SRI VASAVI ENGINEERING COLLEGE (Autonomous)

Department Of C.S.E[Artificial Intelligence]

Pedatadepalli, Tadepalligudem

Certificate

This is to certify Mr/Mrs_____bearing Rollno. _____

of **CAI** Branch of Vth semester submitted the record of **Web Technologies Lab**[Course code:**V20AIL10**] during academic year 2023-24.

Signature of Faculty In-charge

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Head of the Department

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Professor & HOD.

Signature of External Examiner

INDEX

1. Demonstrate the usage of HTML ,CSS with the help of a static web page.

index.html

```
<html>
<frameset rows="25%,65%,10%">
<frame name="A" src="header.html" style="background-color: black;">
    <frameset cols="20%,80%">
      <frame name="C" src="sidebar.html" style="background-color: black;">
            <frame name="right" src="home.html">
    </frameset>
    <frame name="B" src="footer.html" style="background-color: black;">
    <frameset rows="100%">
    </frameset>
</frameset>
</html>
```

header.html

```
<html>
    <body>
    <table style="width:75%;height:75%">
        <tr><td rowspan="2"><img src="https://images-platform.99static.com" height="50%"
width="45%"></img></td>
<td align="center" style="color:whitesmoke"><h2>BOOKSTORE</h2></td>
        </tr>
        <tr>
            <td><a href="home.html" target="right" style="color:whitesmoke">Home</a></td>
            <td><a href="registration.html" target="right" style="color:whitesmoke">Registration</a></td>
            <td><a href="catalog.html" target="right" style="color:whitesmoke">Catalog</a></td>
            <td><a href="cart.html" target="right" style="color:whitesmoke">Cart</a></td>
        </tr>
    </table>
    </body>
</html>
```

sidebar.html

```
<html><body align="center">
    <table style="width:55%; height:55%;"><ul>
        <tr><th><li><a href="cai.html" target="right" style="color: whitesmoke;">CAI</a></li></th></tr>
        <tr><th><li><a href="aim.html" target="right" style="color: whitesmoke;">AIM</a></li></th></tr></li>
        <tr><th><li><a href="cse.html" target="right" style="color: whitesmoke;">CSE</a></li></th></tr></li>
        <tr><th><li><a href="cst.html" target="right" style="color:
whitesmoke;">CST</a></li></th></tr></li></ul>
    </table>
    </body>
</html>
```

footer.html

```
<html><body style="text-align: center;">
    <footer>
    <p style="color: whitesmoke;"> @THE BRUCE COUNTRY BOOKSTORE. All rights reserved.</p>
    </footer>
</body></html>
```

home.html

```
<html>
<head> <link rel="stylesheet" href="style.css"></head><body>

    <div class="content">
        <h1>Welcome to Our Bookstore</h1>
        <p style="font-size: small;">Welcome to our online bookstore</p>
        <p>Any text about your page</p>
    </div>
</body>
</html>
```

registration.html

```
<body>
    <div class="content">
        <h1>Registration Form</h1>
        <form>
            <label for="username">Username:</label>
            <input type="text" id="username" name="username" required>
        <label for="email">Email:</label>
            <input type="email" id="email" name="email" required>
        <label for="password">Password:</label>
            <input type="password" id="password" name="password" required>
        <input type="submit" value="Register">
        </form>
    </div>
</body>
```

catalog.html

```
<body>
    <div class="content">
        <h1>Book Catalog</h1>
        <table>
            <tr>
                <td>Sno</td>
                <td>Book Image</td>
                <td>Book Name</td>
                <td>Author</td>
                <td>Price</td>
                <td>Quantity Range</td>
                <td>Add to Cart</td>
            </tr>
            <tr>
                <td>1</td>
                <td><img src="bookimage.jpg" width="50" height="50"></td>
                <td>Book 1</td>
                <td>Author 1</td>
                <td>$19.99</td>
                <td><input type="range" min="1" max="10" value="1" class="quantity-range"></td>
                <td><button class="add-to-cart-btn" onclick="addToCart(this)">Add to Cart</button></td>
            </tr>
               <! -– Add remaining books of choice -- >
        </table>
        </div>
```

```
    <script>
        function addToCart(button) {
            button.classList.add('added-to-cart');
            button.innerHTML = 'Added';
            button.style.backgroundColor = '#4CAF50';
            button.style.cursor = 'not-allowed';
            button.disabled = true;
        }
    </script>
</body>
```

