Experiment 1 (vs code)

Aim: Webpage creation using HTML5 Semantic and Structural Elements.

Procedure:

1. Start with the <!DOCTYPE html> declaration at the beginning of your HTML document to indicate the use of HTML5.
2. Use the <html> element as the root element of your page.
3. Inside the <html> element, include the <head> section, which contains metadata and links to external resources. Commonly used elements within the <head> section include <title>, <meta>, and <link>.
4. After the <head> section, include the <body> element, which represents the main content of your webpage.
5. Use semantic elements to structure your content.
   <header>: Represents the introductory content at the top of a page or section.
   <nav>: Defines a section containing navigation links.
   <main>: Represents the main content of a document or webpage.
   <article>: Represents a self-contained composition, such as a blog post or article.
   <section>: Defines a generic section of content.
   <aside>: Represents content that is tangentially related to the main content, like sidebars or pull quotes.
   <footer>: Represents the footer or closing content of a page or section.
6. Use structural elements for grouping and organizing content.
   : A generic container used for grouping and applying styles to sections of content.
   : A generic inline container used for applying styles to small sections of content.
    and <ol>: Represent unordered and ordered lists, respectively.
   : Represents individual list items within <ul> or <ol>.
   <table>: Represents tabular data.
   <th>, <td>, <tr>: Used to group table headers, body content, and footer content, respectively.

Program:

main.html

```
<!DOCTYPE html>
<html lang="en">
<head>
    <title>PORTFOLIO PAGE</title>
    <meta charset="UTF-8">
    <link rel="stylesheet" type="text/css" href="styles-main.css">
</head>
<body>

<article>
 <header>
      <img src="logo.jpg" width="50px" height="50px" alt="Logo"> <h1> <b> DC-
EXPO! </b> </h1>
    <nav>
        <ul>
            <li> <a href="html.html">HTML</a></li>
            <li> <a href="js.html">JS</a></li>
```

```
            <li> <a href="designing.html">UI/UX</a></li>
            <li> <a href="feedback.html">FEEDBACK</a></li>
            <li> <a href="login.html">LOGIN/SIGNUP</a></li> <br>
        </ul>
    </nav>
<p></p>
 </header>
</article>

<section>
<div class="intro-media">
        <h3>ABOUT ME</h3>
    <figure>
        <img src="mypic.jpg" width="200" height="190" alt="myimage">
        <figcaption>DURGA CHANDANA SREE M.</figcaption>
    </figure>
 <br>

    <video controls poster="bg.jpeg" height="50%" width="30%" preload muted>

          <source src="myvideo.mp4" type="video/mp4" alt=" Your browser does
not support." >
            <track default kind="captions" srclang="en" src="captions.vtt">
    </video> <br>


 <br>
    <audio controls loop autoplay>
    <source src="music.mp3">
    </audio>
</div>
<br>

  <P>This is <mark>DURGA CHANDANA SREE M.</mark> I am an undergraduate student
persuing CSE-CLOUD COMPUTING from
    SRMIST-KTR, Chennai.</p>
</section>

<details>
    <summary> <u> Click to reveal additional content </u> </summary>
    <p>This is a portfolio page designed to showcase my works and share the
knowledge with my co-ethusiasts out there ! <br>
        If you find the content helpful, do fill our feedback form to get
other materials such as notes, problem statements etc.</p>
</details>
  <br>

    <aside class="box">
```

```
        <H4>CONTENTS: </H4>
        <ol>
            <li> <a href="html.html">html</a></li> <br>
            <li> <a href="js.html">Js</a></li> <br>
            <li> <a href="designing.html">Ui/Ux</a></li> <br>
            <li> <a href="feedback.html">Feedback</a></li> <br>
            <li> <a href="login.html">login/signup</a></li>
        </ol>
    </aside> <br>

<FOOTER>
    <address>
        Mail Us At <a href="mailto:durgachandanasree4@gmail.com">Durga
Chandana</a>.<br>
        Follow Us At: <br>
        Contact: 9866449444
<br>
        <a href="#">Home</a> <br>
        <a href="terms.html"> &copy;Terms And Conditions Of Usage</a>
    </address>
</FOOTER>

</body>
</html>
```

