310257
WEB TECHNOLOGY LABORATORY

Third Year of Computer Engineering (2019 Course)

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2021-2022

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Exercise Number	1: Website Evaluation
Question Description	Case study: Before coding the website, planning is important, students should visit different websites (Min. 5) for the different client projects and note down the evaluation results for these websites, either a good website or a bad website in the attached Exercise 1.docx template file. Upload it as PDF File. Choose Any Group! Group 1 https://www.codecademy.com/ https://www.programiz.com/ https://www.youtube.com/ https://getbootstrap.com/ https://leetcode.com/ Group 2 http://www.cousera.org/ https://www.whatsapp.com/ https://www.hackerearth.com/ https://www.wolframalpha.com/ https://nodejs.org/ Group 3 https://www.postman.com/ https://www.mongodb.com https://www.npmjs.com/ https://www.hackerrank.com/ https://reactjs.org/ Group 4 https://www.udemy.com/ https://jquery.com/ https://angularjs.org/ https://www.codechef.com https://ant.design/
Technology Used	HTML & CSS
Software's Used	Visual Studio Code & Google Chrome Browser

SAMPLE OUTPUT

Sr.No	Website URL	Purpose of Website	Things liked in the website	Things disliked in the website	Overall evaluation of	Points (1 to 10)
1	https://ant.design/	• Evaluating design quality • Guide each designer towards better judgment and decision-making. • Format For the Designs • A design system for enterprise-level products	• Has wide range of input components • Very User- friendly • Proper Guidelines are given	• They don't expose all of their types • It's painful to write tests. • It also reduce the scope of gathering of detailed information as the result shown in this is in structured format.	Good	9

Exercise Number	2: Implement a web page
Question Description	Implement a web page index.html for any client website using the following: • HTML syntax: heading tags, basic tags and attributes, video, audio, frames, tables, images, lists, links for text and images, forms etc. • Use of Internal CSS, Inline CSS, External CSS • Use at least 2 pages on your website Choose one title below: **1. Hotel Website** **2. Online Shopping** **3. Learning Management System** **4. Railway Reservation System** **5. Photography Website** **6. Library Management System** **7. Personal Portfolio** **8. Pharmacy Management system** **The final folder has to be zip and then upload.* ** Students have to individually submit the work.*
Technology Used	HTML & CSS
Software's Used	Visual Studio Code & Google Chrome Browser

SAMPLE SOURCE CODE

index.html

```html
<!DOCTYPE html>
<html lang="en">
  <head>
    <title>Page Title</title>
    <meta charset="UTF-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1" />
    <style>
      * {
        box-sizing: border-box;
      }

      /* Style the body */
      body {
        font-family: Arial, Helvetica, sans-serif;
        margin: 0;
      }

      /* Header/logo Title */
      .header {
        padding: 80px;
        text-align: center;
        background: #1abc9c;
        color: white;
      }

      /* Increase the font size of the heading */
      .header h1 {
        font-size: 40px;
      }
```

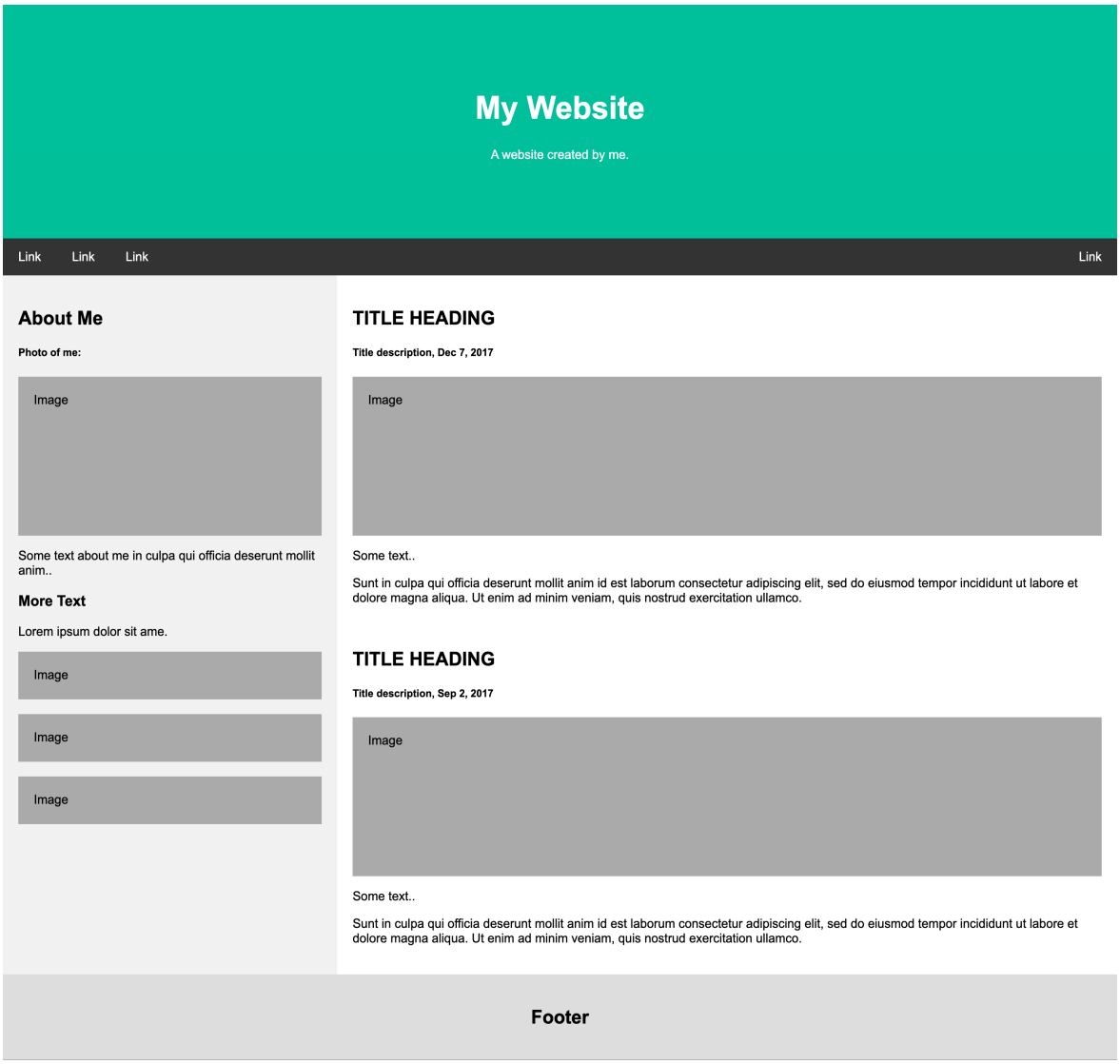
```
/* Style the top navigation bar */
.navbar {
  overflow: hidden;
  background-color: #333;
}

/* Style the navigation bar links */
.navbar a {
  float: left;
  display: block;
  color: white;
  text-align: center;
  padding: 14px 20px;
  text-decoration: none;
}

/* Right-aligned link */
.navbar a.right {
  float: right;
}

/* Change color on hover */
.navbar a:hover {
  background-color: #ddd;
  color: black;
}

/* Column container */
.row {
  display: -ms-flexbox; /* IE10 */
  display: flex;
  -ms-flex-wrap: wrap; /* IE10 */
  flex-wrap: wrap;
}

.side {
  -ms-flex: 30%; /* IE10 */
  flex: 30%;
  background-color: #f1f1f1;
  padding: 20px;
}

.main {
  -ms-flex: 70%; /* IE10 */
  flex: 70%;
  background-color: white;
  padding: 20px;
}

.fakeimg {
  background-color: #aaa;
  width: 100%;
  padding: 20px;
}

.footer {
  padding: 20px;
  text-align: center;
  background: #ddd;
}
```

```
    @media screen and (max-width: 700px) {
      .row {
        flex-direction: column;
      }
    }
    @media screen and (max-width: 400px) {
      .navbar a {
        float: none;
        width: 100%;
      }
    }
  </style>
</head>
<body>
  <div class="header">
    <h1>My Website</h1>
    <p>A website created by me.</p>
  </div>

  <div class="navbar">
    <a href="#">Link</a>
    <a href="#">Link</a>
    <a href="#">Link</a>
    <a href="#" class="right">Link</a>
  </div>

  <div class="row">
    <div class="side">
      <h2>About Me</h2>
      <h5>Photo of me:</h5>
      <div class="fakeimg" style="height: 200px">Image</div>
      <p>Some text about me in culpa qui officia deserunt mollit anim..</p>
      <h3>More Text</h3>
      <p>Lorem ipsum dolor sit ame.</p>
      <div class="fakeimg" style="height: 60px">Image</div>
      <br />
      <div class="fakeimg" style="height: 60px">Image</div>
      <br />
      <div class="fakeimg" style="height: 60px">Image</div>
    </div>
    <div class="main">
      <h2>TITLE HEADING</h2>
      <h5>Title description, Dec 7, 2017</h5>
      <div class="fakeimg" style="height: 200px">Image</div>
      <p>Some text..</p>
      <p>
        Sunt in culpa qui officia deserunt mollit anim id est laborum
        consectetur adipiscing elit, sed do eiusmod tempor incididunt ut
        labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud
        exercitation ullamco.
      </p>
      <br />
      <h2>TITLE HEADING</h2>
      <h5>Title description, Sep 2, 2017</h5>
      <div class="fakeimg" style="height: 200px">Image</div>
      <p>Some text..</p>
      <p> Sunt in culpa qui officia deserunt mollit anim id est laborum consectetur adipiscing elit, sed do eiusmod tempor
incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco.
      </p>
    </div>
```

```
  </div>

  <div class="footer">
    <h2>Footer</h2>
  </div>
 </body>
</html>
```

SAMPLE OUTPUT

Screenshot 1



Exercise Number	3: Implement a Scientific Calculator application using JavaScript
Question Description	**Implement an application in JavaScript using the following:** a) Design UI of the application using HTML, CSS etc. b) Include JavaScript validation c) Use of prompt and alert window using Java Script e.g., Design and implement a simple calculator using JavaScript for operations like addition, multiplication, subtraction, division, the square of a number etc. a) Design calculator interface like text field for input and output, buttons for numbers and operators etc. b) Validate input values c) Prompt/alerts for invalid values etc. **Note:** **1. Find the attached reference image and design the calculator likewise.** **2. You have to use at least more than 20 Buttons** **Your Folder Structure is as follows:** index.html index.js
Technology Used	HTML, CSS & JavaScript
Software's Used	Visual Studio Code & Google Chrome Browser

SAMPLE SOURCE CODE

index.html

```
<html>
 <head>
  <style>
  h1{
     font:3em Futura, 'Century Gothic', AppleGothic, sans-serif;
  }
  input[type=button] {
     color:#08233e;
     font:2em Futura, 'Century Gothic', AppleGothic, sans-serif;
      /* ... other rules ... */
     cursor:pointer;
  }
  input[type=text] {
     color:#08233e;
     font:3.5em Futura, 'Century Gothic', AppleGothic, sans-serif;
      /* ... other rules ... */
     cursor:pointer;
  }
  input[type=button]:hover {
     background-color:rgba(255,204,0,0.8);
  }
  </style>
 </head>
 <body>
  <h1>Scientific Calculator</h1>
  <input type="text" value="0" id="tbox" />
  <br/><br/>
```

```
    <input type="button" value="CLEAR" onclick="document.getElementById('tbox').value=0" />
    <input type="button" value="BACKSPACE" onclick="backspace();"/>
    <br/><br/>

    <input type="button" value="1" onclick="setTboxValue(1)" />
    <input type="button" value="2" onclick="setTboxValue(2)" />
    <input type="button" value="3" onclick="setTboxValue(3)" />
    <input type="button" value="4" onclick="setTboxValue(4)" />
    <input type="button" value="5" onclick="setTboxValue(5)" />
    <input type="button" value="6" onclick="setTboxValue(6)" />
    <input type="button" value="7" onclick="setTboxValue(7)" />
    <input type="button" value="8" onclick="setTboxValue(8)" />
    <input type="button" value="9" onclick="setTboxValue(9)" />
    <input type="button" value="0" onclick="setTboxValue(0)" />
    <input type="button" value="." onclick="setTboxValue('.')" />
    <br/><br/>

    <input type="button" value="+" onclick="BinaryOperatorClick('+')" />
    <input type="button" value="-" onclick="BinaryOperatorClick('-')" />
    <input type="button" value="*" onclick="BinaryOperatorClick('*')" />
    <input type="button" value="/" onclick="BinaryOperatorClick('/')" />
    <input type="button" value="=" onclick="equalOperator()" />
    <br/><br/>

    <input type="button" value="e^x" onclick="expOperator()" />
    <input type="button" value="x^2" onclick="squareOperator()" />
    <input type="button" value="x^3" onclick="cubeOperator()" />
    <input type="button" value="x^y" onclick="xpowyOperator()" />
    <br/><br/>

    <input type="button" value="sqrt" onclick="sqrtOperator()" />
    <input type="button" value="log" onclick="logOperator()" />
    <br/><br/>

    <input type="button" value="sin" onclick="sinOperator()" />
    <input type="button" value="cos" onclick="cosOperator()" />
    <input type="button" value="tan" onclick="tanOperator()" />
    <input type="button" value="sin^-1" onclick="asinOperator()" />
    <input type="button" value="cos^-1" onclick="acosOperator()" />
    <input type="button" value="tan^-1" onclick="atanOperator()" />
    <br/><br/>

    <input type="button" value="Rand" onclick="document.getElementById('tbox').value=Math.random();"/>
    <input type="button" value="pi" onclick="document.getElementById('tbox').value=3.14285714286" />
    <input type="button" value="x!" onclick="Factorial()" />

    <br/><br/>
    <script type="text/javascript" src="./index.js"></script>
</html>
```