cart.html

```
<body>
     <div class="content">
          <h1>Shopping Cart</h1>
        <table>
            <tr>
                <td>Book Image</td>
                <td>Book Name</td>
                <td>Author</td>
                <td>Price</td>
                <td>Quantity</td>
                <td>Remove</td>
            </tr>
            <tr>
                <td><img src="bookimage.jpg" width="50" height="50"></td>
                <td>Book 1</td>
                <td>Author 1</td>
                <td>$19.99</td>
                <td>2</td>
                <td><button class="remove-btn" onclick="removeItem(this)">Remove</button></td>
            </tr>
        </table>
        <button class="checkout-btn" onclick="checkout()">Checkout</button>
        <div class="total-bill" id="totalBill"></div>
    </div>
    <script>
        function removeItem(button) {
            var row = button.parentNode.parentNode;
            row.parentNode.removeChild(row);
        }
        function checkout() {
            var totalBill = calculateTotalBill();
            document.getElementById('totalBill').innerText = 'Total Bill: $' + totalBill.toFixed(2);
        }
        function calculateTotalBill() {
            var table = document.querySelector('table');
            var rows = table.getElementsByTagName('tr');
            var total = 0;
            for (var i = 1; i < rows.length; i++) {
                var cells = rows[i].getElementsByTagName('td');
                var price = parseFloat(cells[2].innerText.replace('$', ''));
```

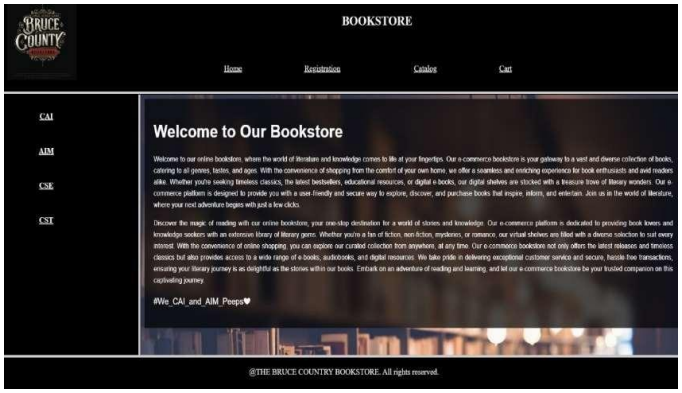
```
                var quantity = parseInt(cells[3].innerText);
                total += Price * Quantity;
            }
            return total;
        }
    </script>
</body>
```

