SIDDAGANGA INSTITUTE OF TECHNOLOGY, TUMKUR

Activity Based Learning Report
Activities
on

Front End Design and Database Operations

Submitted in the partial fulfilment of the requirements for VI Semester

Full Stack Development (OE78)

Submitted by

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(An Autonomous Institution affiliated to Visvesvaraya Technological University, Belagavi, Approved by AICTE, New Delhi, Accredited by NAAC with A++ Grade, Awarded Diamond College Rating by QS I-GAUGE and ISO 9001:2015 Certified)
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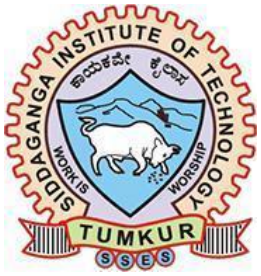
SIDDAGANGA INSTITUTE OF TECHNOLOGY, TUMAKURU - 3



CERTIFICATE

This is to certify that activity-1 on "*Front End Design and Database operations*" is a bonafide work carried out by **Ashutosh Malviya (1SI21EC012)** of **VI** semester Bachelor of Engineering in **Electronics and Communication Engineering**, SIDDAGANGA INSTITUTE OF TECHNOLOGY during the academic year 2023-2024.

Faculty **Signature with Date**

Dr. Pramod T.C
Assistant Professor
Dept of CSE, SIT

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INTRODUCTION

Front-end development focuses on the visual and interactive aspects of a website or web application. It encompasses everything users see and interact with in their web

browser. The primary goal of front-end development is to create an engaging, efficient, and accessible user experience.

Key Components of Front-End Development are:

1. **HTML (HyperText Markup Language)**:
   HTML is the standard markup language used to create web pages. It provides the structure of a webpage by defining elements like headings, paragraphs, links, images, and other content.

2. **CSS (Cascading Style Sheets)**:
   CSS is used to style and layout web pages. It controls the visual presentation of HTML elements, including their colors, fonts, spacing, and positioning.

3. **JavaScript**:
   JavaScript is a programming language that enables dynamic and interactive web pages. It allows developers to create features like form validation, animations, and real-time updates without reloading the page.

PHP(Hypertext Preprocessor):
PHP (Hypertext Preprocessor) is a widely-used open-source scripting language primarily designed for web development. It is particularly well-suited for server-side scripting to create dynamic web pages and interact with databases.

When it comes to database operations, PHP is commonly used to connect to various database management systems (DBMS) like MySQL, PostgreSQL, SQLite, etc. It provides functions and extensions that allow developers to perform tasks such as: Connecting to Databases, Executing Queries, Fetching Data, Handling Errors.

PROJECT CODE

1. **Navigation Bar (Navbar):**
   This code defines the navigation bar at the top of each page, providing links to different sections of the website.

```
<nav class="navbar navbar-expand-lg navbar-light bg-light">
    <a class="navbar-brand" href="index.html">Tour India</a>
```

```
        <button class="navbar-toggler" type="button" data-toggle="collapse" data-
  target="#navbarNav" aria-controls="navbarNav" aria-expanded="false" aria-label="Toggle
navigation">
        <span class="navbar-toggler-icon"></span>
        </button>
        <div class="collapse navbar-collapse" id="navbarNav">
                <ul class="navbar-nav ml-auto">
                     <li class="nav-item"> <a class="nav-link" href="index.html">Home</a> </li>
                     <li class="nav-item"> <a class="nav-link" href="discover.html">Discover</a>
        </li>
                    <li class="nav-item"> <a class="nav-link" href="about.html">About</a> </li>
                <li class="nav-item"> <a class="nav-link" href="contact.html">Contact</a> </li>
        </ul>
    </div>
</nav>
```

2. **Modal for Contact Form:**
   This code defines a modal window that appears when the "Contact Us" link in the navbar is clicked.

```
<div class="container mt-5">
  <h2 class="text-center mb-4">Contact Us</h2>
   <div class="row justify-content-center">
    <div class="col-md-8">
     <form>
        <div class="form-group">
                <label for="name">Name</label> <input type="text" class="form-control"
        id="name" placeholder="Enter your name">
        </div>
        <div class="form-group">
                <label for="email">Email address</label> <input type="email" class="form-
        control" id="email" placeholder="Enter your email">
        </div>
        <div class="form-group"> <label for="message">Message</label>
                <textarea class="form-control" id="message" rows="3" placeholder="Enter your
        message">
                </textarea>
        </div>
                <button type="submit" class="btn btn-primary">Submit</button>
    </form>
  </div>
 </div>
</div>
```