Index.js

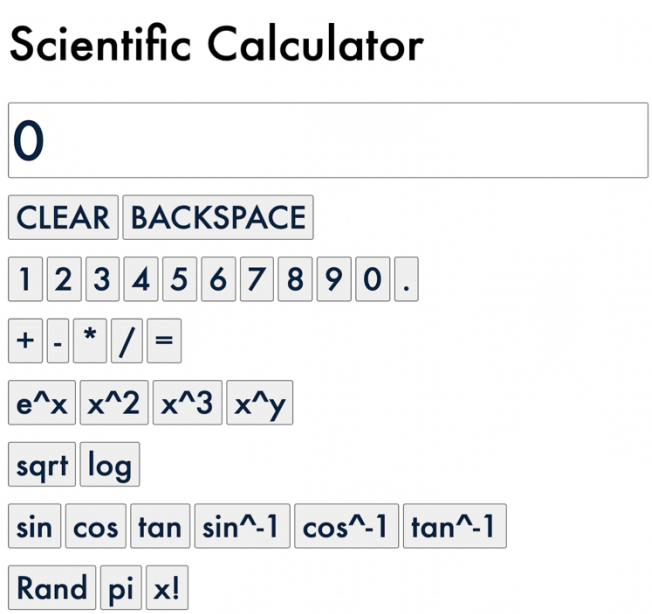
```
var no1 = 0, no2 = 0, ans = 0; BinaryOperator = "", x = 0;

function setTboxValue(number) {
    if (document.getElementById("tbox").value === '0') document.getElementById("tbox").value = number;
    else
        document.getElementById("tbox").value = document.getElementById("tbox").value + number + "";
}

function BinaryOperatorClick(operator) {
```

```
    no1 = parseFloat(document.getElementById("tbox").value);
    BinaryOperator = operator;
    document.getElementById("tbox").value = 0;
}

function equalOperator() {
    no2 = parseFloat(document.getElementById("tbox").value);

    if (BinaryOperator === '+') ans = no1 + no2;
    else if (BinaryOperator === '-') ans = no1 - no2;
    else if (BinaryOperator === '*') ans = no1 * no2;
    else if (BinaryOperator === '/') ans = no1 / no2;
    else if (BinaryOperator === '^') ans = Math.pow(x, no2);

    document.getElementById("tbox").value = ans;
}

function expOperator() {
    let n = parseFloat(document.getElementById("tbox").value);
    document.getElementById("tbox").value = Math.exp(n);
}

function squareOperator() {
    let n = parseFloat(document.getElementById("tbox").value);
    document.getElementById("tbox").value = n * n;
}

function cubeOperator() {
    let n = parseFloat(document.getElementById("tbox").value);
    document.getElementById("tbox").value = n * n * n;
}

function sinOperator() {
    let n = parseFloat(document.getElementById("tbox").value);
    document.getElementById("tbox").value = Math.sin(n);
}

function cosOperator() {
    let n = parseFloat(document.getElementById("tbox").value);
    document.getElementById("tbox").value = Math.cos(n);
}

function tanOperator() {
    let n = parseFloat(document.getElementById("tbox").value);
    document.getElementById("tbox").value = Math.tan(n);
}

function asinOperator() {
    let n = parseFloat(document.getElementById("tbox").value);
    document.getElementById("tbox").value = Math.asin(n);
}

function acosOperator() {
    let n = parseFloat(document.getElementById("tbox").value);
    document.getElementById("tbox").value = Math.acos(n);
}

function atanOperator() {
    let n = parseFloat(document.getElementById("tbox").value);
    document.getElementById("tbox").value = Math.atan(n);
```

```
}
function sqrtOperator() {
    let n = parseFloat(document.getElementById("tbox").value);
    document.getElementById("tbox").value = Math.sqrt(n);
}

function logOperator() {
    let n = parseFloat(document.getElementById("tbox").value);
    document.getElementById("tbox").value = Math.log(n);
}

function backspace() {
    let str = document.getElementById("tbox").value;
    str = str.substring(0, str.length - 1);
    if (!str) str = 0;
    document.getElementById("tbox").value = str;
}

function Factorial() {
    var rval = 1;
    var num = parseFloat(document.getElementById("tbox").value);
    for (var i = 2; i <= num; i++) rval = rval * i;
    document.getElementById("tbox").value = rval;
}

function xpowyOperator() {
    x = parseFloat(document.getElementById("tbox").value);
    BinaryOperator = '^';
    document.getElementById("tbox").value = 0;
}
```

SAMPLE OUTPUT

Screenshot 1



Exercise Number	4: Demonstrating the use of Servlet
Question Description	Implement the sample program demonstrating the use of Java Servlet. For Installation : Must use NetBeans 8.2 & MAMP 4.2 in Windows 10 OS 64bit *Software - download links available in video descriptions. *How to Install - video tutorial links available in video descriptions. e.g., Create a database table e-Bookshop (book_id, book_title, book_author, book_price, quantity) using DB like MySQL etc. and display (use SQL Insert & Select query) the table content using servlet. Reference Videos: 1. Hello World Servlet: https://www.youtube.com/watch?v=njdynH1GX20 2. Servlet getParameter() function - get user-entered values from HTML Forms. https://www.youtube.com/watch?v=in7ME9Tt0lo 3. Create Database, Tables & Fields in MySQL using MAMP in Windows 10 OS https://www.youtube.com/watch?v=OaljuuU7VDk 4. Java Servlets Connect MySQL - Insert Data using NetBeans 8.2 & MAMP 4.2 in Windows 10 OS : https://www.youtube.com/watch?v=d0AxTQbt_CM 5. Java Servlets Connect MySQL -Select Data using NetBeans 8.2 & MAMP 4.2 in Windows 10 OS https://www.youtube.com/watch?v=ATRjiqyWy1k Choose any one topic below: 1. Student Management System (stud_id, stud_name, stud_city, stud_registerno, stud_dept,stud_mobile,stud_mailid) 2. eBookshop System (book_id, book_title, book_author, book_price, quantity) 3. Employee Management System (employee_id, employee_name, employee_city, employee_id, employee_dept,employee_mobile,employee_mailid) 4. Faculty Management system (faculty_id, faculty_name, faculty_city, faculty_registerno, faculty_dept,faculty_mobile,faculty_mailid) Your Final Folder has, 1. Exported project from NetBeans as a zip file 2. Screenshots (Entering values by a user, Database Screenshot, Tables Screenshot, Output Screens) Note: The final folder was uploaded as a zip file.
Technology Used	HTML, CSS & Servlet
Software's Used	NetBeans 8.2, MAMP 4.2 & Google Chrome Browser

SAMPLE SOURCE CODE

index.html

```
<!DOCTYPE html>
<html>
  <head>
    <title>Test</title>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
```

```
    </head>
    <body>
      <form action="login" method="post">
        <input type="text" name ="uname" placeholder="username">
        <input type="text" name ="pass" placeholder="password">
        <input type="submit" value="insert">
      </form>

      <form method="post" action="getdata">
        <input type="submit" value="Get data from MySQL">
      </form>
    </body>
</html>
```

login.java

```
import java.io.IOException;
import java.io.PrintWriter;
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.SQLException;
import java.sql.Statement;
import java.util.logging.Level;
import java.util.logging.Logger;
import javax.servlet.ServletException;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;

public class login extends HttpServlet {

    protected void processRequest(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {
      response.setContentType("text/html;charset=UTF-8");
      try (PrintWriter out = response.getWriter()) {

        String uname = request.getParameter("uname");
        String pass = request.getParameter("pass");
        String sql = "INSERT INTO table1 VALUES ('"+uname+"','"+pass+"')";
        out.println(sql);
        try{
        Class.forName("com.mysql.jdbc.Driver");
        Connection con = DriverManager.getConnection("jdbc:mysql://localhost:3306/test", "john","john");
        Statement stmt = con.createStatement();
        stmt.executeUpdate(sql);
        out.println("Data Inserted Successfully !");
         }
        catch (ClassNotFoundException ex)
        {
           ex.printStackTrace();
        }

        } catch (SQLException ex) {
          ex.printStackTrace();
        }
    }


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

```
        processRequest(request, response);
    }
    @Override
    protected void doPost(HttpServletRequest request, HttpServletResponse response)
            throws ServletException, IOException {
        processRequest(request, response);
    }
    @Override
    public String getServletInfo() {
        return "Short description";
    }// </editor-fold>

}
```

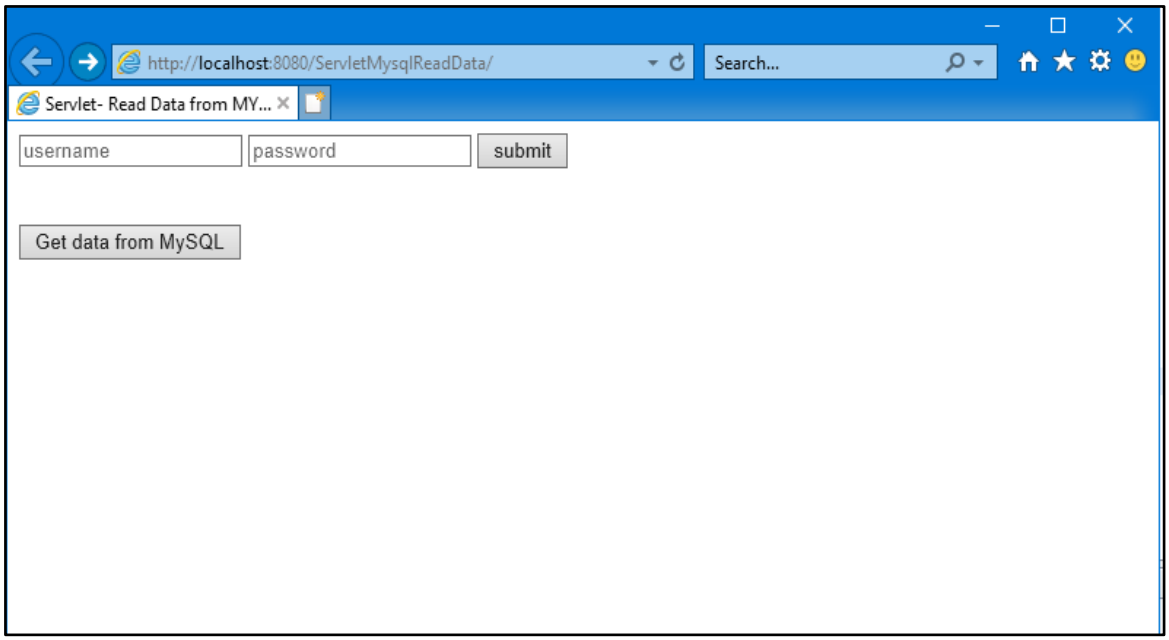
getdata.java

```
import java.io.IOException;
import java.io.PrintWriter;
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.ResultSet;
import java.sql.SQLException;
import java.sql.Statement;
import java.util.logging.Level;
import java.util.logging.Logger;
import javax.servlet.ServletException;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;

public class getdata extends HttpServlet {
    protected void processRequest(HttpServletRequest request, HttpServletResponse response)
            throws ServletException, IOException {
        response.setContentType("text/html;charset=UTF-8");
        try (PrintWriter out = response.getWriter()) {
            String sqlQuery = "SELECT * FROM `table1`";

            try {
            Class.forName("com.mysql.jdbc.Driver");
            Connection con = DriverManager.getConnection("jdbc:mysql://localhost:3306/test","jacob" ,"jacob" );
            Statement stmt = con.createStatement();
            ResultSet rs = stmt.executeQuery(sqlQuery);

            while(rs.next())
            {
                out.println("<h3> Username :"+rs.getString("username")+" & Password :"+rs.getString("password")+"</h3>");
            }
            }
            catch (ClassNotFoundException ex) {
                Logger.getLogger(getdata.class.getName()).log(Level.SEVERE, null, ex);
            }
        }
        catch (SQLException ex) {
                Logger.getLogger(getdata.class.getName()).log(Level.SEVERE, null, ex);
            }
    }

    @Override
    protected void doGet(HttpServletRequest request, HttpServletResponse response)
            throws ServletException, IOException {
        processRequest(request, response);
    }
```

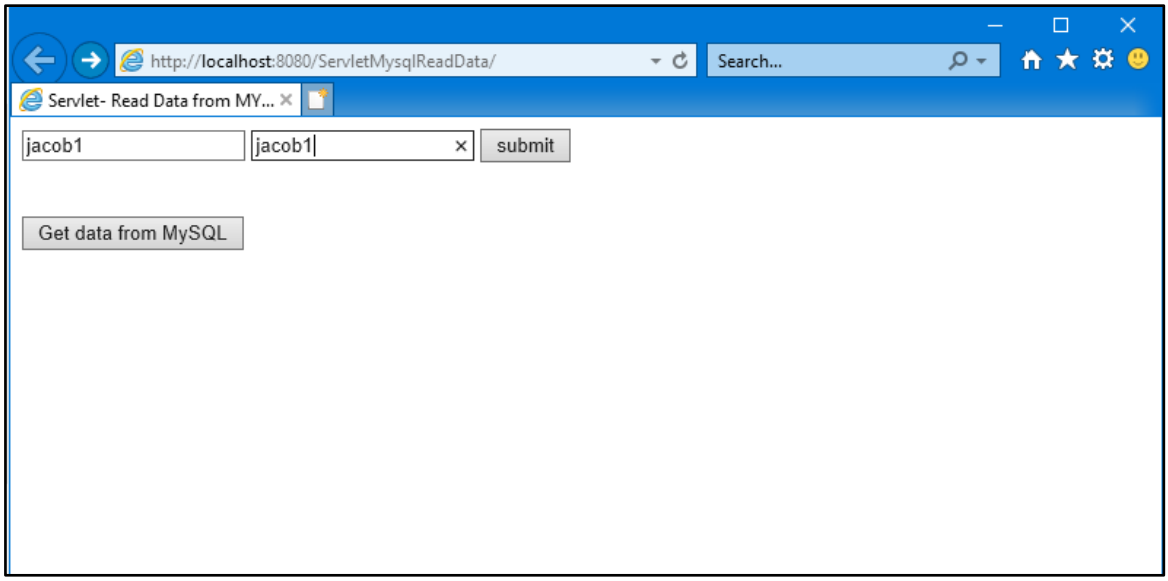
```
    @Override
    protected void doPost(HttpServletRequest request, HttpServletResponse response)
            throws ServletException, IOException {
        processRequest(request, response);
    }
    @Override
    public String getServletInfo() {
        return "Short description";
    }// </editor-fold>

