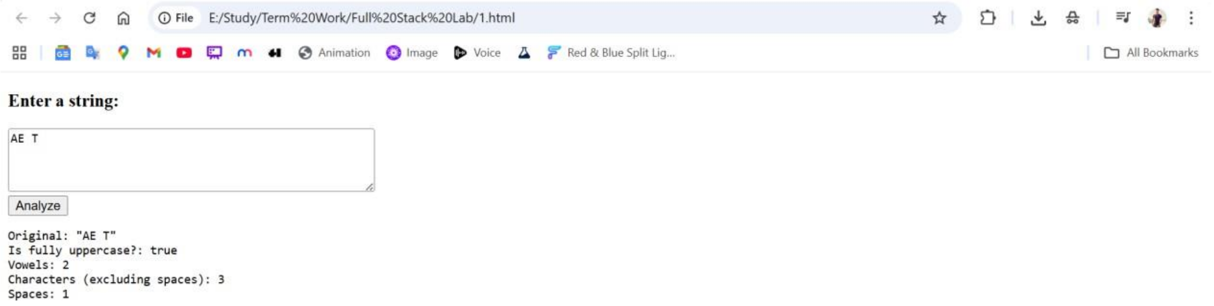
Problem Statement 9: Write a program in Java Script to find out whether a given string is in uppercase or not and then check the number of vowels, characters and spaces in the string.

Objective: To check whether a given string is in uppercase and to count the number of vowels, characters, and spaces in the string using JavaScript.

Source Code:

```
<!DOCTYPE html>

<html>

<head><title>Uppercase & Counts</title></head>

<body>

  <h3>Enter a string:</h3>

  <textarea id="input" rows="4" cols="50"></textarea><br>

  <button onclick="analyze()">Analyze</button>


  <pre id="out"></pre>
  <script>

    function analyze(){

      const s = document.getElementById('input').value;

      if (s.length === 0) {

        document.getElementById('out').textContent = "Please enter a string.";

        return;

      }
      const isUppercase = s === s.toUpperCase();

      const vowels = s.match(/[aeiouAEIOU]/g) || [];

      const spaces = s.match(/ /g) || [];

      const characters = s.replace(/\s/g, '').length;
      document.getElementById('out').textContent = `Original: "${s}"\nIs fully uppercase?: 
${isUppercase}\nVowels: ${vowels.length}\nCharacters (excluding spaces): 
${characters}\nSpaces: ${spaces.length}`;

    }

  </script>

</body>

</html>
```

Output:



Enter a string:

```
AE T
```

```
Original: "AE T"
Is fully uppercase?: true
Vowels: 2
Characters (excluding spaces): 3
Spaces: 1
```

