WP LAB 8– Form processing using Django – Part 2

Name: Pranamya G Kulal
Class: CSE A
Reg no: 220905018
Roll no: 8

Q1)Create a Register page and Success page with the following requirements: i. Register page should contain four input TextBoxes for UserName, Password, Email id and Contact Number and also a button to submit. Make the username as compulsory field and other fields as optional. ii. iii. 2) On button click, Success page is displayed with message "Welcome {UserName}" and also his Email and Contact Number has to be displayed. Use secure technique to send details to the Success page (Hint: use csrftoken) 4) Design a website with two pages.

i)settings.py

```
INSTALLED_APPS = [
   'django.contrib.admin',
   'django.contrib.auth',
   'django.contrib.contenttypes',
   'django.contrib.sessions',
   'django.contrib.messages',
   'django.contrib.staticfiles',
   'registration'
]
```

ii) MySite/urls.py

```
from django.contrib import admin
from django.urls import path, include

urlpatterns = [
   path('admin/', admin.site.urls),
   path('register/', include('registration.urls')),
]
```

iii) registration/urls.py

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

urlpatterns = [
   path('', views.register, name='register'),
   path('success/', views.success, name='success'),
]
```

iv) views.py

```
from django.shortcuts import render, redirect
from .forms import RegisterForm

def register(request):
   if request.method == "POST":
      form = RegisterForm(request.POST)
```

```
        if form.is_valid():
            # Securely store form data in session
            request.session['username'] = form.cleaned_data['username']
            request.session['email'] = form.cleaned_data['email']
            request.session['contact'] = form.cleaned_data['contact']
            return redirect('success')  # Redirect to success page
    else:
        form = RegisterForm()
    return render(request, 'registration/register.html', {'form': form})

def success(request):
    # Fetch stored session data
    username = request.session.get('username', 'Guest')
    email = request.session.get('email', 'Not Provided')
    contact = request.session.get('contact', 'Not Provided')

    return render(request, 'registration/success.html', {'username': username, 'email': email,
'contact': contact})
```

v) templates/registration/register.html

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Register</title>
    <!-- Bootstrap CSS -->
    <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/css/bootstrap.min.css"
rel="stylesheet">
    <style>
        body {
            background-color: #f8f9fa;
        }
        .container {
            max-width: 400px;
            margin-top: 50px;
            padding: 20px;
            background: white;
            border-radius: 10px;
            box-shadow: 0px 0px 10px rgba(0, 0, 0, 0.1);
        }
    </style>
</head>
<body>
    <div class="container">
        <h2 class="text-center">Register</h2>
        <form method="post">
            {% csrf_token %}
            <div class="mb-3">
                <label class="form-label">Username (Required)</label>
                {{ form.username }}
```

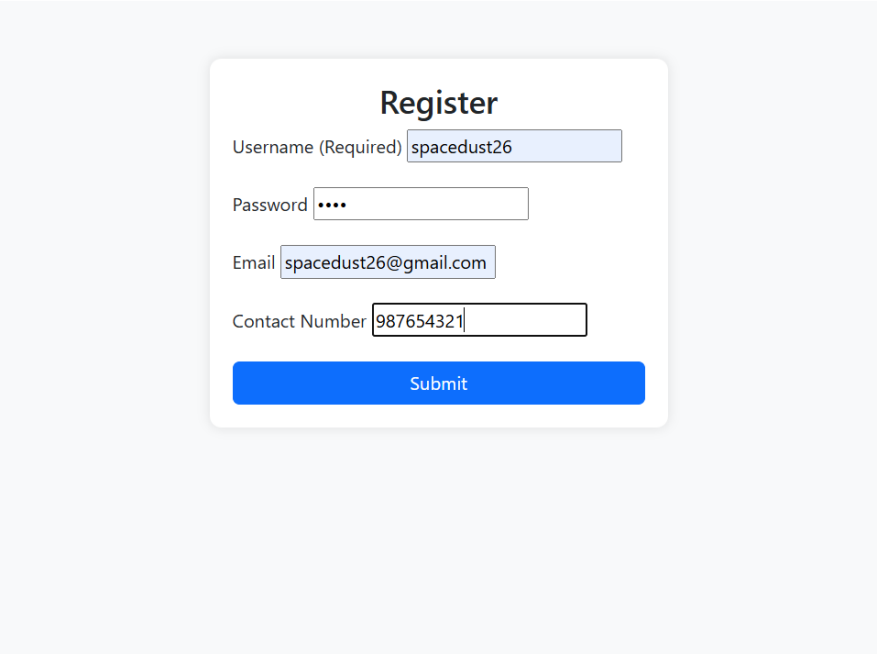
```
        </div>
        <div class="mb-3">
          <label class="form-label">Password</label>
          {{ form.password }}
        </div>
        <div class="mb-3">
          <label class="form-label">Email</label>
          {{ form.email }}
        </div>
        <div class="mb-3">
          <label class="form-label">Contact Number</label>
          {{ form.contact }}
        </div>
        <button type="submit" class="btn btn-primary w-100">Submit</button>
      </form>
    </div>

    <!-- Bootstrap JS -->
    <script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/js/bootstrap.bundle.min.js"></script>
</body>
</html>
```