}
```

SAMPLE OUTPUT

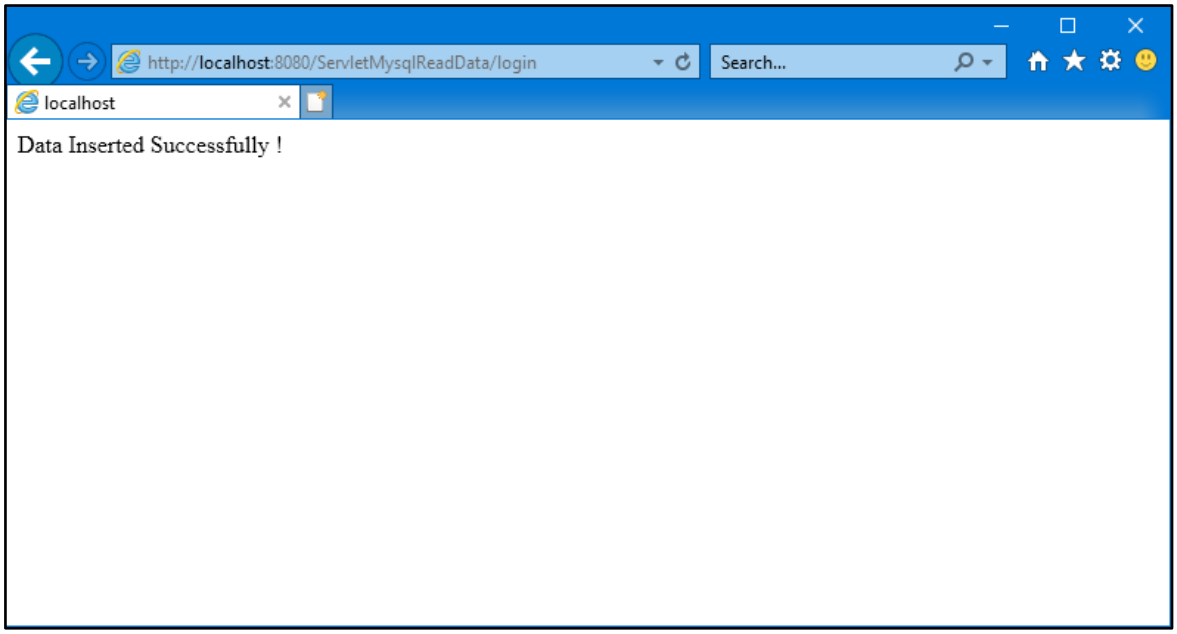
Screenshot 1



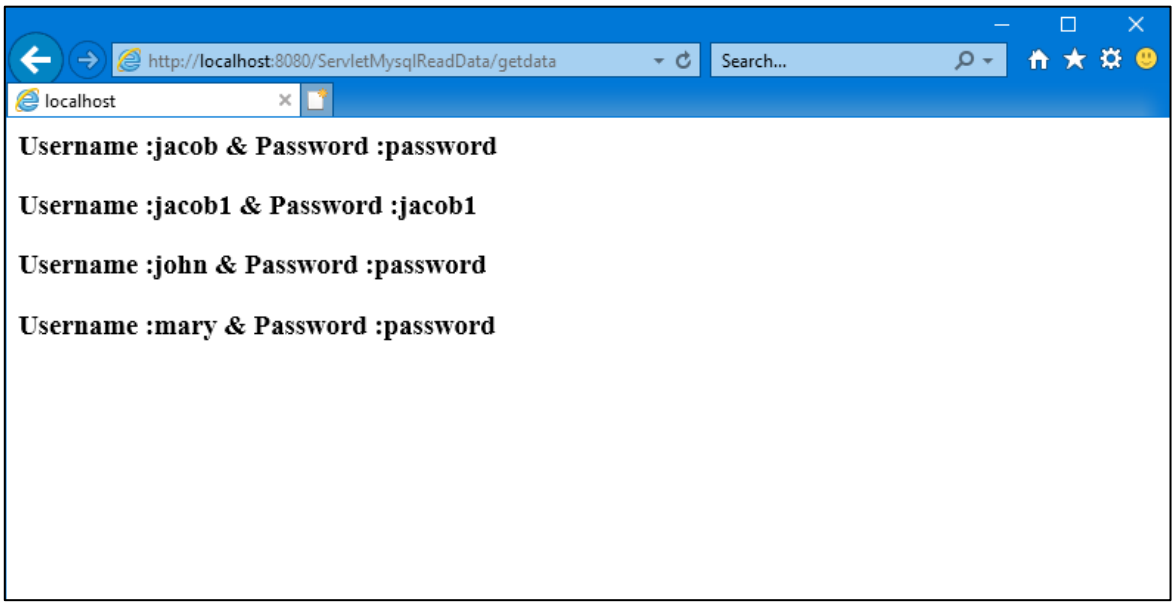
Screenshot 2



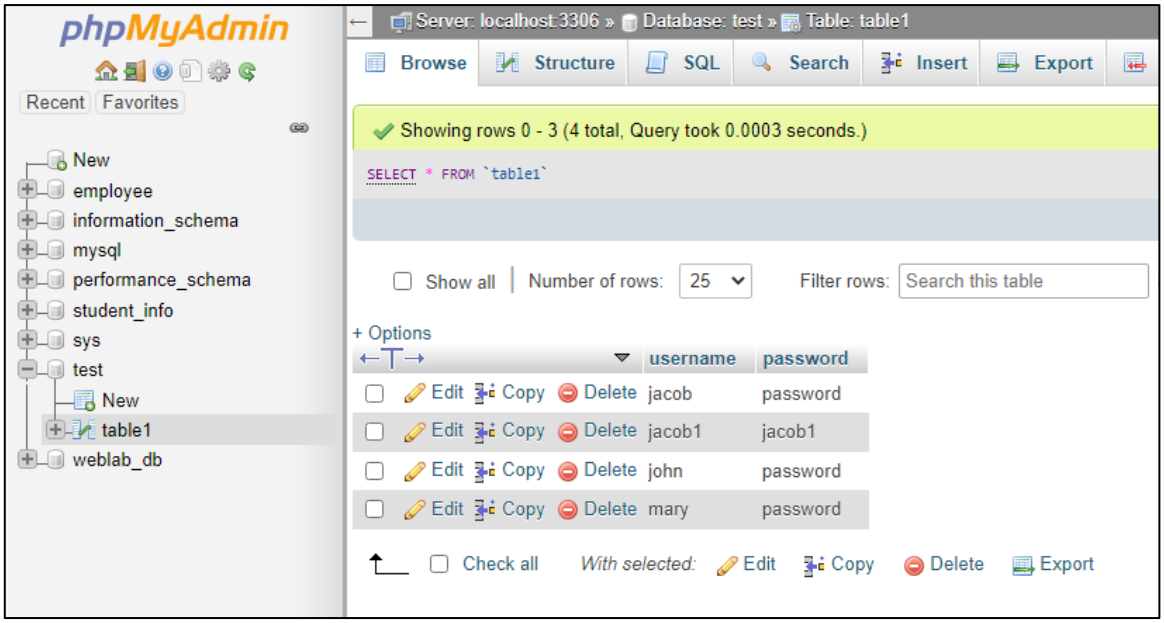
Screenshot 3



Screenshot 4



Screenshot 5



Exercise Number	5 XML
Question Description	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 **Application Type:** 1. Employees 2. Faculties 3. Students 4. Customers **To do:** 1. Create an XML file with DTD by choosing any application from the above. 2. Display the XML file in Browser. 3. Then add the style information into another XML file, which must include an XSL file & XSD file. 4. Open the XML file in a browser to display the information in the form of table format. **Your Final Folder Structure is as follows: (Example Structure)** employees-dtd.xml employees-xsd.xml employee.dtd employee.xsd style.xsl **Note:** Zip and Upload as a single file
Technology Used	XML & XSLT
Software's Used	MAMP 4.2, Visual Studio Code & Google Chrome Browser

SAMPLE SOURCE CODE

employees.xml

```xml
<?xml version="1.0" encoding="utf-8"?>
<employees>
  <employee id="be129">
    <firstname>Jane</firstname>
    <lastname>Doe</lastname>
    <title>Engineer</title>
    <division>Materials</division>
    <building>327</building>
    <room>19</room>
    <supervisor>be131</supervisor>
  </employee>
  <employee id="be130">
    <firstname>William</firstname>
    <lastname>Defoe</lastname>
    <title>Accountant</title>
    <division>Accts Payable</division>
    <building>326</building>
    <room>14a</room>
  </employee>
```

```
  <employee id="be131">
    <firstname>Jack</firstname>
    <lastname>Dee</lastname>
    <title>Engineering Manager</title>
    <division>Materials</division>
    <building>327</building>
    <room>21</room>
  </employee>
  <employee id="be132">
    <firstname>Sandra</firstname>
    <lastname>Rogers</lastname>
    <title>Engineering</title>
    <division>Materials</division>
    <building>327</building>
    <room>22</room>
  </employee>
  <employee id="be133">
    <firstname>Steve</firstname>
    <lastname>Casey</lastname>
    <title>Engineering</title>
    <division>Materials</division>
    <building>327</building>
    <room>24</room>
  </employee>
  <employee id="be135">
    <firstname>Michelle</firstname>
    <lastname>Michaels</lastname>
    <title>COO</title>
    <division>Management</division>
    <building>216</building>
    <room>264</room>
  </employee>
</employees>
```

employees.dtd

```
<!ELEMENT employees (#PCDATA|employee)*>
<!ELEMENT employee (firstname,lastname,title,division,building,room,supervisor)>
<!ELEMENT firstname (#PCDATA)>
<!ELEMENT lastname (#PCDATA)>
<!ELEMENT title (#PCDATA)>
<!ELEMENT division (#PCDATA)>
<!ELEMENT building (#PCDATA)>
<!ELEMENT room (#PCDATA)>
<!ELEMENT supervisor (#PCDATA)>
```

employees-dtd.xml

```
<?xml version="1.0" encoding="utf-8"?>
<!DOCTYPE employees SYSTEM "employees.dtd">
<?xml-stylesheet type="text/xsl" href="style.xsl"?>
<employees>
  <employee id="be129">
    <firstname>Jane</firstname>
    <lastname>Doe</lastname>
    <title>Engineer</title>
    <division>Materials</division>
    <building>327</building>
    <room>19</room>
    <supervisor>be131</supervisor>
  </employee>
  <employee id="be130">
    <firstname>William</firstname>
    <lastname>Defoe</lastname>
```

```
      <title>Accountant</title>
      <division>Accts Payable</division>
      <building>326</building>
      <room>14a</room>
   </employee>
   <employee id="be131">
      <firstname>Jack</firstname>
      <lastname>Dee</lastname>
      <title>Engineering Manager</title>
      <division>Materials</division>
      <building>327</building>
      <room>21</room>
   </employee>
   <employee id="be132">
      <firstname>Sandra</firstname>
      <lastname>Rogers</lastname>
      <title>Engineering</title>
      <division>Materials</division>
      <building>327</building>
      <room>22</room>
   </employee>
   <employee id="be133">
      <firstname>Steve</firstname>
      <lastname>Casey</lastname>
      <title>Engineering</title>
      <division>Materials</division>
      <building>327</building>
      <room>24</room>
   </employee>
   <employee id="be135">
      <firstname>Michelle</firstname>
      <lastname>Michaels</lastname>
      <title>COO</title>
      <division>Management</division>
      <building>216</building>
      <room>264</room>
   </employee>
</employees>
```

employees-xsd.xml

```
<?xml version="1.0" encoding="utf-8"?>
<?xml-stylesheet type="text/xsl" href="style.xsl"?>
<employees
      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      version="1.0"
      xsi:noNamespaceSchemaLocation="employees.xsd"
>
   <employee id="be129">
      <firstname>Jane</firstname>
      <lastname>Doe</lastname>
      <title>Engineer</title>
      <division>Materials</division>
      <building>327</building>
      <room>19</room>
      <supervisor>be131</supervisor>
   </employee>
   <employee id="be130">
      <firstname>William</firstname>
      <lastname>Defoe</lastname>
      <title>Accountant</title>
      <division>Accts Payable</division>
```

```
      <building>326</building>
      <room>14a</room>
   </employee>
   <employee id="be131">
      <firstname>Jack</firstname>
      <lastname>Dee</lastname>
      <title>Engineering Manager</title>
      <division>Materials</division>
      <building>327</building>
      <room>21</room>
   </employee>
   <employee id="be132">
      <firstname>Sandra</firstname>
      <lastname>Rogers</lastname>
      <title>Engineering</title>
      <division>Materials</division>
      <building>327</building>
      <room>22</room>
   </employee>
   <employee id="be133">
      <firstname>Steve</firstname>
      <lastname>Casey</lastname>
      <title>Engineering</title>
      <division>Materials</division>
      <building>327</building>
      <room>24</room>
   </employee>
   <employee id="be135">
      <firstname>Michelle</firstname>
      <lastname>Michaels</lastname>
      <title>COO</title>
      <division>Management</division>
      <building>216</building>
      <room>264</room>
   </employee>
</employees>
```

employees.xsd

```
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
   <xs:element name="employees">
   <xs:complexType>
      <xs:sequence>
         <xs:element name="employee">
         <xs:complexType>
            <xs:sequence>
               <xs:element name="firstname" type="xs:string"/>
               <xs:element name="lastname" type="xs:string"/>
               <xs:element name="title" type="xs:string"/>
               <xs:element name="division" type="xs:string"/>
               <xs:element name="building" type="xs:string"/>
               <xs:element name="room" type="xs:string"/>
               <xs:element name="supervisor" type="xs:string"/>
            </xs:sequence>
         </xs:complexType>
         </xs:element>
      </xs:sequence>
   </xs:complexType>
   </xs:element>
</xs:schema>
```

SAMPLE OUTPUT

Screenshot 1

This XML file does not appear to have any style information associated with it. The document tree is shown below.