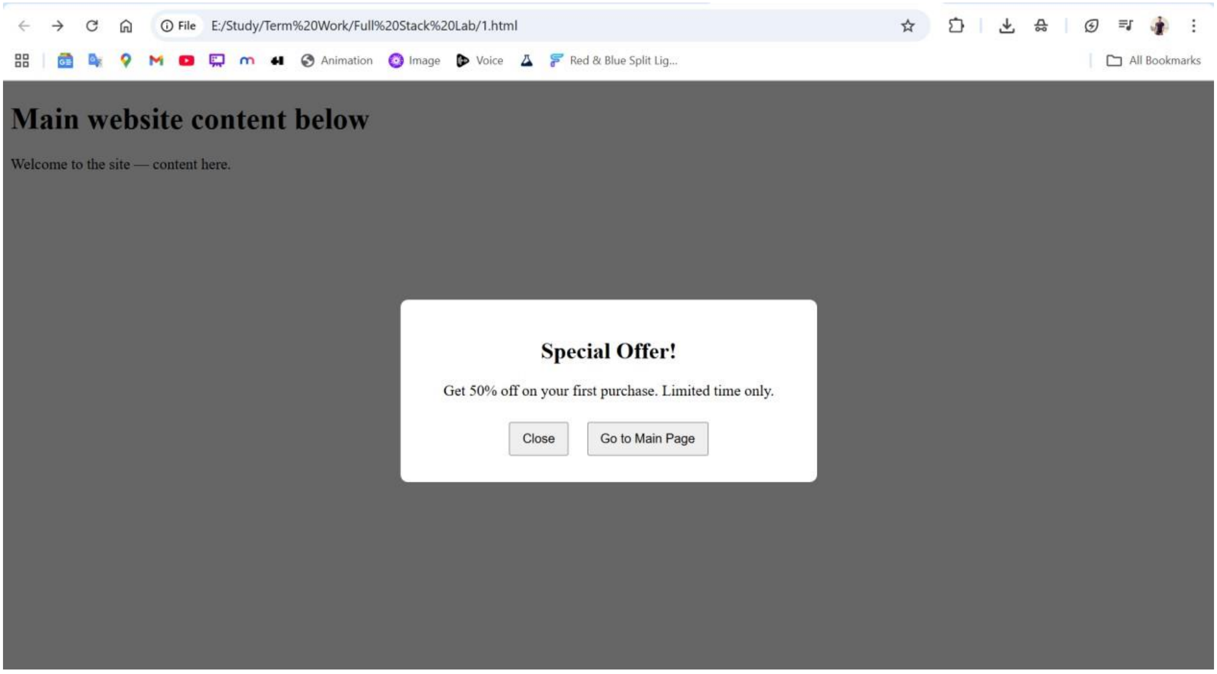
Problem Statement 10: Create an HTML document using Java Script that will display an advertisement whenever website is loaded with button. The button will allow the user to close the advertisement, and by clicking on button user will be directed to main page.

Objective: To create an HTML page that displays an advertisement when the website loads and allows the user to close the advertisement and navigate to the main page using a button.

Source Code:

```
<!DOCTYPE html>
<html>
<head>
<title>Advertisement Example</title>
  <style>
    .modal {
      position: fixed;
      inset: 0;
      display: flex;
      justify-content: center;
      align-items: center;
      background: rgba(0,0,0,0.6);
    }
    .ad {
      background: white;
      padding: 20px;
      border-radius: 8px;
      width: 90%;
      max-width: 400px;
      text-align: center;
    }
    .ad button { margin: 8px; padding: 8px 12px; }
  </style>
</head>
<body>
  <h1>Main website content below</h1>
  <p>Welcome to the site — content here.</p>

  <!-- Modal / Advertisement -->
  <div id="adModal" class="modal" style="display:none">
    <div class="ad">
      <h2>Special Offer!</h2>
      <p>Get 50% off on your first purchase. Limited time only.</p>
      <button id="closeBtn">Close</button>
      <button id="goBtn">Go to Main Page</button>
    </div>
  </div>
  <script>

    window.addEventListener('load', () => {
      document.getElementById('adModal').style.display = 'flex';
    });

    document.getElementById('closeBtn').addEventListener('click', () => {
      document.getElementById('adModal').style.display = 'none';
    });

    document.getElementById('goBtn').addEventListener('click', () => {
      window.location.href = 'main.html';
    });
  </script>
</body>
</html>
```

Output:



Main website content below

Welcome to the site — content here.

Special Offer!

Get 50% off on your first purchase. Limited time only.

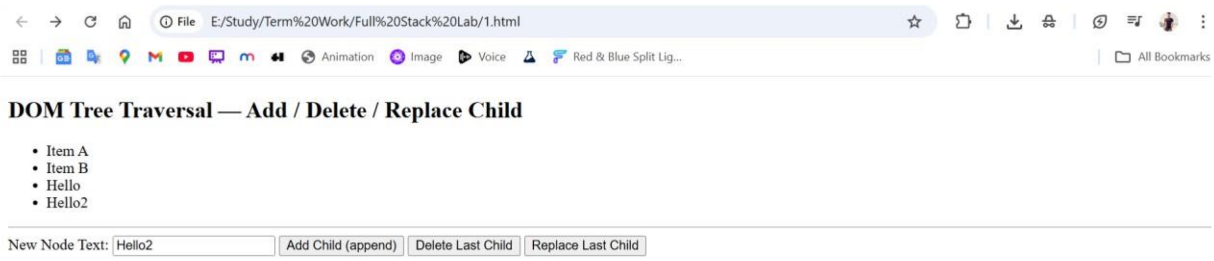
Problem Statement 11: Write a web program to show the functionality of DOM tree traversal . Add, delete and replace a child node by taking user input.

