

Lab6- Django

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CS314- Web Application Development

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#### I. OVERVIEW

The task is to create a website for a Traveler that showcases their work and provides information about their services. The website will have five pages: a home page, an about me page, a contact page, a blog, and a gallery page. The gallery page will feature three categories of the traveler's work: food pictures, landmark pictures, and celebrations pictures.

To complete the project, we will use Django, Python, and Bootstrap. The tasks will involve creating web pages, forms, as well as connecting to a MySQL database to store and retrieve data for display. The project will provide valuable experience in building web applications using these technologies and demonstrate the ability to create a functional and visually appealing website for a client.

#### II. INFASTRUCTURE OF THE INTERENT

TERMINOLOGIES	DEFINITIONS
Website Hosting	Website Hosting refers to the process of storing and serving
	website files on a server that is connected to the internet. A
	web hosting service provider provides the technology and
	services needed for a website to be accessible on the
	internet such as server space and technical support. [1]
Web Programming	Web programming is the process of creating dynamic web
	applications using programming languages and
	frameworks. There are several programming languages that
	can be used for web development, including Python, PHP,
	and JavaScript. Web frameworks, such as Django, and
	Laravel, provide a pre-built structure for building web
	applications and can save time and effort in the
	development process. [2]
Frontend and	Frontend and backend are two parts of a web application
Backend	that work together to provide a seamless user experience.
	The frontend is the part of the application that users interact
	with directly, such as the user interface and design. It
	typically consists of HTML, CSS, and JavaScript code. The
	backend, on the other hand, is the part of the application that

runs behind the scenes and handles the server-side processing, such as database interactions, business logic, and authentication. It typically consists of server-side programming languages, such as Python or PHP, and frameworks like Django or Laravel. Both frontend and backend are equally important in creating a functional and user-friendly web application. [3]

Table 1- Infrastructure of the Internet

#### III. BASIC DJANGO SYNTAX

- Django uses a high-level Python syntax, and code is written in Python files with a
  ".py" extension.
- 2. Django has a built-in template system, which allows for the creation of HTML templates that can be used to generate dynamic content.
- 3. Variables in Django templates are enclosed in double curly braces, like {{ variable\_name }}.
- 4. Django follows the Model-View-Controller (MVC) design pattern, but refers to it as Model-View-Template (MVT).
- 5. Django URLs are defined in a separate file called "urls.py", which maps URLs to views.
- 6. Django views are Python functions that handle HTTP requests and return HTTP responses.
- 7. Django models define the structure of the database tables used by the application and are defined in a separate file called "models.py".
- 8. Django admin is a built-in web application that provides an interface for managing Django models and other application data.

Here are some basic commands/ steps that were used during developing this website:

### **Getting Started**

- 1. Create folder for Project
- 2. Open the folder by terminal
- 3. Create virtual environment by "py -m venv env"
- 4. Activate virtual environment by ".\env\Scripts\activate"

- 5. Install Django by "pip install Django"
- 6. Start project by "django-admin startproject p."
- 7. Run the server by "python manage.py runserver"
- 8. Migrate DB by "python manage.py migrate"
- 9. Create super user by "python manage.py createsuperuser"

# **Create Template:**

- 1. Create folder in the same of the root level, name it as "template"
- 2. Go to the settings page, at TEMPLATE var and at DIRS add "BASE\_DIR/template"

### **Create Applications**

- 1. "python mange.py startapp (appname)"
- 2. Connect app to the project: go to Settings file for the project at INSTALLED\_APPS and write appname.apps.(class name)
- 3. Go to urls of the project and write path(' ', include(appname.urls'))
- 4. Create "urls" python file and write the following lines

```
urlpatterns = [path (' ', views. filename, name = filename)]
```

5. Go to view in the app and write the following lines

def home (request):

retuen render(request, appname / filename.html')

#### **Create Static Folder**

- 1- Create folder inside the app called Static
- 2- Create folder its name the same of app name
- 3- Put CSS, JS and images in it
- 4- Add these if you needed

k rel="stylesheet" href="{% static 'appName/style.css' %}">

# **Django Template Tag**

- 1. {% extends 'base.html' %}: Reuse code from a base HTML template and customize it for specific pages or sections of a website.
- 2. {% block content %} {% endblock %}: Define a customizable section of a web page that can be replaced or modified in the base template.
- 3. {% load static %}: Load static files like CSS stylesheets, JavaScript files, or images in a Django template.
- 4. {% include 'part/header.html'%}: Include another HTML file within a current template to reuse code across multiple pages or sections of a website.