```
▼<employees>
 ▼<employee id="be129">
    <firstname>Jane</firstname>
    <lastname>Doe</lastname>
    <title>Engineer</title>
    <division>Materials</division>
    <building>327</building>
    <room>19</room>
    <supervisor>be131</supervisor>
  </employee>
 ▼<employee id="be130">
    <firstname>William</firstname>
    <lastname>Defoe</lastname>
    <title>Accountant</title>
    <division>Accts Payable</division>
    <building>326</building>
    <room>14a</room>
  </employee>
 ▼<employee id="be131">
    <firstname>Jack</firstname>
    <lastname>Dee</lastname>
    <title>Engineering Manager</title>
    <division>Materials</division>
    <building>327</building>
    <room>21</room>
  </employee>
 ▼<employee id="be132">
    <firstname>Sandra</firstname>
    <lastname>Rogers</lastname>
    <title>Engineering</title>
    <division>Materials</division>
    <building>327</building>
    <room>22</room>
  </employee>
 ▼<employee id="be133">
    <firstname>Steve</firstname>
    <lastname>Casey</lastname>
    <title>Engineering</title>
    <division>Materials</division>
```


Screenshot 2

My Employee Collection

Firstname	lastname	title	division	building	room	supervisor
Jane	Doe	Engineer	Materials	327	19	be131
William	Defoe	Accountant	Accts Payable	326	14a	
Jack	Dee	Engineering Manager	Materials	327	21	
Sandra	Rogers	Engineering	Materials	327	22	
Steve	Casey	Engineering	Materials	327	24	
Michelle	Michaels	COO	Management	216	264	

Screenshot 3

My Employee Collection

Firstname	lastname	title	division	building	room	supervisor
Jane	Doe	Engineer	Materials	327	19	be131
William	Defoe	Accountant	Accts Payable	326	14a	
Jack	Dee	Engineering Manager	Materials	327	21	
Sandra	Rogers	Engineering	Materials	327	22	
Steve	Casey	Engineering	Materials	327	24	
Michelle	Michaels	COO	Management	216	264	

Exercise Number	6 PHP WEB APPLICATION
Question Description	Build a dynamic web application using PHP and MySQL. 1. Create database tables in MySQL and create a connection with PHP 2. Create the add, update, delete and retrieve functions in the PHP web app interacting with the MySQL database. **For Installation :** **Must use MAMP 4.2 in Windows 10 OS 64bit** **Software - download links available in video descriptions.* **How to Install - video tutorial links available in video descriptions.* **Download MAMP 4.2** https://www.dropbox.com/s/czjh5lf4ehlzr0h/MAMP_MAMP_PRO_4.2.0.exe.zip?dl=0 **Reference Videos:** 1. PHP-MySQL CRUD Operations using MAMP in Windows 10 https://www.youtube.com/watch?v=XXgoA6dMvGE 2. Create Database, Tables & Fields in MySQL using MAMP in Windows 10 OS https://www.youtube.com/watch?v=OaljuuU7VDk **Choose any one topic from below:** **1. Student Management System** (stud_id, stud_name, stud_city, stud_registerno, stud_dept,stud_mobile,stud_mailid) **2. eBookshop System** (book_id, book_title, book_author, book_price, quantity) **3. Employee Management System** (employee_id, employee_name, employee_city, employee_id, employee_dept,employee_mobile,employee_mailid) **4. Faculty Management system** (faculty_id, faculty_name, faculty_city, faculty_registerno, faculty_dept,faculty_mobile,faculty_mailid) **Your Final Folder has,** 1. Project folder 2. Screenshots (Entering values by a user, Database Screenshot, Tables Screenshot, Output Screens) *Note: The final folder was uploaded as a zip file.*
Technology Used	PHP, HTML, CSS & JavaScript
Software's Used	MAMP 4.2, Visual Studio Code & Google Chrome Browser

SAMPLE SOURCE CODE

employees.xml

```
<!DOCTYPE html>
<html>
  <head>
    <title>WTL Exercise 6</title>
    <style>
      #frame1
      {
        border: 10px solid green;
        border-radius: 20px;
        animation: colorchange1 3s infinite;
      }
      #frame2
      {
        border: 10px solid yellow;
        border-radius: 20px;
        animation: colorchange2 3s infinite;
      }
      @keyframes colorchange1
      {
        50% {border-color: lightgrey;}
      }
      @keyframes colorchange2
      {
        50% {border-color: red;}
      }
    </style>
  </head>
  <body>
    <center>
      <h1>WTL Exercise 6 || E-BookShop System || TCOA08 K.Abhishek</h1>
      <iframe id="frame1" width="30%" height="300px" src="add.php"></iframe>
      <iframe id="frame2" width="30%" height="300px" src="delete.php"></iframe>
      <iframe id="frame1" width="30%" height="300px" src="update.php"></iframe>
      <iframe id="frame2" width="48.5%" height="320px" src="view.php"></iframe>
    </center>
  </body>
</html>
```

add.php

```
<?php
  require_once('config.php');
  $bookId = $_POST["bookid"];
  $bookTitle = $_POST["booktitle"];
  $bookAuthor = $_POST["bookauthor"];
  $bookPrice = $_POST["bookprice"];
  $bookQuantity = $_POST["bookquantity"];
  $sql = "INSERT INTO ebooks(book_id, book_title, book_author, book_price, book_quantity) VALUES('$bookId',
'$bookTitle', '$bookAuthor', $bookPrice, $bookQuantity)";
  mysqli_query($conn, $sql);
  mysqli_close($conn);
?>

<html>
<head>
  <title>Add E-Book Page</title>
  <style>
  table {
    text-align: left;
```

```
        border: 2px solid dodgerblue;
        border-radius: 6px;
        font-size: 20px;
    }
    th,
    td {
        border: 2px solid dodgerblue;
        border-radius: 6px;
    }
    input {
        font-size: 16px;
    }
    #submitButton:hover {
        background-color: dodgerblue;
        color: white;
    }
    </style>
</head>
<body>
    <center>
        <h1>Add E-Book Data</h1>
        <form action="" method="post">
            <table>
                <tr>
                    <th>  Book ID</th>
                    <td><input type="text" name="bookid" placeholder="Book ID" required /></td>
                </tr>
                <tr>
                    <th>  Book Title</th>
                    <td><input type="text" name="booktitle" placeholder="Book Title" required /></td>
                </tr>
                <tr>
                    <th>  Book Author</th>
                    <td><input type="text" name="bookauthor" placeholder="Book Author" required /></td>
                </tr>
                <tr>
                    <th>  Book Price (Rs.)   </th>
                    <td><input type="number" name="bookprice" placeholder="Book Price" required /></td>
                </tr>
                <tr>
                    <th>  Book Quantity</th>
                    <td><input type="number" name="bookquantity" placeholder="Book Quantity" required /></td>
                </tr>
            </table>
            <br />
            <input id="submitButton" style="padding:3px; border-radius: 15px;" type="submit"
                value=" Submit " />
        </form>
    </center>
</body>
</html>
```

config.php

```
<?php
$host = "localhost";
$username = "abhishek";
$password = "abhishek";
$dbname = "ebookshop";
$conn = mysqli_connect($host, $username, $password, $dbname);
if(! $conn)
{
```

```
    die('Error: '.mysqli_error());
}
?>
```

delete.php

```
<?php
require_once("config.php");
$bookId = $_POST["bookid"];
$sql = "DELETE FROM ebooks where book_id='$bookId'";
mysqli_query($conn, $sql);
mysqli_close($conn);
?>
<html>
<head>
    <title>Delete E-Book Page</title>
    <style>
    table {
        text-align: left;
        border: 2px solid dodgerblue;
        border-radius: 6px;
        font-size: 20px;
    }
    th,
    td {
        border: 2px solid dodgerblue;
        border-radius: 6px;
    }
    input {
        font-size: 16px;
    }
    #submitButton:hover {
        background-color: dodgerblue;
        color: white;
    }
    </style>
</head>
<body>
    <center>
        <h1>Delete E-Book Data</h1>
        <br />
        <form action="" method="post">
            <table>
                <tr>
                    <th>  Book ID     </th>
                    <td><input type="text" name="bookid" placeholder="Book ID" required /></td>
                </tr>
            </table>
            <br />
            <input id="submitButton" style="padding:3px; border-radius: 15px;" type="submit"
                value=" Submit " />
        </form>
    </center>
</body>
</html>
```

update.php

```
<?php
require_once("config.php");
$bookId = $_POST["bookid"];
$bookTitle = $_POST["booktitle"];
$bookAuthor = $_POST["bookauthor"];
$bookPrice = $_POST["bookprice"];
```