Objective: To demonstrate DOM tree traversal in a web program by allowing the user to add, delete, and replace child nodes based on input.

Source Code:

```
<!DOCTYPE html>
<html>
<head><title>DOM Traversal Demo</title></head>
<body>
  <h2>DOM Tree Traversal — Add / Delete / Replace Child</h2>
  <div id="container">
    <ul id="list">
      <li>Item A</li>
      <li>Item B</li>
      <li>Item C</li>
    </ul>
  </div>

  <hr>
  <label>New Node Text: <input id="txt" /></label>
  <button onclick="addChild()">Add Child (append)</button>
  <button onclick="deleteChild()">Delete Last Child</button>
  <button onclick="replaceChild()">Replace Last Child</button>

  <pre id="log"></pre>

  <script>
    const list = document.getElementById('list');
    const log = document.getElementById('log');

    function printTree(){
      let out = '';
      function traverse(node, depth=0){
        out += ' '.repeat(depth*2) + node.nodeName;
        if(node.nodeType === Node.ELEMENT_NODE && node.id) out += `#${node.id}`;
        if(node.nodeType === Node.TEXT_NODE){
          out += ` : "${node.textContent.trim()}"`;
        }
        out += '\n';
        node.childNodes.forEach(child => traverse(child, depth+1));
      }
      traverse(document.getElementById('container'));
      log.textContent = out;
    }

    function addChild(){
      const txt = document.getElementById('txt').value || 'New Item';
      const li = document.createElement('li');
      li.textContent = txt;
      list.appendChild(li);
      printTree();
    }

    function deleteChild(){
      if(list.lastElementChild){
      list.removeChild(list.lastElementChild);
      } else {
        alert('No child to delete');
      }
      printTree();
    }

    function replaceChild(){
      const txt = document.getElementById('txt').value || 'Replaced Item';
      const newNode = document.createElement('li');
      newNode.textContent = txt;
      const oldNode = list.lastElementChild;
      if(oldNode){
      list.replaceChild(newNode, oldNode);
      } else {
        alert('No child to replace');
      }
      printTree();
    }
    printTree();
  </script>
</body>
</html>
```

Output:



DOM Tree Traversal — Add / Delete / Replace Child

- Item A
- Item B
- Hello
- Hello2

New Node Text: Hello2 [Add Child (append)] [Delete Last Child] [Replace Last Child]

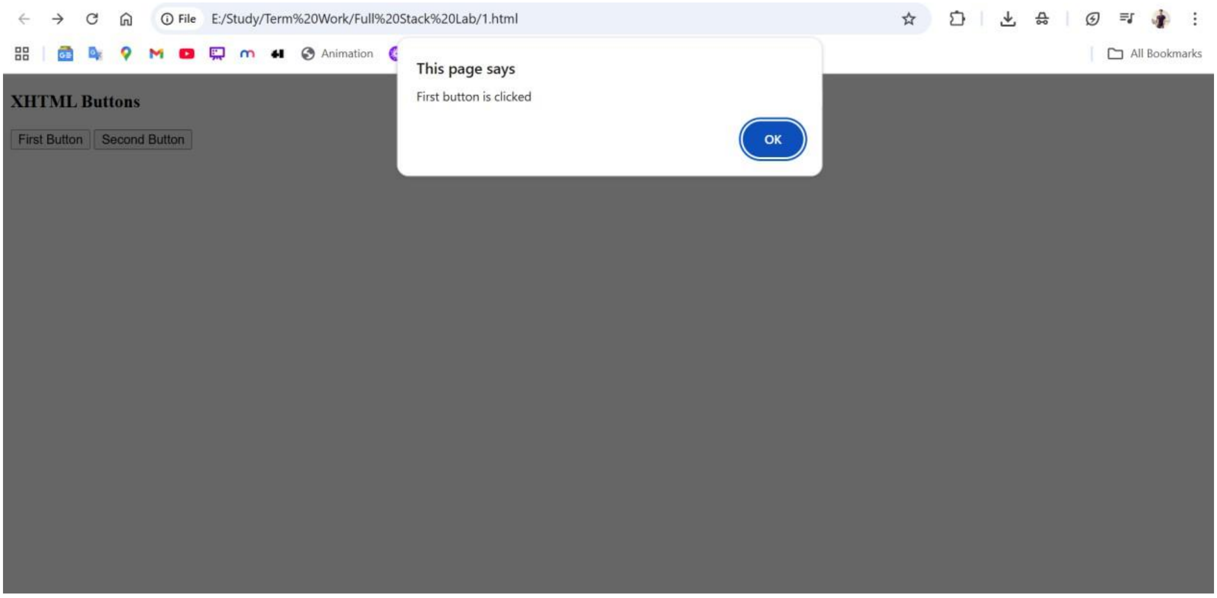
Problem Statement 12: Create an XHTML document with two buttons. Write a JavaScript function that triggers an alert message when the button is clicked. It should display the message "First button is clicked" or “Second button is clicked" depending on the button being clicked.

