

ADVANCED PYTHON PROGRAMMING – CSI3007 Fall Semester (2024-2025)

Mobile App Development - Flutter

NAME: P SURIYA KUMARI

REG NO: 22MIC0181

Slot :- A2 + L7 + L8 + L27 + L28

Faculty:-Dr. Prof. Sharmila Banu K

Q) Web application using flask:

requirements.txt

Flask==2.3.2

Flask-WTF==1.1.1

Flask-SQLAlchemy==3.1.0

Flask-Migrate==4.0.4

WTForms==3.0.1

config.py

import os

BASE_DIR = os.path.abspath(os.path.dirname(__file__))

class Config:

SECRET_KEY = os.environ.get("SECRET_KEY", "dev-secret-key")

SQLALCHEMY_DATABASE_URI = os.environ.get("DATABASE_URL")
or \

"sqlite://" + os.path.join(BASE_DIR, "feedback.db")

SQLALCHEMY_TRACK_MODIFICATIONS = False

models.py

```
from flask_sqlalchemy import SQLAlchemy
from datetime import datetime

db = SQLAlchemy()

class Feedback(db.Model):
    id = db.Column(db.Integer, primary_key=True)
    student_name = db.Column(db.String(150), nullable=False)
    roll_number = db.Column(db.String(50), nullable=False)
    course = db.Column(db.String(100))
    rating = db.Column(db.Integer) # 1-5
    comments = db.Column(db.Text)
    created_at = db.Column(db.DateTime, default=datetime.utcnow)

    def __repr__(self):
        return f"<Feedback {self.student_name} {self.roll_number}>"
```

forms.py

```
from flask_wtf import FlaskForm
from wtforms import StringField, TextAreaField, SelectField, IntegerField, SubmitField
from wtforms.validators import DataRequired, Length, NumberRange

class FeedbackForm(FlaskForm):
```

```
student_name = StringField("Student name", validators=[DataRequired(), Length(max=150)])  
roll_number = StringField("Roll number", validators=[DataRequired(), Length(max=50)])  
course = StringField("Course / Subject", validators=[Length(max=100)])  
rating = SelectField("Rating", choices=[('5','5'),('4','4'),('3','3'),('2','2'),('1','1')], default='5')  
comments = TextAreaField("Comments (how was the class / teacher / lab?)", validators=[Length(max=1000)])  
submit = SubmitField("Submit Feedback")
```

app.py

```
from flask import Flask, render_template, redirect, url_for, flash, request  
from config import Config  
from models import db, Feedback  
from forms import FeedbackForm  
from flask_migrate import Migrate
```

```
app = Flask(__name__)  
app.config.from_object(Config)  
  
db.init_app(app)  
migrate = Migrate(app, db)
```

```
@app.before_first_request  
def create_tables():  
    db.create_all()
```

```
@app.route('/', methods=['GET','POST'])

def index():

    form = FeedbackForm()

    if form.validate_on_submit():

        fb = Feedback(
            student_name=form.student_name.data.strip(),
            roll_number=form.roll_number.data.strip(),
            course=form.course.data.strip(),
            rating=int(form.rating.data),
            comments=form.comments.data.strip()
        )

        db.session.add(fb)
        db.session.commit()

        flash("Thank you! Your feedback has been recorded.", "success")
        return redirect(url_for('preview', fid=fb.id))

    return render_template('index.html', form=form)
```

```
@app.route('/preview/<int:fid>')

def preview(fid):

    fb = Feedback.query.get_or_404(fid)

    return render_template('preview.html', fb=fb)
```

```
@app.route('/admin')

def admin():

    # simple admin view (no auth for demo). Sort newest first.
```

```
all_fb = Feedback.query.order_by(Feedback.created_at.desc()).all()
return render_template('admin.html', feedbacks=all_fb)
```

```
if __name__ == '__main__':
    app.run(debug=True)
```

templates/index.html

```
<!doctype html>
<html lang="en">
<head>
<meta charset="utf-8" />
<meta name="viewport" content="width=device-width,initial-scale=1" />
<title>Student Feedback</title>
<link rel="stylesheet" href="{{ url_for('static', filename='css/style.css') }}"/>
</head>
<body>
<div class="page">
<header class="hero">
<h1>Student Feedback</h1>
<p>Share honest feedback — it helps improve classes</p>
</header>

<main class="container">
<form method="POST">
{{ form.hidden_tag() }}
<label>Student name</label>
```

```
{ { form.student_name(class="input") } }
```

```
<label>Roll number</label>
```

```
{ { form.roll_number(class="input") } }
```

```
<label>Course / Subject</label>
```

```
{ { form.course(class="input") } }
```

```
<label>Rating</label>
```

```
{ { form.rating(class="input") } }
```

```
<label>Comments</label>
```

```
{ { form.comments(class="textarea") } }
```

```
{ { form.submit(class="btn") } }
```

```
</form>
```

```
</main>
```

```
<footer class="footer">
```

```
 <a href="{ { url_for('admin') } }">Admin view</a>
```

```
</footer>
```

```
</div>
```

```
<script src="{ { url_for('static', filename='js/app.js') } }"></script>
```

```
</body>
```

```
</html>
```