Feedback.html

```
<!DOCTYPE html>
<html lang="en">
<head>
    <title>Feedbackpage</title>
    <meta charset="UTF-8">
    <link rel="stylesheet" href="stylesexp.css">
</head>
<body>
  <header>
    <nav>
    <h3>
      Feedback Form
    </h3>
  </nav>
    <h4>Please do provide your valuable feedback to help us improve more
!</h4>
  </header>

    <form method="post">
       Name: <input type="text" id="name" placeholder="Enter your name"
autocomplete="name" autofocus required> <br> <p></p>
```

```
       Date Of Birth: <input type="date" id="dob" required > <br> <p></p>
       <label for="aadhar">Aadhar Number:</label>
         <input type="text" id="aadhar" name="aadhar" placeholder="As per
Aadhar Card" required >
  <br>
       <p> <input type="file" id="file" accept=".jpg, .pdf">
       <input type="submit" value="Upload"> </p>
       Email: <input type="email" id="email" placeholder="Enter a valid mail-
id" required> <br> <p></p>
       <label for="Gender:">Gender:</label> <br>
       <input type="radio" id="Gender" name="Gender" value="male"> Male <br>
       <input type="radio" id="Gender" name="Gender" value="female"> Female
<br>
       <input type="radio" id="Gender" name="Gender" value="prefer not to
say"> Prefer not to say <br> <p></p>
       Nationality: <input type="checkbox" name="Nationality" id="Nationality"
value="Indian" checked>Indian <br> <p></p>
       Contact number: <input type="tel" id="Contact number" name="Contact
number" placeholder="Enter your phone number" required> <br>
     <p></p>
        <label for="Recomendations for more content on" required
>Recomendations for more content on :</label>
        <input type="checkbox" id="Recomendations for more content on"
name="Recomendations for more content on" value="JAVA"> JAVA
        <input type="checkbox" id="Recomendations for more content on"
name="Recomendations for more content on" value="C PROGRAMMING">C PROGRAMMING
        <input type="checkbox" id="Recomendations for more content on"
name="Recomendations for more content on" value="CPP"> CPP
        <br>
     <p></p>
       <label for="Your best practised skill: ">Your best practised skill:
:</label>
       <input list="skill-suggestions" id="skills">
          <datalist id="skill-suggestions">
                <option value="c PROGRAMMING">
                <option value="java">
                <option value="python">
                <option value="cpp">
                <option value="mysql">
                <option value="javascript">
                <option value="php">
                <option value="HTML">
                <option value="css">
         </datalist>
          <br> <p></p>
        Knowledge on that skill:
        <input type="range" id="range" name="range" min="elimentary"
max="professional"> <br> <p></p>
```

```
      Suggestions:
       <textarea id="Suggestions" name="Suggestions" required></textarea>
       <br> <p></p>

       <input type="submit" value="Submit">
       <input type="reset" name="reset" id="reset">
      </form>
      <br>
      <footer> <address>
       <a href="main.html">Home</a>
      </address>
      </footer>
</body>
</html>
```

Login.html

```
<!DOCTYPE html>
<html>
  <head>
    <title>Login or Signup</title>
    <meta charset="UTF-8">
  </head>
  <body>
    <header>
      <h3>Login/Signup</h3>
    </header>

    <div id="login-form">
      <h2>Login</h2>

      <form action="/login" method="get" autocomplete="on">
        <label for="email">Email:</label>
        <input type="email" id="email" name="email" placeholder="Enter
registered email-id" autofocus  required><br>
        <label for="password">Password:</label>
        <input type="password" id="password" name="password" required><br>
        <input type="checkbox" id="Remember me" name="Remember me">
        <label for="Remember me">Remember me</label> <br>
        <input type="submit" value="Submit">
        <input type="reset" value="Reset">
      </form>
    </div>
    <div id="signup-form">
      <h2>Signup</h2>
      <form action="/signup" method="post">
        <label for="name">Name:</label>
```

```
        <input type="text" id="name" name="name" autofocus required><br>
        <label for="email">Email:</label>
        <input type="email" id="email" name="email" placeholder="Enter valid
mail-id" required><br>
        <label for="tel">Phone Number:</label>
        <input type="tel" id="tel" name="phone number"  pattern="\d{10}"
placeholder="xxxxxxxxxx" required> <br>
        <label for="password">Password:</label>
        <input type="password" id="password" name="password" required><br>
        <label for="password-confirm">Confirm Password:</label>
        <input type="password" id="password-confirm" name="password-confirm"
required><br>
        <input type="submit" value="Submit">
      </form>
    </div>
  </body> <br>
  <footer>
    <address>
      <a href="main.html">Home</a>
    </address>
  </footer>
</html>
```