```
$bookQuantity = $_POST["bookquantity"];
$sql = "UPDATE `ebooks` SET `book_title`='$bookTitle', `book_author`='$bookAuthor', `book_price`=$bookPrice,
`book_quantity`=$bookQuantity  WHERE `book_id`='$bookId'";
mysqli_query($conn, $sql);
?>
<html>
  <head>
    <title>Update E-Book Page</title>
    <style>
      table
      {
        text-align: left;
        border: 2px solid dodgerblue;
        border-radius: 6px;
        font-size: 20px;
      }
      th, td
      {
        border: 2px solid dodgerblue;
        border-radius: 6px;
      }
      input
      {
        font-size: 16px;
      }
      #submitButton:hover
      {
        background-color: dodgerblue;
        color: white;
      }
    </style>
  </head>
  <body>
    <center>
    <h1>Update E-Book Data</h1>
    <form action="" method="post">
      <table>
        <tr>
          <th>  Book ID</th>
          <td><input type="text" name="bookid" placeholder="Book ID" required /></td>
        </tr>
        <tr>
          <th>  Book Title</th>
          <td><input type="text" name="booktitle" placeholder="Book Title" required /></td>
        </tr>
        <tr>
          <th>  Book Author</th>
          <td><input type="text" name="bookauthor" placeholder="Book Author" required /></td>
        </tr>
        <tr>
          <th>  Book Price (Rs.)   </th>
          <td><input type="number" name="bookprice" placeholder="Book Price" required /></td>
        </tr>
        <tr>
          <th>  Book Quantity</th>
          <td><input type="number" name="bookquantity" placeholder="Book Quantity" required /></td>
        </tr>
      </table>
      <br/>
```

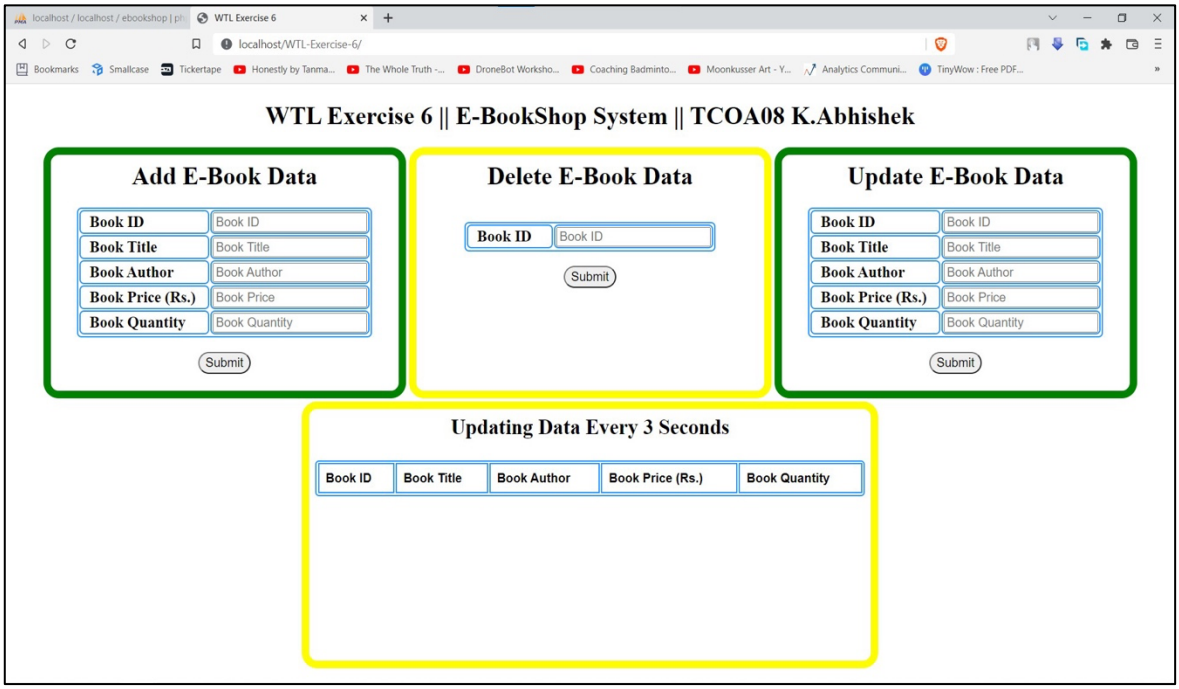
```
        <input id="submitButton" style="padding:3px; border-radius: 15px;" type="submit" value=" Submit "
/>
      </form>
      </center>
   </body>
</html>
```

view.php

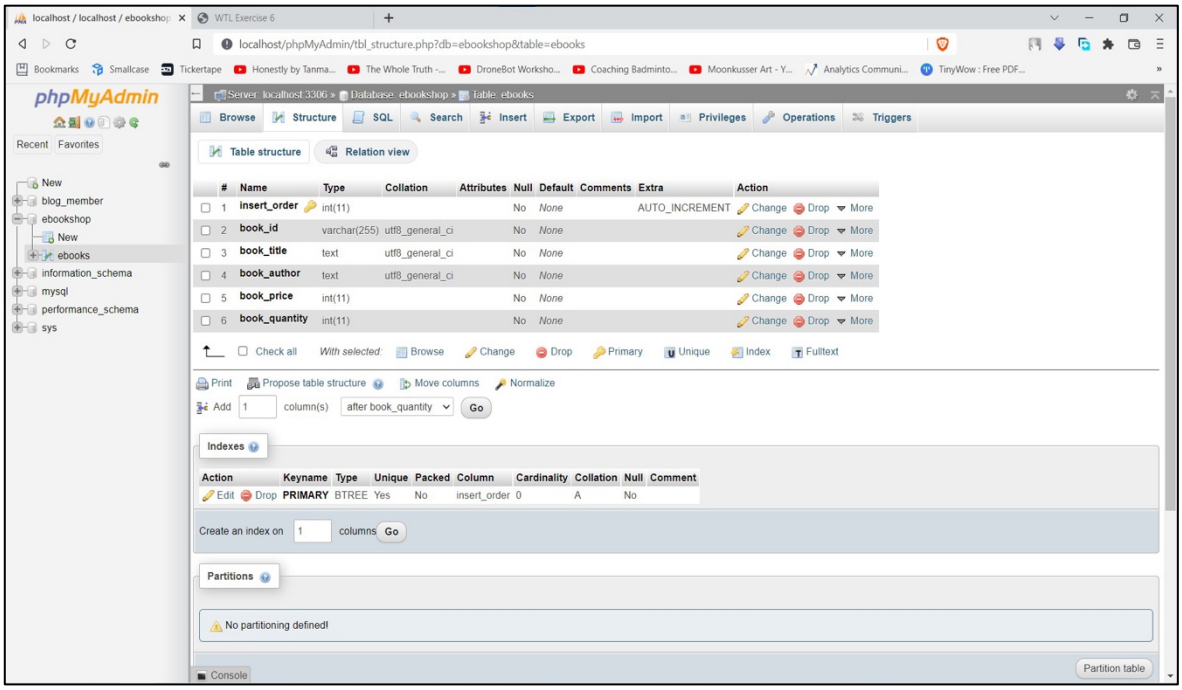
```
<?php
require_once("config.php");
$sql = "SELECT * FROM ebooks ORDER BY insert_order DESC";
$result = mysqli_query($conn, $sql);
?>
<html>
   <head>
      <title>View E-Book Page</title>
      <meta http-equiv="refresh" content="3" />
      <style>
         table {
               font-family: arial, sans-serif; width: 100%; border: 2px solid dodgerblue; border-radius: 5px;
               }
         td, th {
               border: 2px solid dodgerblue; text-align: left;padding: 8px;
               }
         tr:nth-child(even) {
               border: 1px solid dodgerblue; background-color: #e7feff;
            }
      </style>
   </head>
   <body>
      <h3 style='font-size: 27px; text-align: center;'>Updating Data Every 3 Seconds</h3>
      <table>
         <tr>
            <th>Book ID</th>
            <th>Book Title</th>
            <th>Book Author</th>
            <th>Book Price (Rs.)</th>
            <th>Book Quantity</th>
         </tr>
         <?php
            while ($row = mysqli_fetch_assoc($result))
            {
         ?>
               <tr><td> <?php echo $row['book_id']; ?> </td> <td> <?php echo $row['book_title']; ?> </td> <td> <?php
echo $row['book_author']; ?> </td> <td> <?php echo $row['book_price']; ?> </td> <td> <?php echo
$row['book_quantity']; ?> </td></tr>
         <?php
            }
            mysqli_close($conn);
         ?>
      </table>
   </body>
</html>
```

SAMPLE OUTPUT

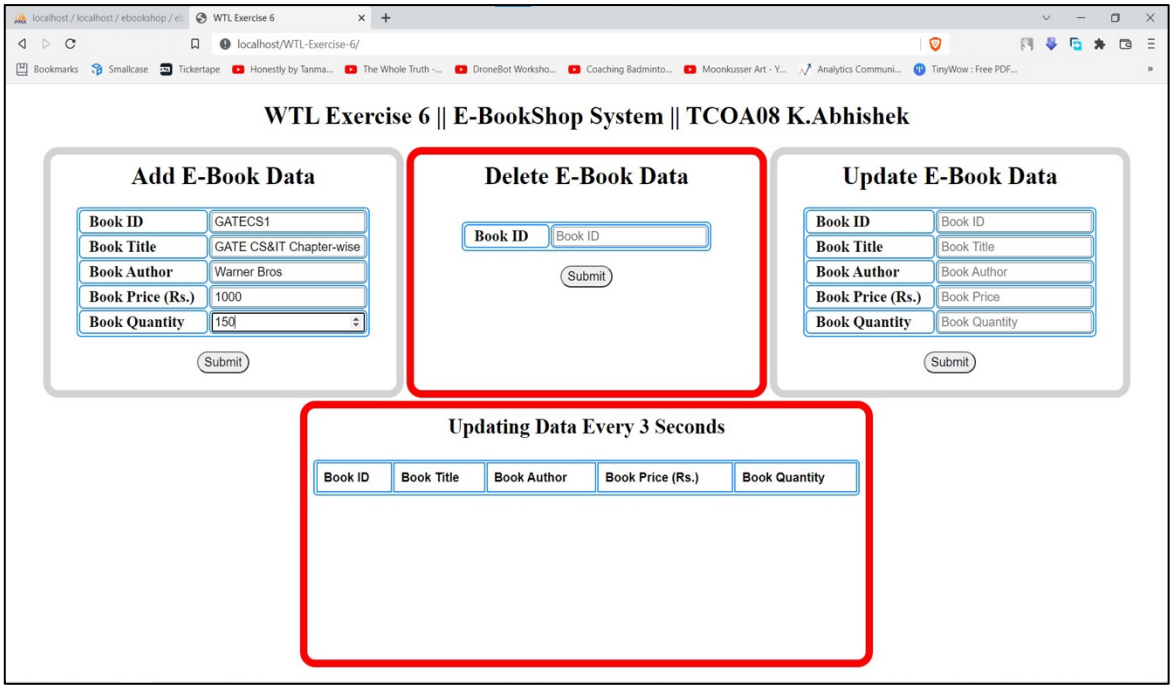
Screenshot 1



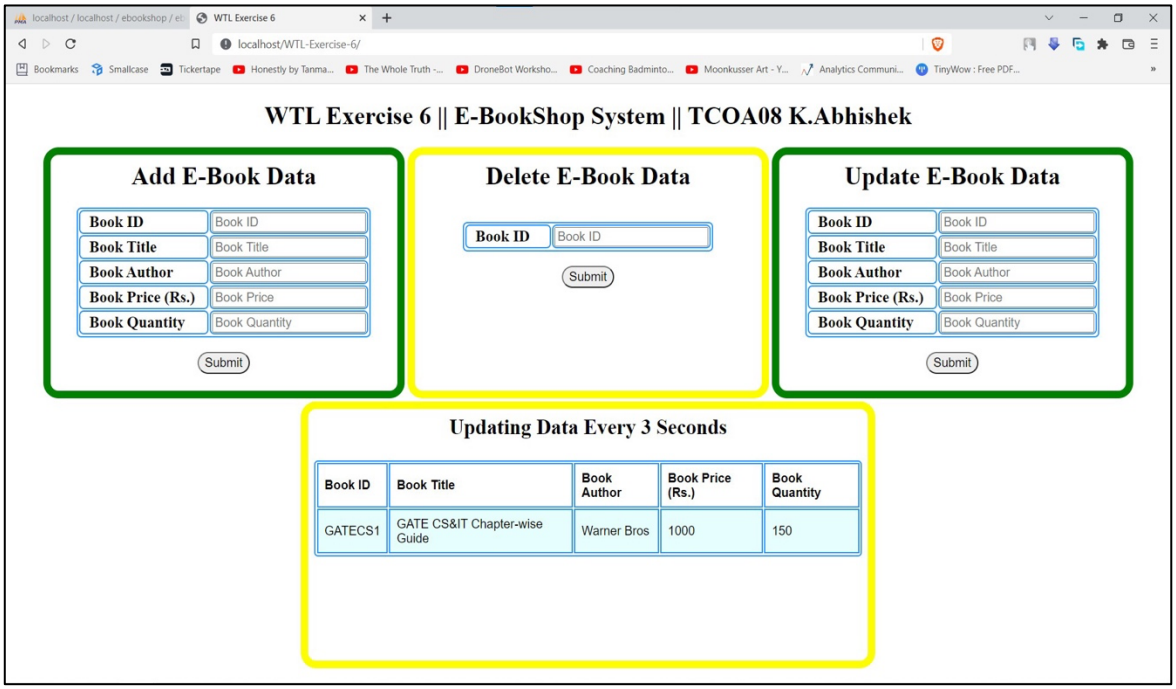
Screenshot 2



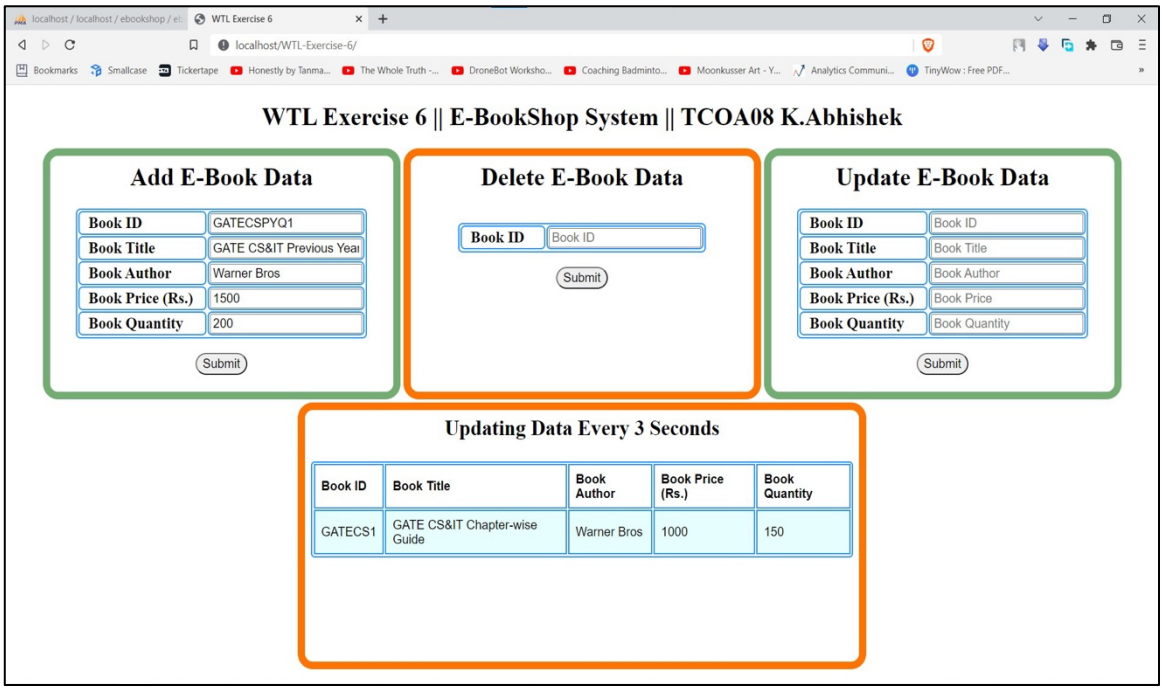
Screenshot 3



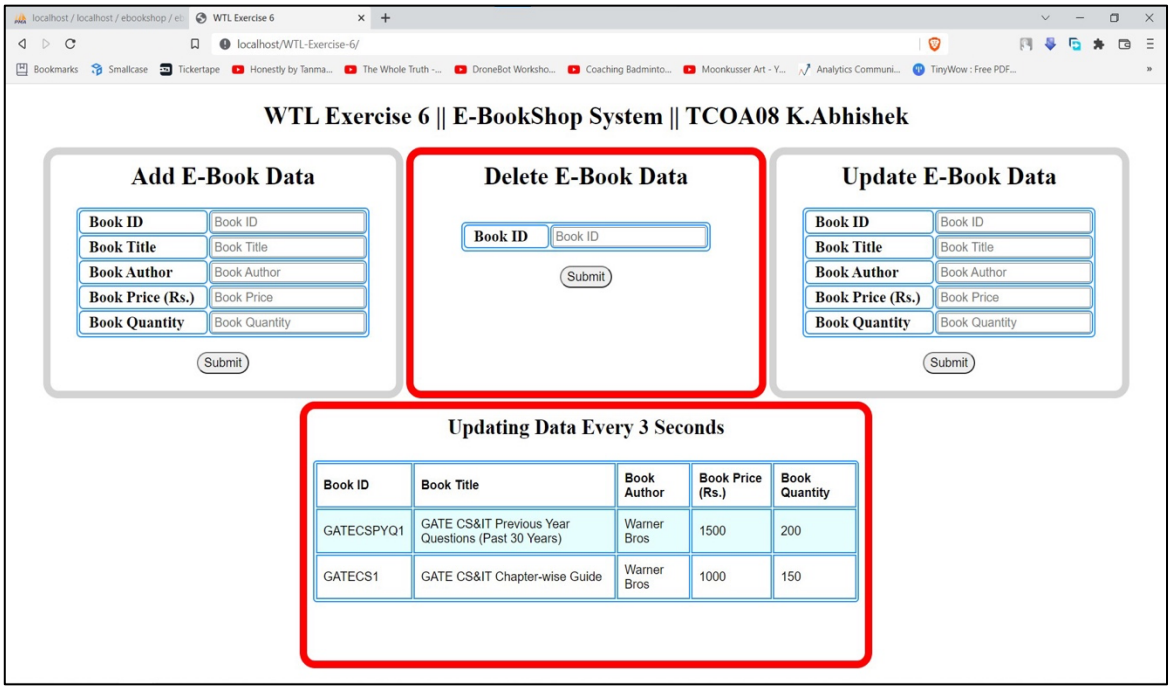
Screenshot 4



Screenshot 5



Screenshot 6



Exercise Number	7 Implement a business interface with necessary logic for any web application using EJB
Question Description	**Objectives:** Design and implement a business interface with necessary business logic for any web application using **Enterprise Java Beans (EJB)**. **Problem Statement:** Design and implement the web application logic for deposit and withdraw the amount transactions using **Enterprise Java Beans (EJB)**. **For Installation:** Must use NetBeans 8.2 in Windows 10 OS 64bit **Exercise Video:** **Implement Bank Application using Enterprise Java Beans (EJB) in NetBeans** https://www.youtube.com/watch?v=LG0pD6uHy3U **Reference Videos:** **Download JDK 1.8** https://www.dropbox.com/s/giklxowul1mp47m/jdk-8u202-windows-x64.zip?dl=0 **Download NetBeans 8.2** https://www.dropbox.com/s/8dlnf4yc4lpytfz/netbeans-8.2-windows.exe.zip?dl=0 **How to Install JDK 1.8 in Windows 10 OS** https://www.youtube.com/watch?v=XcdLGmyAYdc **How to Install NetBeans 8.2 in Windows 10 OS** https://www.youtube.com/watch?v=X1p00aML0ng **Your Final Folder has,** 1. Exported project from NetBeans as a zip file 2. Screenshots ***Note***: *The final folder was uploaded as a zip file.*
Technology Used	JSP, EJB & Servlet
Software's Used	NetBeans 8.2, Google Chrome Browser & Apache Tomcat Server 7

SAMPLE SOURCE CODE

index.html