#### IV. ASSIGNMENTS

#### 1. Source code:

# 1.1 Project Files

# 1.1.1 Sittings File

```
INSTALLED_APPS = [

yallery.apps.Galleryconfig',

'blog.apps.BlogConfig',

'page.apps.PageConfig',

'django.contrib.admin',

'django.contrib.auth',

'django.contrib.sessions',

'django.contrib.messages',

'django.contrib.sesticfiles',

'django.contrib.staticfiles',

'django.contrib.staticfiles',
```

Figure 1.1.1.1 – Sittings File Part1

Figure 1.1.1.2 – Sittings File Part2

#### 1.1.2 Urls File

```
urlpatterns = [
path('admin/', admin.site.urls),
path('', include('page.urls')),
path('blog/', include('blog.urls')),
path('gallery/', include('gallery.urls')),
]
```

# 1.2 Blog App

# 1.2.1 Admin File

```
blog > @ admin.py

1 from django.contrib import admin

2 from . models import Blog

3 # Register your models here.

4

5 admin.site.register(Blog)

6
```

Figure 1.2.1.1 – Admin File for Blog App

#### 1.2.2 Models File

```
blog > @ models.py > ...

from django.db import models

# Create your models here.

class Blog (models.Model):

title= models.CharField(max_length=250)

text= models.TextField()

date= models.DateField()

def _ str_(self):

return self.title
```

Figure 1.2.2.1 – Models File for Blog App

#### 1.2.3 Urls File

```
blog > • urls,py > ...

1     from django.urls import path
2     from . import views
3
4
5     urlpatterns = [
6     path('blog', views.blog, name='blog'),
7     ]
```

Figure 1.2.3.1 – Urls File for Blog App

#### 1.2.4 Views File

```
blog > & views.py > ...

1    from django.shortcuts import render

2    from .models import Blog

3    # Create your views here.

4    def blog(request):

5    post= Blog.objects.all()

7   return render(request, 'blog/blog.html',{'post':post})

7
```

Figure 1.2.4.1 - Views File for Blog App

# 1.2.5 Static File

Figure 1.2.5.1 – CSS File for Blog App

```
| .nav-scroller .nav {
| display: flex; |
| flex-wrap: nowrap; |
| padding-bottom: frem; |
| margin-top: -lpx; |
| overflow-x: auto; |
| text-align: center; |
| white-space: nowrap; |
| -bd-violet-bg: | #712cf9; |
| -bd-violet-gg: | #712cf9; |
| -bd-violet-gg: | #712cf9; |
| -bs-btn-font-weight: 600; |
| -bs-btn-font-weight: 600; |
| -bs-btn-border-color: var(--bs-white); |
| -bs-btn-border-color: var(--bs-white); |
| -bs-btn-hover-color: var(--bs-white); |
| -bs-btn-hover-border-color: | #6528e0; |
| -bs-btn-hover-border-color: | #6528e0; |
| -bs-btn-active-border-color: | #5232c8; |
| -bs-btn-active-berger = #8232c8; |
| -bs-btn-active-border-color: | #5232c8; |
| -bs-btn-active-color: |
```

Figure 1.2.5.2 – CSS File for Blog App Part2

# 1.1 Gallery App

#### 1.1.1 Static File

Figure 1.3.1.1 – Static File for Gallery App

#### 1.1.2 Urls File

```
from django.urls import path
from . import views

urlpatterns = [
    path('celebration', views.celebration, name='celebration'),
    path('landmark', views.product, name='landmark'),
    path('food', views.food, name='food'),
]
```

Figure 1.3.2.1 – Urls File for Gallery App

#### 1.1.3 Views File

Figure 1.3.3.1 – Views File for Gallery App

# 1.2 Page App

### 1.2.1 Admin File

```
page > de admin.py

1 from django.contrib import admin

2 from .models import Contact

3 # Register your models here.

4 admin.site.register(Contact)
```

Figure 1.4.1.1 – Admin File for Page App

#### 1.2.2 Models File

```
page > • models.py > contact > © _str_

from django.db import models

# Create your models here.

class Contact(models.Model):

name= models.charField(max_length=150)

email= models.charField(max_length=150)

subject= models.charField(max_length=150)

massage= models.TextField()

def __str__(self):

return self.name
```