3. **Quiz Form and JavaScript for Quiz Functionality:**
   This snippet includes the quiz form and the JavaScript code that handles quiz submission and scoring.

```
const quizContainer = document.getElementById('quiz');
const resultsContainer = document.getElementById('results');
const submitButton = document.createElement('button');
submitButton.classList.add('btn', 'btn-primary');
submitButton.textContent = 'Submit Quiz';
resultsContainer.appendChild(submitButton);
function buildQuiz() {
        const output = [];
```

```
        quizData.forEach((currentQuestion, questionNumber) => {
                const options = [];
                for (let option of currentQuestion.options) {
                        options.push(       `<label       class="d-block"><input       type="radio"
                name="question${questionNumber}" value="${option}"> ${option}</label>`
                        ); }
                output.push( `<div class="question mb-4">
                                <h5>${currentQuestion.question}</h5>
                                <div class="options">${options.join('')}
                                </div>
                                </div>`
                        );
        });
        quizContainer.innerHTML = output.join('');
}
function showResults() {
         const answerContainers = quizContainer.querySelectorAll('.options');
        let correctAnswers = 0;
         quizData.forEach((currentQuestion, questionNumber) => {
                const answerContainer = answerContainers[questionNumber];
                const selector = `input[name=question${questionNumber}]:checked`;
                const userAnswer = (answerContainer.querySelector(selector) || {}).value;
                        if (userAnswer === currentQuestion.answer) {
                                correctAnswers++; } });
                resultsContainer.innerHTML = `<h3 class="text-center">Quiz Results</h3> <p
                class="text-center">You got ${correctAnswers}
                out of ${quizData.length} questions correct!</p>`;
        }
buildQuiz();
submitButton.addEventListener('click', showResults);
```

4. About Page Content:

This snippet shows the structure of the About page, including headings, paragraphs, and images.

```
<div class="container mt-5">
        <h2 class="text-center mb-4">About Tour India</h2>
        <p>At Tour India, we aim to showcase the incredible diversity and beauty of India's cities. From the bustling streets of Delhi to the serene backwaters of Kerala, our platform is designed to help you explore and discover the richness of Indian culture, history, and cuisine.
        </p>
        <p>Our team of travel enthusiasts is dedicated to providing accurate information, travel tips, and recommendations to make your journey through India unforgettable.
        </p>
 </div>
```

5. Home Page Banner :

This code snippet shows the implementation of ab anner on the home page to showcase various images related to the Travel.

```
<div class="hero-section">
        <div class="container">
                <h1 class="display-4">Welcome to Tour India</h1>
```

```
        <p class="lead">Explore the vibrant cities, rich heritage, and exquisite cuisine of India.
</p>
        <a href="discover.html" class="btn btn-primary btn-lg mr-2">Discover</a>
        <a href="about.html" class="btn btn-secondary btn-lg">Learn More</a>
      </div>
</div>
<section class="container mt-5">
        <h2 class="text-center mb-4">Trending City: Indore</h2>
            <img src="images/indore-trending.jpg" class="img-fluid rounded mx-auto d-block mb-
4" alt="Indore Trending">
        <p class="lead text-center">Discover why Indore is a must-visit destination in India.</p>
 <div class="text-center"> <a href="indore.html" class="btn btn-primary btn-lg">Explore
Indore</a>
        </div>
 </section>
```

6. Footer Section:

This snippet defines the footer section of the website, including copyright information.

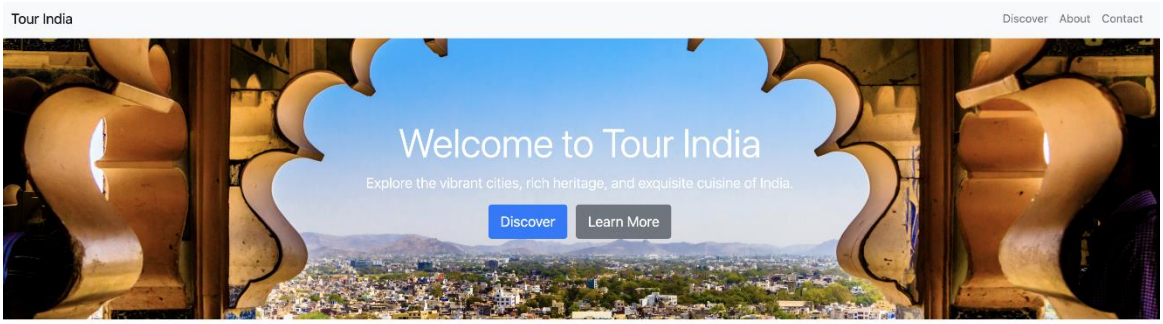
```
<footer class="footer mt-auto py-3 bg-dark">
  <div class="container text-center">
    <span class="text-muted">© 2024 Tour India. All rights reserved.</span>
  </div>
</footer>
```

7. Bootstrap and JavaScript Dependencies:

These are the CDN links to Bootstrap and other JavaScript libraries used for responsive design and interactive features.

```
<!-- Bootstrap CSS -->
<link                                                                    rel="stylesheet"
href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css">

<!-- JavaScript and dependencies -->
<script src="https://code.jquery.com/jquery-3.5.1.slim.min.js"></script>
<script
src="https://cdn.jsdelivr.net/npm/@popperjs/core@2.5.4/dist/umd/popper.min.js"></script>
<script src="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/js/bootstrap.min.js"></script>
```

PROJECT OUTPUT (SCREENSHOTS)



Trending City: Indore

Discover why Indore is a must-visit destination in India.

Explore Indore

Delhi

Explore the capital city of India.

Discover Delhi

Kolkata

Discover the cultural capital of India.

Discover Kolkata

Goa

Experience the beaches and nightlife.

Discover Goa

Test Your Knowledge with Our Cities Quiz!

Challenge yourself with questions about famous cities in India.

