Practical No. 1

Title -: Understand about different Website design issues.

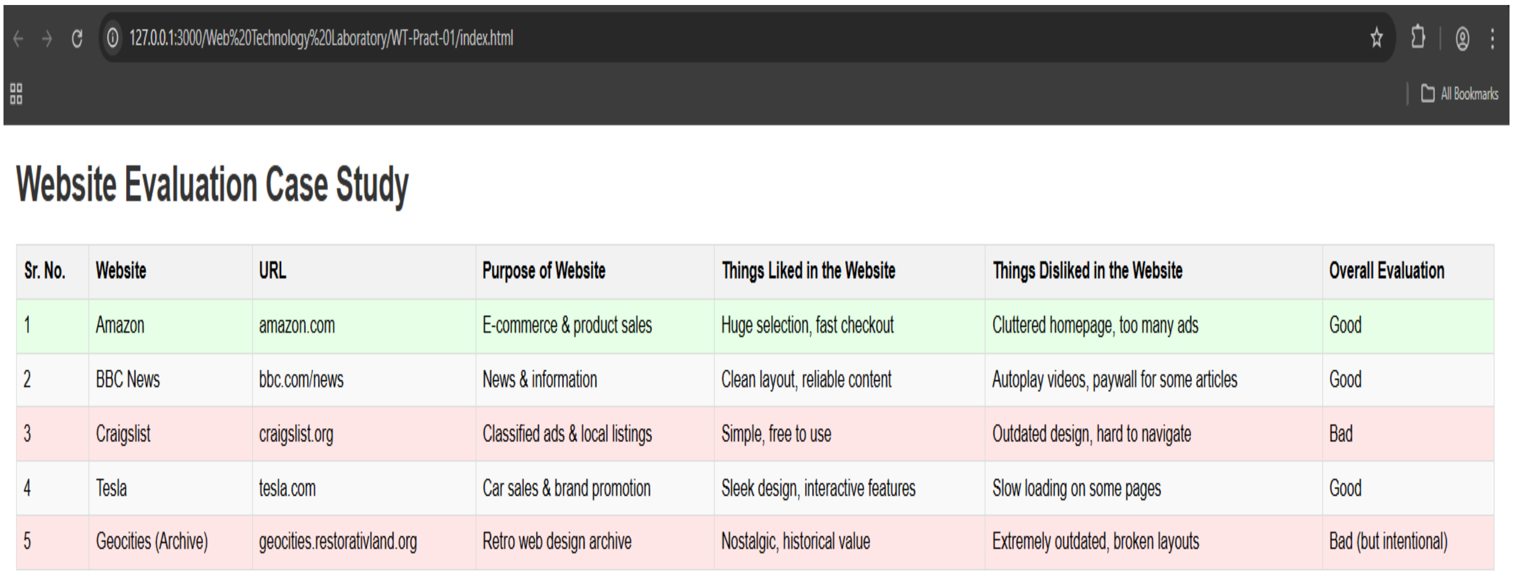
Code -:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Website Evaluation Case Study</title>
  <style>
    body {
      font-family: Arial, sans-serif;
      margin: 20px;
    }
    h1 {
      color: #333;
    }
    table {
      width: 100%;
      border-collapse: collapse;
      margin-top: 20px;
    }
    th, td {
      border: 1px solid #ddd;
      padding: 8px;
      text-align: left;
    }
    th {
      background-color: #f2f2f2;
    }
    tr:nth-child(even) {
      background-color: #f9f9f9;
    }
    .good {
      background-color: #e6ffe6;
    }
    .bad {
      background-color: #ffe6e6;
    }
  </style>
```

```
</head>
<body>
  <h1>Website Evaluation Case Study</h1>

  <table>
    <thead>
      <tr>
        <th>Sr. No.</th>
        <th>Website</th>
        <th>URL</th>
        <th>Purpose of Website</th>
        <th>Things Liked in the Website</th>
        <th>Things Disliked in the Website</th>
        <th>Overall Evaluation</th>
      </tr>
    </thead>
    <tbody>
      <tr class="good">
        <td>1</td>
        <td>Amazon</td>
        <td>amazon.com</td>
        <td>E-commerce & product sales</td>
        <td>Huge selection, fast checkout</td>
        <td>Cluttered homepage, too many ads</td>
        <td>Good</td>
      </tr>
      <tr class="good">
        <td>2</td>
        <td>BBC News</td>
        <td>bbc.com/news</td>
        <td>News & information</td>
        <td>Clean layout, reliable content</td>
        <td>Autoplay videos, paywall for some articles</td>
        <td>Good</td>
      </tr>
      <tr class="bad">
        <td>3</td>
        <td>Craigslist</td>
        <td>craigslist.org</td>
        <td>Classified ads & local listings</td>
        <td>Simple, free to use</td>
        <td>Outdated design, hard to navigate</td>
        <td>Bad</td>
      </tr>
```

```
        <tr class="good">
          <td>4</td>
          <td>Tesla</td>
          <td>tesla.com</td>
          <td>Car sales & brand promotion</td>
          <td>Sleek design, interactive features</td>
          <td>Slow loading on some pages</td>
          <td>Good</td>
        </tr>
        <tr class="bad">
          <td>5</td>
          <td>Geocities (Archive)</td>
          <td>geocities.restorativland.org</td>
          <td>Retro web design archive</td>
          <td>Nostalgic, historical value</td>
          <td>Extremely outdated, broken layouts</td>
          <td>Bad (but intentional)</td>
        </tr>
      </tbody>
    </table>
  </body>
  </html>
```

Output -:



127.0.0.1:3000/Web%20Technology%20Laboratory/WT-Pract-01/index.html

Website Evaluation Case Study

Sr. No.	Website	URL	Purpose of Website	Things Liked in the Website	Things Disliked in the Website	Overall Evaluation
1	Amazon	amazon.com	E-commerce & product sales	Huge selection, fast checkout	Cluttered homepage, too many ads	Good
2	BBC News	bbc.com/news	News & information	Clean layout, reliable content	Autoplay videos, paywall for some articles	Good
3	Craigslist	craigslist.org	Classified ads & local listings	Simple, free to use	Outdated design, hard to navigate	Bad
4	Tesla	tesla.com	Car sales & brand promotion	Sleek design, interactive features	Slow loading on some pages	Good
5	Geocities (Archive)	geocities.restorativland.org	Retro web design archive	Nostalgic, historical value	Extremely outdated, broken layouts	Bad (but intentional)

Practical No. 2

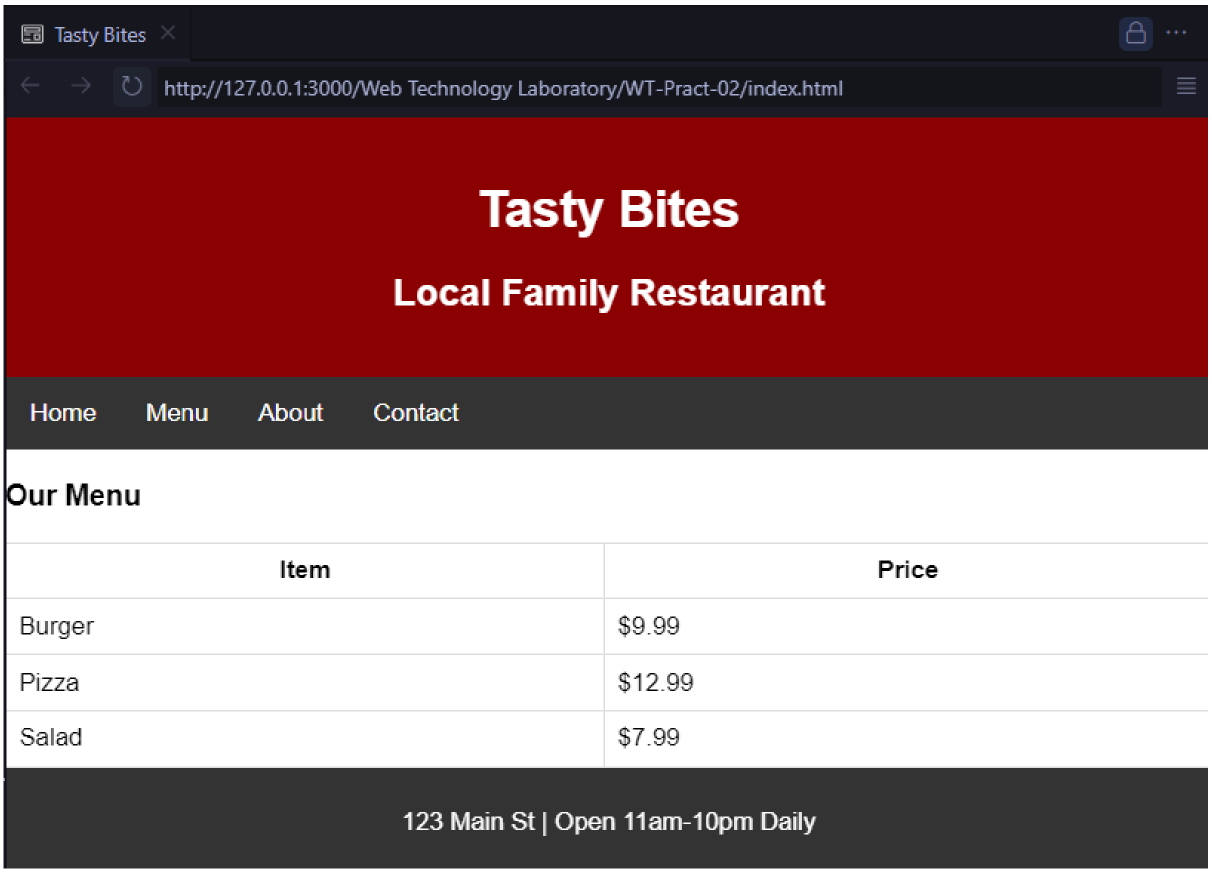
Title -: Implement a web page index.htm for any client website (e.g., a restaurant website Project) using following: a. HTML syntax: heading tags, basic tags and attributes, Frames, tables, images, lists, links for text and images, forms etc. b. Use of Internal CSS, Inline CSS, External CSS

Code -:

```
<!DOCTYPE html>
<html>
<head>
<title>Tasty Bites</title>
<style>
body {font-family:Arial; margin:0; padding:0;}
header {background:#8B0000; color:white; padding:20px; text-align:center;}
nav {background:#333; overflow:hidden;}
nav a {float:left; color:white; padding:14px 16px; text-decoration:none;}
.main {float:left; width:70%; padding:20px;}
.sidebar {float:right; width:25%; padding:20px; background:#e9e9e9;}
footer {background:#333; color:white; text-align:center; padding:10px; clear:both;}
@media (max-width: 600px) {
 .sidebar {display:left;}
}
table {width:100%; border-collapse:collapse;}
th, td {border:1px solid #ddd; padding:8px;}
</style>
</head>
<body>
<header>
<h1>Tasty Bites</h1>
<h2>Local Family Restaurant</h2>
</header>

<nav>
<a href="#home">Home</a>
<a href="#menu">Menu</a>
<a href="#about">About</a>
<a href="#contact">Contact</a>
</nav>

<h3>Our Menu</h3>
<table>
```

```
<tr><th>Item</th><th>Price</th></tr>
<tr><td>Burger</td><td>$9.99</td></tr>
<tr><td>Pizza</td><td>$12.99</td></tr>
<tr><td>Salad</td><td>$7.99</td></tr>
</table>
</div>

<footer>
<p>123 Main St | Open 11am-10pm Daily</p>
</footer>
</body>
</html>
```

Output -:



Tasty Bites
http://127.0.0.1:3000/Web Technology Laboratory/WT-Pract-02/index.html

Tasty Bites

Local Family Restaurant

Home Menu About Contact

Our Menu

Item	Price
Burger	$9.99
Pizza	$12.99
Salad	$7.99

123 Main St | Open 11am-10pm Daily

Practical No. 3

Title -: Design the XML document to store the information of the employees of any business organization and demonstrate the use of:
a) DTD b) XML Schema And display the content in (e.g., tabular format) by using CSS/XSL

Code -:

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE employees SYSTEM "employees.dtd">
<?xml-stylesheet type="text/xsl" href="employees.xsl"?>
<?xml-stylesheet type="text/css" href="employees.css"?>
<employees xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
        xsi:noNamespaceSchemaLocation="employees.xsd">
   <employee id="E1001">
      <name>Akhilesh Jadhav</name>
      <position>Software Developer</position>
      <department>IT</department>
      <salary>75000</salary>
      <hire_date>2018-06-15</hire_date>
   </employee>
   <employee id="E1002">
      <name>Sarah Johnson</name>
      <position>HR Manager</position>
      <department>Human Resources</department>
      <salary>68000</salary>
      <hire_date>2019-03-22</hire_date>
   </employee>
   <employee id="E1003">
      <name>Vishwajit Kogade</name>
      <position>Sales Executive</position>
      <department>Marketing</department>
      <salary>62000</salary>
      <hire_date>2020-11-05</hire_date>
   </employee>
</employees>


<?xml version="1.0" encoding="UTF-8"?>
<xsl:stylesheet version="1.0"
xmlns:xsl="http://www.w3.org/1999/XSL/Transform">
<xsl:template match="/">
<html>
```

```
<head>
   <title>Employee Information</title>
   <style>
      table { width:100%; border-collapse:collapse; }
      th, td { border:1px solid #ddd; padding:8px; text-align:left; }
      th { background-color:#8B0000; color:white; }
      tr:nth-child(even) { background-color:#f2f2f2; }
   </style>
</head>
<body>
   <h2>Employee Directory</h2>
   <table>
      <tr>
         <th>ID</th>
         <th>Name</th>
         <th>Position</th>
         <th>Department</th>
         <th>Salary</th>
         <th>Hire Date</th>
      </tr>
      <xsl:for-each select="employees/employee">
      <tr>
         <td><xsl:value-of select="@id"/></td>
         <td><xsl:value-of select="name"/></td>
         <td><xsl:value-of select="position"/></td>
         <td><xsl:value-of select="department"/></td>
         <td>$<xsl:value-of select="salary"/></td>
         <td><xsl:value-of select="hire_date"/></td>
      </tr>
      </xsl:for-each>
   </table>
</body>
</html>
</xsl:template>
</xsl:stylesheet>
```

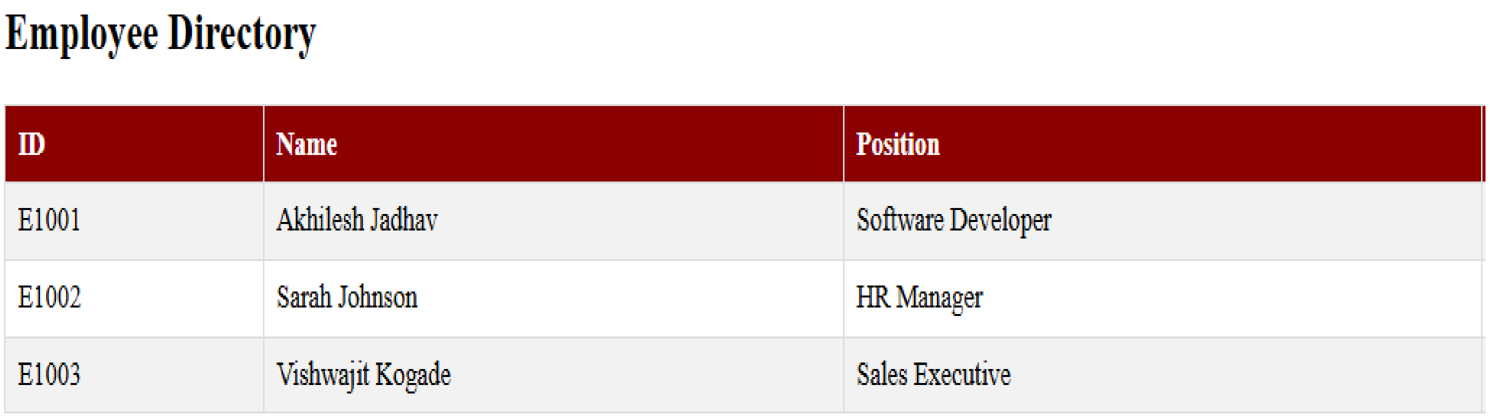
```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE employees SYSTEM "employees.dtd">
<?xml-stylesheet type="text/xsl" href="employees.xsl"?>
<?xml-stylesheet type="text/css" href="employees.css"?>
<employees xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
         xsi:noNamespaceSchemaLocation="employees.xsd">
   <employee id="E1001">
```

```xml
    <name>John Smith</name>
    <position>Software Developer</position>
    <department>IT</department>
    <salary>75000</salary>
    <hire_date>2018-06-15</hire_date>
  </employee>
  <employee id="E1002">
    <name>Sarah Johnson</name>
    <position>HR Manager</position>
    <department>Human Resources</department>
    <salary>68000</salary>
    <hire_date>2019-03-22</hire_date>
  </employee>
  <employee id="E1003">
    <name>Michael Brown</name>
    <position>Sales Executive</position>
    <department>Marketing</department>
    <salary>62000</salary>
    <hire_date>2020-11-05</hire_date>
  </employee>
</employees>
```

```xml
<?xml version="1.0" encoding="UTF-8"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="employees">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="employee" maxOccurs="unbounded">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="name" type="xs:string"/>
              <xs:element name="position" type="xs:string"/>
              <xs:element name="department" type="xs:string"/>
              <xs:element name="salary" type="xs:integer"/>
              <xs:element name="hire_date" type="xs:date"/>
            </xs:sequence>
            <xs:attribute name="id" type="xs:string" use="required"/>
          </xs:complexType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>
```

```
<!ELEMENT employees (employee+)>
<!ATTLIST employees
  xmlns:xsi CDATA #IMPLIED
  xsi:noNamespaceSchemaLocation CDATA #IMPLIED>
<!ELEMENT employee (name, position, department, salary, hire_date)>
<!ATTLIST employee id CDATA #REQUIRED>

<!ELEMENT name (#PCDATA)>
<!ELEMENT position (#PCDATA)>
<!ELEMENT department (#PCDATA)>
<!ELEMENT salary (#PCDATA)>
<!ELEMENT hire_date (#PCDATA)>
```

