btn-primary">
      Add to Cart
    </button>
  </div>
</div>
<div class="row">
  <div class="col-md-4 text-center">
    <span>In Stock</span>
  </div>
  <div class="col-md-4 offset-md-1 text-center">
    <a href="#">Add to Shopping List</a>
  </div>
</div>

```



```

</div>
<div class="row">
  <div class="col-md-12"></div><hr>
</div>
<div class="row">
  <div class="col-md-12">
    <p>To order by telephone, please call <a href="tel:9876543210">9876543210
</a></p>
  </div>
</div>
<ul class="nav nav-tabs" role="tablist">
  <li role="presentation" class="nav-item">
    <a class="nav-link active" href="#description" aria-controls="description"
" role="tab" data-toggle="tab">Description</a>
  </li>
  <li role="presentation" class="nav-item">
    <a class="nav-link" href="#features" aria-controls="features" role="tab"
data-toggle="tab">Features</a>
  </li>
  <li role="presentation" class="nav-item">
    <a class="nav-link" href="#notes" aria-controls="notes" role="tab" data-t
oggle="tab">Notes</a>
  </li>
  <li role="presentation" class="nav-item">
    <a class="nav-link" href="#reviews" aria-controls="reviews" role="tab" da
ta-toggle="tab">Reviews</a>
  </li>
</ul>
<div class="tab-content">
  <div class="tab-pane fade show active" id="description" role="tabpanel">Lor
em ipsum dolor sit amet consectetur adipisicing elit. Autem eos dolor eveniet, labo
rum quod quo non nemo quidem exercitationem vitae! Perferendis doloremque similique
ipsum earum vel voluptate magni architecto voluptatibus quod quisquam pariatur quo
s rerum a dicta illo fuga nam, nulla veritatis optio tenetur exercitationem, iure a
liquam accusamus? Illo praesentium iste maxime, magnam accusamus dignissimos evenie
t aspernatur pariatur asperiores reprehenderit adipisci non, rerum explicabo necess
itatibus perspiciatis velit ipsa soluta possimus, eligendi consequuntur. Possimus e
xcepturi, distinctio dicta aperiam velit odit sint optio doloremque ullam voluptate
m obcaecati ducimus nesciunt fuga aspernatur nihil tempore dolores molestias rerum
accusamus aliquid soluta perspiciatis facilis quasi?</div>
  <div class="tab-pane fade" id="features" role="tabpanel">Lorem ipsum dolor
sit, amet consectetur adipisicing elit. Quo eum inventore vitae, laudantium eligend
i rem iste nisi facilis voluptatem excepturi perspiciatis at error itaque omnis qua
e, temporibus ullam dolor in libero veritatis architecto officia! Ad error dolorum
excepturi, consequuntur quo nobis maiores suscipit et. Voluptas minima facilis veni
am? Harum, aut!</div>
  <div class="tab-pane fade" id="notes" role="tabpanel">Lorem ipsum dolor sit
amet consectetur adipisicing elit. Modi maiores quo ipsam voluptatem facere neque

```