Take the Quiz

Take the Quiz

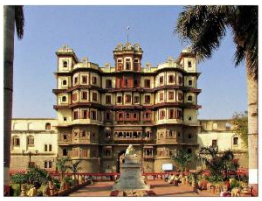
Top Cities Comparison

City	Population	Main Attraction	Specialty Cuisine	Weather
Indore	2.1 million	Sarafa Bazaar	Poha-Jalebi	Tropical wet and dry climate
Jaipur	3.1 million	Amer Fort	Daal Baati Churma	Hot desert climate
Chennai	7.1 million	Marina Beach	Dosa	Tropical wet and dry climate
Delhi	31 million	Red Fort	Butter Chicken	Hot semi-arid climate
Mumbai	20 million	Gateway of India	Vada Pav	Tropical wet and dry climate
Bengaluru	12.3 million	Lalbagh Botanical Garden	Masala Dosa	Tropical savanna climate
Kolkata	14.1 million	Victoria Memorial	Rasgulla	Tropical wet and dry climate
Hyderabad	10 million	Charminar	Biryani	Tropical wet and dry climate
Varanasi	1.2 million	Kashi Vishwanath Temple	Banarasi Paan	Humid subtropical climate
Goa	1.5 million	Baga Beach	Vindaloo	Tropical monsoon climate
Udaipur	0.5 million	City Palace	Laal Maas	Semi-arid climate

Tour India

Discover About Contact

Places to Visit



Tour India

Home Discover Quiz About Contact

Cities Quiz

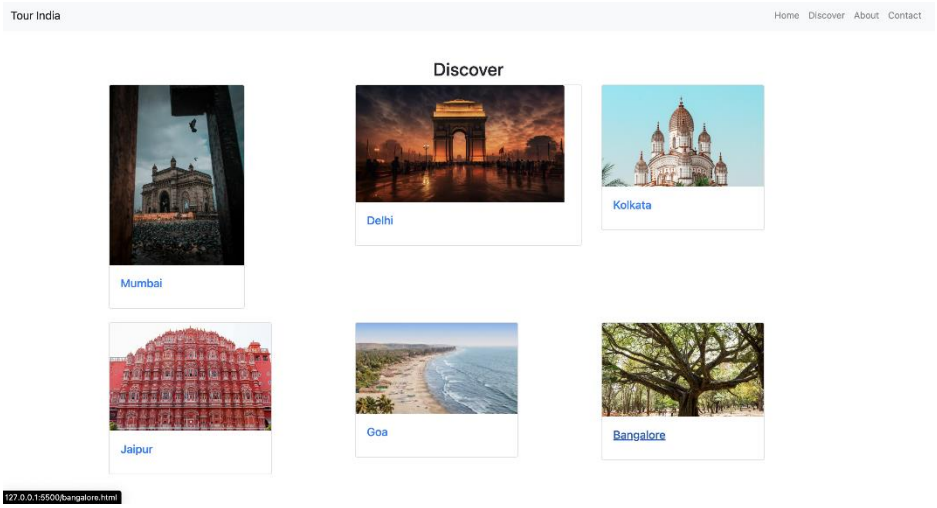
Which city is known as the 'Pink City'?
- ○ Jaipur
- ○ Delhi
- ○ Mumbai
- ○ Chennai

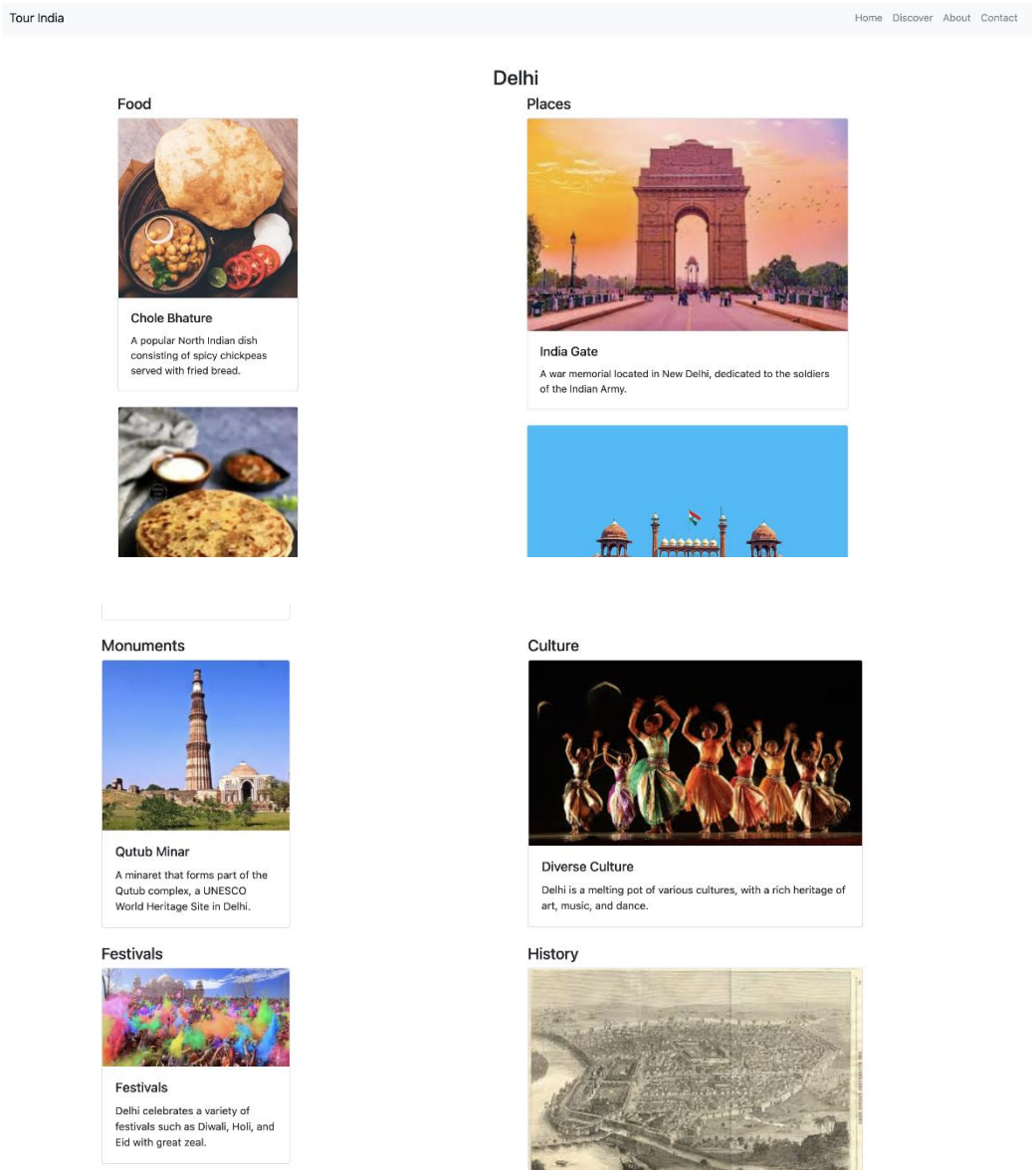
Which city is famous for its Marina Beach?
- ○ Kolkata
- ○ Chennai
- ○ Bengaluru
- ○ Hyderabad

