

WP LAB 5 – Developing Web Application using Django - Part I

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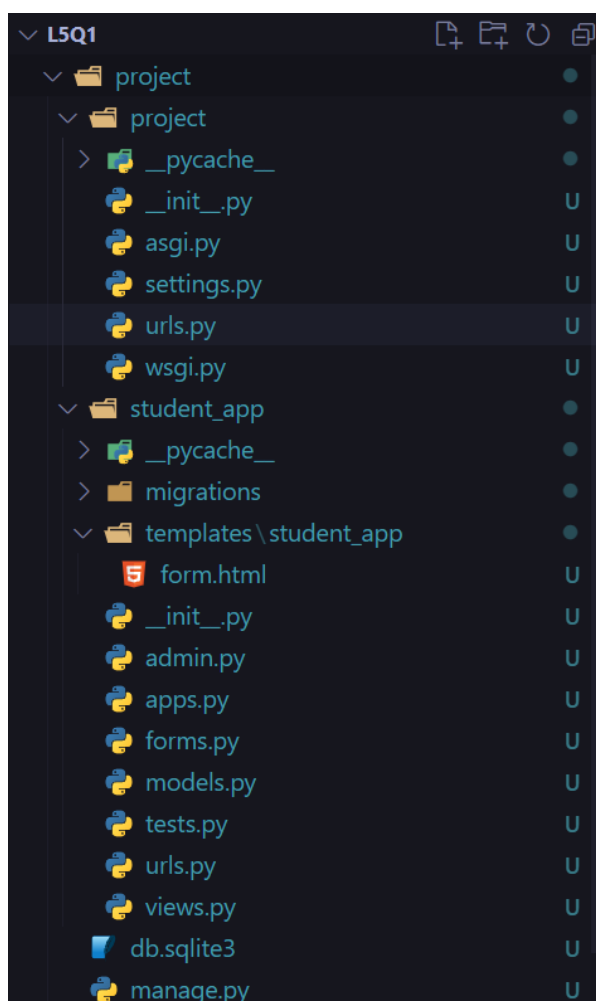
Class: CSE A

Reg no: 220905018

Roll no: 8

Q1) Create a web form which allows the teacher to enter the student details like name, date of birth, address, contact number, email id and marks of English, Physics and Chemistry. After filling all the information and on clicking submit button, details should be added to a textarea displayed on the same page. Display the total percentage of marks obtained in a label.

i) Directory structure



ii)project/project/urls.py

```
from django.contrib import admin
from django.urls import path, include
urlpatterns = [
    path('admin/', admin.site.urls),
    path("", include('student_app.urls')),
]
```

iii)project/student_app/urls.py

```

from django.urls import path
from .views import student_form_view
urlpatterns = [
    path("", student_form_view, name='student_form'),
]

```

iv)project/student_app/forms.py

```

from django import forms
class StudentForm(forms.Form):
    name = forms.CharField(widget=forms.TextInput(attrs={'class': 'form-control'}))
    date_of_birth = forms.DateField(widget=forms.DateInput(attrs={'class': 'form-control', 'type':
'date'}))
    address = forms.CharField(widget=forms.Textarea(attrs={'class': 'form-control', 'rows': 3}))
    contact_number = forms.CharField(widget=forms.TextInput(attrs={'class': 'form-control'}))
    email = forms.EmailField(widget=forms.EmailInput(attrs={'class': 'form-control'}))
    english_marks = forms.FloatField(widget=forms.NumberInput(attrs={'class': 'form-control'}))
    physics_marks = forms.FloatField(widget=forms.NumberInput(attrs={'class': 'form-control'}))
    chemistry_marks = forms.FloatField(widget=forms.NumberInput(attrs={'class': 'form-
control'}))

```

v)project/student_app/models.py

```

from django.db import models
class Student(models.Model):
    name = models.CharField(max_length=100)
    date_of_birth = models.DateField()
    address = models.TextField()
    contact_number = models.CharField(max_length=15)
    email = models.EmailField()
    english_marks = models.FloatField()
    physics_marks = models.FloatField()
    chemistry_marks = models.FloatField()

    def total_percentage(self):
        return (self.english_marks + self.physics_marks + self.chemistry_marks) / 3

```

vi)project/student_app/templates/student_app/form.html

```

<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <title>Student Form</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;
            padding: 20px;