Figure 1.4.2.1 – Models File for Page App

#### 1.2.3 Urls File

```
page > @ urls.py > ...
1     from django.urls import path
2     from . import views
3
4
5     urlpatterns = [
6         path('', views.home, name='home' ),
7         path('about', views.about, name='about' ),
8         path('contact', views.contact, name='contact' ),
9
```

Figure 1.4.3.1 – Urls File for Page App

#### 1.2.4 View File

Figure 1.4.4.1 – Views File for Page App

#### 1.2.5 Static File

Figure 1.4.5.1 – CSS File for Page App for About Part1

```
.nav-scroller .nav {
    display: flex;
    flex.wrap: nowrap;
    padding-bottom: 1rem;
    margin-top: -lpx;
    overflow-x: auto;
    text-align: center;
    white-space: nowrap;
    -webkit-overflow-scrolling: touch;
}

btn-bd-primary {
    -bd-violet-rgb: 112.520718, 44.062154, 249.437846;
    -bs-btn-font-weight: 600;
    -bs-btn-font-weight: 600;
    -bs-btn-bg: var(--bs-white);
    -bs-btn-bg: var(--bd-violet-bg);
    -bs-btn-hover-color: var(--bs-white);
    -bs-btn-hover-bg: 1552820;
    -bs-btn-hover-bg: 1552820;
    -bs-btn-hover-bg: 1552820;
    -bs-btn-focus-shadow-rgb: var(--bd-violet-rgb);
    -bs-btn-focus-shadow-rgb: var(--bd-violet-rgb);
    -bs-btn-active-color: var(--bs-btn-hover-color);
    -bs-btn-active-bg: 1552820;
    -bs-btn-active-bg: 155282328;
    -bs-btn-active-bg: 1552328;
    -bs-btn-active-bg: 1552328;
    -bs-btn-active-bge [1552328]
    -bs-btn-active-border-color: 1552328;
    -bs-btn-active-border-
```

Figure 1.4.5.2 – CSS File for Page App for About Part2

Figure 1.4.5.3 – CSS File for Page App for Contact

Figure 1.4.5.4 – CSS File for Page App for Home Part1

```
| Inav-scroller .nav { | display: flex; | flex-wrap: nowrap; | padding-bottom: 1rem; | margin-top: -lpx; | overflow-x: auto; | text-align: center; | white-space: nowrap; | -bd-violet-bg: #712cf9; | -bd-violet-bg: #712cf9; | -bd-violet-rgb: 112.520718, 44.062154, 249.437846; | -bs-btn-fort-weight: 600; | -bs-btn-fort-weight: 600; | -bs-btn-bd-primary { | -bs-btn-fort-weight: 600; | -bs-btn-bd-primary { | -bs-btn-bd-weight: 600; | -bs-btn-bd-weight: 600; | -bs-btn-bd-weight: 600; | -bs-btn-bd-primary { | -bs-btn-active-bg: #5523c8; | -bs-btn-active-bg: #5523c8; | -bs-btn-active-bge { | 2-index: 1500; | | -bs-btn-active-bge { | 2-index: 1500; | -bs-btn-active-bge { | 2-index: 1500;
```

Figure 1.4.5.4 – CSS File for Page App for Home Part2

# 1.1 Template

# 1.1.1 Blog Html File

```
(% extends 'base.html' %)
(% load static %)
(% block content %)
(doctype html)
(html lang="en" data-bs-theme="auto")
(html lang="en" data-bs-theme="width-device-width, initial-scale=1")
(html lang="en" data-bs-theme="width-device-width, initial-scale=1")
(html lang="device-time" description" content=""wark Otto, Jacob Thornton, and Bootstrap contributors")
(html name="generator" content="Hugo 0.111.3")
(html ename="generator" content="Hugo 0.111.3")
(html rel="annical" href="https://getbootstrap.com/docs/5.3/examples/blog/")
(link rel="annical" href="https://getbootstrap.com/docs/5.3/examples/blog/")
(link rel="apple-touch-icon" href="/docs/5.3/assets/img/favicons/aple-touch-icon.png" sizes="180x180")
(link rel="icon" href="/docs/5.3/assets/img/favicons/favicon-32x32.png" sizes="16x16" type="image/png")
(link rel="manifest" href="/docs/5.3/assets/img/favicons/favicon-lex16.png" sizes="16x16" type="image/png")
(link rel="manifest" href="/docs/5.3/assets/img/favicons/f
```