templates/preview.html (this is the generated preview for the submitted feedback)

```
<!doctype html>
<html lang="en">
<head>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width,initial-scale=1" />
  <title>Feedback Preview</title>
  <link rel="stylesheet" href="{{ url_for('static', filename='css/style.css') }}">
</head>
<body>
  <div class="preview-card">
    <h2>Feedback Submitted ✓ </h2>

    <div class="meta">
      <strong>Name:</strong> {{ fb.student_name }}<br>
      <strong>Roll:</strong> {{ fb.roll_number }}<br>
      <strong>Course:</strong> {{ fb.course or '—' }}<br>
      <strong>Rating:</strong> {{ fb.rating }} / 5<br>
      <strong>Submitted at:</strong> {{ fb.created_at.strftime('%Y-%m-%d %H:%M:%S') }}<br>
    </div>

    <div class="comments">
      <h3>Comments</h3>
      <p>{{ fb.comments or 'No additional comments.' }}</p>
    </div>
  </div>
</body>
```

```

<div class="actions">
    <a class="btn" href="{{ url_for('index') }}>Submit another</a>
    <a class="btn ghost" href="{{ url_for('admin') }}>Go to admin</a>
</div>
</div>
</body>
</html>

```

templates/admin.html

```

<!doctype html>
<html lang="en">
<head>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width,initial-scale=1" />
    <title>Admin - Feedbacks</title>
    <link rel="stylesheet" href="{{ url_for('static', filename='css/style.css') }}>
</head>
<body>
    <div class="container">
        <header><h1>All Student Feedbacks</h1></header>
        <table class="feedback-table">
            <thead>
                <tr><th>#</th><th>Name</th><th>Roll</th><th>Course</th><th>Rating</th>
                <th>Comments</th><th>When</th></tr>
            </thead>

```

```

<tbody>
    {% for f in feedbacks %}
        <tr>
            <td>{{ loop.index }}</td>
            <td>{{ f.student_name }}</td>
            <td>{{ f.roll_number }}</td>
            <td>{{ f.course or '—' }}</td>
            <td>{{ f.rating }}</td>
            <td>{{ f.comments[:80] }} {% if f.comments|length > 80 %}...{% endif %}
            %}</td>
            <td>{{ f.created_at.strftime('%Y-%m-%d %H:%M') }}</td>
        </tr>
    {% else %}
        <tr><td colspan="7" class="muted">No feedback yet.</td></tr>
    {% endfor %}
</tbody>
</table>
</div>
</body>
</html>

```

static/css/style.css

```

:root{
    --bg:#fffafc; --card:#fff; --accent:#ff6b9a; --muted:#6b6b6b;
}

body{font-family:Inter,system-ui,Arial; background:linear-gradient(120deg,#fffafc,#f3f7ff); margin:0; padding:0;}

```

```
.page .hero{padding:28px; text-align:center;}  
.container{max-width:760px;margin:20px auto;padding:20px;}  
.input, .textarea, select {width:100%; padding:10px; border-radius:8px;  
border:1px solid #eee; box-shadow:0 4px 18px rgba(0,0,0,0.04); margin-  
bottom:12px;}  
.textarea{min-height:110px; resize:vertical;}  
.btn{background:var(--accent); color:white; padding:10px 18px; border-  
radius:12px; border:none; cursor:pointer; text-decoration:none;}  
.btn.ghost{background:transparent;color:var(--accent); border:1px solid var(--  
accent); padding:8px 12px;}  
.preview-card{max-width:640px;margin:30px auto;background:var(--  
card);padding:22px;border-radius:16px;box-shadow:0 10px 30px  
rgba(0,0,0,0.08)}  
.feedback-table{width:95%; margin:20px auto; border-collapse:collapse;}  
.feedback-table th, .feedback-table td{padding:10px; border-bottom:1px solid  
#f1f1f1;font-size:14px;}  
.muted{color:var(--muted); text-align:center;}
```

static/js/app.js

```
// minimal; you can add client-side validation or enhancements later  
console.log("Student Feedback front-end loaded");
```

OUTPUT:

 Suriya Kumari

Student Feedback Dashboard

Welcome to the student feedback dashboard!

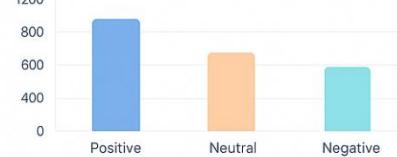
134 Total Feedback

87 Positive Feedback

37 Average Rating

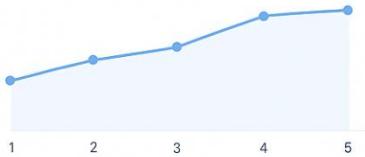
12 New Feedback

Feedback Overview



Category	Count
Positive	87
Neutral	65
Negative	58

Rating Distribution



Category	Average Rating
1	15
2	20
3	25
4	30
5	35

Recent Feedback

Name	Course	Rating	Comments	Date	Date
Abigail	Mathematics	★★★★	Great course!	Apr 2 2024	Apr 21, 2024
Mukesh	History	★★★★	Very informative	Apr 2 2024	Apr 20, 2024
Emma	Chemistry	★★★★	Excellent teaching	Apr 20 324	Apr 18, 2024
John	Literature	★★★★	Okey overall	Apr 16 024	Apr 18, 2024
Ashok	Physics	★★★★	Loved the labs	Apr 18 024	Apr 18, 2024