Which city is the capital of India?
- ○ Mumbai
- ○ Chennai
- ○ Delhi
- ○ Kolkata

Which city is known as the 'City of Dreams'?
- ○ Mumbai
- ○ Jaipur
- ○ Goa
- ○ Chennai

Which city hosts the annual Kumbh Mela?
- ○ Varanasi


Tour India
Home Discover About Contact
Discover
Mumbai
Delhi
Kolkata
Jaipur
Goa
Bangalore
127.0.0.1:5500/bangalore.html


Tour India
Home Discover About Contact
Delhi
Food
Chole Bhature
A popular North Indian dish consisting of spicy chickpeas served with fried bread.
Places
India Gate
A war memorial located in New Delhi, dedicated to the soldiers of the Indian Army.
Monuments
Qutub Minar
A minaret that forms part of the Qutub complex, a UNESCO World Heritage Site in Delhi.
Culture
Diverse Culture
Delhi is a melting pot of various cultures, with a rich heritage of art, music, and dance.
Festivals
Festivals
Delhi celebrates a variety of festivals such as Diwali, Holi, and Eid with great zeal.
History

Tour India

Discover About Contact

Contact Us

Name

Enter your name

Email address

Enter your email

Message

Enter your message

Submit

Tour India

Discover About Contact

About Tour India

At Tour India, we aim to showcase the incredible diversity and beauty of India's cities. From the bustling streets of Delhi to the serene backwaters of Kerala, our platform is designed to help you explore and discover the richness of Indian culture, history, and cuisine.

Our team of travel enthusiasts is dedicated to providing accurate information, travel tips, and recommendations to make your journey through India unforgettable.

PHP ASSIGNMENT PROGRAMS

1. Write a PHP and MySql program to accept USN, branch, Semester, from web page and display all the students who belong to 6th sem and ECE branch.

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

<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Student Database</title>
    <style>
        body {
            font-family: Arial, sans-serif;
            margin: 0;
            padding: 20px;
        }

        form {
            max-width: 400px;
            margin: 0 auto;
            padding: 20px;
            border: 1px solid #ccc;
            border-radius: 10px;
        }

        label {
            display: block;
            margin: 10px 0 5px;
        }

        input[type="text"],
        input[type="number"],
        input[type="submit"] {
            width: 100%;
            padding: 8px;
            margin: 5px 0 20px;
            box-sizing: border-box;
        }

        button {
            width: 100%;
            padding: 10px;
            background-color: #4CAF50;
            color: white;
            border: none;
            border-radius: 5px;
            cursor: pointer;
        }

        button:hover {
            background-color: #45a049;
        }

        .student-details {
            max-width: 600px;
```

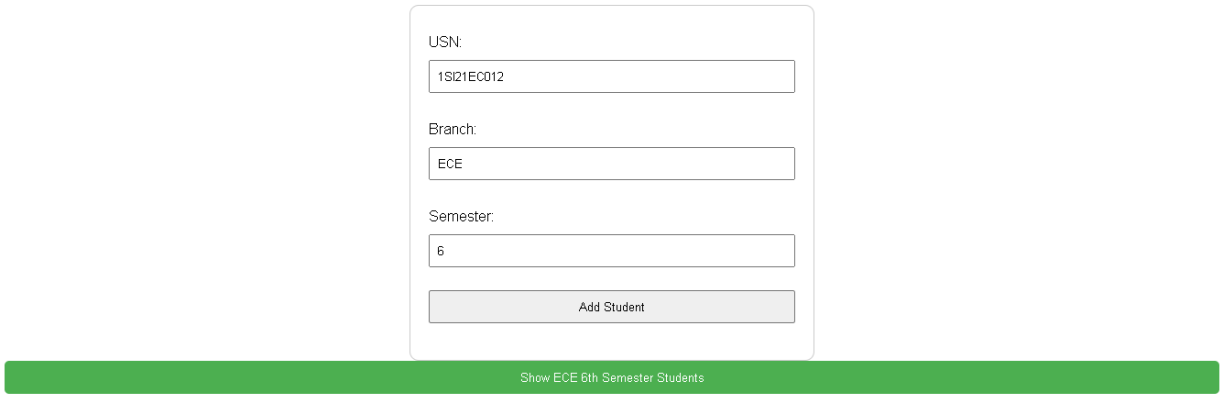
```
            margin: 20px auto;
            padding: 10px;
            border: 1px solid #ccc;
            border-radius: 10px;
            display: none;
        }