Js.html

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <title>js-page</title>
</head>
<body>
    <header>
    <h3>JAVASCRIPT</h3>
</header>

    <section>
        <h3>What is javascript?</h3>
        <p> <section>
            JavaScript is a scripting or programming language that allows you
to implement complex features on web pages –
            every time a web page does more than just sit there and display
static information for you to look at –
            displaying timely content updates, interactive maps, animated
2D/3D graphics, scrolling video jukeboxes, etc.</p>
    </section>
```

```
    <section>
        <h3>Tutorial for designing webpage using javascript:</h3>

        <iframe width="600" height="315" frameborder="30"
             src="https://www.youtube.com/embed/W6NZfCO5SIk?autoplay=1&mute=1"
>
        </iframe>

    </section>
    <br>

    <footer>
        <address>
       <a href="main.html">Home</a>
        </address>
    </footer>

</body>
</html>
```

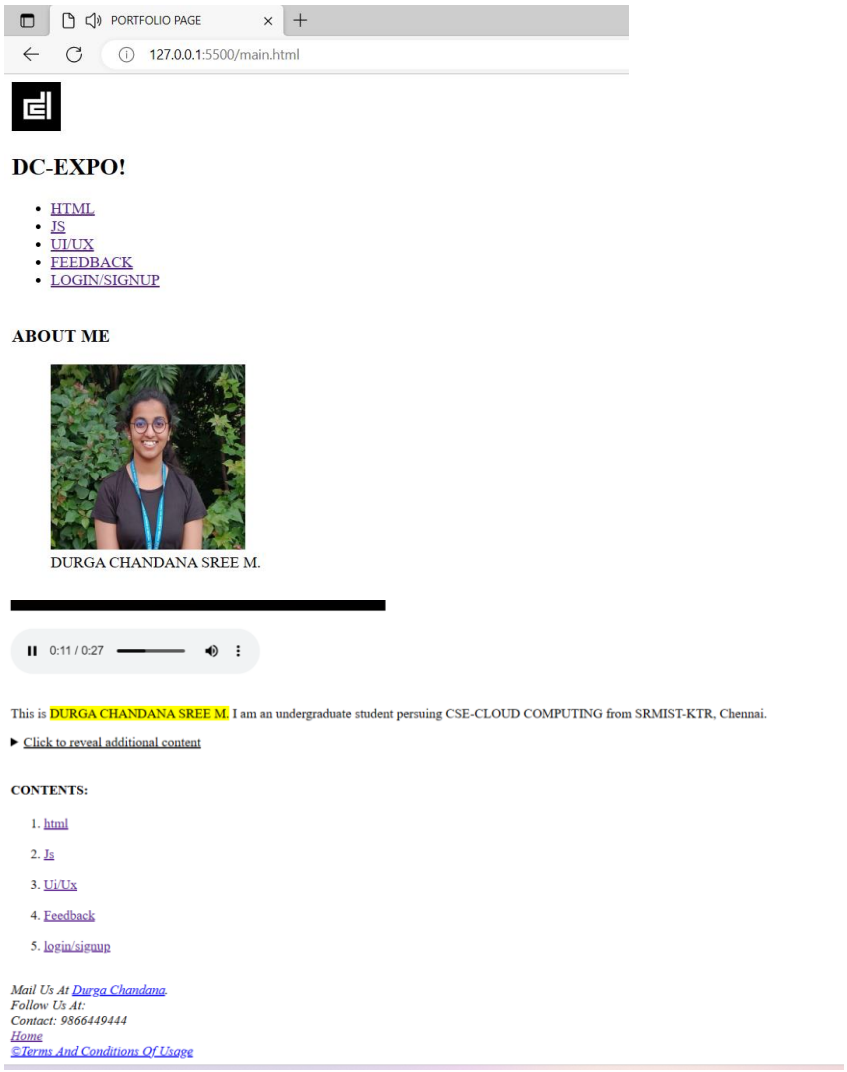
Html.html

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <title>HTML-PAGE</title>
</head>
<body>
 <header>

    <h3> Hyper Text Markup Language </h3>
</header>

    <section>
        <h3>What is html?</h3>
        <p> HTML stands for Hyper Text Markup Language.
            HTML is the standard markup language for creating Web pages.
            HTML describes the structure of a Web page. <br>
            Below is a visualization of an HTML page structure: <br>
        <img src="htmlpagestructure.jpg" width="600px" height="250px"
alt="htmlpagestructure"></p>
    </section>

    <section>
        <h3>Why html?</h3>
```