Objective: To create an XHTML document with two buttons, each triggering a JavaScript alert message indicating which button was clicked.

Source Code:

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"
  "http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
  <head>
    <title>XHTML Buttons Example</title>
    <meta http-equiv="Content-Type" content="text/html; charset=UTF-8" />
    <script type="text/javascript">
      function which(btn) {
        if (btn === 1) {
          alert("First button is clicked");
        } else {
          alert("Second button is clicked");
        }
      }
    </script>
  </head>
  <body>
    <h3>XHTML Buttons</h3>
    <input type="button" value="First Button" onclick="which(1)" />
    <input type="button" value="Second Button" onclick="which(2)" />
  </body>
</html>
```

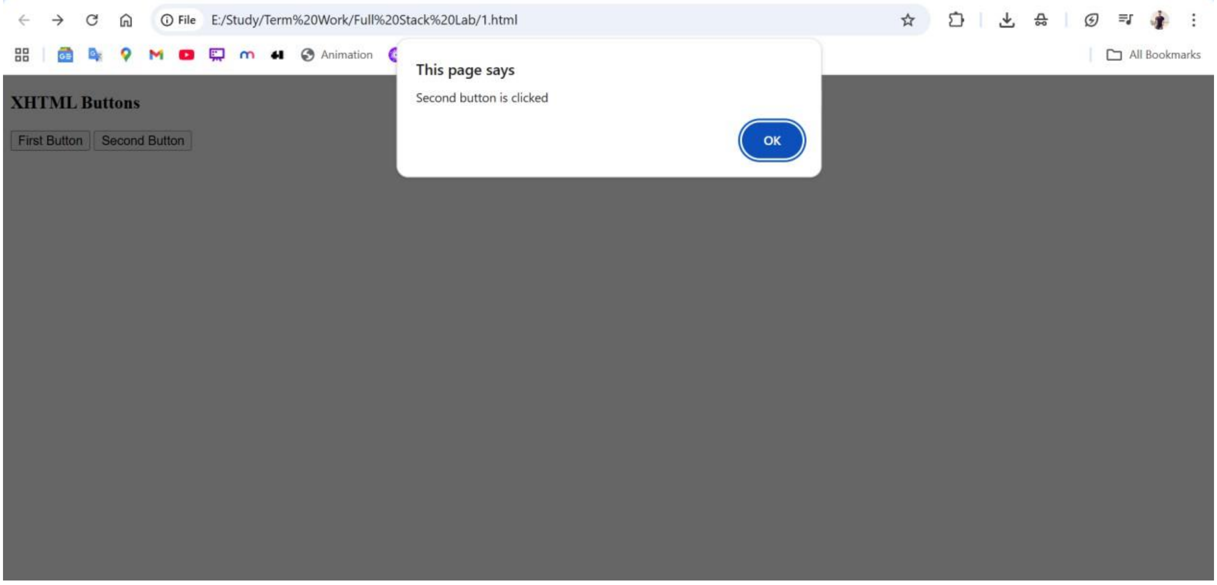
Output:



XHTML Buttons

This page says

First button is clicked



XHTML Buttons

This page says

Second button is clicked

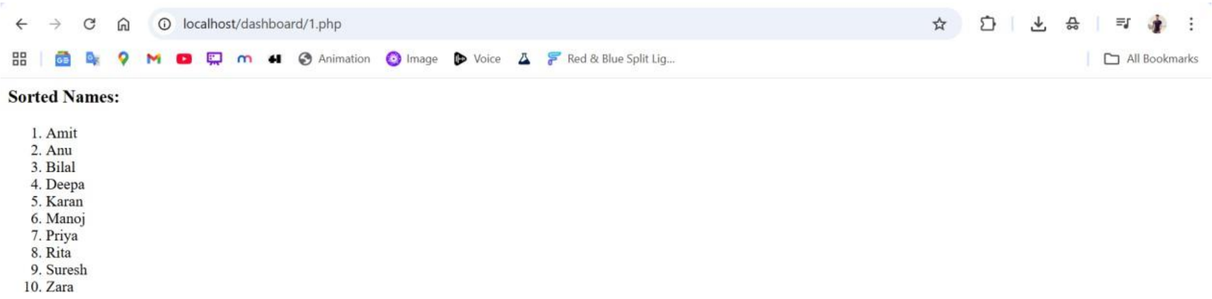
Problem Statement 13: Write a PHP script to sort 10 names alphabetically without using inbuilt functions.

Objective: To write a PHP script that sorts 10 names alphabetically without using built-in sorting functions.

Source Code:

```
<?php
$names = array(
  "Rita",
  "Amit",
  "Suresh",
  "Bilal",
  "Anu",
  "Zara",
  "Manoj",
  "Priya",
  "Karan",
  "Deepa"
);

$n = count($names);
for ($i = 0; $i < $n - 1; $i++) {
    for ($j = 0; $j < $n - 1 - $i; $j++) {
        if (strcasecmp($names[$j], $names[$j+1]) > 0) {
            $temp = $names[$j];
            $names[$j] = $names[$j+1];
            $names[$j+1] = $temp;
        }
    }
}

echo "<h3>Sorted Names:</h3><ol>";
foreach ($names as $name) {
    echo "<li>" . htmlspecialchars($name) . "</li>";
}
echo "</ol>";
?>
```

Output:



```
Sorted Names:

 1. Amit
 2. Anu
 3. Bilal
 4. Deepa
 5. Karan
 6. Manoj
 7. Priya
 8. Rita
 9. Suresh
10. Zara
```

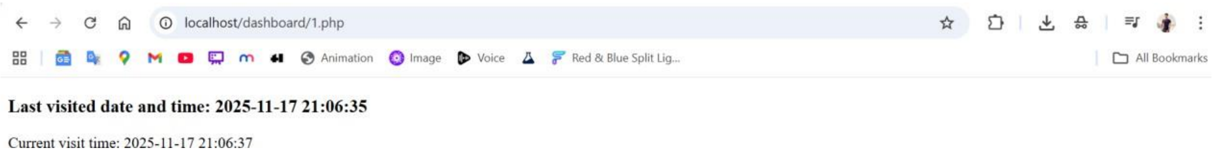
Problem Statement 14: Write a PHP program using COOKIE to store the current date and time and on reopening the same web page display the "Last visited date and time".

Objective: To develop a PHP program using cookies to store the current date and time and display the last visited date and time when the webpage is reopened.

Source Code:

```
<?php
date_default_timezone_set('Asia/Kolkata');
$cookieName = 'last_visit';

$now = date('Y-m-d H:i:s');

if (isset($_COOKIE[$cookieName])) {
   $last = $_COOKIE[$cookieName];
   $message = "Last visited date and time: " . htmlspecialchars($last);
} else {
   $message = "This is your first visit (no previous cookie).";
}

setcookie($cookieName, $now, time() + 30*24*3600, "/");

?>
<!DOCTYPE html>
<html>
<head><meta charset="utf-8"><title>Last Visit Cookie</title></head>
<body>
  <h3><?php echo $message; ?></h3>
  <p>Current visit time: <?php echo htmlspecialchars($now); ?></p>
</body>
</html>
```

Output:



```
Last visited date and time: 2025-11-17 21:06:35

Current visit time: 2025-11-17 21:06:37
```

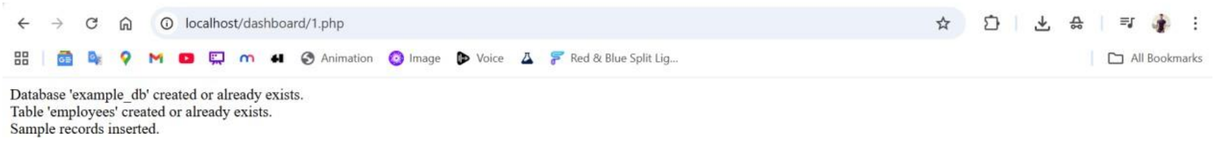
Problem Statement 15: Write a PHP script to create a database. Create a table in the database and insert values in the database.

Objective: To write a PHP script that creates a database, creates a table within it, and inserts data into the table.

Source Code:

```
<?php
$servername = "localhost";
$username = "root";
$password = "";
$conn = new mysqli($servername, $username, $password);
if ($conn->connect_error) die("Connection failed: " . $conn->connect_error);
$dbname = "example_db";
$sql = "CREATE DATABASE IF NOT EXISTS $dbname";
if ($conn->query($sql) === TRUE) {
   echo "Database '$dbname' created or already exists.<br>";
} else {
   die("Error creating database: " . $conn->error);
}
$conn->select_db($dbname);

$tableSql = "CREATE TABLE IF NOT EXISTS employees (
   id INT AUTO_INCREMENT PRIMARY KEY,
   name VARCHAR(100) NOT NULL,
   position VARCHAR(100),
   salary DECIMAL(10,2)
) ENGINE=InnoDB";
if ($conn->query($tableSql) === TRUE) {
   echo "Table 'employees' created or already exists.<br>";
} else {
   die("Error creating table: " . $conn->error);
}
$insertSql = "INSERT INTO employees (name, position, salary) VALUES
   ('Amit Kumar', 'Developer', 45000.00),
   ('Priya Sharma', 'Designer', 38000.00),
   ('Suresh R', 'Manager', 60000.00)";
if ($conn->query($insertSql) === TRUE) {
   echo "Sample records inserted.<br>";
} else {
   echo "Insert error (maybe duplicates): " . $conn->error . "<br>";
}

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

Output:



```
Database 'example_db' created or already exists.
Table 'employees' created or already exists.
Sample records inserted.
```

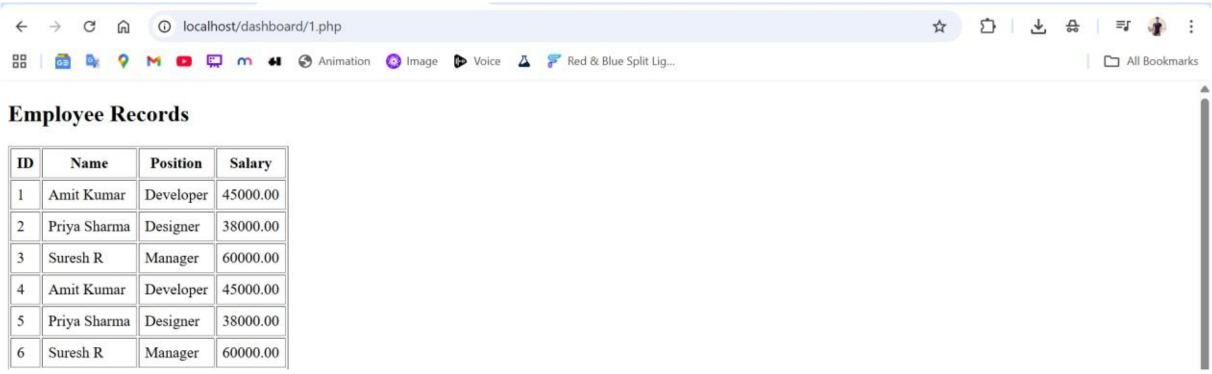
Problem Statement 16: Write a PHP code to retrieve the data stored in the database containing the records of the employees.