Output -:



Employee Directory

ID	Name	Position
E1001	Akhilesh Jadhav	Software Developer
E1002	Sarah Johnson	HR Manager
E1003	Vishwajit Kogade	Sales Executive

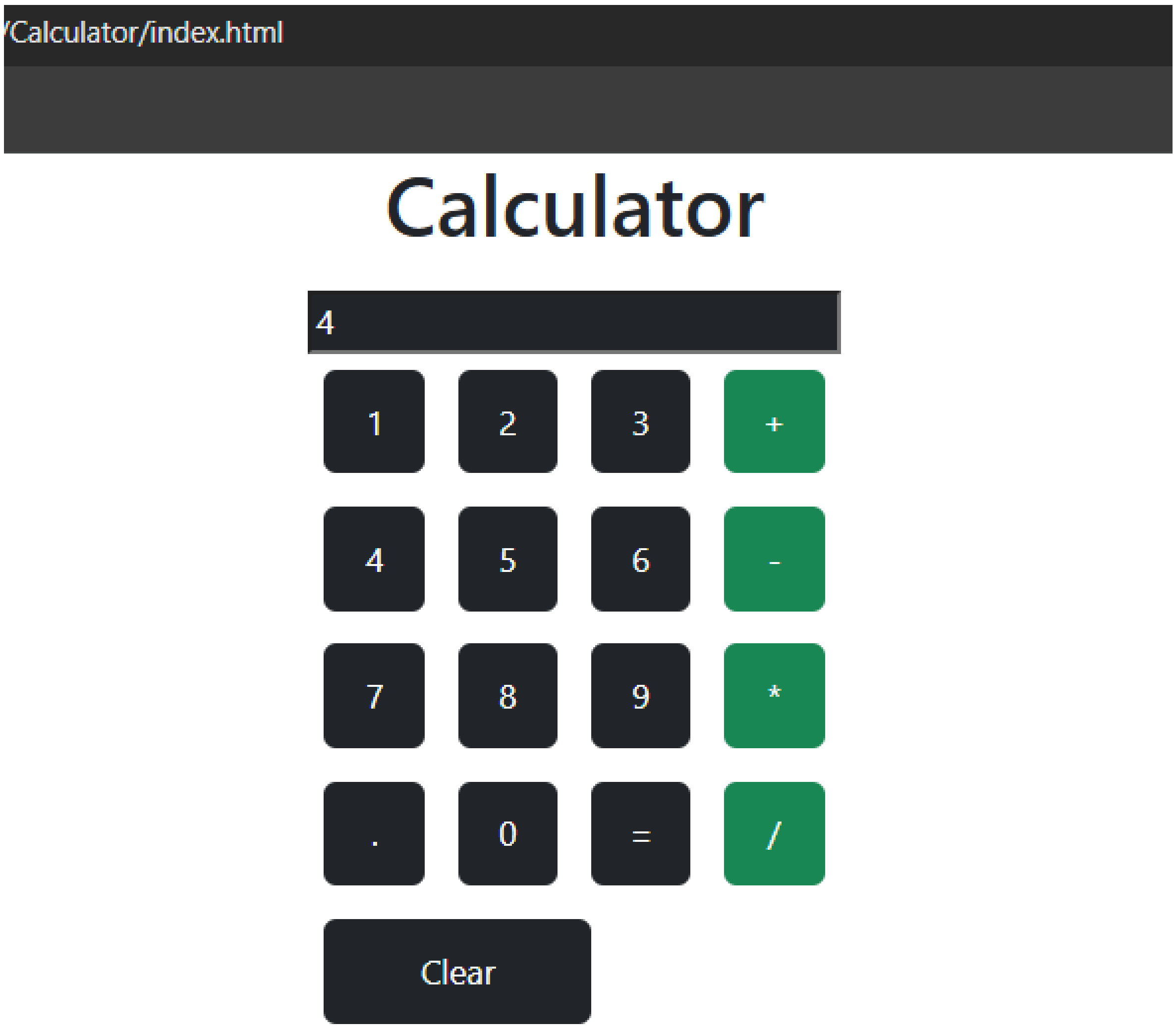
Practical No. 4

**Title -: Implement an application in Java Script using following:
a) Design UI of application using HTML, CSS etc. b) Include JavaScript validation number etc. c) Use of prompt and alert window using JavaScript e.g., Design and implement a simple calculator using JavaScript for operations like addition, Multiplication, subtraction, division, square of b) Validate input values a) Design calculator interface like text field for input and output, buttons for numbers and Operators etc. c) Promptalerts for invalid values etc.**

Code -:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Calculator</title>
  <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/css/bootstrap.min.css"
rel="stylesheet" integrity="sha384-
QWTKZyjpPEjISv5WaRU9OFeRpok6YctnYmDr5pNlyT2bRjXh0JMhjY6hW+ALEwIH"
crossorigin="anonymous">
  <style>
      button{
      height: 50px;
      width: 50px;
    }
  </style>
</head>
<body>

  <h1 class="text-center">Calculator</h1>
  <main style="  max-width: 300px; margin: auto; padding: 10px;">
  <div class="container">

    <input id="display" class="w-100 bg-dark text-white" readonly>

    <div class="d-flex">
      <button class="btn bg-dark text-white m-2" onclick="apDisplay('1')">1</button>
      <button class="btn bg-dark text-white m-2" onclick="apDisplay('2')">2</button>
      <button class="btn bg-dark text-white m-2" onclick="apDisplay('3')">3</button>
      <button class="btn bg-success text-white m-2" onclick="apDisplay('+')">+</button>
    </div>
    <div class="d-flex">
      <button class="btn bg-dark text-white m-2" onclick="apDisplay('4')">4</button>
      <button class="btn bg-dark text-white m-2" onclick="apDisplay('5')">5</button>
      <button class="btn bg-dark text-white m-2" onclick="apDisplay('6')">6</button>
      <button class="btn bg-success text-white m-2" onclick="apDisplay('-')">-</button>
    </div>

    <div class="d-flex">
      <button class="btn bg-dark text-white m-2" onclick="apDisplay('7')">7</button>
      <button class="btn bg-dark text-white m-2" onclick="apDisplay('8')">8</button>
      <button class="btn bg-dark text-white m-2" onclick="apDisplay('9')">9</button>
      <button class="btn bg-success text-white m-2" onclick="apDisplay('*')">*</button>
    </div>

    <div class="d-flex">
      <button class="btn bg-dark text-white m-2" onclick="apDisplay('.')">.</button>
      <button class="btn bg-dark text-white m-2" onclick="apDisplay('0')">0</button>
      <button class="btn bg-dark text-white m-2" onclick="calculate()">=</button>
      <button class="btn bg-success text-white m-2" onclick="apDisplay('/')">/</button>
    </div>

    <button class="btn bg-dark text-white m-2 w-50"
onclick="clearDisplay()">Clear</button>

  </div>
  </main>

  <script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/js/bootstrap.bundle.min.js"
integrity="sha384-
YvpcrYf0tY3lHB60NNkmXc5s9fDVZLESaAA55NDzOxhy9GkcIdslK1eN7N6jIeHz"
crossorigin="anonymous"></script>
  <script>

    document.addEventListener('keydown', function(event) {
      if (event.key === 'Delete') {
        clearDisplay();
      }
      if (event.key === 'Backspace') {
        minusDisplay();
      }
      if (event.key === 'Enter') {
        calculate();
      }
      if (event.key >= '0' && event.key <= '9') {
        apDisplay(event.key);
      }
      if (event.key === '+' || event.key === '-' || event.key === '*' || event.key === '/') {
        apDisplay(event.key);
      }
      if (event.key === '.') {
        apDisplay(event.key);
      }
    });

    const display = document.getElementById('display');

    function apDisplay(input){
      display.value += input;
    }

    function clearDisplay(){
      display.value = "";
    }

    function minusDisplay(){
      display.value = display.value.slice(0, -1);
    }

    function calculate(){
      try{
      display.value = eval(display.value);
      }
      catch(error){
        display.value = "Error";
      }
    }