Figure 1.5.1.1 – Blog Html File Part1

Figure 1.5.1.2 – Blog Html File Part2

#### 1.1.2 Gallery Html Files

 $Figure\ 1.5.2.1-Gallery\ Html\ File\ for\ celebration\ Html$ 

Figure 1.5.2.2 – Gallery Html File for Food Html

Figure 1.5.2.3 - Gallery Html File for Landmark Html

### 1.1.3 Page Html Files

1.5.3.1 About me Page

 $Figure\ 1.5.3.1.1-Page\ Html\ File\ Part1$ 

```
| Counting styles for this template -->
| Clink inter="pricing.css" rel="stylesheet">
| Clink inter="stylesheet">
| Clink inte
```

Figure 1.5.3.1.3 – Page Html File Part2

Figure 1.5.3.1.4 – Page Html File Part3

Figure 1.5.3.1.5 – Page Html File Part4

 $Figure\ 1.5.3.1.6-Page\ Html\ File\ Part5$ 

Figure 1.5.3.1.7 - Page Html File Part6

#### 1.5.3.2 Contact me Page

Figure 1.5.3.2.1 - Contact Html File Part1

Figure 1.5.3.2.2 – Contact Html File Part2

### **1.5.3.3 Home Page**

Figure 1.5.3.3.1 – Home Html File Part1

```
| Classification | Clas
```

Figure 1.5.3.3.3 – Home Html File Part2

```
//symbol>
/
```

Figure 1.5.3.3.4 – Home Html File Part3

Figure 1.5.3.3.5 – Home Html File Part4

#### 1.5.3.4 Thanks Page

Figure 1.5.3.4.1 – Thanks Html File

#### 1.1.4 Part Html Files

### 1.1.4.1 Footer Page

Figure 1.5.4.1.1 – Footer Html File Part1

```
| .b-example-divider { | width: 100%; | height: 3rcm; | background-color: | rgba(0, 0, 0, .1); | border: solid | rgba(0, 0, 0, .15); | border-width: 1px 0; | box-shadow: inset 0 .5em 1.5em | rgba(0, 0, 0, .1), inset 0 .125em .5em | rgba(0, 0, 0, .15); | } | .b-example-vr { | flex-shrink: 0; | width: 1,5rem; | height: 100vh; | } | .bi { | vertical-align: -.125em; | fill: currentColor; | } | .nav-scroller { | position: relative; | z-index: 2; | height: 2.75rem; | overflow-y: hidden; | } | .nav-scroller nav { | display: flex; | flex-wrap: nowrap; | padding-bottom: 1rem; | margin-top: -1px; | overflow-x: auto; | text-align: center; | white-space: nowrap; | -webkit-overflow-scrolling: touch; | } | .ewebkit-overflow-scrolling: touch; | .ewebkit-overf
```

Figure 1.5.4.1.2 - Footer Html File Part2

Figure 1.5.4.1.3 – Footer Html File Part3

 $Figure\ 1.5.4.1.4-Footer\ Html\ File\ Part 4$ 

Figure 1.5.4.1.5 – Footer Html File Part5

# 1.1.4.2 Header Page

```
templates > part > ∅ header.html > ∅ nav.navbar.navbar-expand-lgnavbar-light.bg-light.rounded → ∅ div.container-fluid > ∅ div#navbars.cxample09.collapsen.avbar-collapse > ∅ l converted of converted o
```

Figure 1.5.4.2.1 – Header Html File

#### **1.1.4.3** Base Page

Figure 1.5.4.3.1 – Base Html File

# 2. Output:

# 1.1 Home Page

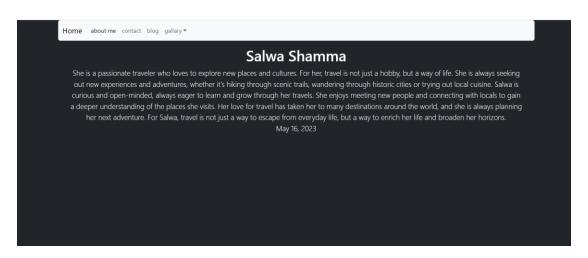


Figure 1.1.1 - Home Page

# 1.2 About me Page

Home about me contact blog gallary ▼

# Pricing

As a traveler with a passion for photography, I approach my craft with a romantic and impressionist sensibility. Throughout my journeys over the past decade, I have been fortunate enough to capture some of the world's most iconic and exclusive celebrations for discerning patrons in over twenty countries and on six continents. It has been a joy to document these unique moments and showcase the beauty of different cultures through my lens.