```
unde rerum minus, temporibus quasi ex reiciendis expedita cumque dignissimos, liber  
o fuga autem vero doloremque quia ea vitae nulla aspernatur repellat. Laborum maior  
es error est, magni deserunt hic eveniet nam totam, corporis, perferendis rerum pro  
vident? Laudantium, blanditiis aliquid? Maiores at corrupti, quod similique quae cu  
m dolor! Ipsa consequatur iusto minus maiores, assumenda tempora ducimus id nobis m  
agni hic rem soluta!</div>  
    <div class="tab-pane fade" id="reviews" role="tabpanel">Lorem ipsum, dolor  
sit amet consectetur adipisicing elit. At blanditiis molestias quisquam consequuntur  
harum ipsam saepe pariatur rem. Similique aliquid dolore ipsa necessitatibus modi  
qui!</div>  
    </div>  
    </div>  
    </div>  
</div>
```

**Note:** Only the HTML part of the code is included. The Javascript and the custom sass code is not included.



## 4. Plugins

### Jekyll

Jekyll is a static site generator. You give it text written in your favorite markup language and it uses layouts to create a static website. You can tweak how you want the site URLs to look, what data gets displayed on the site, and more.

### Liquid

Jekyll uses the Liquid templating language to process templates. Generally in Liquid you output content using two curly braces e.g. `{{ variable }}` and perform logic statements by surrounding them in a curly brace percentage sign e.g. `{% if statement %}`.

### Variables

Jekyll traverses your site looking for files to process. Any files with front matter are subject to processing. For each of these files, Jekyll makes a variety of data available via Liquid.

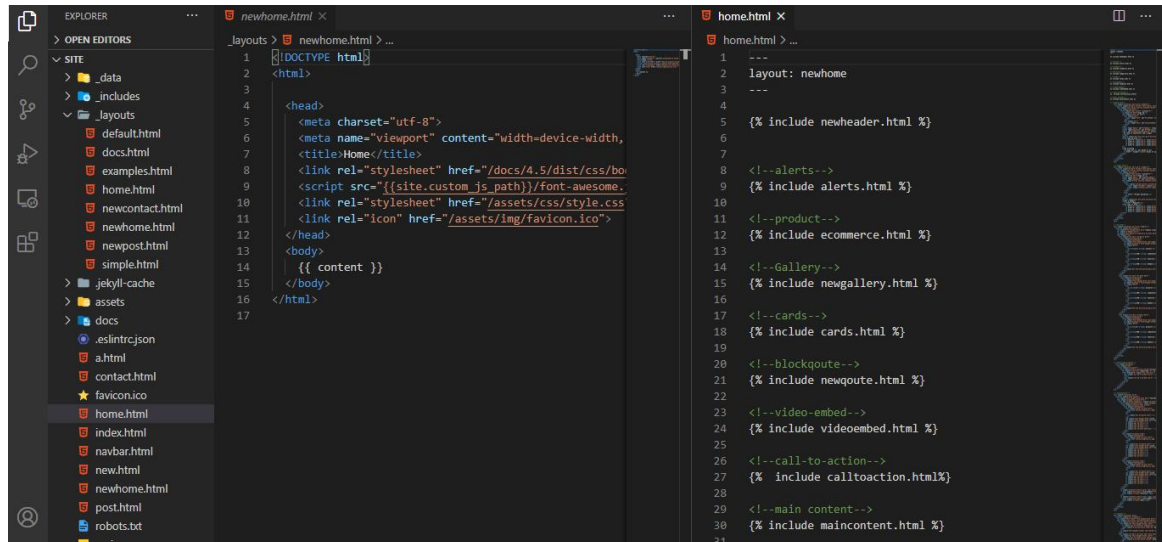
Variable	Description
<code>site.time</code>	The current time (when you run the <code>jekyll</code> command).
<code>site.[VARIABLE]</code>	All the variables set via the command line and your <code>_config.yml</code> are available through the <code>site</code> variable. For example, if you have <code>foo: bar</code> in your configuration file, then it will be accessible in Liquid as <code>site.foo</code> . Jekyll does not parse changes to <code>_config.yml</code> in <code>watch</code> mode, you must restart Jekyll to see changes to variables.

There are many more variables listed in the documentation of Jekyll.



## Layouts

Layouts are templates that wrap around your content. They allow you to have the source code for your template in one place so you don't have to repeat things like your navigation and footer on every page. Layouts live in the `_layouts` directory.



```
newhome.html
1 <!DOCTYPE html>
2 <html>
3
4 <head>
5   <meta charset="utf-8">
6   <meta name="viewport" content="width=device-width,
7     height=device-height, initial-scale=1">
8   <title>Home</title>
9   <link rel="stylesheet" href="/docs/4.5/dist/css/bo
10     tstrap.min.css">
11   <link rel="stylesheet" href="/assets/css/style.css
12   <link rel="icon" href="/assets/img/favicon.ico">
13 </head>
14 <body>
15   {{ content }}
16 </body>
17 </html>