  </script>
</body>
</html>
```

Output -:



Practical No. 5

Title -: Implement the sample program demonstrating the use of Servlet. e.g., create a database table eBook shop (book_id, book_ title, book_author, book_price, quantity) using database like Oracle/MySQL etc. and display (use SQL select query) the table content using servlet.

Code -:

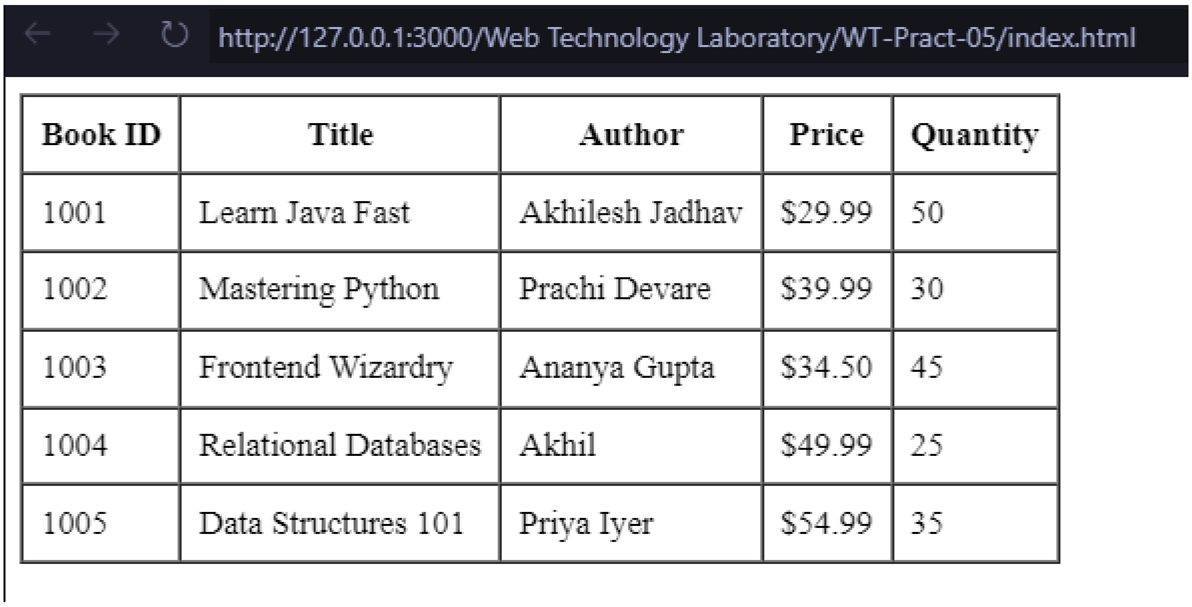
```
import java.io.*;
import java.sql.*;
import javax.servlet.*;
import javax.servlet.http.*;

public class BookServlet extends HttpServlet {
   private static final String JDBC_URL = "jdbc:mysql://localhost:3306/ebookshop";
   private static final String JDBC_USER = "your_username";
   private static final String JDBC_PASSWORD = "your_password";

   protected void doGet(HttpServletRequest request, HttpServletResponse response)
         throws ServletException, IOException {

       response.setContentType("text/html");
       PrintWriter out = response.getWriter();

       try {
          Class.forName("com.mysql.cj.jdbc.Driver");

          Connection conn = DriverManager.getConnection(JDBC_URL, JDBC_USER,
JDBC_PASSWORD);

          Statement stmt = conn.createStatement();
          ResultSet rs = stmt.executeQuery("SELECT * FROM books");

          out.println("<html><head><title>eBook Shop</title>");
          out.println("<style>");
          out.println("table { border-collapse: collapse; width: 80%; margin: 20px auto; }");
          out.println("th, td { border: 1px solid #ddd; padding: 8px; text-align: left; }");
          out.println("th { background-color: #4CAF50; color: white; }");
          out.println("tr:nth-child(even) { background-color: #f2f2f2; }");
          out.println("h1 { text-align: center; color: #333; }");
          out.println("</style></head>");
```

```
            out.println("<body><h1>eBook Shop Inventory</h1>");
            out.println("<table>");
            out.println("<tr><th>Book
ID</th><th>Title</th><th>Author</th><th>Price</th><th>Quantity</th></tr>");

            while (rs.next()) {
                int id = rs.getInt("book_id");
                String title = rs.getString("book_title");
                String author = rs.getString("book_author");
                double price = rs.getDouble("book_price");
                int qty = rs.getInt("quantity");

                out.println("<tr>");
                out.println("<td>" + id + "</td>");
                out.println("<td>" + title + "</td>");
                out.println("<td>" + author + "</td>");
                out.println("<td>$" + price + "</td>");
                out.println("<td>" + qty + "</td>");
                out.println("</tr>");
            }

            out.println("</table></body></html>");

            rs.close();
            stmt.close();
            conn.close();

        } catch (ClassNotFoundException e) {
            out.println("<p>Error: JDBC driver not found</p>");
            e.printStackTrace(out);
        } catch (SQLException e) {
            out.println("<p>Error: Database connection problem</p>");
            e.printStackTrace(out);
        }
    }
}
```

```
<?xml version="1.0" encoding="UTF-8"?>
<web-app xmlns="http://xmlns.jcp.org/xml/ns/javaee"
      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xsi:schemaLocation="http://xmlns.jcp.org/xml/ns/javaee
      http://xmlns.jcp.org/xml/ns/javaee/web-app_4_0.xsd"
      version="4.0">
```

```
  <servlet>
    <servlet-name>BookServlet</servlet-name>
    <servlet-class>BookServlet</servlet-class>
  </servlet>

  <servlet-mapping>
    <servlet-name>BookServlet</servlet-name>
    <url-pattern>/books</url-pattern>
  </servlet-mapping>