```
<!DOCTYPE html>
<html>
  <head>
    <title>WTL Exercise-7</title>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <style>
      form
      {
        border: 10px solid green;
        border-radius: 20px;
        animation: colorchange1 3s infinite;
        padding: 30px;
        width: 40%;
```

```
        }

        @keyframes colorchange1
        {
            50% {border-color: yellow;}
        }
    </style>
  </head>
  <body>
    <center>
    <br/>
    <h1>WTL Exercise 7  ||  Bank Application  ||  TCOA08 K.Abhishek</h1>
    <br/><br/><br/>
    <form method="POST" action="Transact">
        <span style="font-size: 25px; font-weight: bold;">Amount:  </span><input type="text" name="amt"
placeholder="Enter Amount" style="font-size: 18px;" required/><br/><br/><br/><br/>

        <input type="radio" name="type" value="deposit"/><span style="font-size: 18px; border: 4px solid blue; padding:
6px; border-radius: 15px; margin-left: 10px;">Deposit</span>
        <input type="radio" name="type" value="withdraw" style="margin-left: 60px;"/><span style="font-size: 18px;
border: 4px solid blue; padding: 6px; border-radius: 15px; margin-left: 10px; display:
inline;">Withdraw</span><br/><br/><br/>

        <input name="submitbutton" type="submit" value="Submit" style="border: 6px solid lightgreen; border-radius:
20px; color: white; font-size: 20px; background-color: dodgerblue; padding: 7px;" />
    </form>
    </center>
  </body>
</html>
```

BankTransaction.java

```
package bankdemo;
import jakarta.ejb.Stateful;
@Stateful
public class BankTransaction implements BankTransactionLocal {
    int balance = 10000;
    @Override
    public int deposit(int amt) {
        balance = balance + amt;
        return balance;
    }
    // Add business logic below. (Right-click in editor and choose
    // "Insert Code > Add Business Method")
    @Override
    public int withdraw(int amt) {
        balance = balance - amt;
        return balance;
    }
}
```

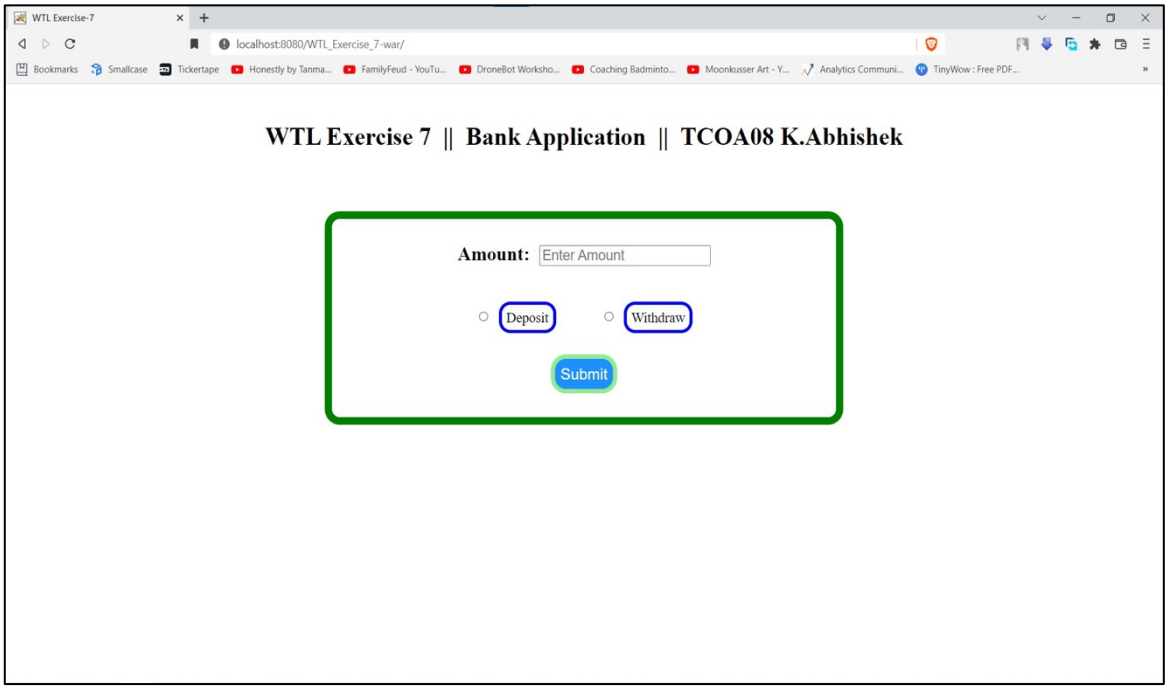
Transact.java

```
import bankdemo.BankTransactionLocal;
import java.io.IOException;
import java.io.PrintWriter;
import jakarta.servlet.ServletException;
import jakarta.servlet.http.HttpServlet;
import jakarta.servlet.http.HttpServletRequest;
import jakarta.servlet.http.HttpServletResponse;
import java.util.logging.Level;
import java.util.logging.Logger;
import javax.naming.Context;
import javax.naming.InitialContext;
```

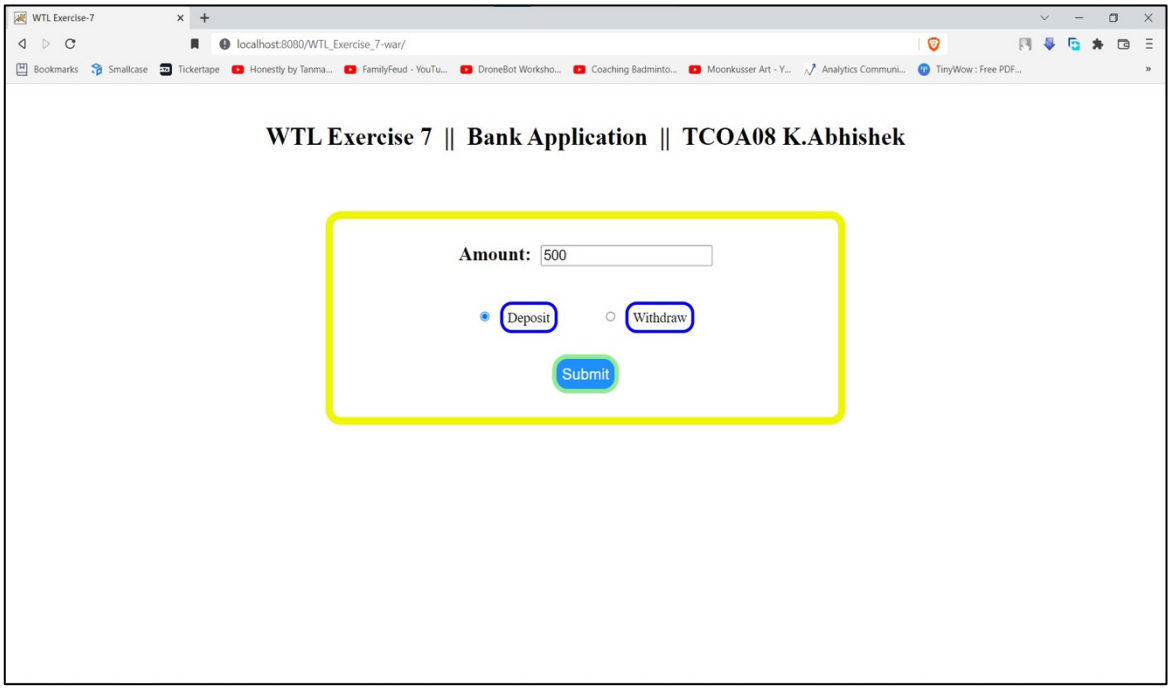
```
import javax.naming.NamingException;
public class Transact extends HttpServlet {
   BankTransactionLocal bankTransaction = lookupBankTransactionLocal();

   protected void processRequest(HttpServletRequest request, HttpServletResponse response)
         throws ServletException, IOException {
      response.setContentType("text/html;charset=UTF-8");
      try ( PrintWriter out = response.getWriter()) {

         String type = request.getParameter("type");

         int amt = Integer.parseInt(request.getParameter("amt"));
         int amount=0;
         out.println("<html><head><title>WTL Exercise-7</title><style>table{border: 10px solid green;border-radius:
20px;animation: colorchange1 3s infinite;padding: 30px;width: 40%;}@keyframes colorchange1{50% {border-color:
yellow;}}</style></head> ");
         out.println("<body>");
         out.println("<center><br/><h1>WTL Exercise 7  ||  Bank Application  ||  TCOA08
K.Abhishek</h1><br/><br/><br/><table ><tr><th style='font-size: 25px; font-weight: bold;'> Rs. "+ amt +" 
Successfully");

         if(type.equals("deposit")) {
            amount = bankTransaction.deposit(amt);
            out.println(" Deposited ");
         }