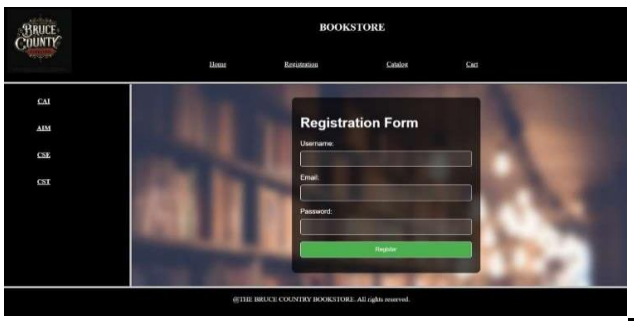
style.css

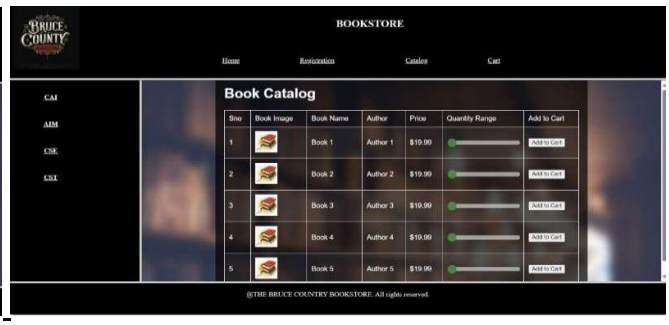
```
body {
            background-image: url('image.jpg');
            background-size: cover;
            color: #fff;
            font-family: Arial, sans-serif;
            backdrop-filter: blur(10px);
            margin: 0;
            display: flex;
            justify-content: center;
            align-items: center;
            height: 100vh;
        }
h1     {
            color: #fff;
            font-size: 32px;
        }
.content {
            background-color: rgba(0, 0, 0, 0.7);
            padding: 20px;
            border-radius: 10px;
            width: 80%;
            max-width: 800px;
            overflow: auto;
        }
table {
            width: 100%;
            border-collapse: collapse;
            margin-top: 20px;
            color: #fff;
        }
td {

            border: 1px solid #fff;
            padding: 10px;
        }
            text-align: left;
tr:nth-child(even) {
            background-color: rgba(255, 255, 255, 0.05);
        }
tr:hover {
            background-color: rgba(255, 255, 255, 0.2);
        }
.added-to-cart {
            background-color: #4CAF50 !important;
            cursor: not-allowed;
        }
```

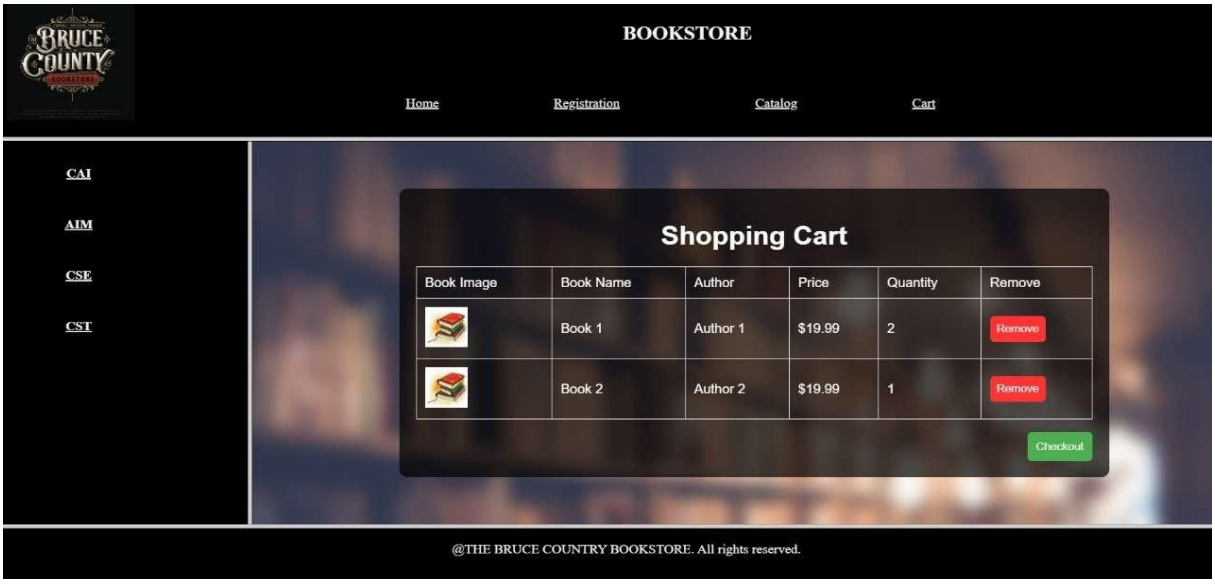
```
input[type="range"] {
            -webkit-appearance: none;
            width: 100%;
            height: 10px;
            border-radius: 5px;
            background: #d3d3d3;
            outline: none;
            opacity: 0.7;
            -webkit-transition: 0.2s;
            transition: opacity 0.2s;
        }
input[type="range"]:hover {
            opacity: 1;
        }
input[type="range"]::-webkit-slider-thumb {
            -webkit-appearance: none;
            appearance: none;
            width:  20px;
            height: 20px;
            border-radius: 50%;
            background: #4CAF50;
            cursor: pointer;
        }
input[type="range"]::-moz-range-thumb {
            width:  20px;
            height: 20px;
            border-radius: 50%;
            background: #4CAF50;
            cursor: pointer;
        }
```

Outputs:









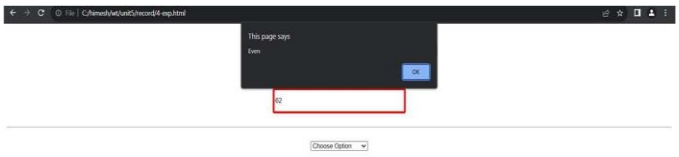
2.Develop the Following programs using JavaScript.

a. Check if a given number is even or odd.
b. Check if a given number is prime or not.
c. Check if a given number is a Palindrome.

```
<html>
    <body align="center">
        <h1>Enter Name : </h1>
        <input type="number" id="t1" placeholder="enter number" required>
        <br>
        <select id="id" onchange="f1()">
            <option value="0">Choose Option</option>
            <option value="1">Even or Odd</option>
            <option value="2">Prime or Not</option>
            <option value="3">Palindrome or Not</option>
        </select>
        <script>
            function f1() {
                x=parseInt(document.getElementById("id").value);
                switch(x){
                    case 1:
                        eoo();
                        break;
                    case 2:
                        pon();
                        break;
                    case 3:
                        plon();
                        break;
                }
            }
            function eoo(){
                x=document.getElementById("t1").value;
                if(x%2==0)alert("Even");
```

```
            else
                alert("odd");
        }
        function pon(){
            x=document.getElementById("t1").value;
            var f=0;
            if(x==0 || x==1){
                f=1;
            }
            else{
                for(let i=2;i<x/2;i++){
                    if(x%i==0){
                        f=1;
                        break;
                    }
                }
            if(f==0){alert("prime");
            else alert("not prime");
            }
        }
        function plon(){
            x=document.getElementById("t1").value;
            var s=0,n=x;
            while(x>0){
                s=s*10+x%10;
                x=parseInt(x/10);
            }
            if(s==parseInt(n))
                alert(n+" is palindrome");
            else
                alert(n+" is not palindrome");
        }
    </script>
</body>
</html>
```

Outputs:



3. Write an XML file which will display the Book information which includes the following:
(i)Title of the book (ii)Author Name (iii)ISBNnumber
(iv) Publisher name (v) Edition Price

(a) Write a Document Type Definition (DTD) to validate the aboveXML file.

(b) Write a XML Schema Definition (XSD).

Book.Xml

```
<?xml version="1.0" encoding="UTF-8"?>
<bookstore> <book category="cooking">
  <title lang="en">Everyday Italian</title>
  <author>Giada De Laurentiis</author>
  <year>2005</year>
  <price>30.00</price>
</book><book category="children">
  <title lang="en">Harry Potter</title>
  <author>J K. Rowling</author>
  <year>2005</year>
  <price>29.99</price>
</book><book category="web">
  <title lang="en">XQuery Kick Start</title>
  <author>James McGovern</author>
  <author>Per Bothner</author>
  <author>Kurt Cagle</author>
  <author>James Linn</author>
  <author>Vaidyanathan Nagarajan</author>
  <year>2003</year>
  <price>49.99</price>
</book><book category="web">
  <title lang="en">Learning XML</title>
  <author>Erik T. Ray</author>
  <year>2003</year>
  <price>39.95</price>
</book> </bookstore>
```

DTD:

```
<!DOCTYPE bookstore [
  <!ELEMENT bookstore (book+)>
  <!ELEMENT book (title, author+, year, price)>
  <!ATTLIST book category CDATA #REQUIRED >
  <!ELEMENT title (#PCDATA)>
  <!ELEMENT author (#PCDATA)>
  <!ELEMENT year (#PCDATA)>
  <!ELEMENT price (#PCDATA)>
  <!ATTLIST title lang CDATA #IMPLIED > ]>
```

XSD:

```
<?xml version="1.0" encoding="UTF-8"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="bookstore">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="book" maxOccurs="unbounded">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="title" type="xs:string"/>
              <xs:element name="author" type="xs:string" minOccurs="0"
maxOccurs="unbounded"/>
              <xs:element name="year" type="xs:integer"/>
              <xs:element name="price" type="xs:decimal"/>
            </xs:sequence>
            <xs:attribute name="category" type="xs:string" use="required"/>
          </xs:complexType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>
```