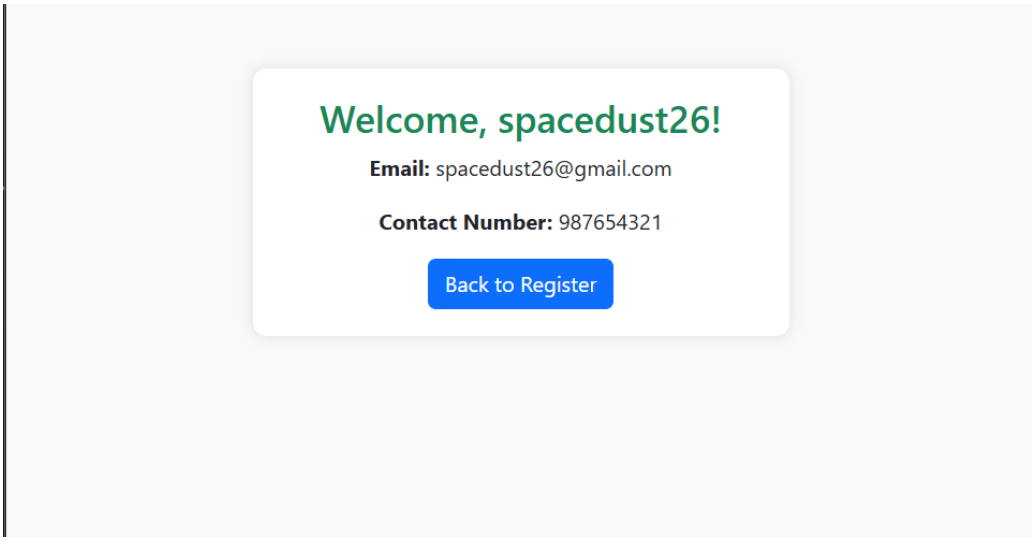
vi) templates/registration/success.html

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Success</title>
    <!-- Bootstrap CSS -->
    <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/css/bootstrap.min.css"
rel="stylesheet">
    <style>
        body {
            background-color: #f8f9fa;
        }
        .container {
            max-width: 400px;
            margin-top: 50px;
            padding: 20px;
            background: white;
            border-radius: 10px;
            box-shadow: 0px 0px 10px rgba(0, 0, 0, 0.1);
        }
    </style>
</head>
<body>
    <div class="container text-center">
        <h2 class="text-success">Welcome, {{ username }}!</h2>
        <p><strong>Email:</strong> {{ email }}</p>
```

```
    <p><strong>Contact Number:</strong> {{ contact }}</p>
    <a href="{% url 'register' %}" class="btn btn-primary">Back to Register</a>
  </div>

  <!-- Bootstrap JS -->
  <script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/js/bootstrap.bundle.min.js"></script>
</body>
</html>
```

vii) Screenshots





Q2) "How is the book ASP.NET with c# by Vipul Prakashan?" Give the user three choice: i)Good ii)Satisfactory iii)Bad. Provide a VOTE button. After user votes, present the result in percentage using labels next to the choices.

i)settings.py