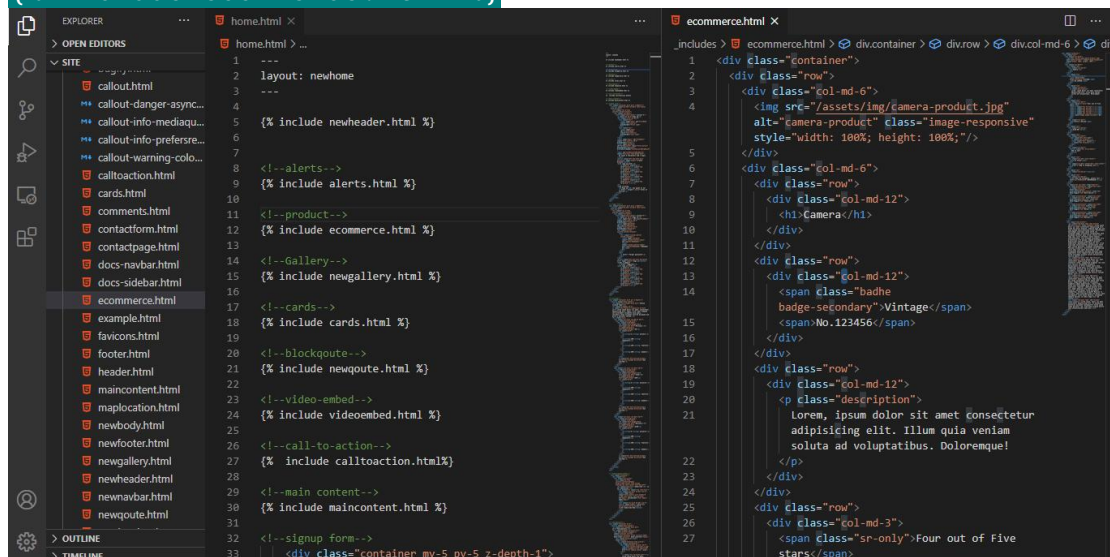
home.html
1 ---
2 layout: newhome
3 ---
4 {% include newheader.html %}
5
6 <!--alerts-->
7 {% include alerts.html %}
8
9 <!--product-->
10 {% include ecommerce.html %}
11
12 <!--Gallery-->
13 {% include newgallery.html %}
14
15 <!--cards-->
16 {% include cards.html %}
17
18 <!--blockquote-->
19 {% include newquote.html %}
20
21 <!--video-embed-->
22 {% include videoembed.html %}
23
24 <!--call-to-action-->
25 {% include calltoaction.html %}
26
27 <!--main content-->
28 {% include maincontent.html %}
29
30 <!--signup form-->
31 <div class="container my-5 py-5 z-depth-1">
```

Here the file `home.html` is placed in the root of the directory and the file `newhome.html` is placed inside the `_layouts` directory.

## Includes

The `include` tag allows you to include the content from another file stored in the `_includes` folder:

```
{% include ecommerce.html %}
```



```
home.html
1 ---
2 layout: newhome
3 ---
4
5 {% include newheader.html %}
6
7 <!--alerts-->
8 {% include alerts.html %}
9
10 <!--product-->
11 {% include ecommerce.html %}
12
13 <!--Gallery-->
14 {% include newgallery.html %}
15
16 <!--cards-->
17 {% include cards.html %}
18
19 <!--blockquote-->
20 {% include newquote.html %}
21
22 <!--video-embed-->
23 {% include videoembed.html %}
24
25 <!--call-to-action-->
26 {% include calltoaction.html %}
27
28 <!--main content-->
29 {% include maincontent.html %}
30
31 <!--signup form-->
32 <div class="container my-5 py-5 z-depth-1">
33   <div class="container">
34     <div class="row">
35       <div class="col-md-6">
36         
39       </div>
40       <div class="col-md-6">
41         <div class="row">
42           <div class="col-md-12">
43             <h1>Camera</h1>
44           </div>
45           <div class="row">
46             <div class="col-md-12">
47               <span class="badge badge-secondary">Vintage</span>
48               <span>No.123456</span>
49             </div>
50             <div class="row">
51               <div class="col-md-12">
52                 <p class="description">
53                   Lorem, ipsum dolor sit amet consectetur
54                   adipiscing elit. Illum quia veniam
55                   soluta ad voluptatibus. Doloremque!
56                 </p>
57               </div>
58             </div>
59           </div>
60         </div>
61       </div>
62     </div>
63   </div>
64   <div class="row">
65     <div class="col-md-3">
66       <span class="sr-only">Four out of Five
67       stars</span>
68     </div>
69   </div>
70 </div>

ecommerce.html
1 <div class="container">
2 <div class="row">
3 <div class="col-md-6">
4 
7 </div>
8 <div class="col-md-6">
9 <div class="row">
10 <div class="col-md-12">
11 <h1>Camera</h1>
12 </div>
13 <div class="row">
14 <div class="col-md-12">
15 <span class="badge badge-secondary">Vintage</span>
16 <span>No.123456</span>
17 </div>
18 <div class="row">
19 <div class="col-md-12">
20 <p class="description">
21   Lorem, ipsum dolor sit amet consectetur
22   adipiscing elit. Illum quia veniam
23   soluta ad voluptatibus. Doloremque!
24 </p>
25 </div>
26 </div>
27 </div>
28 <div class="row">
29 <div class="col-md-3">
30 <span class="sr-only">Four out of Five
31 stars</span>
32 </div>
33 </div>
34 </div>
```

Here the file `home.html` is placed in the root of the directory and the file `ecommerce.html` is placed inside the `_includes` directory. Jekyll will look for the referenced file in the `_includes` directory at the root of your source directory and insert its contents.



## 5. References

For summing up the report the following resources were of great help, thus the below listed links are truly up for consideration in order to build a website

- [Official Drupal Website](#)
- [Wikipedia](#)
- [Bootstrap Website](#)
- [IIT Bombay Official Website](#)
- [FOSSEE Website](#)
- [Liquid|Jekyll Website](#)