4. Create a simple JSP to print current Date and Time.

```
<%@ page language="java" contentType="text/html; charset=UTF-8" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
	<body>
		<%@ page import="java.util.Date" %>
		Today is: <%= new Date() %>
	</body>
</html>
```

Output:

Today is: Tue Nov 14 15:40:35 IST 2023

5. Develop JSP program calculates factorial values for an integer number, while the input is taken from an HTML form.

fact.html

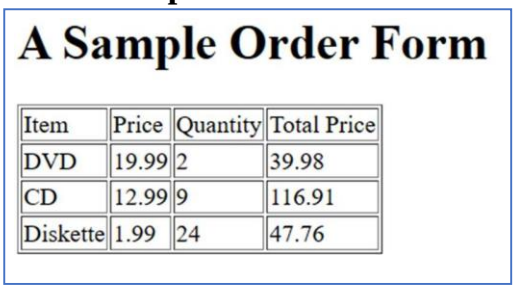
```
<html>
	<body>
		<form action="Fact.jsp" method="post">
		    <input type="text" name="n"><br>
		    <input type="submit" >
		</form>
	</body>
</html>
```

fact.jsp

```
<!DOCTYPE html>
<%@ page language="java" contentType="text/html; charset=ISO-8859-1"
    pageEncoding="ISO-8859-1"%>
<!DOCTYPE html>
<html>
<body>
<%! long a; %>
<%!    long Fact(long n){
        if(n<=1)
        return 1;
       return n*Fact(n-1);
} %>
<% a=Integer.parseInt(request.getParameter("n"));
    out.print("Factorial of "+a+" : "+Fact(a));%>
</body></html>
```

Output

6. Develop Jsp program shows a Sample Order Form

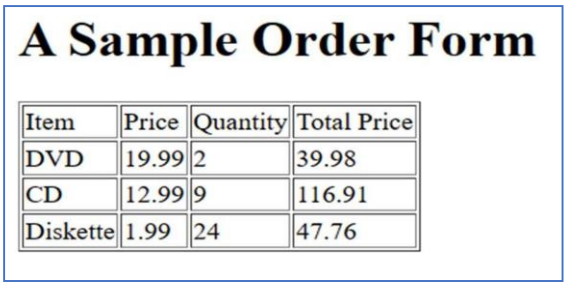


A Sample Order Form

Item	Price	Quantity	Total Price
DVD	19.99	2	39.98
CD	12.99	9	116.91
Diskette	1.99	24	47.76

```
<html>
<body>
<%! String Items[]={"DVD","CD","Diskette"};
    double price[]={19.99,12.99,1.99};
    int Quantity[]={2,9,24};
    double TotalPrice[]=new double[Items.length];    %>
    <table border="1px">
    <tr>
        <td>Item</td>
        <td> Price </td>
        <td>Quantity</td>
        <td>Total Price </td>
    </tr>
    <% for(int i=0;i<Items.length;i++){
        TotalPrice[i]=price[i]*Quantity[i];     %>
        <tr>
        <td><% out.println(Items[i]); %></td>
        <td><% out.println(price[i]); %></td>
        <td><% out.println(Quantity[i]); %></td>
        <td><% out.println(TotalPrice[i]); %></td>
        </tr>
        <%} %>
    </table>
</body>
</html>
```

Output:



A Sample Order Form

Item	Price	Quantity	Total Price
DVD	19.99	2	39.98
CD	12.99	9	116.91
Diskette	1.99	24	47.76

7.Create JSP to manipulate data of student in database using JDBC

home.html

```
<html>
<body>
    <h1>Welcome student database</h1>
    <p>choose an action:</p>
    <ul><li><a href="insert.html"> Insert</a></li>
        <li><a href ="update.html"> Update</a></li>
        <li><a href="delete.html"> Delete</a></li></ul>
</body>
</html>
```

insert.html

```
<html>
<body><form action="insert.jsp" method="Post">
          <h1 align="center">Insert</h1>
          <table align="center">
               <tr><td>Name :</td>
                    <td><input type="text" name="sname"/></td></tr>
               <tr><td>Roll no:</td>
                    <td><input type="text" name="srno"/></td></tr>
               <tr><td>cgpa :</td>
                    <td><input type="text" name="cgpa"/></td></tr>
               <tr><td><input type="submit" value="insert" /></td>
                    <td><input type="reset" value="clear"/></td></tr>
          </table>
     </form>
</body>
</html>
```