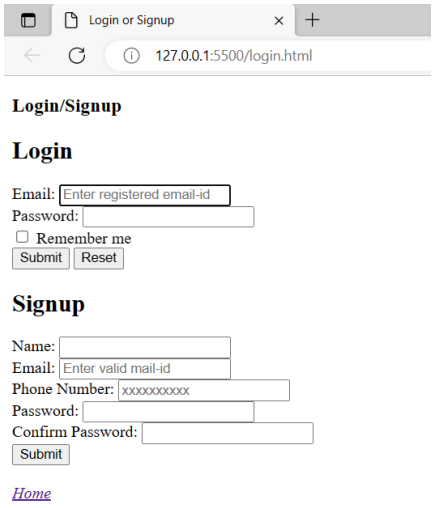
```
        <p> HTML (Hypertext Markup Language) is used to create the structure
and layout of web pages.
            It is the backbone of web pages and is used to define the
different sections and elements that make up a page,
            such as headings, paragraphs, images, and links.
            HTML allows web developers to create structured documents, with
headings, paragraphs, lists, links, images and more.</p>
    </section>

    <section>
        <h3>Projects using html !</h3>

        <table cellpadding="10" cellspacing="5" border="1" >
            <colgroup>
            <col width="35%">
            <col width="35%">
            <col width="35%">
            </colgroup>
            <caption>Resource links</caption>
            <tr>
                <th>TITLE</th> <th>DIFFICULTY LEVEL</th> <th>GITHUB LINK</th>
</tr>
            <tr> <td>projecta</td> <td>beginer level</td> <td> <a
href="https://github.com/dc0407">Click here</a></td></tr>
            <tr> <td>projectb</td> <td>intermediate level</td> <td> <a
href="https://github.com/dc0407">Click here</a></td></tr>
        </table>
    </section>
    <br>


    <embed src="firstvideo.mp4" width="50%" height="40%">


    <footer>
         <address>
        <a href="main.html">Home</a>
         </address>
     </footer>
</body>
</html>
```

Output:

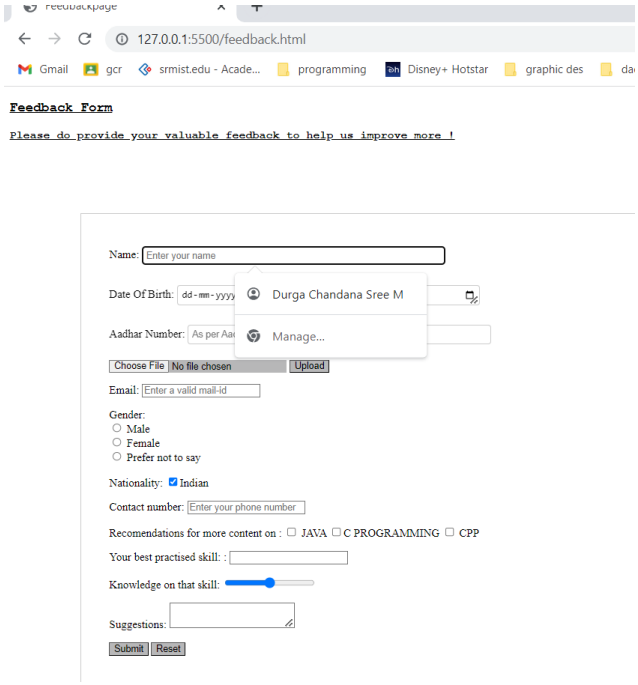
Main page

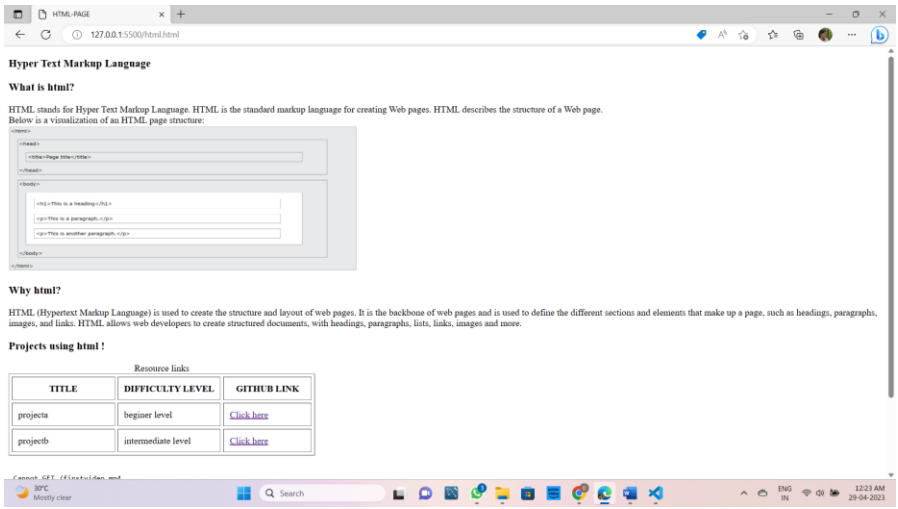


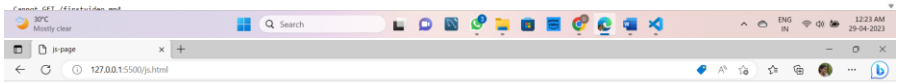
Login output



Feedback form







EXPERIMENT2: aws

Aim: Web Page hosting in AWS.

Procedure:

1. Create an AWS account: Sign up for an AWS account at aws.amazon.com. Provide the necessary information and set up billing.
2. Launch an EC2 instance: EC2 (Elastic Compute Cloud) is a virtual server in AWS. Launch an EC2 instance by selecting the desired operating system, instance type, and configuration. Choose an appropriate AMI (Amazon Machine Image) for your web page's technology stack.
3. Configure security groups: Security groups control inbound and outbound traffic to your EC2 instance. Configure security group rules to allow HTTP (port 80) and HTTPS (port 443) traffic.
4. Upload your web page files: Connect to your EC2 instance using SSH or a remote desktop connection. Upload your web page files to the appropriate location on the instance. This can be achieved through FTP, SCP, or other file transfer methods.
5. Configure a web server: Install and configure a web server software like Apache, Nginx, or IIS on your EC2 instance. Set up virtual hosts or server blocks to serve your web page. Ensure the necessary permissions and file ownership are correctly configured.

