Ex. No: 13 08.05.2025	ELECTRICITY BILL MANAGEMENT SYSTEM

AIM:

To create a electricity bill management system dashboard and perform CRUD operation using Mysql and Python.

Electricity bill MANAGEMENT DASHBOARD:

- It is web-based application built using Flask, SQL-Work Bench that provides user's info in the management.
- The dashboard displays varieties of electricity bill management with customers electricity bill.
- This project aims to demonstrate the use of work bench that visualizes the info given by customers.

FRONT-END CODING AND BACKEND CODING:

App.py

```
from flask import Flask, render_template, request, redirect, url_for
import mysql.connector

app = Flask(__name__)

conn = mysql.connector.connect(
    host="localhost",
    user="root",
    password="1234",
    database="electricity_db"
)
cursor = conn.cursor()

@app.route('/', methods=['GET', 'POST'])
def index():
    if request.method == 'POST':
        name = request.form['name']
        units = int(request.form['units'])
        month = request.form['month']
        address = request.form['address']
        email = request.form['email']
        mobile = request.form['mobile']
        rate = 5

        bill = units * rate
        cursor.execute("""
```

```
            INSERT INTO bills (name, units, month, bill_amount, address, email, mobile)
            VALUES (%s, %s, %s, %s, %s, %s, %s)
        """, (name, units, month, bill, address, email, mobile))
        conn.commit()
        return redirect(url_for('view'))

    return render_template('index.html')

@app.route('/view')
def view():
    cursor.execute("SELECT * FROM bills")
    bills = cursor.fetchall()
    return render_template('view.html', bills=bills)

@app.route('/delete/<int:id>')
def delete(id):
    cursor.execute("DELETE FROM bills WHERE id=%s", (id,))
    conn.commit()
    return redirect(url_for('view'))

@app.route('/edit/<int:id>', methods=['GET', 'POST'])
def edit(id):
    if request.method == 'POST':
        name = request.form['name']
        units = int(request.form['units'])
        month = request.form['month']
        address = request.form['address']
        email = request.form['email']
        mobile = request.form['mobile']
        rate = 5
        bill = units * rate

        cursor.execute("""
            UPDATE bills
            SET name=%s, units=%s, month=%s, bill_amount=%s, address=%s, email=%s, mobile=%s
            WHERE id=%s
        """, (name, units, month, bill, address, email, mobile, id))
        conn.commit()
        return redirect(url_for('view'))

    cursor.execute("SELECT * FROM bills WHERE id=%s", (id,))
    bill = cursor.fetchone()
    return render_template('edit.html', bill=bill)

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

Index.html:

```
<!DOCTYPE html>
<html>
```

```
<head>
  <title>Add Electricity Bill</title>
  <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/css/bootstrap.min.css" rel="stylesheet">
</head>
<body class="bg-light">
<div class="container mt-5">
  <h2 class="mb-4">Add Electricity Bill</h2>
  <form method="POST" class="card p-4 shadow">
    <div class="row">
      <div class="mb-3 col-md-6">
        <label>Name</label>
        <input type="text" name="name" class="form-control" required>
      </div>
      <div class="mb-3 col-md-6">
        <label>Units Consumed</label>
        <input type="number" name="units" class="form-control" required>
      </div>
      <div class="mb-3 col-md-6">
        <label>Month</label>
        <input type="text" name="month" class="form-control" required>
      </div>
      <div class="mb-3 col-md-6">
        <label>Mobile</label>
        <input type="text" name="mobile" class="form-control" required>
      </div>
      <div class="mb-3 col-md-6">
        <label>Email</label>
        <input type="email" name="email" class="form-control" required>
      </div>
      <div class="mb-3 col-md-6">
        <label>Address</label>
        <input type="text" name="address" class="form-control" required>
      </div>
    </div>
    <button type="submit" class="btn btn-primary">Submit Bill</button>
    <a href="/view" class="btn btn-secondary">View Bills</a>
  </form>
</div>
</body>
</html>
```

Edit.html:

```
<!DOCTYPE html>
<html>
<head>
  <title>Edit Bill</title>
  <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/css/bootstrap.min.css" rel="stylesheet">
</head>
<body class="bg-light">
<div class="container mt-5">
```