insert.jsp

```
<%@page import="java.sql.*" %>
<%
String name=request.getParameter("sname");
int rno=Integer.parseInt(request.getParameter("srno"));
String cgpa=request.getParameter("cgpa");
//out.println(name+" "+rno+""+cgpa);
try{
    Class.forName("com.mysql.jdbc.Driver");
    Connection con=DriverManager.getConnection("jdbc:mysql://localhost:3306/cai", "root", "root");
    PreparedStatement ps=con.prepareStatement("insert into std values(?,?,?)");
    ps.setInt(1, rno);
    ps.setString(2, name);
    ps.setString(3,cgpa);
    int i=ps.executeUpdate();
    if (i!=0){
        out.println("inserted..");
    }
    else{
        out.println("not inserted..");
    }
}
catch (Exception e){out.print(e);}
```

```
session.setAttribute("sname", name);
session.setAttribute("srno",rno);%>
```

update.html

```
<body>
    <form action="update.jsp" method="post">
        <h1 align="center"> Update </h1>
        <table align="center">
            <tr><td>Name:</td>
                <td><input type="text" name="sname"/></td>
            </tr>
            <tr><td>Roll no: </td>
                <td><input type="number" name="srno"/></td></tr>
            <tr><td>cgpa :</td>
                <td><input type="text" name="cgpa"/></td></tr>
            <tr><td><input type="submit" value="Update" /></td></tr>
        </table>
    </form>
</body>
```

update.jsp

```
<%@page import="java.sql.*" %>
<%
String name=request.getParameter("sname");
int rno=Integer.parseInt(request.getParameter("srno"));
String cgpa=request.getParameter("cgpa");
try{
    Class.forName("com.mysql.jdbc.Driver");
    Connection con=DriverManager.getConnection("jdbc:mysql://localhost:3306/cai", "root", "root");
    PreparedStatement ps = con.prepareStatement("UPDATE std SET rno=?, cgpa=? WHERE name=?");
    ps.setInt(1, rno);
    ps.setString(2, cgpa);
    ps.setString(3,name);
    int i=ps.executeUpdate();
    if (i!=0){
        out.println("updated..");
    }
    else{
        out.println("not updated..");
    }
}
catch (Exception e){out.print(e);}%>
```

