Week6- 220962446

Question1) Develop a simple web page to perform basic arithmetic operations. Take two

integer inputs from the user, select the operation to be performed using a

dropdown. Include a button “Calculate” to perform the selected operation, and

then display the result in the same web page.

Code1)

**Base.html**

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1.0">

<title>Calculator</title>

<link href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css" rel="stylesheet">

</head>

<body>

<div class="container mt-5">

<h2 class="text-center">Simple Calculator</h2>

<form method="post">

{% csrf\_token %}

<div class="row justify-content-center">

<div class="col-md-4">

<div class="form-group mb-3">

<label for="num1">Enter the first number</label>

<input type="number" class="form-control" name="num1" id="num1" required>

</div>

</div>

<div class="col-md-2 d-flex align-items-center justify-content-center">

<select name="operation" id="operations" class="form-control mb-3">

<option value="add">+</option>

<option value="sub">-</option>

<option value="mul">\*</option>

<option value="div">/</option>

</select>

</div>

<div class="col-md-4">

<div class="form-group mb-3">

<label for="num2">Enter the second number</label>

<input type="number" class="form-control" name="num2" id="num2" required>

</div>

</div>

</div>

<div class="row justify-content-center">

<div class="col-md-4 text-center">

<button type="submit" class="btn btn-primary w-100">Calculate</button>

</div>

</div>

</form>

{% if result %}

<div class="row justify-content-center mt-4">

<div class="col-md-4">

<div class="alert alert-info text-center">

<strong>Result:</strong> {{ result }}

</div>

</div>

</div>

{% endif %}

</div>

<script src="https://code.jquery.com/jquery-3.5.1.slim.min.js"></script>

<script src="https://cdn.jsdelivr.net/npm/@popperjs/core@2.5.2/dist/umd/popper.min.js"></script>

<script src="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/js/bootstrap.min.js"></script>

</body>

</html>

**views.py**

from django.shortcuts import render

def calculator(request):

if request.method == 'POST':

try:

num1 = float(request.POST.get('num1'))

num2 = float(request.POST.get('num2'))

operation = request.POST.get('operation')

if operation == 'add':

result = num1 + num2

elif operation == 'sub':

result = num1 - num2

elif operation == 'mul':

result = num1 \* num2

elif operation == 'div':

if num2 != 0:

result = num1 / num2

else:

result = 'Cannot divide by zero'

else:

result = 'Invalid operation'

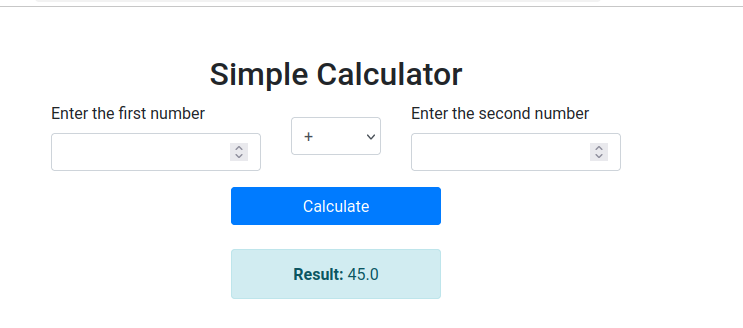
except ValueError:

result = 'Please enter valid numbers'

return render(request, 'base.html', {'result': result})

return render(request, 'base.html')

solution)



Question 2) Develop a simple web form that generates the front cover for a magazine. The

form should provide the options for selecting the image, background color,

changing font size, color etc. Input messages must be taken from the user so

as to display it on the front cover with legible font family and font size. The

front cover developed should be proportionate to the web page size. Place the

css files inside static folder.

Code 2)

base.html

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1.0">

<title>Magazine Editor</title>

<link href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css" rel="stylesheet">

{% load static %}

<link rel="stylesheet" href="{% static 'styles.css' %}">

</head>

<body>

<div class="container mt-5">

<h2 class="text-center">Magazine Front Cover Editor</h2>

<form method="post" enctype="multipart/form-data"> <!-- Don't forget the enctype for file upload -->

{% csrf\_token %}

<div class="form-group">

<label for="heading">Enter the heading</label>

<input type="text" name="heading" id="heading" class="form-control" required>

</div>

<div class="form-group">

<label for="bg\_color">Select the Background Color</label>

<input type="color" name="bg\_color" id="bg\_color" class="form-control" value="#ffffff">

</div>

<div class="form-group">

<label for="bg\_image">Upload Background Image</label>

<input type="file" name="bg\_image" id="bg\_image" class="form-control" accept="image/\*" required>