```
  <h2>Edit Bill for {{ bill[1] }}</h2>
  <form method="POST" class="card p-4 shadow">
    <div class="row">
      <div class="mb-3 col-md-6">
        <label>Name</label>
        <input type="text" name="name" class="form-control" value="{{ bill[1] }}" required>
      </div>
      <div class="mb-3 col-md-6">
        <label>Units</label>
        <input type="number" name="units" class="form-control" value="{{ bill[2] }}" required>
      </div>
      <div class="mb-3 col-md-6">
        <label>Month</label>
        <input type="text" name="month" class="form-control" value="{{ bill[3] }}" required>
      </div>
      <div class="mb-3 col-md-6">
        <label>Mobile</label>
        <input type="text" name="mobile" class="form-control" value="{{ bill[7] }}" required>
      </div>
      <div class="mb-3 col-md-6">
        <label>Email</label>
        <input type="email" name="email" class="form-control" value="{{ bill[6] }}" required>
      </div>
      <div class="mb-3 col-md-6">
        <label>Address</label>
        <input type="text" name="address" class="form-control" value="{{ bill[5] }}" required>
      </div>
    </div>
    <button type="submit" class="btn btn-primary">Update</button>
    <a href="/view" class="btn btn-secondary">Cancel</a>
  </form>
</div>
</body>
</html>
```

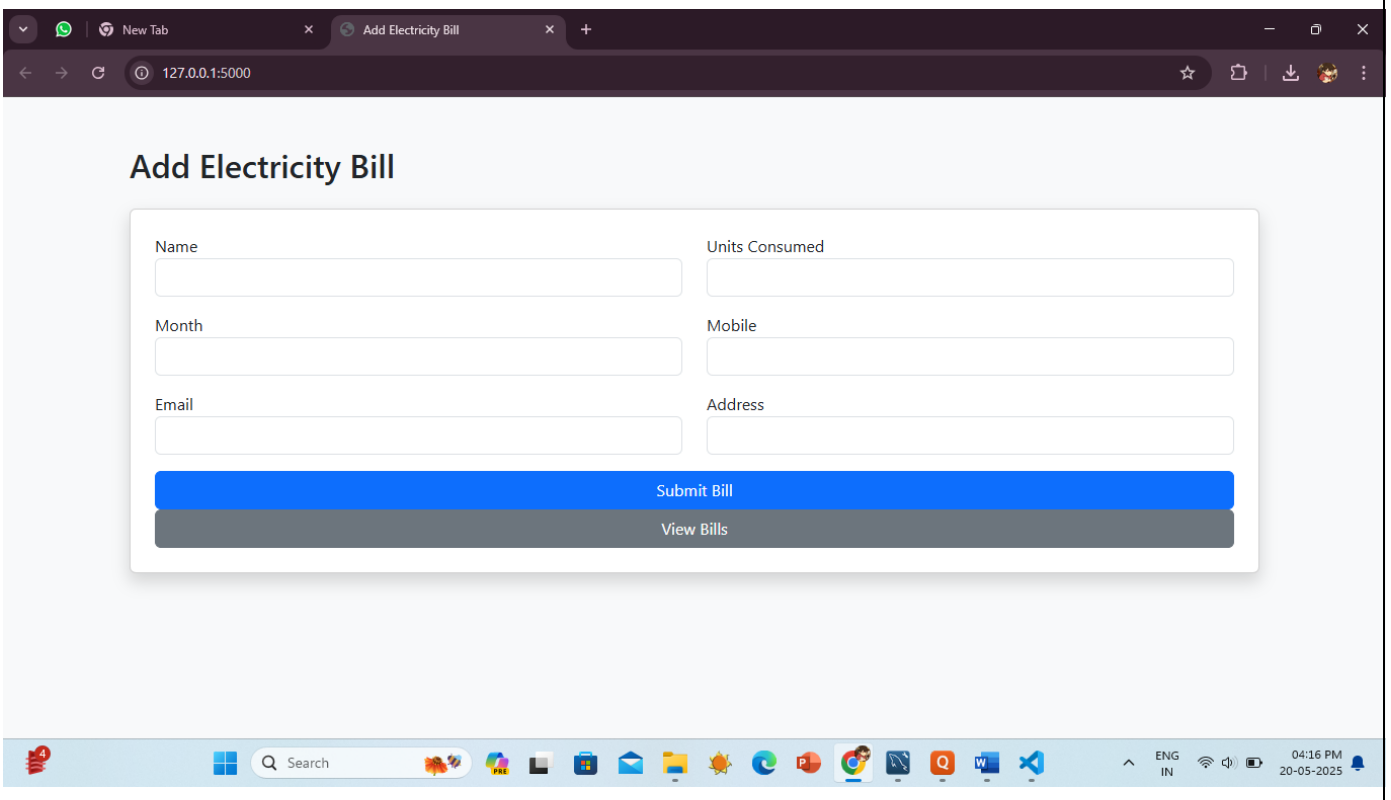
View.html:

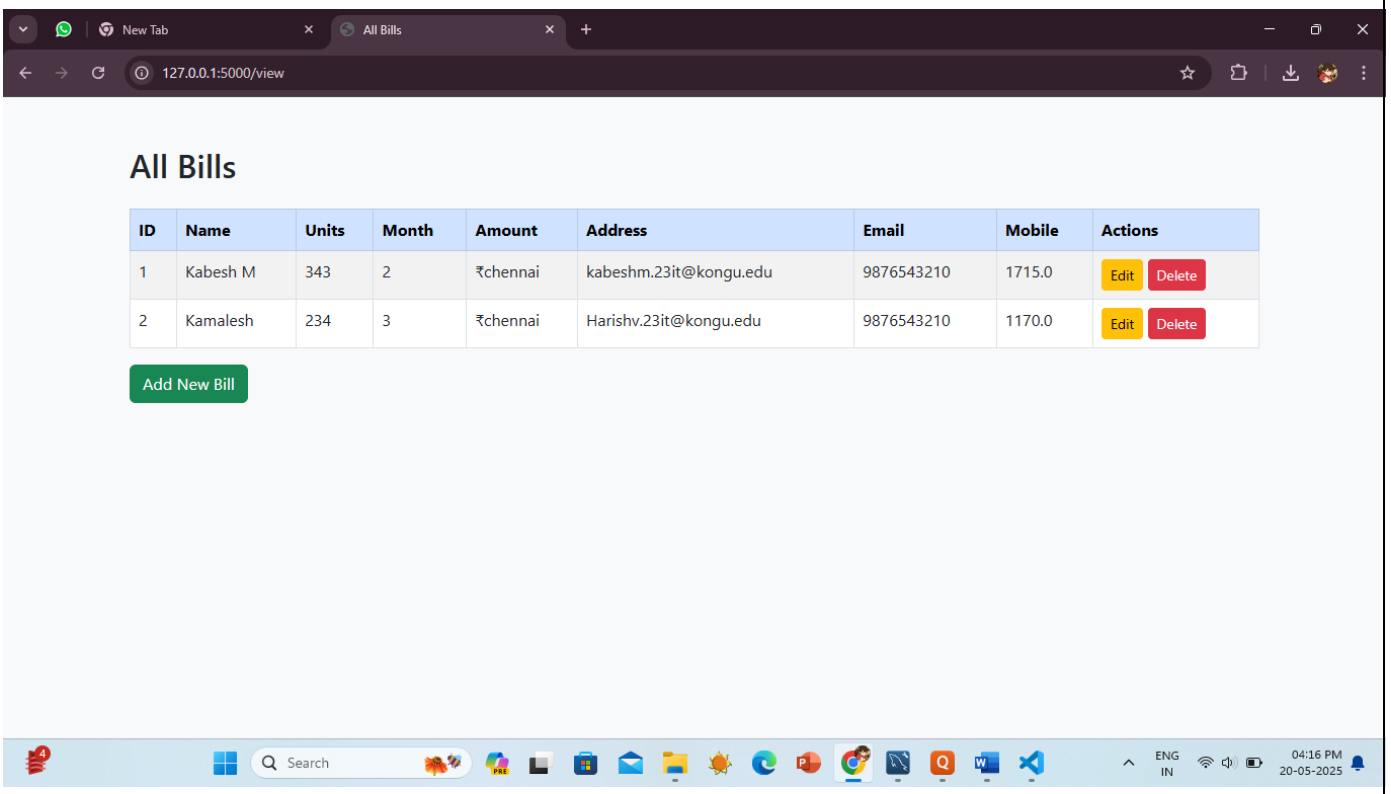
```
<!DOCTYPE html>
<html>
<head>
  <title>All Bills</title>
  <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/css/bootstrap.min.css" rel="stylesheet">