        .student-details table {
            width: 100%;
            border-collapse: collapse;
        }

        .student-details table,
        th,
        td {
            border: 1px solid black;
            padding: 8px;
        }

        th {
            background-color: #f2f2f2;
        }
    </style>
</head>

<body>
    <h1>Student Details</h1>
    <form action="students.php" method="post">
        <label for="usn">USN:</label>
        <input type="text" id="usn" name="usn" required>

        <label for="branch">Branch:</label>
        <input type="text" id="branch" name="branch" required>

        <label for="sem">Semester:</label>
        <input type="number" id="sem" name="sem" required>

        <input type="submit" value="Add Student">
    </form>

    <button onclick="showECESixthSemester()">Show ECE 6th Semester Students</button>

    <div class="student-details" id="student-details">
        <h2>ECE 6th Semester Students</h2>
        <table>
            <thead>
                <tr>
                    <th>ID</th>
                    <th>USN</th>
                    <th>Branch</th>
                    <th>Semester</th>
                </tr>
            </thead>
            <tbody id="student-details-body">
                <!-- Student details will be inserted here -->
            </tbody>
        </table>
    </div>
```

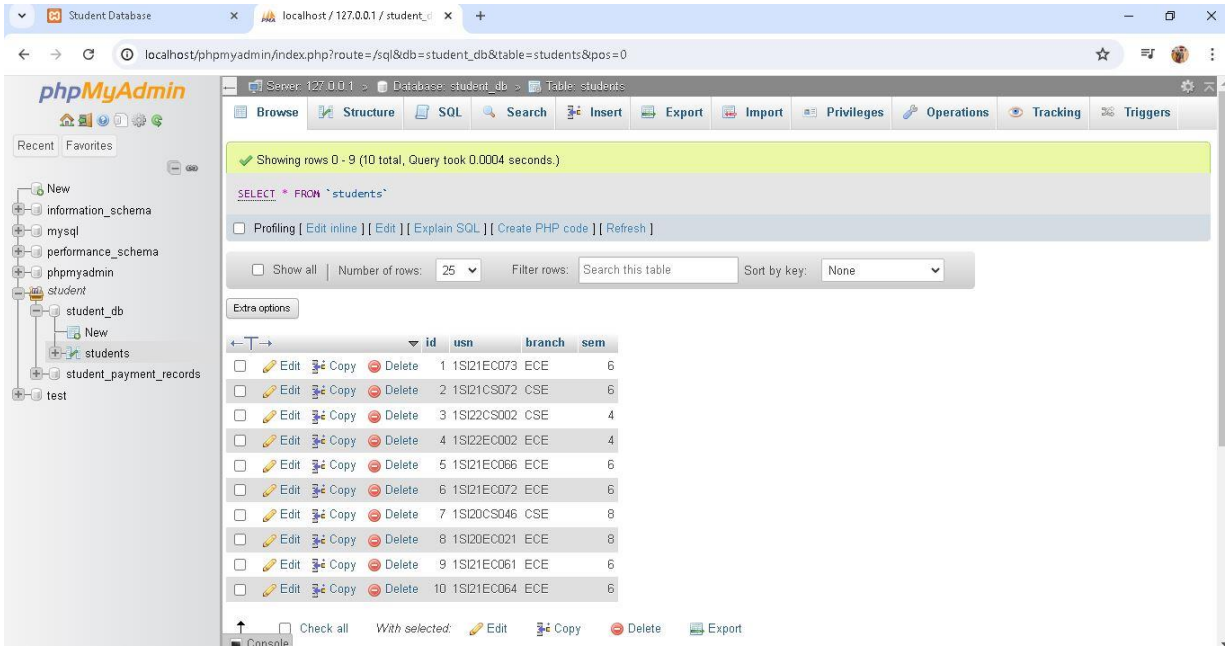
```
    <script>
        function showECESixthSemester() {
            fetch('students.php')
                .then(response => response.json())
                .then(data => {
                    const studentDetailsBody = document.getElementById('student-details-body');
                    studentDetailsBody.innerHTML = '';
                    data.forEach(student => {
                        const row = document.createElement('tr');
                        row.innerHTML = `
                            <td>${student.id}</td>
                            <td>${student.usn}</td>
                            <td>${student.branch}</td>
                            <td>${student.sem}</td>
                        `;
                        studentDetailsBody.appendChild(row);
                    });
                    document.getElementById('student-details').style.display = 'block';
                })
                .catch(error => console.error('Error fetching student details:', error));
        }
    </script>
</body>
</html>

<?php
// Database connection
$servername = "localhost";
$username = "root";
$password = "";
$database_name = "student_db";

// Connect to the database with its name
$conn = new mysqli($servername, $username, $password, $database_name);

if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
}

// Check if the database exists, if not create it
$result = $conn->query("SHOW DATABASES LIKE '$database_name'");
if ($result->num_rows == 0) {
    $create_db_sql = "CREATE DATABASE $database_name";
    if ($conn->query($create_db_sql) === TRUE) {
        echo "Database created successfully. ";
    } else {
        echo "Error creating database: " . $conn->error . ". ";
    }
    $conn->select_db($database_name);
}