```
INSTALLED_APPS = [
   'django.contrib.admin',
   'django.contrib.auth',
   'django.contrib.contenttypes',
   'django.contrib.sessions',
   'django.contrib.messages',
   'django.contrib.staticfiles',
   'voting',
]
```

ii) Bookreview/urls.py

```
from django.contrib import admin
from django.urls import path, include

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

iii)voting/urls.py

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

urlpatterns = [
   path('', views.vote_view, name='vote'),
   path('results/', views.results_view, name='results'),
]
```

iv) views.py

```
from django.shortcuts import render, redirect
from .forms import VoteForm
from .models import Vote
from django.db.models import Count

def vote_view(request):
   if request.method == "POST":
      form = VoteForm(request.POST)
      if form.is_valid():
         form.save()
         return redirect('results')
   else:
      form = VoteForm()

   return render(request, 'voting/vote.html', {'form': form})

def results_view(request):
```

```
    total_votes = Vote.objects.count()
    results = (
        Vote.objects.values('choice')
        .annotate(count=Count('choice'))
        .order_by('-count')
    )

    percentages = {}
    for result in results:
        choice = result['choice']
        count = result['count']
        percentages[choice] = round((count / total_votes) * 100, 2) if total_votes else 0

    return render(request, 'voting/results.html', {'percentages': percentages})
```

v) models.py

```
from django.db import models

class Vote(models.Model):
    OPTION_CHOICES = [
        ('good', 'Good'),
        ('satisfactory', 'Satisfactory'),
        ('bad', 'Bad'),
    ]
    choice = models.CharField(max_length=20, choices=OPTION_CHOICES, default='good')  # Set default value
```

vi) forms.py

```
from django import forms
from .models import Vote

class VoteForm(forms.ModelForm):
    class Meta:
        model = Vote
        fields = ['choice']
        widgets = {
            'choice': forms.RadioSelect
        }

    def __init__(self, *args, **kwargs):
        super(VoteForm, self).__init__(*args, **kwargs)
        # Manually set choices to remove the empty default option
        self.fields['choice'].choices = [
            ('good', 'Good'),
            ('satisfactory', 'Satisfactory'),
            ('bad', 'Bad')
        ]
```

vii) templates/voting/results.html

```
<!DOCTYPE html>
<html lang="en">
```

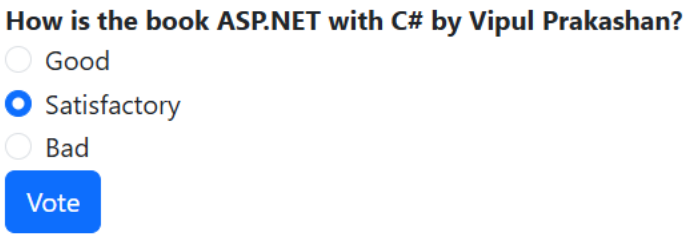
```
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Results</title>
  <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/css/bootstrap.min.css"
rel="stylesheet">
</head>
<body>
  <div class="container mt-5">
    <h2>Voting Results</h2>
    <ul class="list-group">
      <li class="list-group-item">Good - {{ percentages.good|default:0 }}%</li>
      <li class="list-group-item">Satisfactory - {{ percentages.satisfactory|default:0 }}%</li>
      <li class="list-group-item">Bad - {{ percentages.bad|default:0 }}%</li>
    </ul>
    <br>
    <a href="{% url 'vote' %}" class="btn btn-success">Vote Again</a>
  </div>
</body>
</html>
```

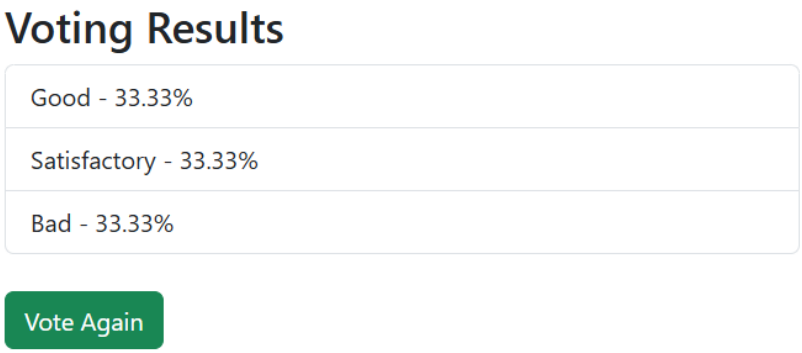
viii) templates/voting/vote.html

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Vote</title>
  <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/css/bootstrap.min.css"
rel="stylesheet">
</head>
<body>
  <div class="container mt-5">
   <form method="post">
    {% csrf_token %}
    <label><strong>How is the book ASP.NET with C# by Vipul
Prakashan?</strong></label><br>

    <div class="form-check">
      <input class="form-check-input" type="radio" name="choice" value="good" required>
Good
    </div>
    <div class="form-check">
      <input class="form-check-input" type="radio" name="choice" value="satisfactory">
Satisfactory
    </div>
    <div class="form-check">
      <input class="form-check-input" type="radio" name="choice" value="bad"> Bad
    </div>

    <button type="submit" class="btn btn-primary">Vote</button>
```

```
  </form>

  </div>
</body>
</html>
```