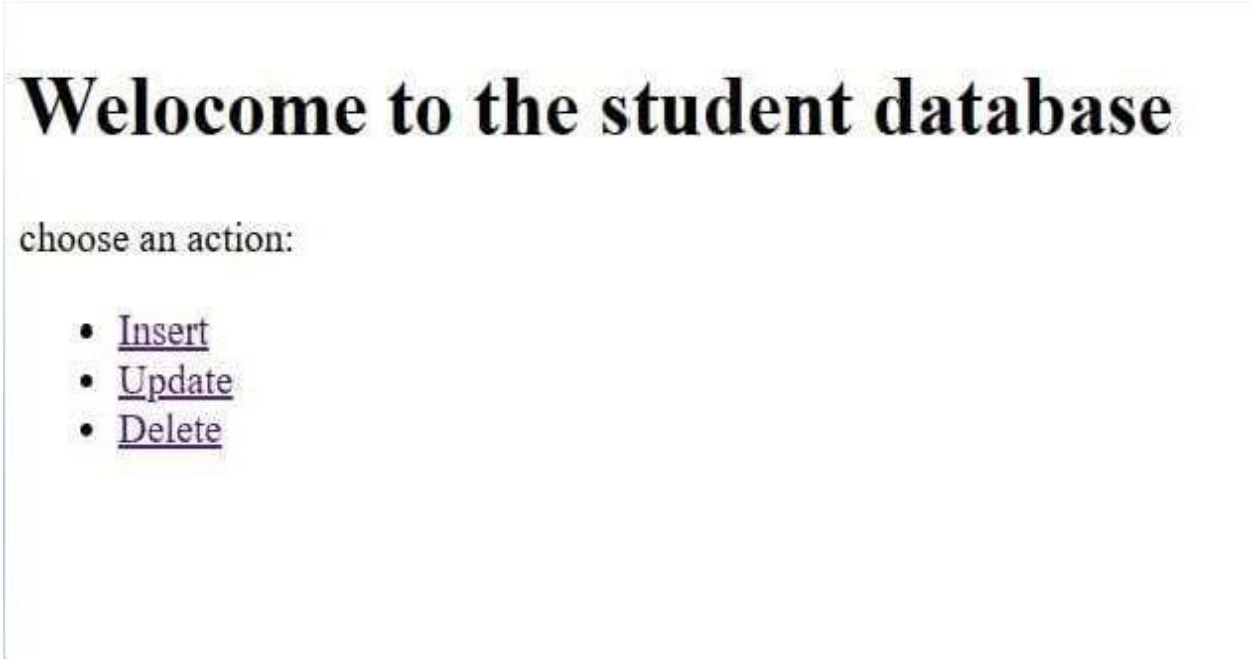
delete.html

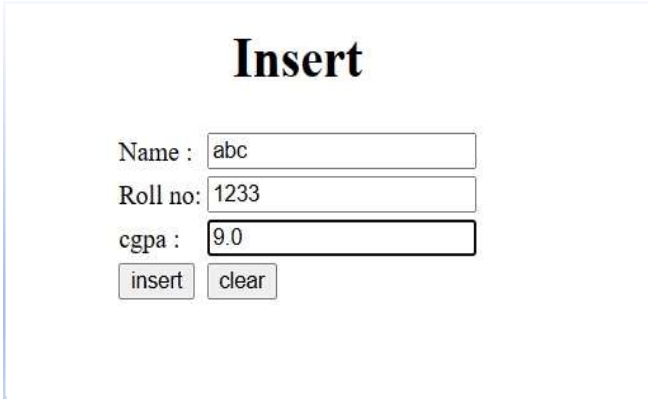
```
<body>
     <form action="del.jsp" method="post">
          <h1 align="center" >Delete</h1>
          <table align="center">
               <tr><td>Name :</td>
                         <td><input type="text" name="sname"/></td></tr>
                    <tr><td><input type="submit" value="Delete"/></td></tr>
           </table>
      </form>

</body
```

delete.jsp

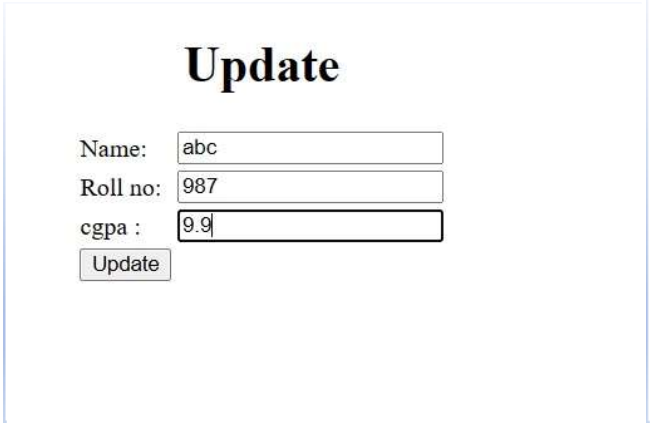
```
<%@page import="java.sql.*" %>
<% String name=request.getParameter("sname");
try{
    Class.forName("com.mysql.jdbc.Driver");
    Connection con=DriverManager.getConnection("jdbc:mysql://localhost:3306/cai", "root",
"root");
    PreparedStatement ps = con.prepareStatement("DELETE FROM `std` WHERE name=?");
    ps.setString(1,name);

    int i=ps.executeUpdate();
    if (i!=0){
        out.println("Deleted..");
    }
    else{
        out.println("not Deleted..");
    }
}
catch (Exception e){out.print(e);}%>
```

Outputs:





inserted..