Objective: To write PHP code that retrieves and displays employee data stored in a database.

Source Code:

```
<?php
$servername = "localhost";
$username = "root";
$password = "";
$dbname = "example_db";
$conn = new mysqli($servername, $username, $password, $dbname);
if ($conn->connect_error) die("Connection failed: " . $conn->connect_error);
$sql = "SELECT id, name, position, salary FROM employees";
$result = $conn->query($sql);
?>
<!DOCTYPE html>
<html>
<head><meta charset="utf-8"><title>Employees</title></head>
<body>
  <h2>Employee Records</h2>
  <?php
  if ($result && $result->num_rows > 0) {
      echo "<table border='1'
cellpadding='6'><tr><th>ID</th><th>Name</th><th>Position</th><th>Salary</th></tr>";
      while($row = $result->fetch_assoc()) {
          echo "<tr>";
          echo "<td>".htmlspecialchars($row['id'])."</td>";
          echo "<td>".htmlspecialchars($row['name'])."</td>";
          echo "<td>".htmlspecialchars($row['position'])."</td>";
          echo "<td>".htmlspecialchars($row['salary'])."</td>";
          echo "</tr>";
      }
      echo "</table>";
  } else {
      echo "<p>No records found.</p>";
  }
  $conn->close();
  ?>
</body>
</html>
```

Output:



Employee Records

ID	Name	Position	Salary
1	Amit Kumar	Developer	45000.00
2	Priya Sharma	Designer	38000.00
3	Suresh R	Manager	60000.00
4	Amit Kumar	Developer	45000.00
5	Priya Sharma	Designer	38000.00
6	Suresh R	Manager	60000.00

Problem Statement 17: Create a React Application to display the message “Hello World"

Objective: To create a React application that displays the message “Hello World”.

Source Code:

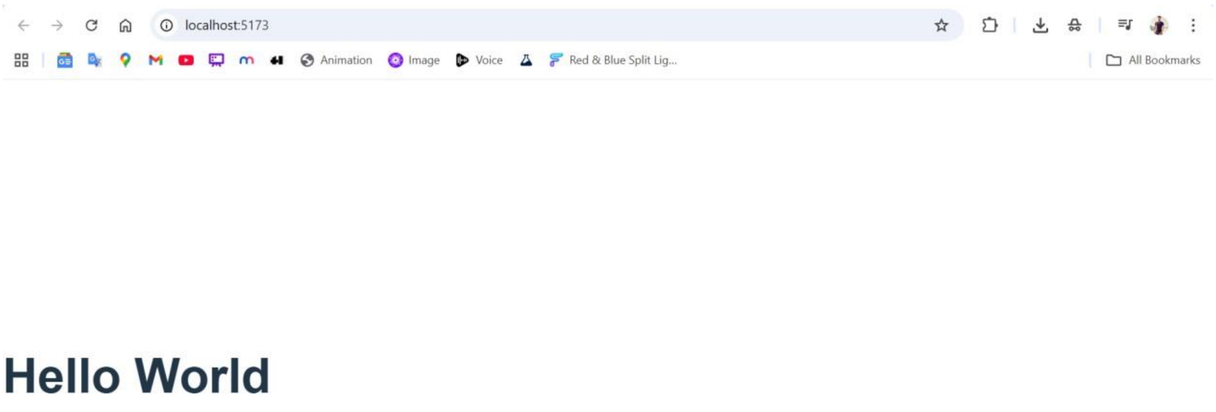
App.js:-

```
import React from "react";
export default function App() {
  return (
    <div style={{display:'flex', minHeight:'100vh', alignItems:'center', justifyContent:'center', 
fontFamily:'sans-serif'}}>
      <h1>Hello World</h1>
    </div>
  );
}
```

Index.js:-

```
import React from 'react';
import { createRoot } from 'react-dom/client';
import App from './App';
const container = document.getElementById('root');
const root = createRoot(container);
root.render(<App />);
```

Output:



Hello World