// Check if the table 'students' exists, if not create it
$table_name = "students";
$table_exists = $conn->query("SHOW TABLES LIKE '$table_name'");
if ($table_exists->num_rows == 0) {
    $create_table_sql = "CREATE TABLE students (
        id INT AUTO_INCREMENT PRIMARY KEY,
```

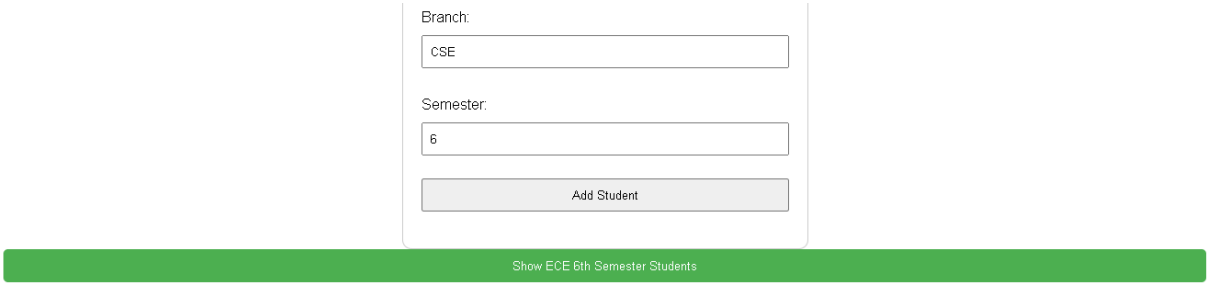
```
        usn VARCHAR(255) NOT NULL,
        branch VARCHAR(255) NOT NULL,
        sem INT NOT NULL
    )";

    if ($conn->query($create_table_sql) === TRUE) {
        echo "Table created successfully. ";
    } else {
        echo "Error creating table: " . $conn->error . ". ";
    }
}

// Add a new student
if ($_SERVER['REQUEST_METHOD'] === 'POST' && isset($_POST['usn']) &&
isset($_POST['branch']) && isset($_POST['sem'])) {
    $usn = $_POST['usn'];
    $branch = $_POST['branch'];
    $sem = $_POST['sem'];

    $sql = "INSERT INTO students (usn, branch, sem) VALUES ('$usn', '$branch', $sem)";
    if ($conn->query($sql) === TRUE) {
        echo "Student added successfully.";
    } else {
        echo "Error: " . $sql . "<br>" . $conn->error;
    }
}

// Fetch students with branch ECE and semester 6
if ($_SERVER['REQUEST_METHOD'] === 'GET') {
    $sql = "SELECT * FROM students WHERE branch='ECE' AND sem=6";
    $result = $conn->query($sql);

    $students = array();
    if ($result->num_rows > 0) {
        while ($row = $result->fetch_assoc()) {
            $students[] = $row;
        }
    }

    // Return the student details as JSON
    header('Content-Type: application/json');
    echo json_encode($students);
}