</web-app>
```

Output -:



http://127.0.0.1:3000/Web Technology Laboratory/WT-Pract-05/index.html

Book ID	Title	Author	Price	Quantity
1001	Learn Java Fast	Akhilesh Jadhav	$29.99	50
1002	Mastering Python	Prachi Devare	$39.99	30
1003	Frontend Wizardry	Ananya Gupta	$34.50	45
1004	Relational Databases	Akhil	$49.99	25
1005	Data Structures 101	Priya Iyer	$54.99	35

Practical No. 6

Title -: Implement the program demonstrating the use of JSP. e.g., Create a database table students_info (stud_id, stud _name, class, division, city) using database like Oracle/MySQL etc. and display (use SQL select query) the table content using JSP.
Code -:

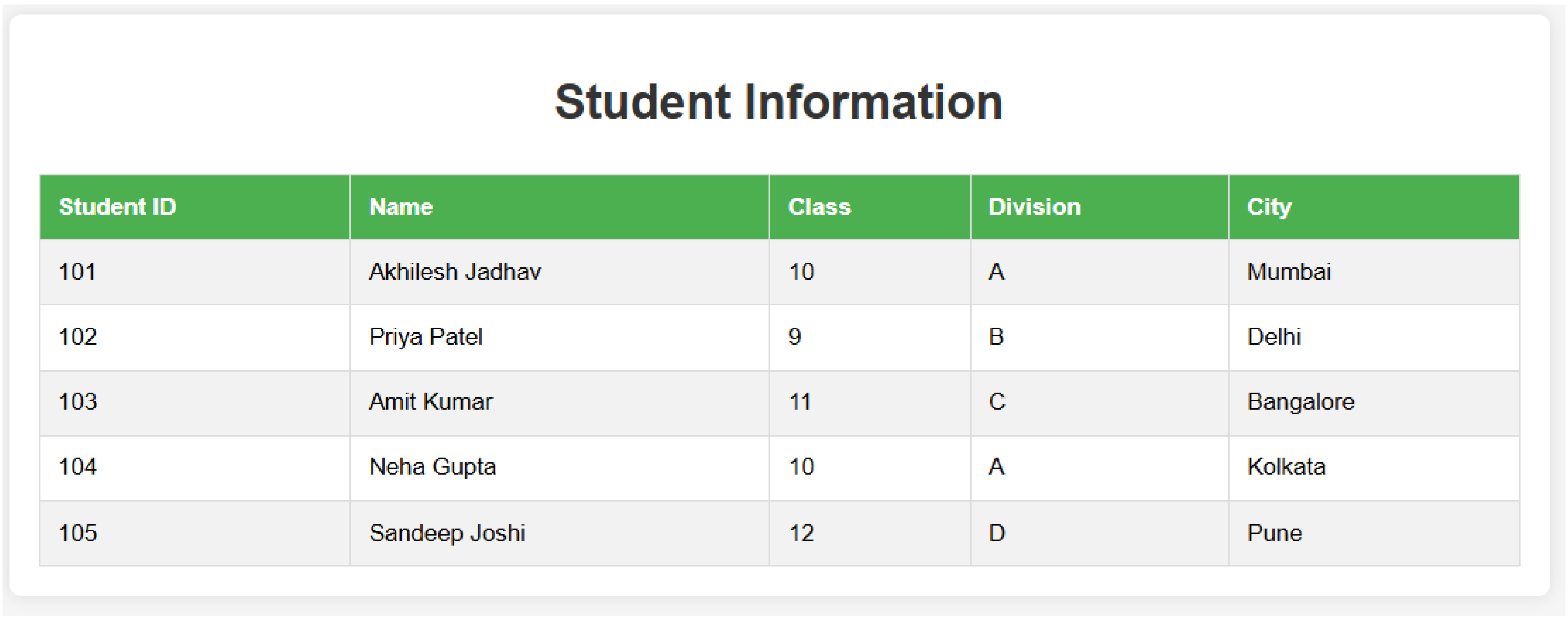
```
<%@ page import="java.sql.*" %>
<%@ page language="java" contentType="text/html; charset=UTF-8" pageEncoding="UTF-
8"%>
<!DOCTYPE html>
<html>
<head>
  <title>Student Information System</title>
  <style>
    body {
      font-family: Arial, sans-serif;
      margin: 0;
      padding: 20px;
      background-color: #f5f5f5;
    }
    .container {
      max-width: 1000px;
      margin: 0 auto;
      background-color: white;
      padding: 20px;
      border-radius: 8px;
      box-shadow: 0 0 10px rgba(0,0,0,0.1);
    }
    h1 {
      color: #333;
      text-align: center;
      margin-bottom: 30px;
    }
    table {
      width: 100%;
      border-collapse: collapse;
      margin-top: 20px;
    }
    th, td {
      border: 1px solid #ddd;
```

```
            padding: 12px;
            text-align: left;
        }
        th {
            background-color: #4CAF50;
            color: white;
        }
        tr:nth-child(even) {
            background-color: #f2f2f2;
        }
        .error {
            color: red;
            text-align: center;
            margin: 20px 0;
        }
    </style>
</head>
<body>
    <div class="container">
        <h1>Student Information</h1>

        <%
            // Database connection details
            String jdbcUrl = "jdbc:mysql://localhost:3306/student_db";
            String dbUser = "your_username";
            String dbPassword = "your_password";

            Connection conn = null;
            Statement stmt = null;
            ResultSet rs = null;

            try {
                // Load JDBC driver
                Class.forName("com.mysql.cj.jdbc.Driver");

                // Establish connection
                conn = DriverManager.getConnection(jdbcUrl, dbUser, dbPassword);

                // Execute query
                stmt = conn.createStatement();
                String sql = "SELECT * FROM students_info";
                rs = stmt.executeQuery(sql);
        %>
```

```
<table>
   <tr>
      <th>Student ID</th>
      <th>Name</th>
      <th>Class</th>
      <th>Division</th>
      <th>City</th>
   </tr>

   <%
      // Process result set
      while (rs.next()) {
         int studId = rs.getInt("stud_id");
         String studName = rs.getString("stud_name");
         String studClass = rs.getString("class");
         String division = rs.getString("division");
         String city = rs.getString("city");
   %>

   <tr>
      <td><%= studId %></td>
      <td><%= studName %></td>
      <td><%= studClass %></td>
      <td><%= division %></td>
      <td><%= city %></td>
   </tr>

   <%
      }
   %>
</table>

<%
   } catch (ClassNotFoundException e) {
%>
   <p class="error">Error: MySQL JDBC Driver not found!</p>
<%
      e.printStackTrace();
   } catch (SQLException e) {
%>
   <p class="error">Error: Database connection problem!</p>
<%
      e.printStackTrace();
   } finally {
```

```
                // Close resources
                try {
                    if (rs != null) rs.close();
                    if (stmt != null) stmt.close();
                    if (conn != null) conn.close();
                } catch (SQLException e) {
                    e.printStackTrace();
                }
            }
        %>
    </div>
</body>
</html>
```

Output -:



Student Information

Student ID	Name	Class	Division	City
101	Akhilesh Jadhav	10	A	Mumbai
102	Priya Patel	9	B	Delhi
103	Amit Kumar	11	C	Bangalore
104	Neha Gupta	10	A	Kolkata
105	Sandeep Joshi	12	D	Pune

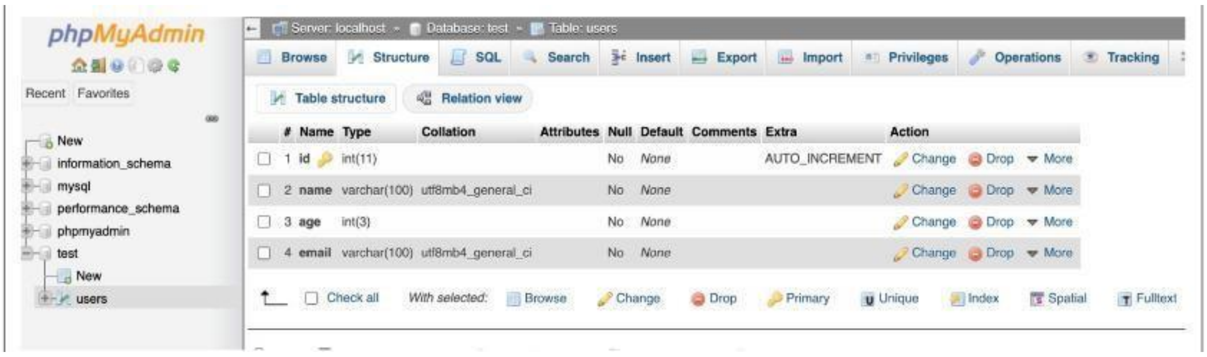
Practical No. 7

Title -: Build a dynamic web application using PHP and MySQL.
a. Create database tables in MySQL and create connection with PHP.
b. Create the add, update, delete and retrieve functions in the PHP web app interacting with MySQL
Code -:

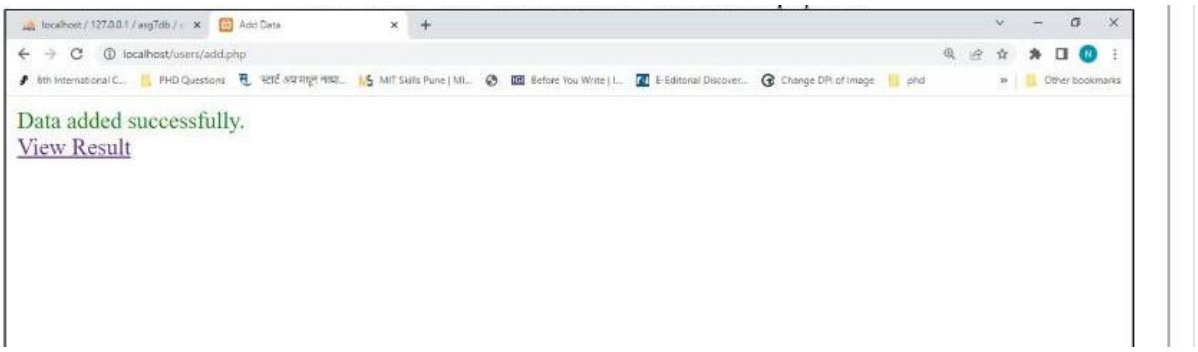
```
<!DOCTYPE html>
<html>
 <head>
  <meta charset="utf-8">
  <title>Register</title>
  <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/6.2.0/css/all.min.css" integrity="sha512-xh6O/CkQoPOWDdYTDqeRdPCVd1SpvCA9XXcUnZS2FmJNp1coAFzvtCN9BmamE+4aHK8yyUHUSCcJHgXloTyT2A==" crossorigin="anonymous" referrerpolicy="no-referrer">
    <link href="style.css" rel="stylesheet" type="text/css">
 </head>
 <body>
  <div class="register">
   <h1>Register</h1>
   <form action="register.php" method="post" autocomplete="off">
    <label for="username">
     <i class="fas fa-user"></i>
    </label>
    <input type="text" name="username" placeholder="Username" id="username" required>
    <label for="password">
     <i class="fas fa-lock"></i>
    </label>
    <input type="password" name="password" placeholder="Password" id="password" required>
    <label for="email">
     <i class="fas fa-envelope"></i>
    </label>
    <input type="email" name="email" placeholder="Email" id="email" required>
    <input type="submit" value="Register">
   </form>
  </div>
 </body>
</html>
```