```

```

}
.container {
  max-width: 600px;
  background: white;
  padding: 20px;
  border-radius: 10px;
  box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);
}
h2 {
  text-align: center;
  margin-bottom: 20px;
}
textarea {
  width: 100%;
  height: 150px;
  resize: none;
}
.result-box {
  background: #e9ecef;
  padding: 10px;
  border-radius: 5px;
  margin-top: 10px;
}
</style>
</head>
<body>
<div class="container">
  <h2>Enter Student Details</h2>
  <form method="post">
    {% csrf_token %}
    <div class="mb-3">
      <label class="form-label">Name</label>
      {{ form.name }}
    </div>
    <div class="mb-3">
      <label class="form-label">Date of Birth</label>
      {{ form.date_of_birth }}
    </div>
    <div class="mb-3">
      <label class="form-label">Address</label>
      {{ form.address }}
    </div>
    <div class="mb-3">
      <label class="form-label">Contact Number</label>
      {{ form.contact_number }}
    </div>
    <div class="mb-3">
      <label class="form-label">Email</label>
      {{ form.email }}
    </div>
  </form>
  <h5>Marks</h5>

```

```

<div class="mb-3">
  <label class="form-label">English</label>
  {{ form.english_marks }}
</div>
<div class="mb-3">
  <label class="form-label">Physics</label>
  {{ form.physics_marks }}
</div>
<div class="mb-3">
  <label class="form-label">Chemistry</label>
  {{ form.chemistry_marks }}
</div>
<button type="submit" class="btn btn-primary w-100">Submit</button>
</form>

{% if submitted_data %}
<div class="result-box mt-4">
  <h4>Submitted Data</h4>
  <textarea readonly>
Name: {{ submitted_data.name }}
DOB: {{ submitted_data.date_of_birth }}
Address: {{ submitted_data.address }}
Contact: {{ submitted_data.contact_number }}
Email: {{ submitted_data.email }}
Marks: English {{ submitted_data.english_marks }},
      Physics {{ submitted_data.physics_marks }},
      Chemistry {{ submitted_data.chemistry_marks }}
  </textarea>
  >
  <h5 class="mt-2">
    Total Percentage:
    <span class="badge bg-success">{{ percentage }}%</span>
  </h5>
</div>
{% endif %}
</div>

<!-- Bootstrap JS (optional, for additional interactivity) -->
<script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/js/bootstrap.bundle.min.js"></script>
</body>
</html>

```

vii)project/student_app/views.py

```

from django.shortcuts import render
from .forms import StudentForm

```

```

def student_form_view(request):
    form = StudentForm()
    submitted_data = None
    percentage = None

```

```

if request.method == "POST":
    form = StudentForm(request.POST)
    if form.is_valid():
        submitted_data = form.cleaned_data
        total_marks = (
            submitted_data['english_marks'] +
            submitted_data['physics_marks'] +
            submitted_data['chemistry_marks']
        )
        percentage = round((total_marks / 300) * 100, 2) # Assuming each subject is out of 100

return render(request, 'student_app/form.html', {
    'form': form,
    'submitted_data': submitted_data,
    'percentage': percentage
})

```

viii) Screenshots

The image shows two screenshots of a web form titled "Enter Student Details".

Top Screenshot: The form is displayed with the following fields and values:

- Name: Pranamy G Kulal
- Date of Birth: 26-05-2004
- Address: Manipal
- Contact Number: 09876543210
- Email: pranamyk26@gmail.com
- Marks: English

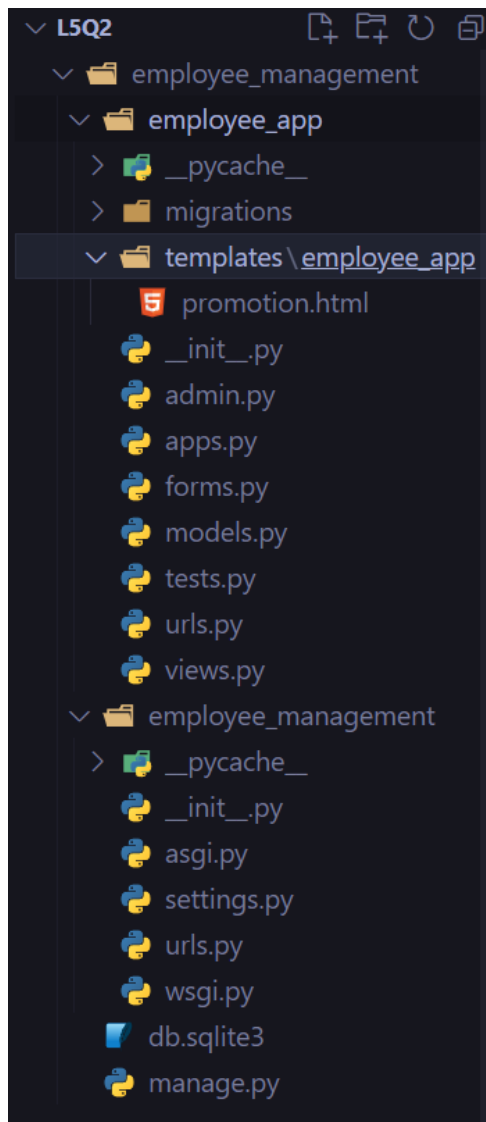
Bottom Screenshot: The form is displayed after submission. The "Submitted Data" section shows the following information:

- Name: Pranamy G Kulal
- DOB: May 26, 2004
- Address: Manipal
- Contact: 09876543210
- Email: pranamyk26@gmail.com
- Marks: English 100.0,

The "Total Percentage" is displayed as 98.67%.

Q2) Create a web form with employee ids in dropdown list. Use a textbox for accepting date of joining. Add a button named “Am I Eligible for Promotion”. On clicking the button, if he has more than 5 years of experience, then display “YES” else “NO” in the label control.

i) Directory structure



ii) employee_management/employee_management/urls.py

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

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

iii) employee_management/employee_app/urls.py

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

```
urlpatterns = [
```

```

    path("", promotion_view, name='promotion_check'),
]

```

iv)employee_management/employee_app/forms.py

```

from django import forms
from datetime import date
EMPLOYEE_IDS = [
    ('E001', 'E001'),
    ('E002', 'E002'),
    ('E003', 'E003'),
    ('E004', 'E004'),
    ('E005', 'E005'),
]

class PromotionForm(forms.Form):
    employee_id = forms.ChoiceField(choices=EMPLOYEE_IDS,
    widget=forms.Select(attrs={'class': 'form-control'}))
    date_of_joining = forms.DateField(
        widget=forms.DateInput(attrs={'class': 'form-control', 'type': 'date'})
    )

    def check_promotion_eligibility(self):
        joining_date = self.cleaned_data['date_of_joining']
        today = date.today()
        experience = today.year - joining_date.year - ((today.month, today.day) <
(joining_date.month, joining_date.day))
        return "YES" if experience >= 5 else "NO"

```

v)employee_management/employee_app/views.py

```

from django.shortcuts import render
from .forms import PromotionForm

def promotion_view(request):
    form = PromotionForm()
    result = None

    if request.method == "POST":
        form = PromotionForm(request.POST)
        if form.is_valid():
            result = form.check_promotion_eligibility()

    return render(request, 'employee_app/promotion.html', {'form': form, 'result': result})

```

v)employee_management/employee_app/templates/employee_app/promotion.html

```

<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Employee Promotion Check</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;
    padding: 20px;
  }
  .container{
    max-width: 500px;
    background: white;
    padding: 20px;
    border-radius: 10px;
    box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);
  }
  h2{
    text-align: center;
    margin-bottom: 20px;
  }
  .result-box{
    background: #e9ecef;
    padding: 10px;
    border-radius: 5px;
    margin-top: 10px;
    text-align: center;
    font-weight: bold;
  }
</style>
</head>
<body>

<div class="container">
  <h2>Promotion Eligibility Check</h2>
  <form method="post">
    {% csrf_token %}
    <div class="mb-3">
      <label class="form-label">Select Employee ID</label>
      {{ form.employee_id }}
    </div>
    <div class="mb-3">
      <label class="form-label">Date of Joining</label>
      {{ form.date_of_joining }}
    </div>
    <button type="submit" class="btn btn-primary w-100">Am I Eligible for
Promotion?</button>
  </form>

  {% if result is not None %}
    <div class="result-box mt-4">
      <h4>Eligibility: <span class="badge bg-{% if result == 'YES' %}success{% else
%}danger{% endif %}">{{ result }}</span></h4>
    </div>
  {% endif %}