         else if(type.equals("withdraw")) {
            amount = bankTransaction.withdraw(amt);
            out.println(" Withdrawn ") ;
         }
         out.println("! <br/><br/></th></tr> <tr><th style='font-size: 25px; font-weight: bold;'> Current Balance:  Rs."
+ amount + "</th></tr></table></center>");
         out.println("</body></html>");
      }
   }
}
```

SAMPLE OUTPUT

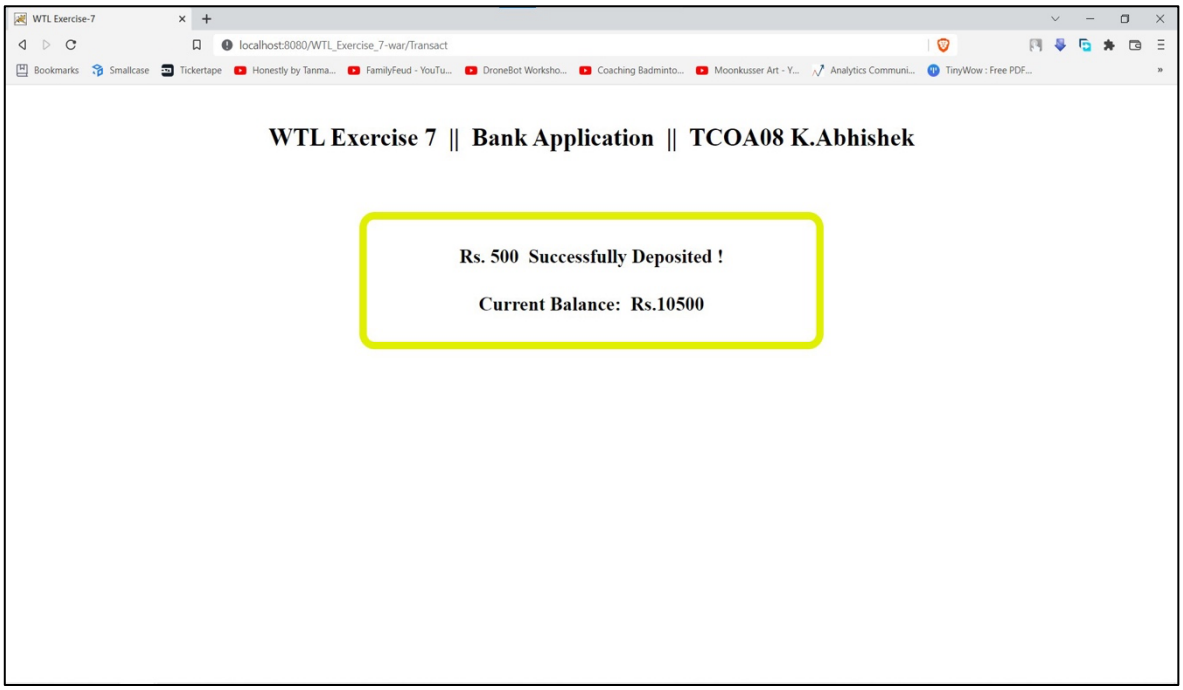
Screenshot 1



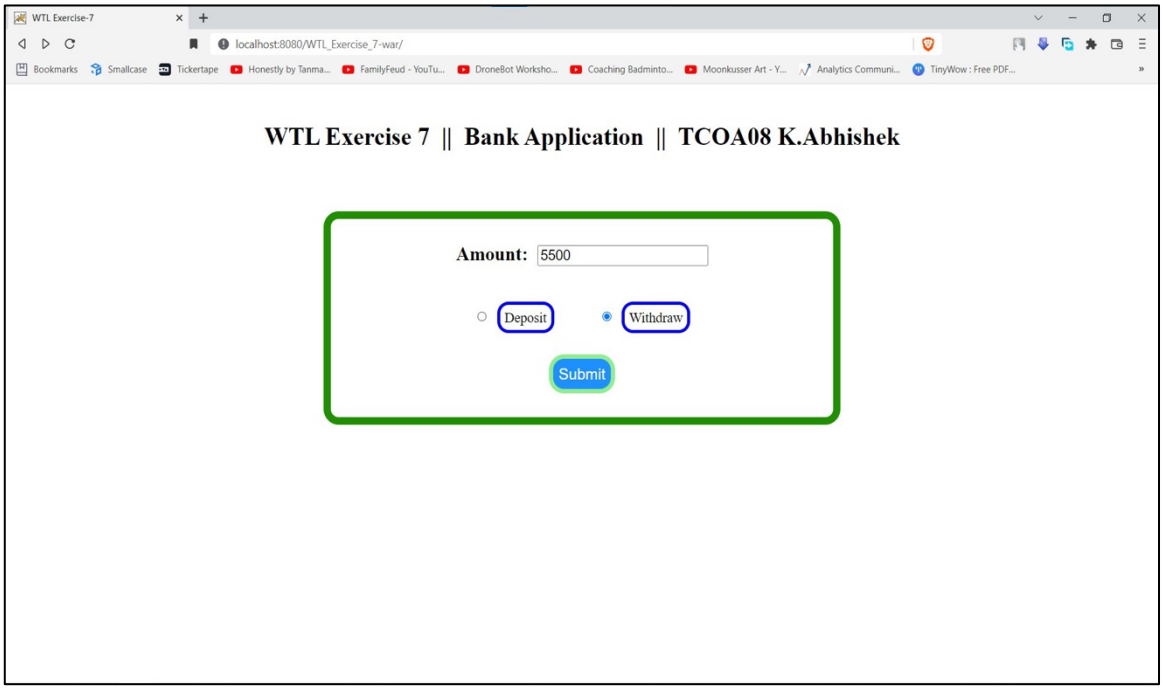
Screenshot 2



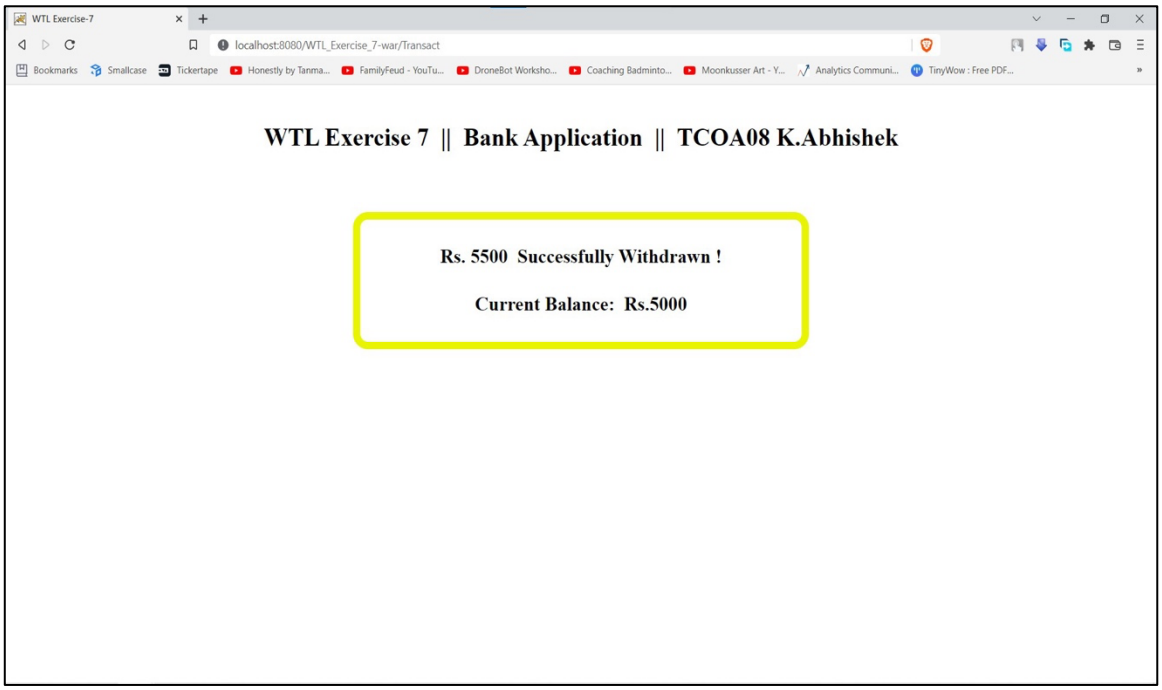
Screenshot 3



Screenshot 4



Screenshot 5



Exercise Number	8 : Implement the program demonstrating the use of JSP
Question Description	Implement the program demonstrating the use of JSP. **For Installation :** **Must use NetBeans 8.2 & MAMP 4.2 in Windows 10 OS 64bit** **Software - download links available in video descriptions.* **How to Install - video tutorial links available in video descriptions.* e.g., Create a database table students_info (stud_id, stud_name, class, division, city) using a database like Oracle/MySQL etc. and display (use SQL select query) the table content using JSP. **Exercise Video:** **1. JSP-MySQL CRUD Operations using NetBeans 8.2 & MAMP in Windows 10** https://www.youtube.com/watch?v=HeggmhzVZ-g **Reference Videos:** **1. Hello World in JSP** https://www.youtube.com/watch?v=Bpdx9trrGuY **2. Create Database, Tables & Fields in MySQL using MAMP in Windows 10 OS** https://www.youtube.com/watch?v=OaIjuuU7VDk **Choose any one topic below:** **1. Student Management System** (stud_id, stud_name, stud_city, stud_registerno, stud_dept,stud_mobile,stud_mailid) **2. eBookshop System** (book_id, book_title, book_author, book_price, quantity) **3. Employee Management System** (employee_id, employee_name, employee_city, employee_id, employee_dept,employee_mobile,employee_mailid) **4. Faculty Management system** (faculty_id, faculty_name, faculty_city, faculty_registerno, faculty_dept,faculty_mobile,faculty_mailid) **Your Final Folder has,** 1. Exported project from NetBeans as a zip file 2. Screenshots (Entering values by a user, Database Screenshot, Tables Screenshot, Output Screens) ***Note**: The final folder was uploaded as a zip file.*
Technology Used	JSP, Servlet, MySQL & PHPMyAdmin
Software's Used	NetBeans 8.2, Apache Tomcat 7, Google Chrome Browser & MAMP

SAMPLE SOURCE CODE

index.jsp

```
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
  <head>
    <title>E-BookShop System</title>
    <meta charset="UTF-8">
    <style>
      #frame1
      {
        border: 10px solid green;
        border-radius: 20px;
        animation: colorchange1 3s infinite;
      }
      #frame2
      {
        border: 10px solid yellow;
        border-radius: 20px;
        animation: colorchange2 3s infinite;
      }
      @keyframes colorchange1
      {
        50% {border-color: lightgrey;}
      }
      @keyframes colorchange2
      {
        50% {border-color: red;}
      }
    </style>
  </head>
  <body>
  <center>
    <iframe id="frame1" width="80%" height="260px" src="InsertData.jsp"> </iframe>
    <br>
    <iframe id="frame2" width="80%" height="370px" src="DisplayData.jsp" > </iframe>
  </center>
  </body>
</html>
```

insert.jsp

```
<%@page import="java.sql.*" %>
<%
String bookId = request.getParameter("bookid");
String bookName = request.getParameter("bookname");
String bookAuthor = request.getParameter("bookauthor");
int bookPrice = Integer.parseInt(request.getParameter("bookprice"));
int bookQuantity = Integer.parseInt(request.getParameter("bookquantity"));
String sqlInsertQuery = "INSERT INTO `ebooks` (`book_id`, `book_title`, `book_author`, `book_price`, `book_quantity`)
VALUES ('" + bookId + "', '" + bookName + "', '" + bookAuthor + "', " + bookPrice + ", " + bookQuantity + ")";
out.println("<!DOCTYPE html>");
out.println("<html>");
out.println("<body style='text-align: center;'>");
        try
{
  Class.forName("com.mysql.jdbc.Driver");
  Connection con = DriverManager.getConnection("jdbc:mysql://localhost:3306/ebookshop", "abhishek", "abhishek");
  Statement stmt = con.createStatement();
  stmt.executeUpdate(sqlInsertQuery);
  stmt.close();
```

```
    con.close();
    out.println("<h3 style='font-size: 30px;'> Data Inserted Successfully !!! </h3>");
    out.println("<a style='font-size: 20px;' href='InsertData.jsp'> Click to Insert New Data </a>");
        }
catch (Exception ex)
{
    out.println("<br><br><h2>Error Occurred!!!</h2>");
    out.println("<h4>Please Try Again</h4>");
    out.println("<a style='font-size: 15px;' href='InsertData.jsp'> Click to Insert New Data </a>");

}
out.println("</body>");
out.println("</html>");
%>
```

insertData.jsp

```
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<html>
    <head>
        <title>
            Insert Data
        </title>
        <style>
            input
            {
                font-size: 15px;
                width: 95%;
            }
            table
            {
                font-family: arial, sans-serif;
                width: 100%;
                border: 2px solid black;
                border-radius: 5px;
            }
            td, th
            {
                border: 2px solid grey;
                text-align: left;
                padding: 8px;
            }
        </style>
    </head>
    <body>
    <center>
        <div>
            <h3 style="font-size: 32px;">Insert E-Book Data</h3>
            <form id="InsertDataForm" action="insert.jsp" method="post">
                <table>
                    <tr>
                        <th>Book ID</th>
                        <th>Book Name</th>
                        <th>Book Author</th>
                        <th>Book Price (Rs.)</th>
                        <th>Book Quantity</th>
                    </tr>

                    <tr>
                        <td><input type="text" name="bookid" placeholder="Book ID" required /></td>
                        <td><input type="text" name="bookname" placeholder="Book Name" required /></td>
                        <td><input type="text" name="bookauthor" placeholder="Book Author" required /></td>
```

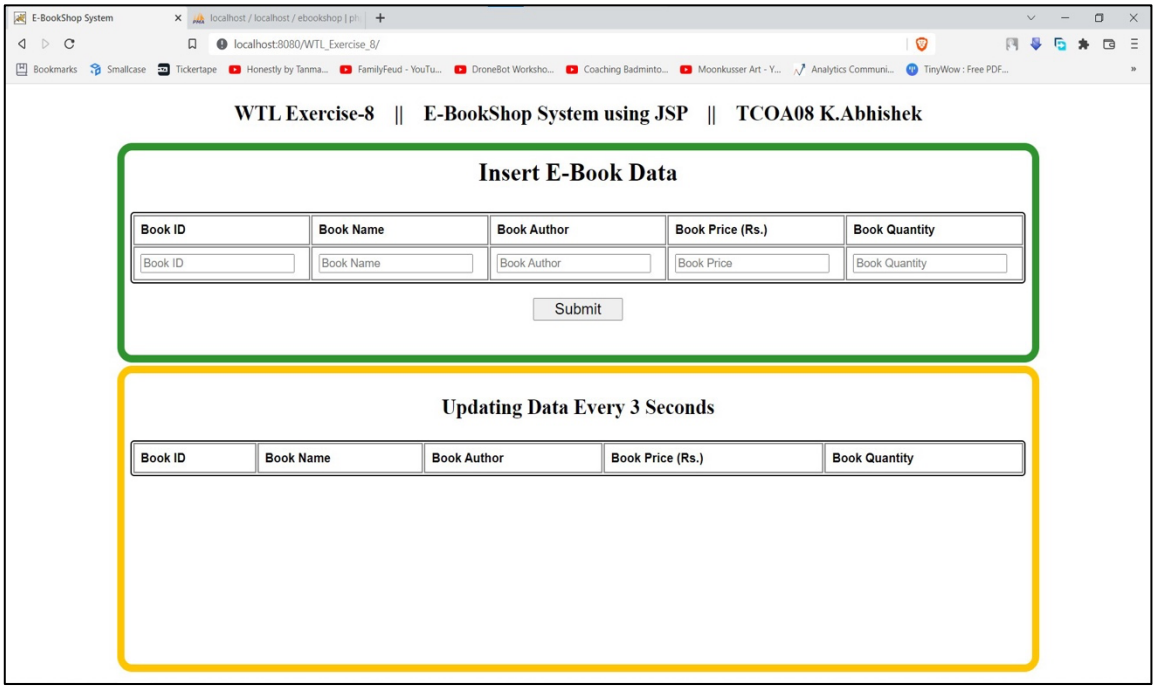
```
                <td><input type="number" name="bookprice" placeholder="Book Price" required /></td>
                <td><input type="number" name="bookquantity" placeholder="Book Quantity" required /></td>
              </tr>
            </table>
            <br>
            <input type="submit" value="Submit" style="width: 10%; font-size: 20px;" />
          </form>
        </div>
    </center>
    </body>
</html>
```

DisplayData.jsp

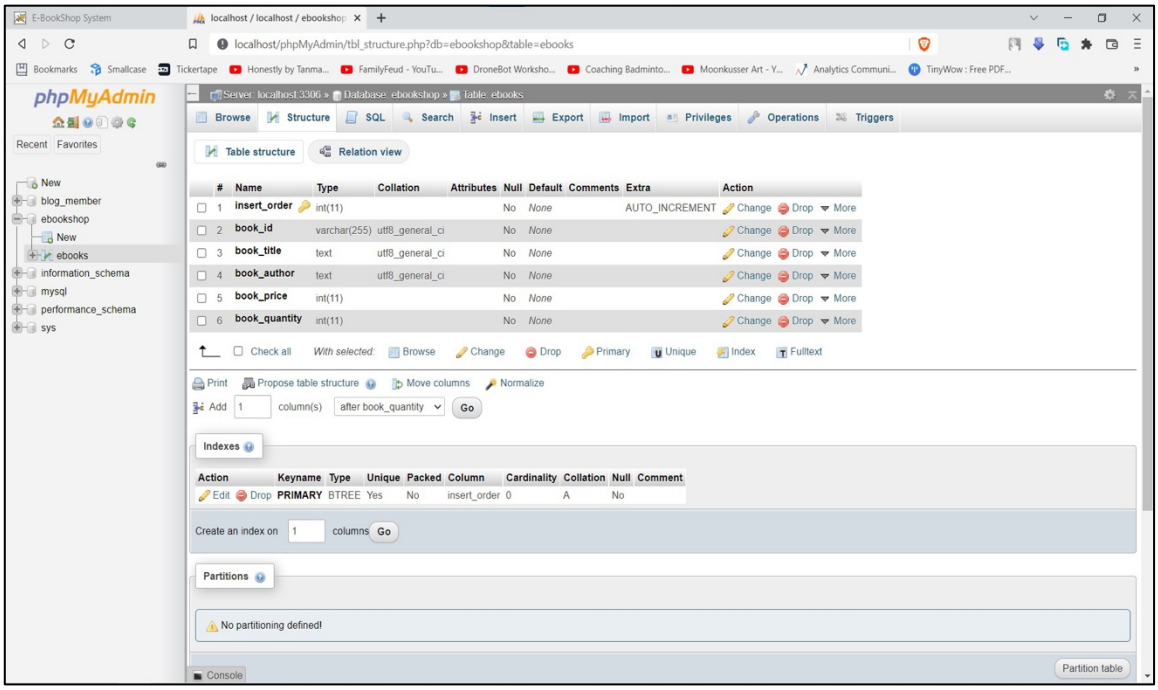
```
<%@page import="java.sql.*" %>
<%
response.setIntHeader("Refresh", 3);
response.setContentType("text/html");