```php
<?php
require_once 'connection.php';

if (!isset($_POST['username'], $_POST['password'], $_POST['email'])) {
  exit('Please complete the registration form!');
}
if (empty($_POST['username']) || empty($_POST['password']) || empty($_POST['email']))
{
  exit('Please complete the registration form');
}

if ($stmt = $con->prepare('INSERT INTO accounts (username, password, email) VALUES (?,
?, ?)')) {
  $stmt->bind_param('sss', $_POST['username'], $_POST['password'], $_POST['email']);
  $stmt->execute();
  echo 'You have successfully registered! You can now login!';
} else {
  echo 'Could not prepare statement!';
}

<?php
$DATABASE_HOST = 'localhost';
$DATABASE_USER = 'root';
$DATABASE_PASS = '';
$DATABASE_NAME = 'phplogin';
$con = mysqli_connect($DATABASE_HOST, $DATABASE_USER, $DATABASE_PASS,
$DATABASE_NAME);
if (mysqli_connect_errno()) {
  exit('Failed to connect to MySQL: ' . mysqli_connect_error());
}
```

Output -:


phpMyAdmin
Recent Favorites
New
information_schema
mysql
performance_schema
phpmyadmin
test
New
users
Server: localhost » Database: test » Table: users
Browse Structure SQL Search Insert Export Import Privileges Operations Tracking
Table structure Relation view
Check all With selected: Browse Change Drop Primary Unique Index Spatial Fulltext

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	id	int(11)			No	None		AUTO_INCREMENT	Change Drop More
2	name	varchar(100)	utf8mb4_general_ci		No	None			Change Drop More
3	age	int(3)			No	None			Change Drop More
4	email	varchar(100)	utf8mb4_general_ci		No	None			Change Drop More



Data added successfully.
View Result

Practical No. 8

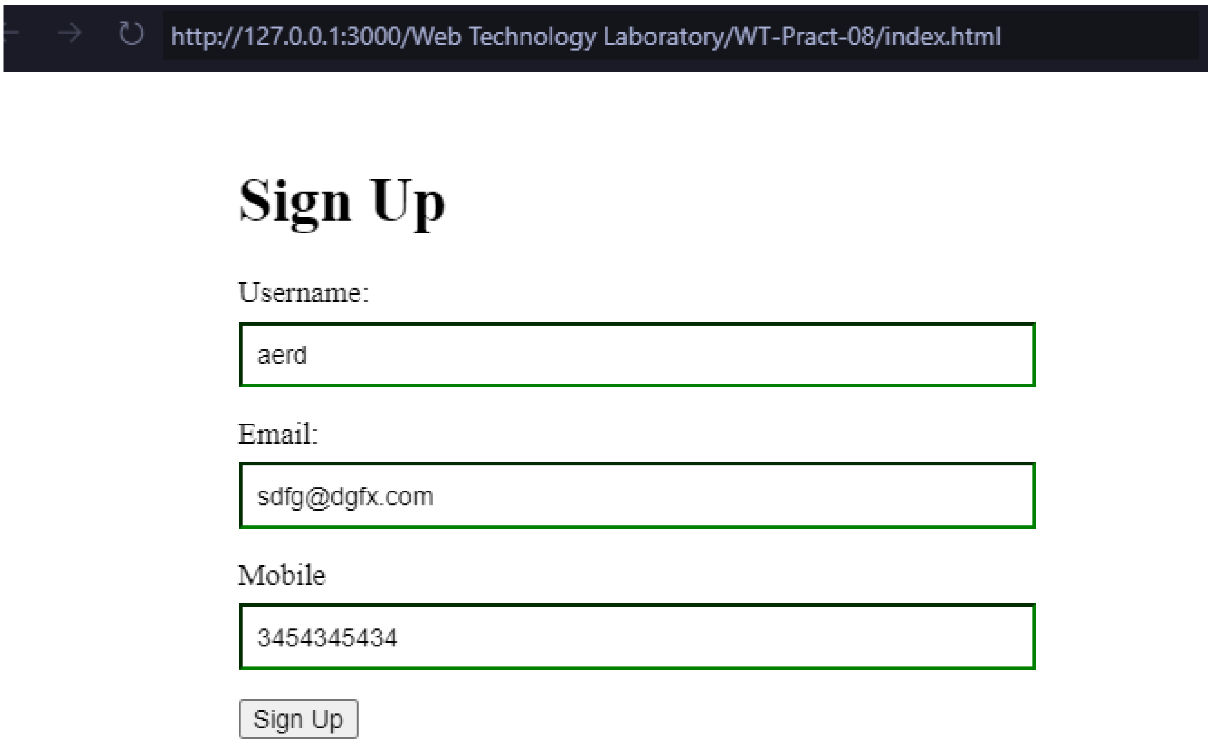
Title -: Design a login page with entries for name, mobile number email id and login button. Use struts and pertom tollowing validations b. Validation for mobile numbers c. Validation for enmail id d. Validation if no cntered any value e. Re-display for wrongly entered values with message f. Congratulations and welcome page upon successful entries
Code -:

```
<!DOCTYPE html>
<html>
<head>
<title>JavaScript Form Validation Demo</title>
<style>
.container {
  max-width: 400px;
  margin: 0 auto;
  padding: 20px;
}
.form-field {
  margin-bottom: 15px;
}
.form-field label {
  display: block;
  margin-bottom: 5px;
}
.form-field input {
  width: 100%;
  padding: 8px;
}
.form-field small {
  color: red;
}
.error input {
  border-color: red;
}
.success input {
  border-color: green;
}
</style>
</head>
<body>
<div class="container">
```

```
<form id="signup" class="form" action='Hello.jsp'>
<h1>Sign Up</h1>
<div class="form-field">
<label for="username">Username:</label>
<input type="text" name="username" id="username" autocomplete="off">
<small></small>
</div>
<div class="form-field">
<label for="email">Email:</label>
<input type="email" name="email" id="email" autocomplete="off">
<small></small>
</div>
<div class="form-field">
<label for="mobile">Mobile</label>
<input type="number" name="mobile" id="mobile" autocomplete="off">
<small></small>
</div>
<input type="submit" value="Sign Up">
</form>
</div>
<script>
const usernameEl = document.querySelector('#username');
const emailEl = document.querySelector('#email');
const mobileEl = document.querySelector('#mobile');
const form = document.querySelector('#signup');

const checkUsername = () => {
  let valid = false;
  const min = 3, max = 25;
  const username = usernameEl.value.trim();
  if (!isRequired(username)) {
    showError(usernameEl, 'Username cannot be blank.');
  } else if (!isBetween(username.length, min, max)) {
    showError(usernameEl, `Username must be between ${min} and ${max} characters.`);
  } else {
    showSuccess(usernameEl);
    valid = true;
  }
  return valid;
};
const checkEmail = () => {
  let valid = false;
  const email = emailEl.value.trim();
  if (!isRequired(email)) {
    showError(emailEl, 'Email cannot be blank.');
  } else if (!isEmailValid(email)) {
    showError(emailEl, 'Email is not valid.');
  } else {
    showSuccess(emailEl);
    valid = true;
  }
  return valid;
};
const checkMobile = () => {
  let valid = false;
  const mobile = mobileEl.value.trim();
  if (!isRequired(mobile)) {
    showError(mobileEl, 'Mobile cannot be blank.');
  } else if (!isMobileValid(mobile)) {
    showError(mobileEl, 'Mobile must be 10 digits.');
  } else {
    showSuccess(mobileEl);
    valid = true;
  }
  return valid;
};
const isEmailValid = (email) => {
  const re = /^(([^<>()\[\]\\.,;:\s@"]+(\.[^<>()\[\]\\.,;:\s@"]+)*)|(".+"))@((\[[0-9]{1,3}\.[0-
9]{1,3}\.[0-9]{1,3}\.[0-9]{1,3}\])|(([a-zA-Z\-0-9]+\.)+[a-zA-Z]{2,}))$/;
  return re.test(email);
};
const isMobileValid = (mobile) => {
  const re = /^[0-9]{10}$/;
  return re.test(mobile);
};
const isRequired = value => value === '' ? false : true;
const isBetween = (length, min, max) => length < min || length > max ? false : true;