ix) Screenshots





Q3) Create a website with two pages. Page 1 has two TextBoxes (name and total marks) and one 'Calculate' Button as shown in the figure. On clicking the 'Calculate' Button, CGPA (total marks/50) along with the name should be displayed in the Page 2. Use Django sessions to store the information.

i)settings.py

```
INSTALLED_APPS = [
  'django.contrib.admin',
  'django.contrib.auth',
  'django.contrib.contenttypes',
  'django.contrib.sessions',
  'django.contrib.messages',
```

```
    'django.contrib.staticfiles',
    'calculator'
]
```

ii) CGPACalculator/urls.py

```
from django.contrib import admin
from django.urls import path, include

urlpatterns = [
    path('admin/', admin.site.urls),
    path('', include('calculator.urls')),  # Include app URLs
]
```

iii) calculator/urls.py

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

urlpatterns = [
    path('', views.input_page, name="input_page"),  # Home Page
    path('result/', views.result_page, name="result_page"),  # Result Page
]
```

iv) views.py

```
from django.shortcuts import render, redirect

def input_page(request):
    if request.method == "POST":
        name = request.POST.get("name")
        total_marks = request.POST.get("total_marks")

        # Store data in session
        request.session["name"] = name
        request.session["total_marks"] = total_marks

        return redirect("result_page")  # Redirect to result page

    return render(request, "calculator/input_page.html")

def result_page(request):
    # Retrieve data from session
    name = request.session.get("name", "Unknown")
    total_marks = request.session.get("total_marks", 0)

    try:
        cgpa = float(total_marks) / 10  # Calculate CGPA
    except ValueError:
        cgpa = 0

    return render(request, "calculator/result_page.html", {"name": name, "cgpa": cgpa})
```

v) templates/calculator/input_page.html

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>CGPA Calculator</title>
  <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/css/bootstrap.min.css"
rel="stylesheet">
</head>
<body>
  <div class="container mt-5">
    <h2>CGPA Calculator</h2>
    <form method="post">
      {% csrf_token %}
      <div class="mb-3">
        <label for="name" class="form-label">Name:</label>
        <input type="text" class="form-control" id="name" name="name" required>
      </div>
      <div class="mb-3">
        <label for="total_marks" class="form-label">Total Marks:</label>
        <input type="number" class="form-control" id="total_marks" name="total_marks"
required>
      </div>
      <button type="submit" class="btn btn-primary">Calculate</button>
    </form>
  </div>
</body>
</html>
```

vi) templates/calculator/result_page.html

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>CGPA Result</title>
  <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/css/bootstrap.min.css"
rel="stylesheet">
</head>
<body>
  <div class="container mt-5">
    <h2>CGPA Result</h2>
    <p><strong>Name:</strong> {{ name }}</p>
    <p><strong>CGPA:</strong> {{ cgpa }}</p>
    <a href="{% url 'input_page' %}" class="btn btn-success">Calculate Again</a>
  </div>
</body>
</html>
```

vii) Screenshots

CGPA Calculator

Name:

Peter Parker

Total Marks:

97

Calculate

CGPA Result

Name: Peter Parker

CGPA: 9.7

Calculate Again