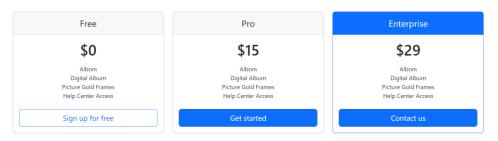


Figure 1.2.1 – About me Page

# 1.3 Contact Page

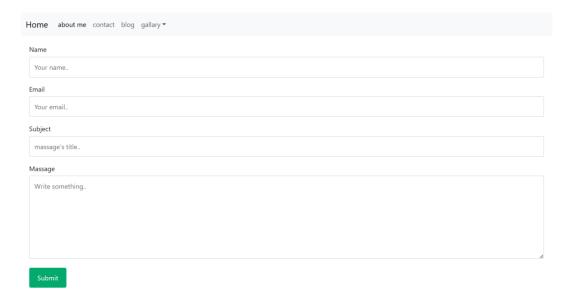


Figure 1.3.1 – Contact Page

# 1.4 Gallery Page

# 1.4.1 Gallery Celebration Page



 $Figure\ 1.4.1.1-Gallery\ Celebration\ Page$ 

# 1.4.2 Gallery Food Page



Figure 1.4.2.1 – Gallery Food Page

# 1.4.3 Gallery Landmark Page



Figure 1.4.3.1 – Gallery Landmark Page

#### 1.5 **Blog Page**



Figure 1.5.1 – Blog Page Part1

# Cairo: A Journey Through Ancient History

Egypt is a land of ancient wonders and mysteries. Take a Nile River cruise to see the Valley of the Kings and the Temple of Karnak. Visit the Great Pyramids of Giza and the nearby Sphinx. Explore the Egyptian Museum in Cairo to see the treasures of Tutankhamun. Try the country's famous dishes, such as koshari and ful medames. Egypt's monuments, temples, and tombs offer a glimpse into the mysteries and wonders of the ancient world. Discover the magic of Egypt for yourself.

#### New York: The City That Never Sleeps

New York City, the most populous city in the United States, is a vibrant and diverse metropolis that has something to offer everyone. Walk through Central Park, visit Times Square and catch a Broadway show, see the Statue of Liberty, and explore the Metropolitan Museum of Art. New York's culinary scene offers a diverse array of dining experiences. The city's energy, culture, and history inspire and captivate visitors. Discover the city that never sleeps for yourself

Figure 1.5.2 – Blog Page Part2

#### Paris: The City of Light and Love

Paris, the capital of France, is a city known for its rich history, art, and culture. From the iconic Eiffel Tower to the charming cobblestone streets of Montmartre, Paris is a city that has something to offer everyone. Walk along the Seine River, visit the Louvre Museum, see the Arc de Triomphe, and enjoy the city's gastronomy. Paris inspires and captivates visitors with its art, culture, and history. Experience the magic of the City of Light and Love for yourself.

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Figure 1.5.3 - Blog Page Part3

# 3. Website DB



Figure 3 – DB Page

# 3.1 DB Blog

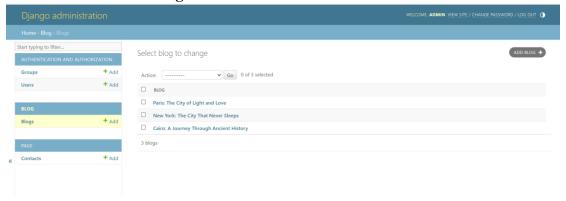


Figure 3.1 - DB Blog Page

# 3.2 DB Contact

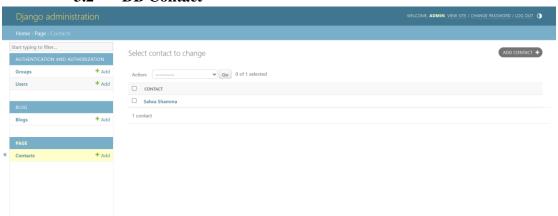


Figure 3.2 – DB Contact Page

# 4. GitHub

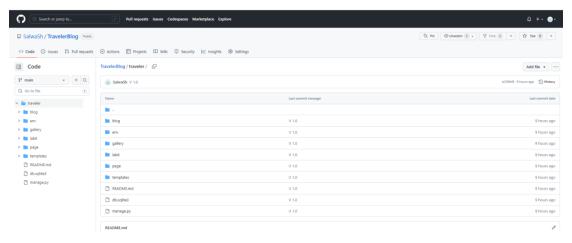


Figure 4.1 - GitHub Page

# 5. Deployment Link

Link: http://salwashamma.pythonanywhere.com/

#### V. REFERENCES

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