</div>

<div class="form-group">

<label for="font\_size">Select Font Size</label>

<input type="number" name="font\_size" id="font\_size" class="form-control" value="30" required>

</div>

<div class="form-group">

<label for="font\_color">Select Font Color</label>

<input type="color" name="font\_color" id="font\_color" class="form-control" value="#000000">

</div>

<div class="form-group">

<button type="submit" class="btn btn-primary btn-block">Generate Magazine Cover</button>

</div>

</form>

</div>

</body>

</html>

magazine.html

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1.0">

<title>Magazine Cover Result</title>

<link href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css" rel="stylesheet">

{% load static %}

<link rel="stylesheet" href="{% static 'styles.css' %}">

<style>

.magazine-cover {

background-size: cover;

background-position: center;

height: 600px;

width: 100%;

border-radius: 10px;

box-shadow: 0px 4px 10px rgba(0, 0, 0, 0.2);

position: relative;

}

.cover-title {

position: absolute;

top: 50%;

left: 50%;

transform: translate(-50%, -50%);

color: {{ font\_color }};

font-size: {{ font\_size }}px;

text-shadow: 2px 2px 5px rgba(0, 0, 0, 0.6);

font-weight: bold;

}

</style>

</head>

<body class="bg-light">

<div class="container mt-5">

<h2 class="text-center mb-4" style="font-family: 'Arial', sans-serif; color: #333;">Your Magazine Cover</h2>

<!-- Container for the Magazine Cover -->

<div class="magazine-cover" style="background-image: url('{{ bg\_image }}'); background-color: {{ bg\_color }};">

<!-- Magazine Title -->

<div class="cover-title">

<h1 class="display-4">{{ heading }}</h1>

</div>

</div>

<div class="mt-4 text-center">

<p class="lead text-muted">This is a preview of your customized magazine cover. Feel free to make more edits.</p>

<a href="{% url 'magazine\_editor' %}" class="btn btn-primary">Edit Again</a>

</div>

</div>

<!-- Optional Bootstrap JavaScript and Popper.js -->

<script src="https://code.jquery.com/jquery-3.5.1.slim.min.js"></script>

<script src="https://cdn.jsdelivr.net/npm/@popperjs/core@2.5.3/dist/umd/popper.min.js"></script>

<script src="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/js/bootstrap.min.js"></script>

</body>

</html>

views.py

from django.shortcuts import render

from .forms import MagazineForm

from django.conf import settings

import os

def magazine\_editor(request):

if request.method == 'POST':

form = MagazineForm(request.POST, request.FILES) # Include request.FILES for image upload

if form.is\_valid():

heading = form.cleaned\_data['heading']

bg\_image = form.cleaned\_data['bg\_image'] # This will be the uploaded image file

bg\_color = form.cleaned\_data['bg\_color']

font\_size = form.cleaned\_data['font\_size']

font\_color = form.cleaned\_data['font\_color']

image\_url = os.path.join(settings.MEDIA\_URL, bg\_image.name)

return render(request, 'magazine.html', {

'heading': heading,

'bg\_image': image\_url,

'bg\_color': bg\_color,

'font\_size': font\_size,

'font\_color': font\_color

})

else:

form = MagazineForm()

return render(request, 'base.html', {'form': form})

def magazine\_result(request):

return render(request, 'magazine.html', {

'heading': 'Magazine Title', # You can pass the real data from the form if needed