```

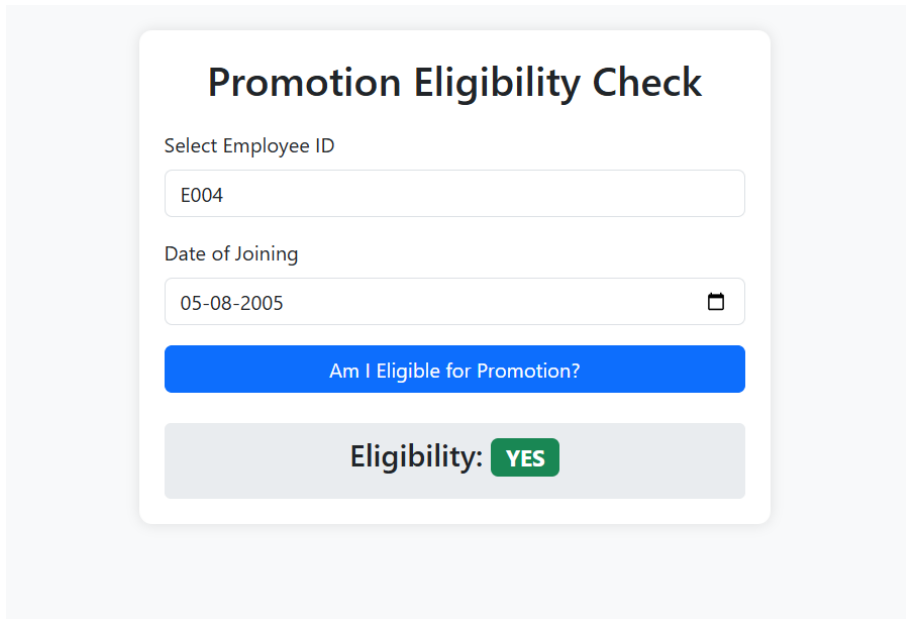


```
        {% endif %}
    </div>

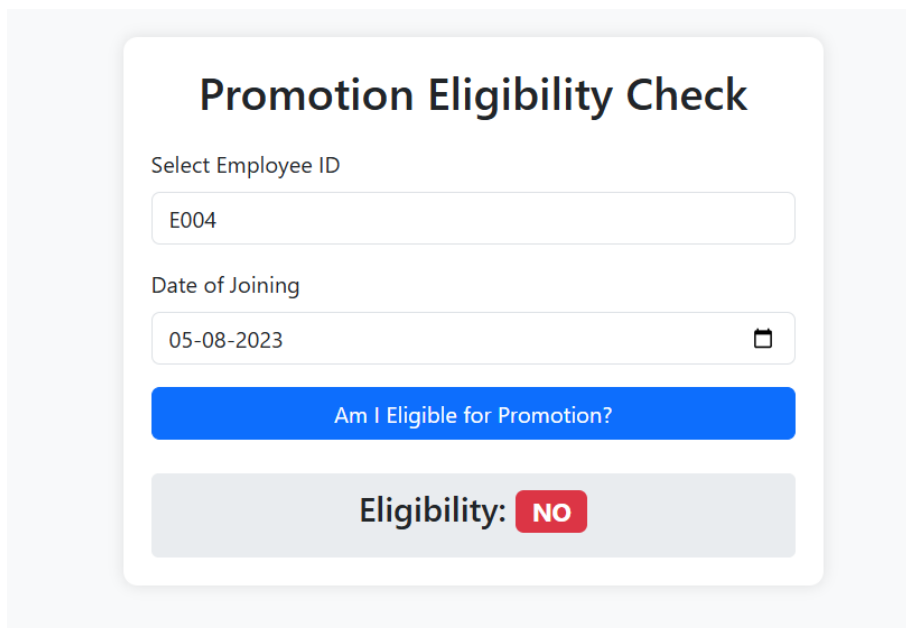
    <!-- Bootstrap JS -->
    <script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/js/bootstrap.bundle.min.js"></script>

</body>
</html>
```

vi)Screenshots



The screenshot shows a web form titled "Promotion Eligibility Check". It has two input fields: "Select Employee ID" with the value "E004" and "Date of Joining" with the value "05-08-2005". Below these fields is a blue button labeled "Am I Eligible for Promotion?". At the bottom, a grey box displays "Eligibility: YES" with "YES" in a green box.



The screenshot shows the same web form titled "Promotion Eligibility Check". The "Select Employee ID" field still has the value "E004", but the "Date of Joining" field now has the value "05-08-2023". The blue button "Am I Eligible for Promotion?" is present. At the bottom, a grey box displays "Eligibility: NO" with "NO" in a red box.