const showError = (input, message) => {
  const formField = input.parentElement;
  formField.classList.remove('success');
  formField.classList.add('error');
  const error = formField.querySelector('small');
  error.textContent = message;
};

const showSuccess = (input) => {
  const formField = input.parentElement;
  formField.classList.remove('error');
  formField.classList.add('success');
  const error = formField.querySelector('small');
  error.textContent = '';
};
form.addEventListener('submit', function(e) {
  e.preventDefault();
  let isUsernameValid = checkUsername(),
     isEmailValid = checkEmail(),
     isMobileValid = checkMobile();
  let isFormValid = isUsernameValid && isEmailValid && isMobileValid;
  if (isFormValid) {
    form.submit();
  }
});

const debounce = (fn, delay = 500) => {
  let timeoutId;
  return (...args) => {
    if (timeoutId) {
      clearTimeout(timeoutId);
    }
    timeoutId = setTimeout(() => {
      fn.apply(null, args)
    }, delay);
  };
};

form.addEventListener('input', debounce(function(e) {
  switch (e.target.id) {
    case 'username':
      checkUsername();
      break;
    case 'email':
      checkEmail();
      break;
    case 'mobile':
      checkMobile();
      break;
  }
}));
</script>
</body>
</html>
```

```
<%@ page language="java" contentType="text/html; charset=UTF-8" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Hello World</title>
</head>
<body>
<%
String name = request.getParameter("username");
String Mobile = request.getParameter("mobile");
String Email = request.getParameter("email");
session.setAttribute("name", name);
session.setAttribute("mobile", Mobile);
session.setAttribute("email", Email);
%>
Hi!!! My name is <% out.println(session.getAttribute("name")); %><br /><br>
Mobile Number is:- <% out.println(session.getAttribute("mobile")); %><br><br>
Email id:- <% out.println(session.getAttribute("email")); %><br><br>
</body>
</html>
```

Output -:



http://127.0.0.1:3000/Web Technology Laboratory/WT-Pract-08/index.html

Sign Up

Username: aerd

Email: sdfg@dgfx.com

Mobile 3454345434

Practical No. 9

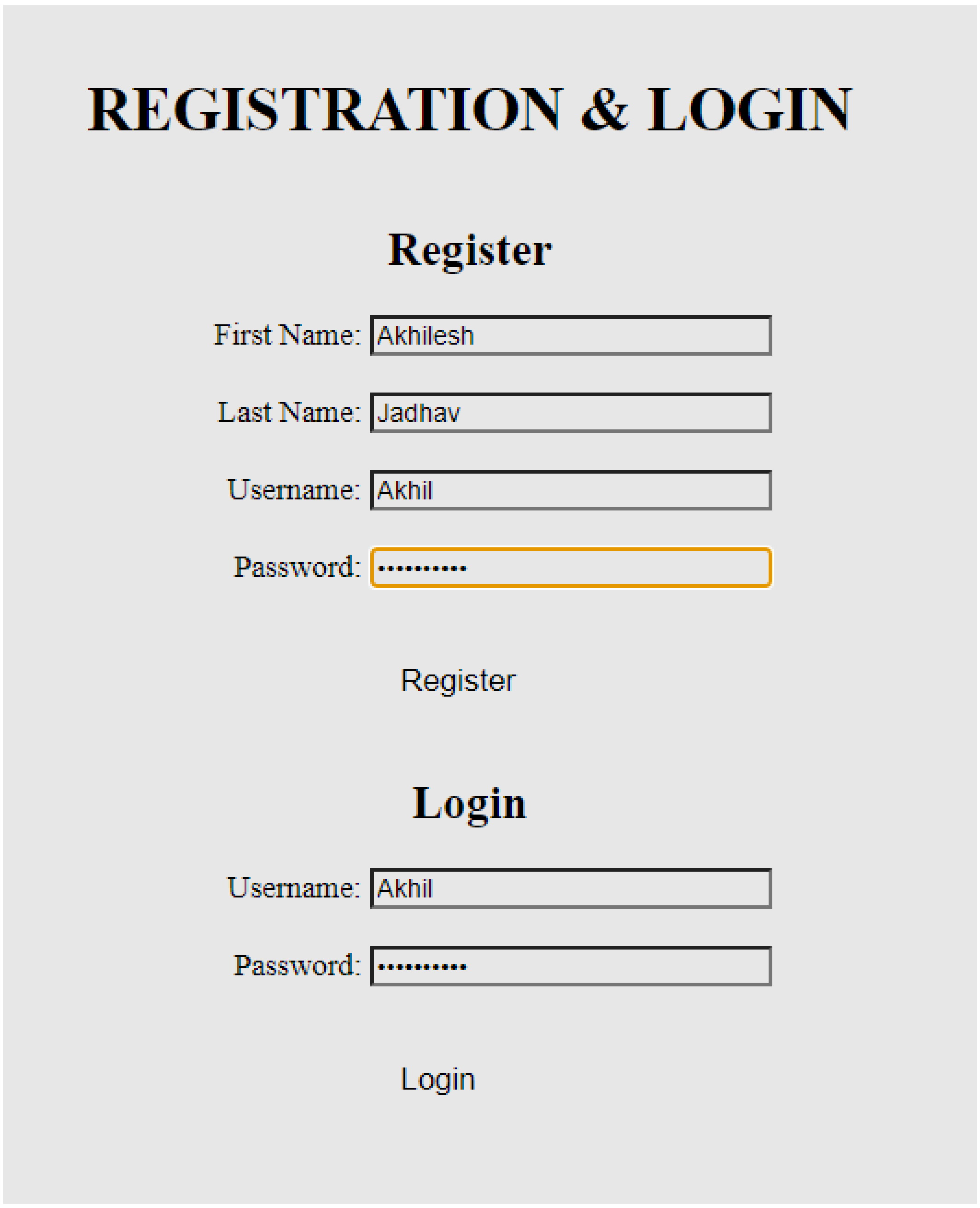
Title -: Design an application using Angular JS. e-g., Design registration (first name, last name, username, password) and login page using Angular JS.

Code -:

```
 <!DOCTYPE html>
 <html ng-app="myApp">
   <head>
   <meta charset="utf-8">
       <title>AngularJS Registration & Login</title>
       <link rel="stylesheet" href="style.css">
       <script
src="https://ajax.googleapis.com/ajax/libs/angularjs/1.8.2/angular.min.js"></script>
       <script src="app.js"></script>
   </head>
 <body ng-controller="myCtrl">
     <h1><b>REGISTRATION & LOGIN</b></h1>

     <h2>Register</h2>
   <form ng-submit="registerUser()">
        <label for="firstName">First Name:</label>
        <input type="text" ng-model="firstName" required><br>
        <br>
        <label for="lastName">Last Name:</label>
        <input type="text" ng-model="lastName" required><br>
        <br>
        <label for="username">Username:</label>
        <input type="text" ng-model="username" required><br>
        <br>
        <label for="password">Password:</label>
        <input type="password" ng-model="password" required><br>
        <br>
        <input type="submit" class="button" value="Register">
   </form>

   <h2>Login</h2>
       <form ng-submit="loginUser()">
        <label for="username">Username:</label>
        <input type="text" ng-model="username" required><br>
        <br>
        <label for="password">Password:</label>
        <input type="password" ng-model="password" required><br>
        <br>
        <input type="submit" value="Login" class="button">
      </form>

    <div ng-if="errorMessage">{{errorMessage}}</div>

    <div ng-if="successMessage">{{successMessage}}</div>

  </body>
  </html>



var app = angular.module("myApp", []);

app.controller("myCtrl", function($scope) {

  $scope.registerUser = function() {
    var user = {
      firstName: $scope.firstName,
      lastName: $scope.lastName,
      username: $scope.username,
      password: $scope.password
    };

    localStorage.setItem($scope.username, JSON.stringify(user));

    $scope.firstName = "";
    $scope.lastName = "";
    $scope.username = "";
    $scope.password = "";

    $scope.successMessage = "Registration successful!";
  };

  $scope.loginUser = function() {
    var user = JSON.parse(localStorage.getItem($scope.username));
    if (user && user.password === $scope.password) {

      $scope.username = "";
      $scope.password = "";
      $scope.successMessage = "Login successful!";
    } else {
```

```
    $scope.errorMessage = "Invalid username or password";
  }
 };