'bg\_image': '/media/images/sample.jpg', # Use actual image path from media

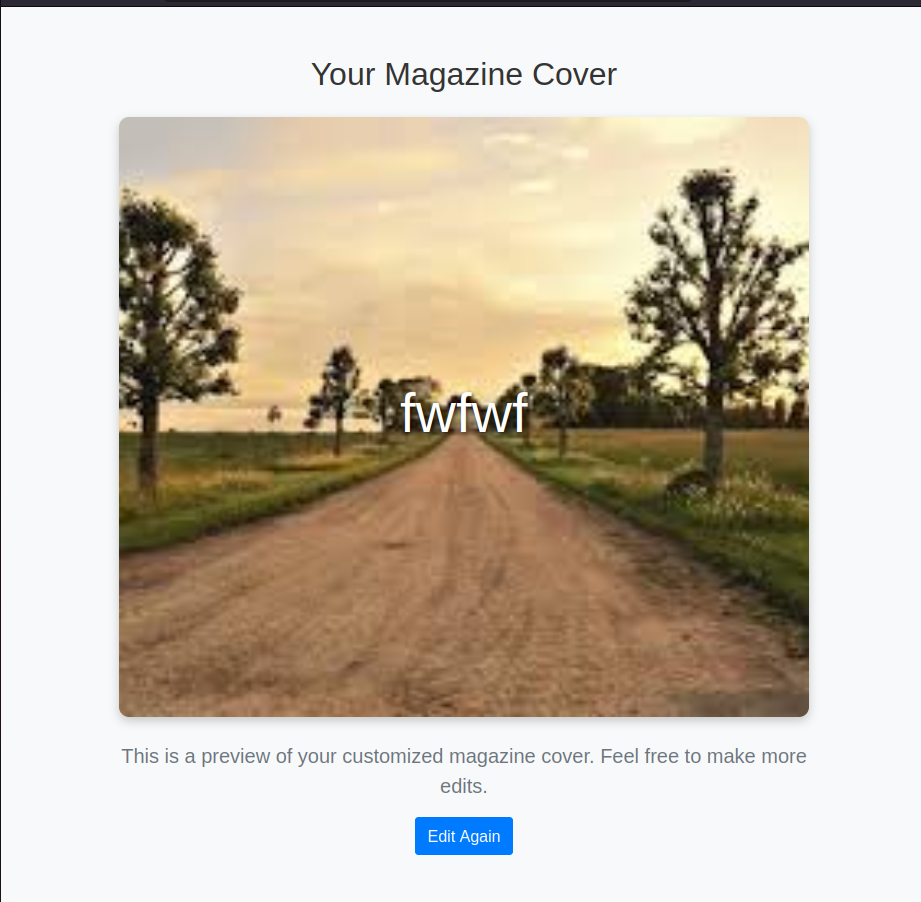
'bg\_color': '#FFFFFF', # Example background color

'font\_size': 30, # Example font size

'font\_color': '#000000', # Example font color

})

Solution)



Question 3) Design a simple web application to provide information about a book. The

home page of the application should display the cover page of the book along

with three hyperlinks: Metadata, Reviews, Publisher info. Give provision to

revert to home page from any other page.

Code 1)

Code:

views.py:

from django.shortcuts import render, get\_object\_or\_404

from .models import Book

def home(request):

book = Book.objects.first() # Get the first book (MVP)

return render(request, 'webapp/home.html', {'book': book})

def metadata(request):

book = Book.objects.first()

return render(request, 'webapp/metadata.html', {'book': book})

def reviews(request):

book = Book.objects.first()

return render(request, 'webapp/reviews.html', {'book': book})

def publisher\_info(request):

book = Book.objects.first()

return render(request, 'webapp/publisher\_info.html', {'book': book})

models.py:

from django.db import models

class Book(models.Model):

title = models.CharField(max\_length=200)

cover\_image = models.ImageField(upload\_to='covers/')

metadata = models.TextField()

reviews = models.TextField()

publisher\_info = models.TextField()

def \_\_str\_\_(self):

return self.title

base.html:  
<!-- webapp/templates/webapp/base.html -->

<!DOCTYPE html>

<html>

<head>

<title>Book Details</title>

</head>

<body>

<nav>

<a href="{% url 'webapp:home' %}">Home</a>

</nav>

{% block content %}

{% endblock %}

</body>

</html>

home.html”

<!-- webapp/templates/webapp/home.html -->

{% extends 'webapp/base.html' %}

{% block content %}

<h1>Book Details</h1>

{% if book.cover\_image %}

<img src="{{ book.cover\_image.url }}" alt="{{ book.title }} cover" width="200">

{% endif %}

<ul>

<li><a href="{% url 'webapp:metadata' %}">Metadata</a></li>

<li><a href="{% url 'webapp:reviews' %}">Reviews</a></li>

<li><a href="{% url 'webapp:publisher\_info' %}">Publisher Info</a></li>

</ul>

{% endblock %}

metadata.html:

<!-- webapp/templates/webapp/metadata.html -->

{% extends 'webapp/base.html' %}

{% block content %}

<h1>Book Metadata</h1>

<p>{{ book.metadata }}</p>

{% endblock %}

publisher\_info.html:  
<!-- webapp/templates/webapp/publisher\_info.html -->

{% extends 'webapp/base.html' %}

{% block content %}

<h1>Publisher Information</h1>

<p>{{ book.publisher\_info }}</p>

{% endblock %}

reviews.html:  
<!-- webapp/templates/webapp/reviews.html -->

{% extends 'webapp/base.html' %}

{% block content %}

<h1>Book Reviews</h1>

<p>{{ book.reviews }}</p>

{% endblock %}

Output)