</head>
<body class="bg-light">
<div class="container mt-5">
  <h2 class="mb-4">All Bills</h2>
  <table class="table table-bordered table-striped">
    <thead class="table-primary">
      <tr>
        <th>ID</th><th>Name</th><th>Units</th><th>Month</th><th>Amount</th>
```

```
        <th>Address</th><th>Email</th><th>Mobile</th><th>Actions</th>
      </tr>
    </thead>
    <tbody>
    {% for bill in bills %}
      <tr>
        <td>{{ bill[0] }}</td>
        <td>{{ bill[1] }}</td>
        <td>{{ bill[2] }}</td>
        <td>{{ bill[3] }}</td>
        <td>₹{{ bill[4] }}</td>
        <td>{{ bill[5] }}</td>
        <td>{{ bill[6] }}</td>
        <td>{{ bill[7] }}</td>
        <td>
          <a href="/edit/{{ bill[0] }}" class="btn btn-warning btn-sm">Edit</a>
          <a href="/delete/{{ bill[0] }}" class="btn btn-danger btn-sm"
            onclick="return confirm('Are you sure to delete?')">Delete</a>
        </td>
      </tr>
    {% endfor %}
    </tbody>
  </table>
  <a href="/" class="btn btn-success">Add New Bill</a>
</div>
</body>
</html>
```

Output:



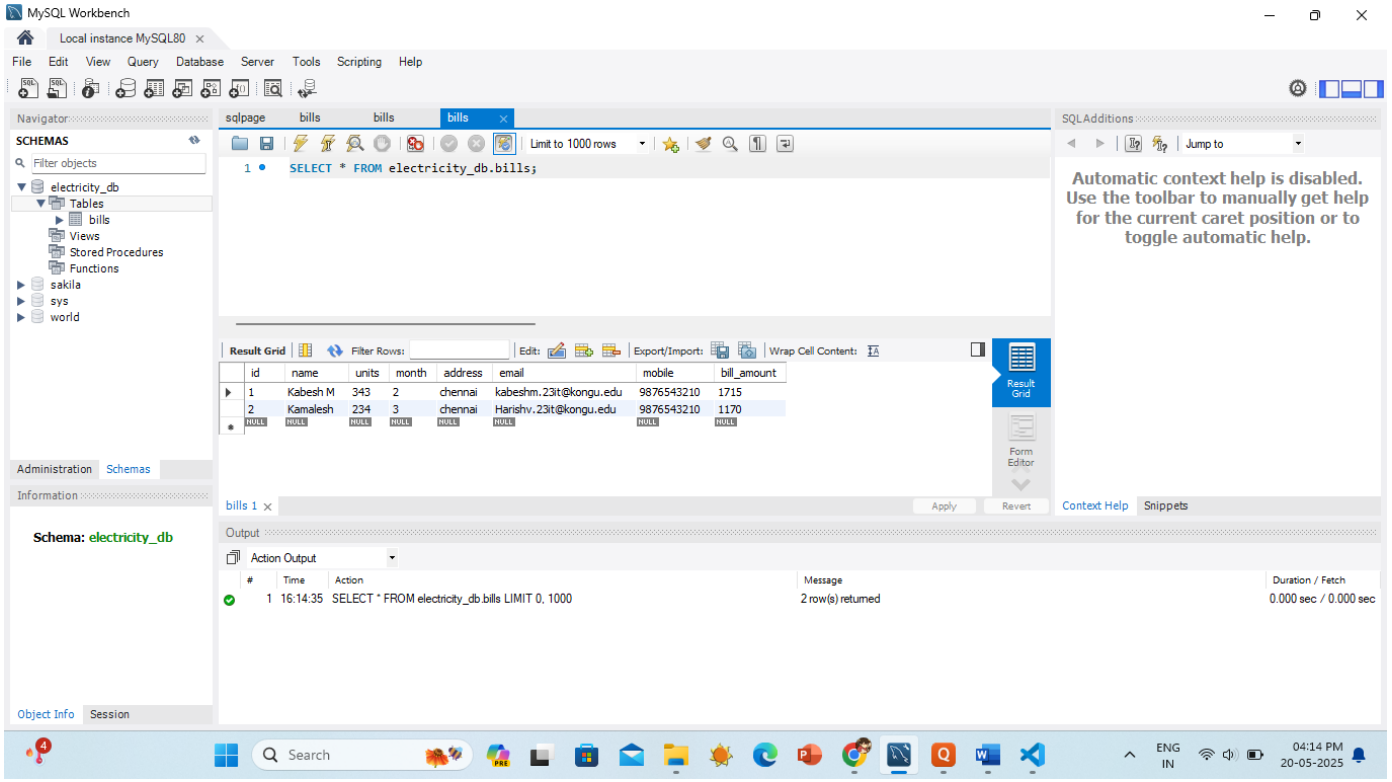


SQLpage.sql:

```
CREATE DATABASE electricity_db;
USE electricity_db;
CREATE TABLE bills (
  id INT AUTO_INCREMENT PRIMARY KEY,
  name VARCHAR(100),
  units INT,
  month VARCHAR(50),
  address VARCHAR(200),
  email VARCHAR(100),

  mobile varchar(10),
  bill_amount FLOAT
);
select * from bills;
```

Output:



CONTENTS	MARKS ALLOTED	MARKS OBTAINED
Aim, Algorithm, SQL, PL/SQL	30	
Execution and Result	20	
Viva	10	
Total	60	

RESULT:

Thus a electricity bill management system dashboard was created and performed CRUD operation using Flask and Python.