});
```

Output -:



REGISTRATION & LOGIN

Register

First Name:	Akhilesh
Last Name:	Jadhav
Username:	Akhil
Password:	••••••••••

Register

Login

Username:	Akhil
Password:	••••••••••

Login

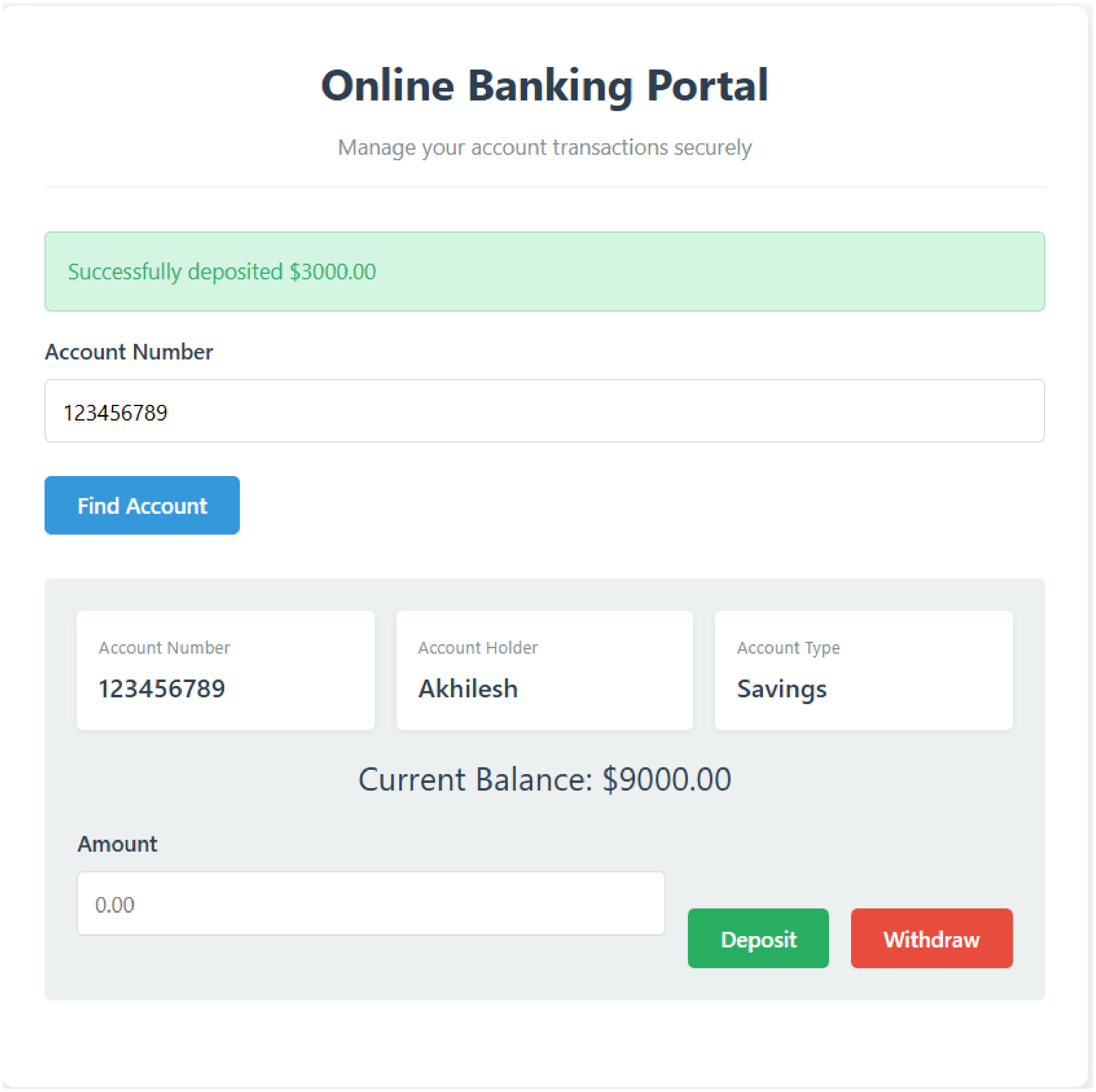
Practical No. 10

Title -: Design and implement a business interface with necessary business logic for any web application using EJB. e.g., Design and implement the web application logic for deposit and withdraw amount transactions using EJB.

Code -:

```
package com.banking.ejb;

import com.banking.model.Account;
import javax.ejb.Stateless;
import javax.persistence.EntityManager;
import javax.persistence.PersistenceContext;

@Stateless
public class AccountServiceImpl implements AccountService {

  @PersistenceContext(unitName = "BankingPU")
  private EntityManager em;

  @Override
  public Account createAccount(String accountNumber, String accountHolder, double
initialDeposit) {
    Account account = new Account(accountNumber, accountHolder, initialDeposit);
    em.persist(account);
    return account;
  }

  @Override
  public Account findAccount(String accountNumber) {
    return em.find(Account.class, accountNumber);
  }

  @Override
  public Account deposit(String accountNumber, double amount) throws
TransactionException {
    if (amount <= 0) {
      throw new TransactionException("Deposit amount must be positive");
    }

    Account account = findAccount(accountNumber);
    if (account == null) {
            throw new TransactionException("Account not found");
        }

        account.setBalance(account.getBalance() + amount);
        return em.merge(account);
    }

    @Override
    public Account withdraw(String accountNumber, double amount) throws
TransactionException {
        if (amount <= 0) {
            throw new TransactionException("Withdrawal amount must be positive");
        }

        Account account = findAccount(accountNumber);
        if (account == null) {
            throw new TransactionException("Account not found");
        }

        if (account.getBalance() < amount) {
            throw new TransactionException("Insufficient funds");
        }

        account.setBalance(account.getBalance() - amount);
        return em.merge(account);
    }
}

package com.banking.web;

import com.banking.ejb.AccountService;
import com.banking.ejb.TransactionException;
import com.banking.model.Account;
import java.io.IOException;
import javax.ejb.EJB;
import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;

@WebServlet("/account")
public class AccountServlet extends HttpServlet {
    @EJB
    private AccountService accountService;

    protected void doPost(HttpServletRequest request, HttpServletResponse response)
            throws ServletException, IOException {

        String action = request.getParameter("action");
        String accountNumber = request.getParameter("accountNumber");

        try {
            switch (action) {
                case "deposit":
                    double depositAmount =
Double.parseDouble(request.getParameter("amount"));
                    Account depositedAccount = accountService.deposit(accountNumber,
depositAmount);
                    request.setAttribute("account", depositedAccount);
                    request.setAttribute("message", "Deposit successful!");
                    break;

                case "withdraw":
                    double withdrawAmount =
Double.parseDouble(request.getParameter("amount"));
                    Account withdrawnAccount = accountService.withdraw(accountNumber,
withdrawAmount);
                    request.setAttribute("account", withdrawnAccount);
                    request.setAttribute("message", "Withdrawal successful!");
                    break;

                case "find":
                    Account foundAccount = accountService.findAccount(accountNumber);
                    if (foundAccount != null) {
                        request.setAttribute("account", foundAccount);
                    } else {
                        request.setAttribute("error", "Account not found");
                    }
                    break;
            }
        } catch (TransactionException e) {
            request.setAttribute("error", e.getMessage());
        } catch (NumberFormatException e) {
            request.setAttribute("error", "Invalid amount format");
        }
        request.getRequestDispatcher("/index.jsp").forward(request, response);
    }
}

<?xml version="1.0" encoding="UTF-8"?>
<project xmlns="http://maven.apache.org/POM/4.0.0"
         xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
         xsi:schemaLocation="http://maven.apache.org/POM/4.0.0
         http://maven.apache.org/xsd/maven-4.0.0.xsd">
    <modelVersion>4.0.0</modelVersion>

    <groupId>com.banking</groupId>
    <artifactId>BankingApp</artifactId>
    <version>1.0</version>
    <packaging>war</packaging>

    <properties>
        <project.build.sourceEncoding>UTF-8</project.build.sourceEncoding>
        <maven.compiler.source>1.8</maven.compiler.source>
        <maven.compiler.target>1.8</maven.compiler.target>
    </properties>

    <dependencies>
        <!-- Java EE 8 API -->
        <dependency>
            <groupId>javax</groupId>
            <artifactId>javaee-api</artifactId>
            <version>8.0</version>
            <scope>provided</scope>
        </dependency>

        <!-- JSTL -->
        <dependency>
            <groupId>javax.servlet</groupId>
            <artifactId>jstl</artifactId>
            <version>1.2</version>
        </dependency>
    </dependencies>

    <build>
        <finalName>BankingApp</finalName>
    </build>
</project>
```

Output -:



Online Banking Portal

Manage your account transactions securely

Successfully deposited $3000.00

Account Number

123456789

Account Number	Account Holder	Account Type
123456789	Akhilesh	Savings

Current Balance: $9000.00

Amount

0.00