String sqlDisplayQuery = "SELECT * FROM `ebooks` ORDER BY `insert_order` DESC";

try{
   out.println("<!DOCTYPE html>");
   out.println("<html>");
   out.println("<head><style> table {font-family: arial, sans-serif; width: 100%; border: 2px solid black; border-
radius: 5px;} td, th {border: 2px solid grey; text-align: left;padding: 8px;} tr:nth-child(even) {border: 1px solid black;
background-color: #dddddd;} </style></head>");
   out.println("<body>");
   out.println("<h3 style='font-size: 27px; text-align: center;'>Updating Data Every 3 Seconds</h3>");
   out.println("<table > <tr> <th>Book ID</th> <th>Book Name</th> <th>Book Author</th> <th>Book Price (Rs.)</th>
<th>Book Quantity</th> </tr> ");

   Class.forName("com.mysql.jdbc.Driver");
   Connection con = DriverManager.getConnection("jdbc:mysql://localhost:3306/ebookshop", "abhishek", "abhishek");
   Statement stmt = con.createStatement();
   ResultSet rs = stmt.executeQuery(sqlDisplayQuery);

   while(rs.next())
   {
      out.println("<tr><td>" + rs.getString("book_id") + "</td> <td>" + rs.getString("book_title") + "</td> <td>" +
rs.getString("book_author") + "</td> <td>" + rs.getString("book_price") + "</td> <td>" + rs.getString("book_quantity") +
"</td></tr>");
   }
   out.println("</table>");
   out.println("</body>");
   out.println("</html>");

   stmt.close();
   con.close();

   }catch (Exception ex){
      ex.printStackTrace();
      }
%>
```

SAMPLE OUTPUT

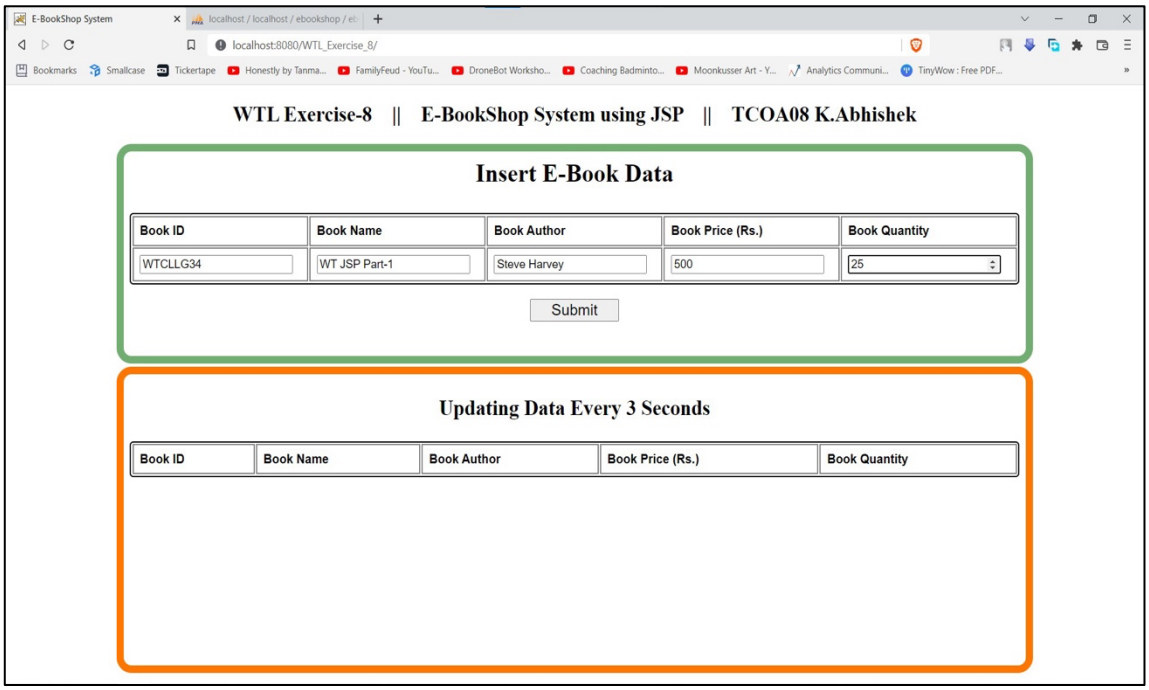
Screenshot 1



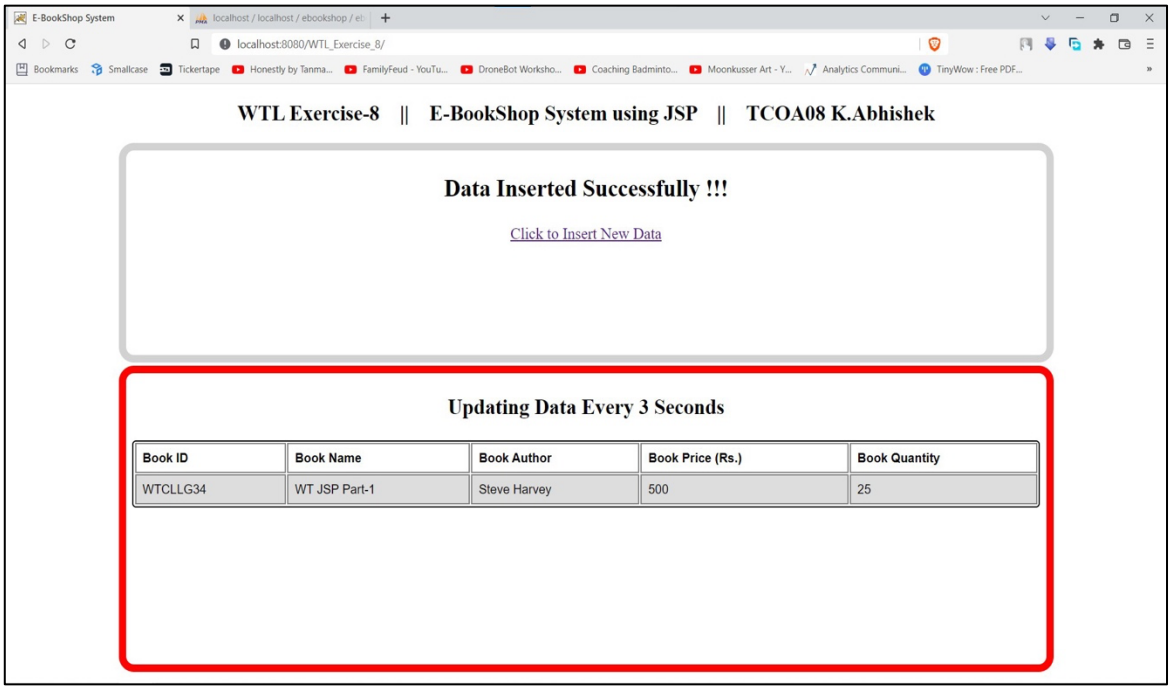
Screenshot 2



Screenshot 3



Screenshot 4



Exercise Number	9: Angular Login Page Design
Question Description	Design an application using Angular JS. e.g., Design registration (username, password) and login page using Angular 13. **For Installation :** **Node JS 14.17.5 (Install 14.17.5 version only)** ***Software - download links available in video descriptions.*** **Exercise Video:** **1. Angular 13 Login Page Design & Material Design with Flex layout in Windows 10** https://www.youtube.com/watch?v=3GFSww1weUI **Your Final Folder has,** 1. Project folder as a zip file **(Important: without node_modules folder)** 2. Screenshots ***Note**: The final folder was uploaded as a zip file.*
Technology Used	Angular 13 & Flex Layout
Software's Used	NodeJS, NPM, Visual Studio Code & Google Chrome Browser

SAMPLE SOURCE CODE

app-routing.module.ts

```
import { NgModule } from '@angular/core';
import { RouterModule, Routes } from '@angular/router';
import { LoginComponent } from './login/login.component';

const routes: Routes = [
  {path:'', component:LoginComponent}
];

@NgModule({
  imports: [RouterModule.forRoot(routes)],
  exports: [RouterModule]
})
export class AppRoutingModule { }
```

app.component.html

```
<router-outlet></router-outlet>
```

login.component.html

```
<div fxLayoutAlign="center center" fxFlexFill class="main-div">
   <mat-card fxFlex="25">
      <mat-toolbar color="primary">
         <span>App Sign in</span>
       </mat-toolbar>
      <form fxLayoutAlign="streth" fxLayout="column" class="login-form">
         <mat-form-field>
           <input matInput placeholder="Username" >
         </mat-form-field>
         <mat-form-field>
            <input matInput type="password" placeholder="Password" >
         </mat-form-field>
         <button mat-raised-button color="accent">Login</button>
       </form>
```

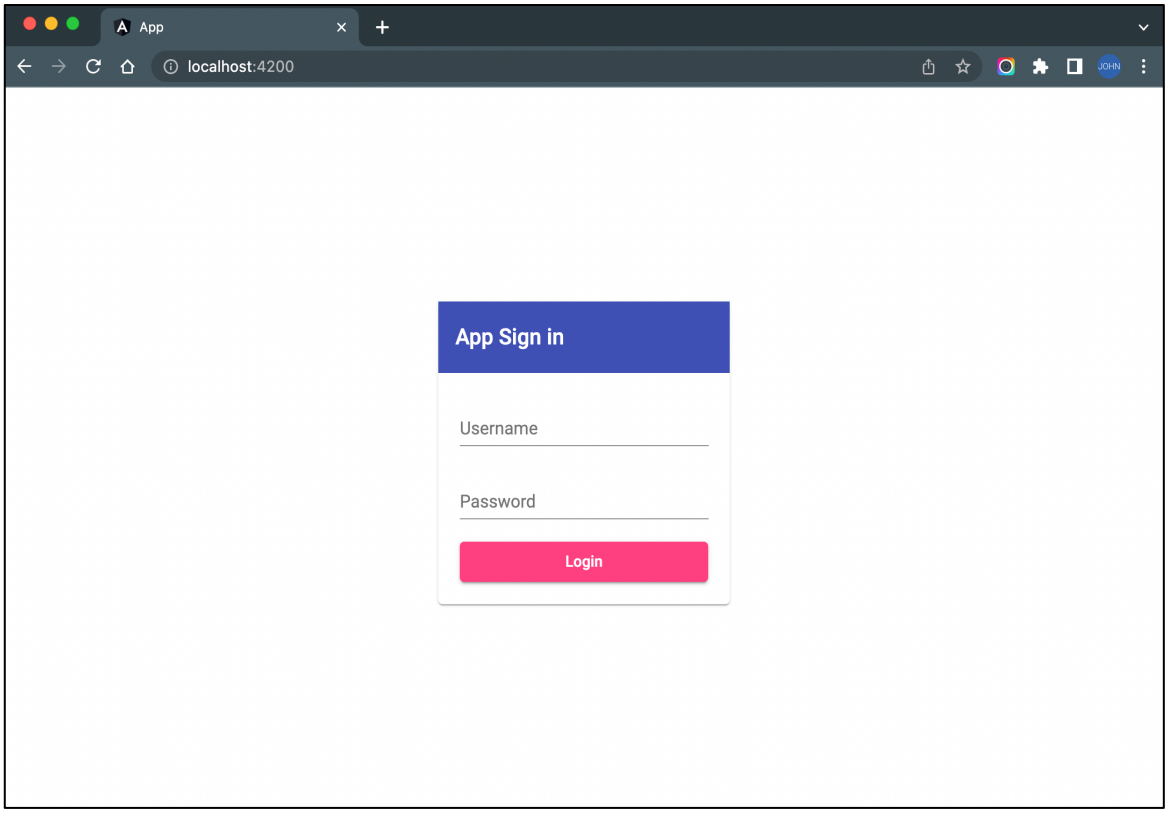
```
    </mat-card>
</div>
```

login.component.css

```
.main-div mat-card{
    padding: 0px;
}
.login-form{
    padding: 20px;
}
```

app.module.ts

```
import { NgModule } from '@angular/core';
import { BrowserModule } from '@angular/platform-browser';
import { AppRoutingModule } from './app-routing.module';
import { AppComponent } from './app.component';
import { BrowserAnimationsModule } from '@angular/platform-browser/animations';
import { LoginComponent } from './login/login.component';
import { FlexLayoutModule } from '@angular/flex-layout';
import {MatFormFieldModule} from '@angular/material/form-field';
import {MatInputModule} from '@angular/material/input';
import {MatButtonModule} from '@angular/material/button';
import {MatCardModule} from '@angular/material/card';
import {MatToolbarModule} from '@angular/material/toolbar';
@NgModule({
  declarations: [
    AppComponent,
    LoginComponent
  ],
  imports: [
    BrowserModule,
    AppRoutingModule,
    BrowserAnimationsModule,
    FlexLayoutModule,
    MatFormFieldModule,
    MatInputModule,
    MatButtonModule,
    MatCardModule,
    MatToolbarModule
  ],
  providers: [],
  bootstrap: [AppComponent]
})
export class AppModule { }
```

SAMPLE OUTPUT

Screenshot 1