$conn->close();
?>
```

OUTPUTS:

Student Details







ECE 6th Semester Students

ID	USN	Branch	Semester
1	1SI21EC012	ECE	6
5	1SI21EC001	ECE	6
6	1SI21EC032	ECE	6
9	1SI21EC020	ECE	6

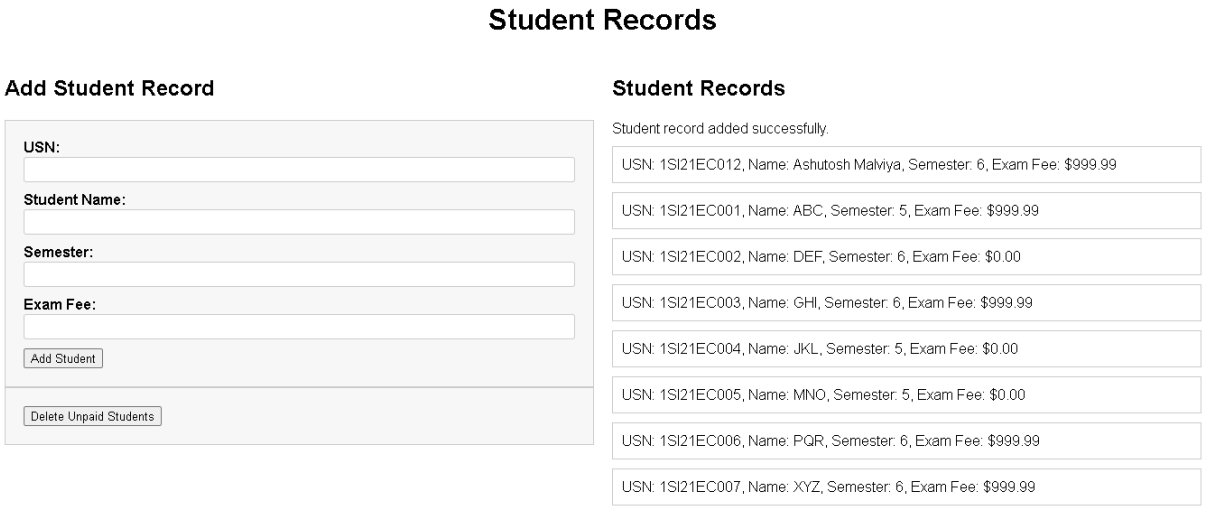
2. Write a php and MySQL program to accept Student_name,USN,semester,exam_fee from web page and delete all the students who have not paid exam fees.

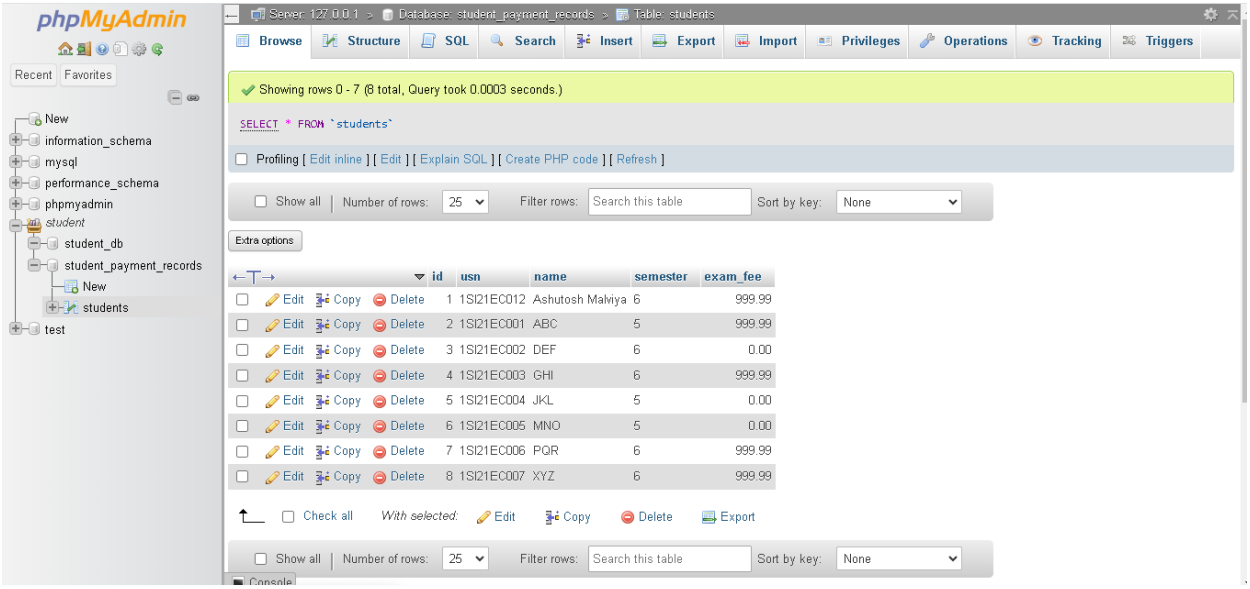
```
<!DOCTYPE html>
<html>
<head>
    <title>Student Payment Records</title>
    <style>
        body {
            font-family: Arial, sans-serif;
            margin: 20px;
        }
        h1 {
            text-align: center;
        }
        .container {
            display: flex;
            justify-content: center;
        }
        .form-container {
            width: 50%;
            margin-right: 20px;
        }
        .records-container {
            width: 50%;
        }
        form {
            border: 1px solid #ccc;
            padding: 20px;
            background-color: #f7f7f7;
        }
        ul {
            list-style: none;
            padding: 0;
        }
        li {
            margin: 10px 0;
            border: 1px solid #ccc;
            padding: 10px;
            background-color: #fff;
        }
        .form-group {
            margin-bottom: 10px;
            display: flex;
            flex-direction: column;
        }
        .form-group label {
            font-weight: bold;
        }
        .form-group input {
            padding: 5px;
            border: 1px solid #ccc;
            border-radius: 3px;
        }
    </style>
</head>
<body>
<h1>Student Records</h1>
<div class="container">
    <div class="form-container">
```

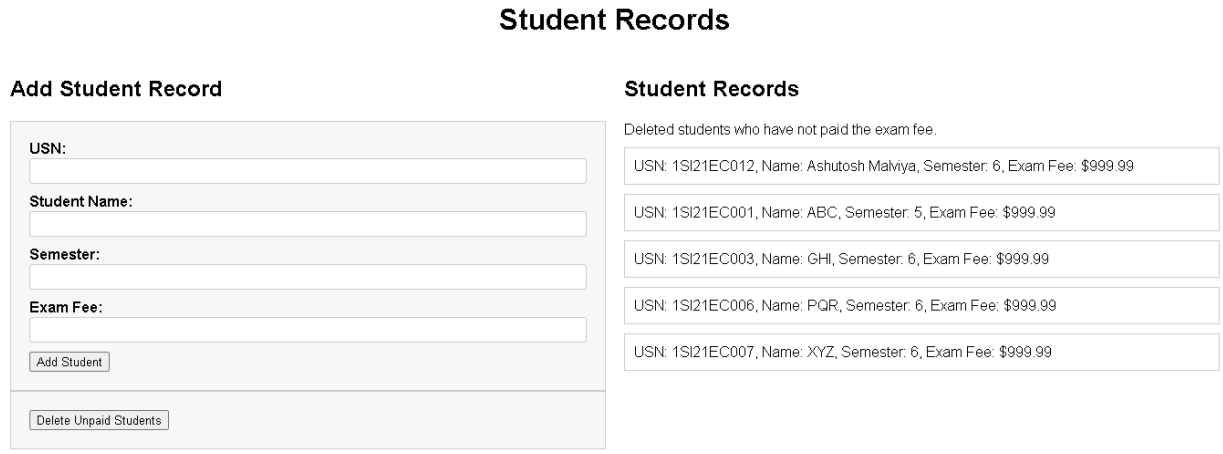
```
        <h2>Add Student Record</h2>
        <form action="index.php" method="post">
            <div class="form-group">
                <label for="usn">USN:</label>
                <input type="text" name="usn" required>
            </div>
            <div class="form-group">
                <label for="name">Student Name:</label>
                <input type="text" name="name" required>
            </div>
            <div class="form-group">
                <label for="semester">Semester:</label>
                <input type="text" name="semester" required>
            </div>
            <div class="form-group">
                <label for="exam_fee">Exam Fee:</label>
                <input type="number" step="0.01" name="exam_fee" required>
            </div>
            <button type="submit" name="add_student">Add Student</button>
        </form>
        <!-- Add a button to delete unpaid students -->
        <form action="index.php" method="post">
            <button type="submit" name="delete_unpaid_students">Delete Unpaid
Students</button>
        </form>
    </div>
    <div class="records-container">
        <h2>Student Records</h2>
        <ul>
            <?php
            // Database creation and connection
            $servername = "localhost";
            $username = "root";
            $password = "";
            $dbname = "student_payment_records";