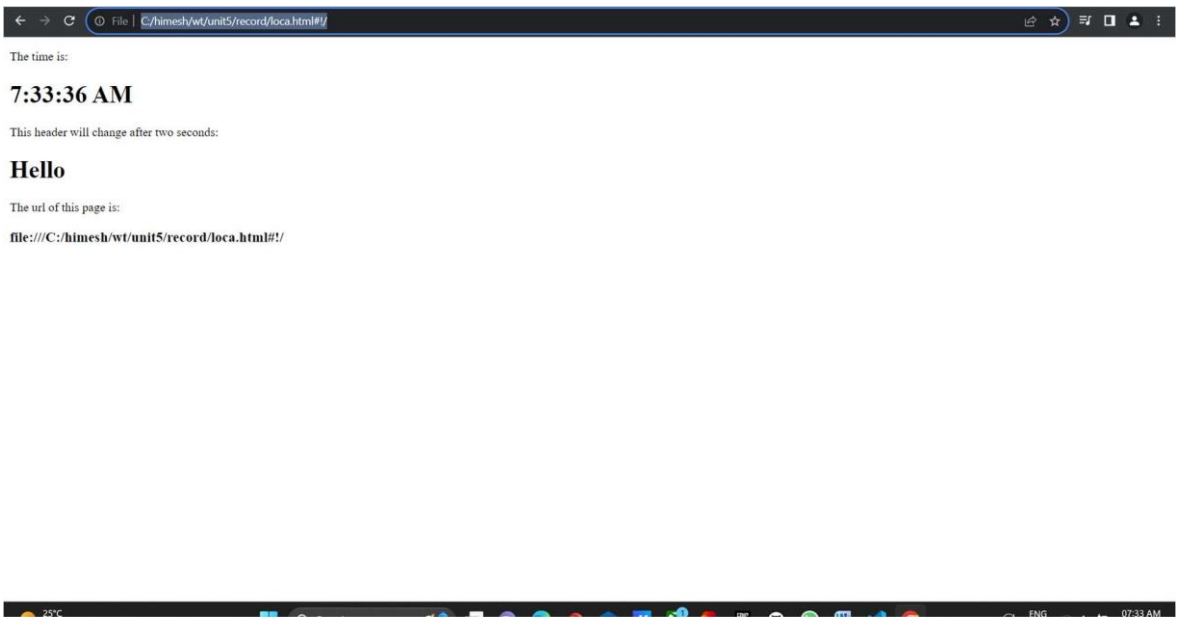


updated..

Deleted..

8. Design an Angular JS from.

```
<html>
<script src="https://ajax.googleapis.com/ajax/libs/angularjs/1.6.9/angular.min.js"></script>
<body>
<div ng-app="myApp" ng-controller="myCtrl">
       <p>The time is:</p>
       <h1>{{theTime}}</h1>
       <p>This header will change after two seconds:</p>
       <h1>{{myHeader}}</h1>
       <p>The url of this page is:</p>
       <h3>{{myUrl}}</h3>
</div>
<script>
       var app = angular.module('myApp', []);
       app.controller('myCtrl', function($scope, $timeout, $location, $interval) {
           $scope.myUrl = $location.absUrl();
           $scope.myHeader = "Hi";
           $scope.theTime = new Date().toLocaleTimeString();
         $interval(function () {
             $scope.theTime = new Date().toLocaleTimeString();
         }, 1000);
           $timeout(function () {
             $scope.myHeader = "Hello";
         }, 2000);
         $timeout(function () {
             $scope.myHeader = "How are you today?";
         }, 4000);
       });
</script> </body> </html>
```



9. Design a Node JS form.

abc.html

```
<html>
	<body>
		<h1>ABC</h1>
		<h4>This is abc.html file </h4>
		<p>abc</p>
	</body>
</html>
```

xyz.html

```
<html>
	<body>
		<h1>XYZ</h1>
		<h4> This is xyz.html file </h4>
		<p>xyz</p>
	</body>
</html>
```

Fileserver.js

```
var http = require('http');
var url = require('url');
var fs = require('fs');
http.createServer(function (req, res) {
  var q = url.parse(req.url, true);
  var filename = "." + q.pathname;
  fs.readFile(filename, function(err, data) {
    if (err) {
      res.writeHead(404, {'Content-Type': 'text/html'});
      return res.end("404 Not Found");
    }
    res.writeHead(200, {'Content-Type': 'text/html'});
    res.write(data);
    return res.end();
  });
}).listen(8080);
```

Output 1:

localhost:8080/xyz.html/

XYZ

This is xyz.html file

Xyz

Output 2:

localhost:8080/abc.html/

ABC

This is abc.html file

abc