            $conn = mysqli_connect($servername, $username, $password);

            if (!$conn) {
                die("Connection failed: " . mysqli_connect_error());
            }

            // Create the database if it doesn't exist
            $sql = "CREATE DATABASE IF NOT EXISTS $dbname";
            if (mysqli_query($conn, $sql)) {
                $conn = mysqli_connect($servername, $username, $password, $dbname);

                // Create the table if it doesn't exist
                $createTableSQL = "CREATE TABLE IF NOT EXISTS students (
                    id INT AUTO_INCREMENT PRIMARY KEY,
                    usn VARCHAR(10) NOT NULL,
                    name VARCHAR(50) NOT NULL,
                    semester VARCHAR(10) NOT NULL,
                    exam_fee DECIMAL(5, 2) NOT NULL
                )";
                mysqli_query($conn, $createTableSQL);
            }
```

```
        // Add student record
        if (isset($_POST['add_student'])) {
            $usn = $_POST['usn'];
            $name = $_POST['name'];
            $semester = $_POST['semester'];
            $exam_fee = $_POST['exam_fee'];

            $sql = "INSERT INTO students (usn, name, semester, exam_fee) VALUES ('$usn',
'$name', '$semester', $exam_fee)";
            if (mysqli_query($conn, $sql)) {
                echo "Student record added successfully.";
            } else {
                echo "Error: " . $sql . "<br>" . mysqli_error($conn);
            }
        }

        // Delete students who have not paid the exam fee
        if (isset($_POST['delete_unpaid_students'])) {
            $sql = "DELETE FROM students WHERE exam_fee <= 0";
            if (mysqli_query($conn, $sql)) {
                echo "Deleted students who have not paid the exam fee.";
            } else {
                echo "Error: " . $sql . "<br>" . mysqli_error($conn);
            }
        }

        // Display all students
        $sql = "SELECT usn, name, semester, exam_fee FROM students";
        $result = mysqli_query($conn, $sql);

        if (mysqli_num_rows($result) > 0) {
            while ($row = mysqli_fetch_assoc($result)) {
                echo "<li>USN: " . $row["usn"] . ", Name: " . $row["name"] . ", Semester: " .
$row["semester"] . ", Exam Fee: $" . $row["exam_fee"] . "</li>";
            }
        } else {
            echo "No student records found.";
        }

        mysqli_close($conn);
        ?>
      </ul>
   </div>
</div>
</body>
</html>
```

OUTPUTS:







LIST OF HTML TAGS, CSS PROPERTIES AND DATABASE QUERIES USED

List of HTML tags:

- **<head> :** Contains metadata and links to external resources for the HTML document.
- **<style> :** Contains CSS rules to style the HTML document.
- **<script> :** Embeds or links to a client-side script like JavaScript.
- **<nav> :** Defines a section of navigation links.
- **<a> :** Creates hyperlinks to other web pages,locations within the same page.
- **<ul>:** Defines an unordered list, typically used for listing navigation items or other collections of items.
- **<form> :** Contains interactive controls for user input.
- **<input> :** Represents a control that allows users to enter data
- **<footer> :** Defines a footer for a document or section
- ** :** Defines a division or section within an HTML document
- **<modal> :** Represents dialog box displayed over the current page content.
- **<img> :** Embeds an image into the HTML document.

CSS Properties:

- **color :** Specifies the text color.
- **padding :** Sets the padding space on all four sides of an element.
- **font-family :** Specifies the font family for text.
- **list-style-type :** Defines the style of the list item marker, such as bullets or numbers.
- **text-decoration :** Specifies decorations added to text, such as underline
- **font-size :** Sets the size of the font.
- **font-weight :** Specifies the thickness of the font characters.
- **text-align :** Aligns text horizontally within its container.

Database Queries:

- **Check Database Existence:** Checks if the database with ‘name’ exists.
- **Create Database :** Creates a new database with ‘name’ if it doesn't exist.
- **Select Database :** Selects the database for use.
- **Check Table Existence :** Checks if the table with ‘name’ exists in the selected database
- **Create Table :** Creates a new table with columns if it doesn't exist.
- **Delete Unpaid Students :** Deletes student records from the table.