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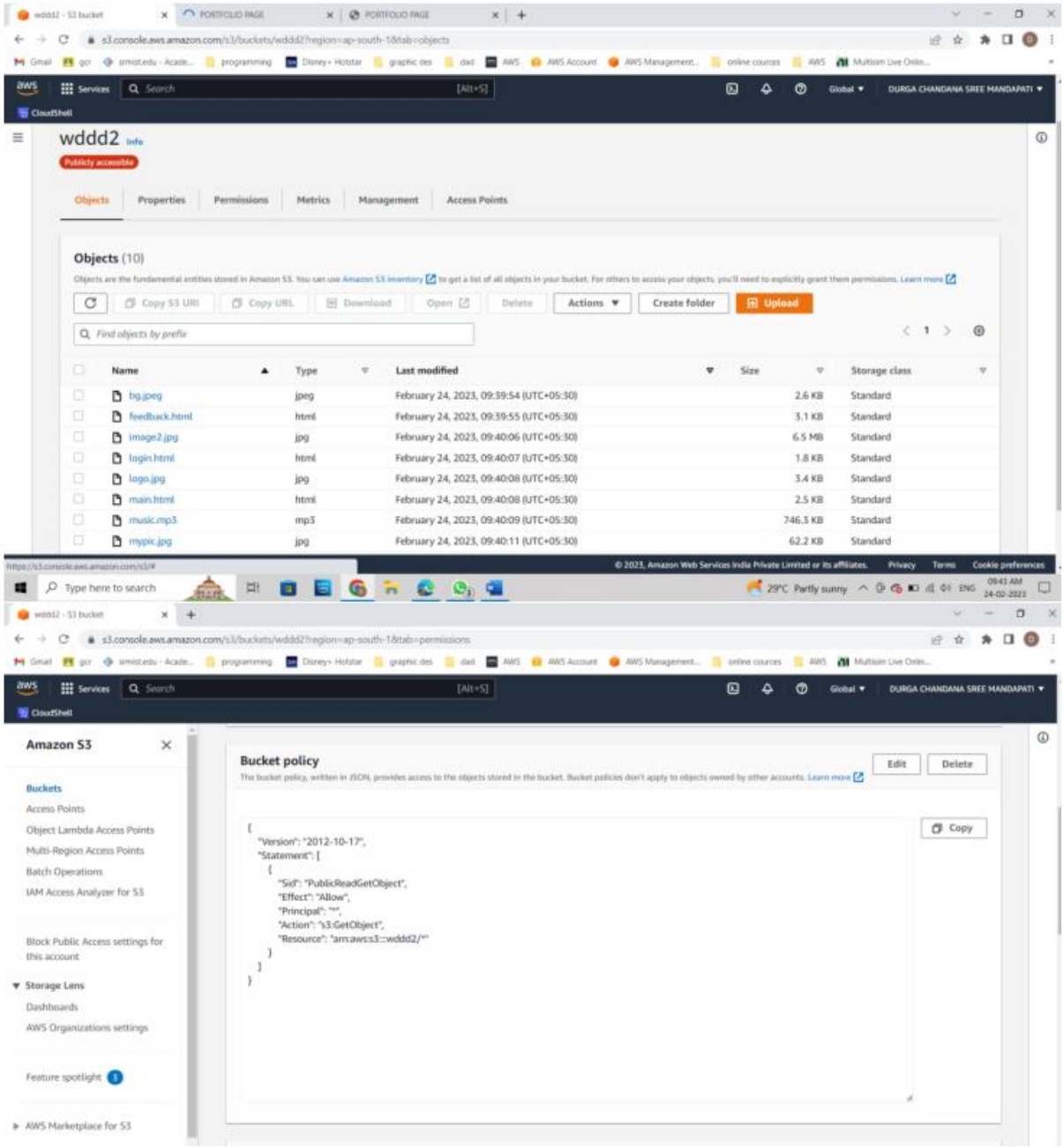
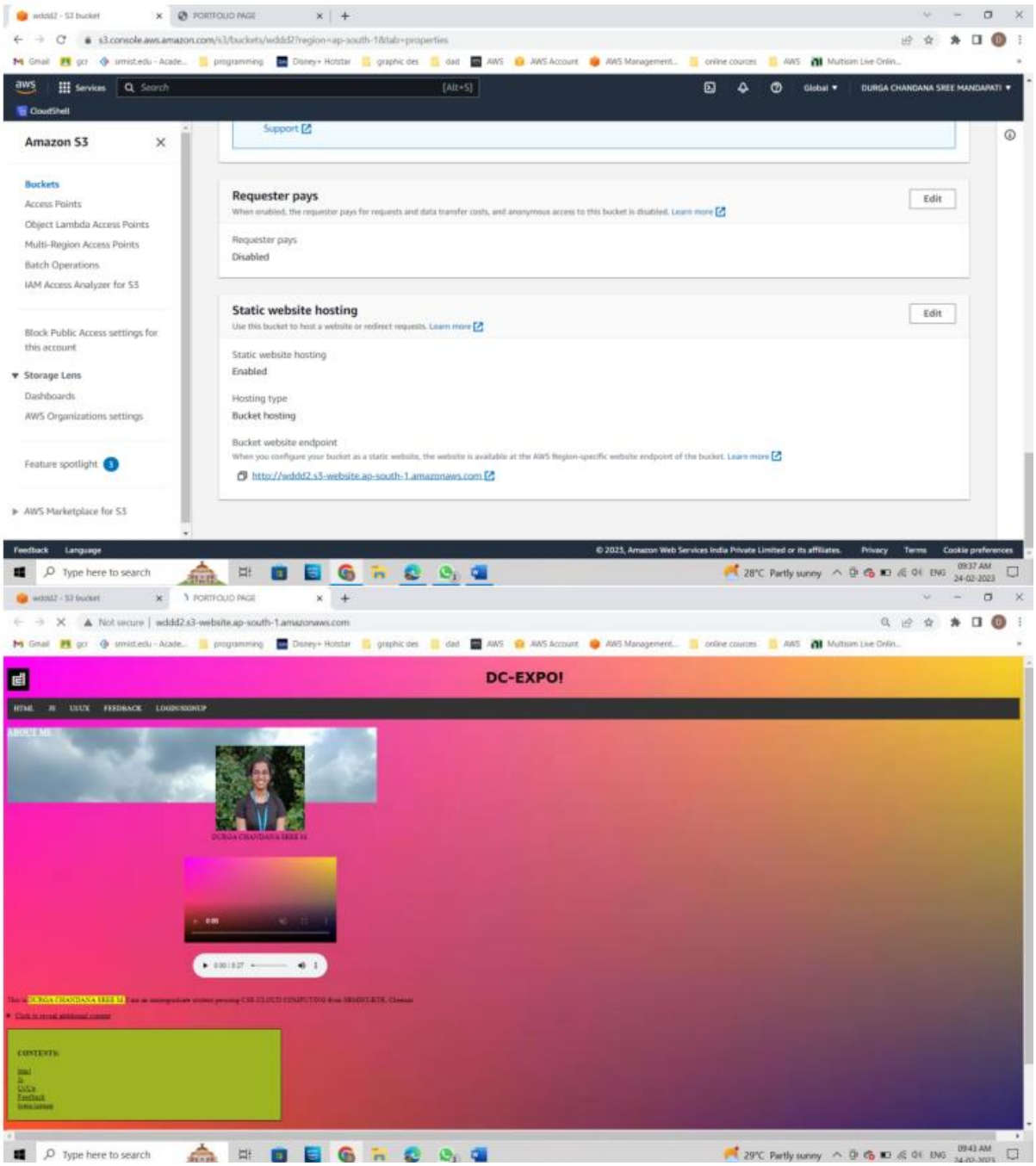
Output:


wddd2 Info
Publicly accessible
Objects
Properties
Permissions
Metrics
Management
Access Points
Objects (10)
Copy S3 URI
Copy URL
Download
Open
Delete
Actions
Create folder
Upload
Find objects by prefix
Name
Type
Last modified
Size
Storage class
bg.jpeg jpeg February 24, 2023, 09:39:54 (UTC+05:30) 2.6 KB Standard
feedback.html html February 24, 2023, 09:39:55 (UTC+05:30) 3.1 KB Standard
image2.jpg jpg February 24, 2023, 09:40:06 (UTC+05:30) 6.5 MB Standard
login.html html February 24, 2023, 09:40:07 (UTC+05:30) 1.8 KB Standard
logo.jpg jpg February 24, 2023, 09:40:08 (UTC+05:30) 3.4 KB Standard
main.html html February 24, 2023, 09:40:08 (UTC+05:30) 2.5 KB Standard
music.mp3 mp3 February 24, 2023, 09:40:09 (UTC+05:30) 746.3 KB Standard
mypic.jpg jpg February 24, 2023, 09:40:11 (UTC+05:30) 62.2 KB Standard
Amazon S3
Buckets
Access Points
Object Lambda Access Points
Multi-Region Access Points
Batch Operations
IAM Access Analyzer for S3
Block Public Access settings for this account
Storage Lens
Dashboards
AWS Organizations settings
Feature spotlight
AWS Marketplace for S3
Bucket policy
Edit
Delete
Copy
{
"Version": "2012-10-17",
"Statement": [
{
"Sid": "PublicReadGetObject",
"Effect": "Allow",
"Principal": "*",
"Action": "s3:GetObject",
"Resource": "arn:aws:s3:::wddd2/*"
}
]
}


Amazon S3
Buckets
Access Points
Object Lambda Access Points
Multi-Region Access Points
Batch Operations
IAM Access Analyzer for S3
Block Public Access settings for this account
Storage Lens
Dashboards
AWS Organizations settings
Feature spotlight
AWS Marketplace for S3
Requester pays
Edit
Requester pays
Disabled
Static website hosting
Edit
Static website hosting
Enabled
Hosting type
Bucket hosting
Bucket website endpoint
http://wddd2.s3-website.ap-south-1.amazonaws.com

DC-EXPO!
HTML
JS
UI/UX
FEEDBACK
CONTENTS:

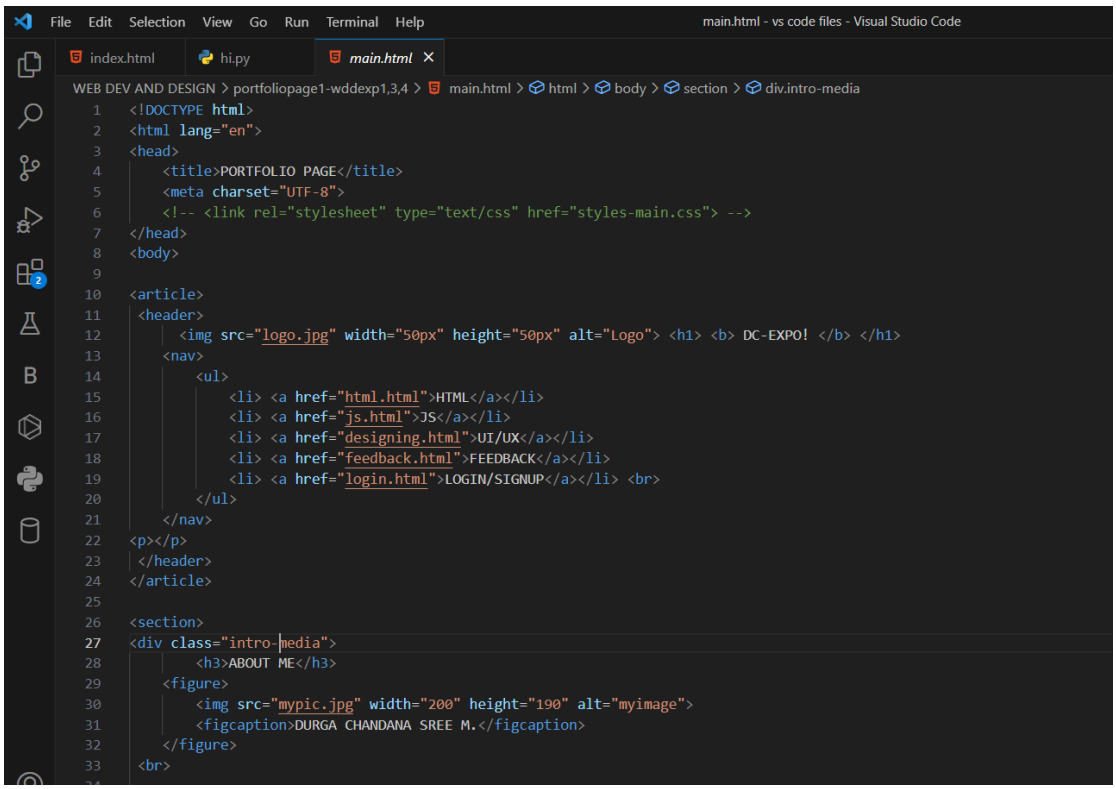
EXPERIMENT3: (vs code)

Aim: Create a webpage using HTML5 Media Elements.

Procedure:

1. Create a new HTML file with a .html extension.
2. Declare the HTML5 doctype at the beginning of the file:
   <!DOCTYPE html>
3. Within the <html> tags, include the <head> and <body> sections.
4. Inside the <head> section, you can add metadata, such as the page title and linked stylesheets.
5. Within the <body> section, add the desired content for your webpage.
6. To include a video, use the <video> element and specify the video file using the src attribute. You can also add the controls attribute to enable playback controls.
7. To include audio, use the <audio> element and specify the audio file using the src attribute. Similarly, you can add the controls attribute for audio playback controls.
8. To display an image, use the <img> element and specify the image file using the src attribute. You can also include an alt attribute with descriptive text for accessibility.
9. Customize and style the elements using CSS or inline styles as desired.
10. Save the HTML file and open it in a web browser to view the webpage with the media elements.

Program:



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```
<video controls poster="bg.jpeg" height="50%" width="30%" preload muted>
    <source src="myvideo.mp4" type="video/mp4" alt=" Your browser does not support." >
      <track default kind="captions" srclang="en" src="captions.vtt">
</video> <br> <br>
<audio controls loop autoplay>
<source src="music.mp3">
</audio>
</div>
<br>
  <P>This is <mark>DURGA CHANDANA SREE M.</mark> I am an undergraduate student persuing CSE-CLOUD COMPUTING from
  SRMIST-KTR, Chennai.</p>
</section>
<details>
    <summary> <u> Click to reveal additional content </u> </summary>
    <p>This is a portfolio page designed to showcase my works and share the knowledge with my co-ethusiasts out there ! <br>
        If you find the content helpful, do fill our feedback form to get other materials such as notes, problem statements etc.</p>
</details>   <br>
    <aside class="box">
        <H4>CONTENTS: </H4>
        <ol>
            <li> <a href="html.html">html</a></li> <br>
            <li> <a href="js.html">Js</a></li> <br>
            <li> <a href="designing.html">Ui/Ux</a></li> <br>
            <li> <a href="feedback.html">Feedback</a></li> <br>
            <li> <a href="login.html">login/signup</a></li>
        </ol>
    </aside> <br>
<FOOTER>
    <address>
        Mail Us At <a href="mailto:durgachandanasree4@gmail.com">Durga Chandana</a>.<br>
        Follow Us At: <br>
        Contact: 9866449444 <br>
        <a href="#">Home</a> <b
        <a href="terms.html"> &copy;Terms And Conditions Of Usage</a>
    </address>
</FOOTER>
</body>
```

Character entity representing '©', unicode equivalent 'U+00A9'

Output:

PORTFOLIO PAGE

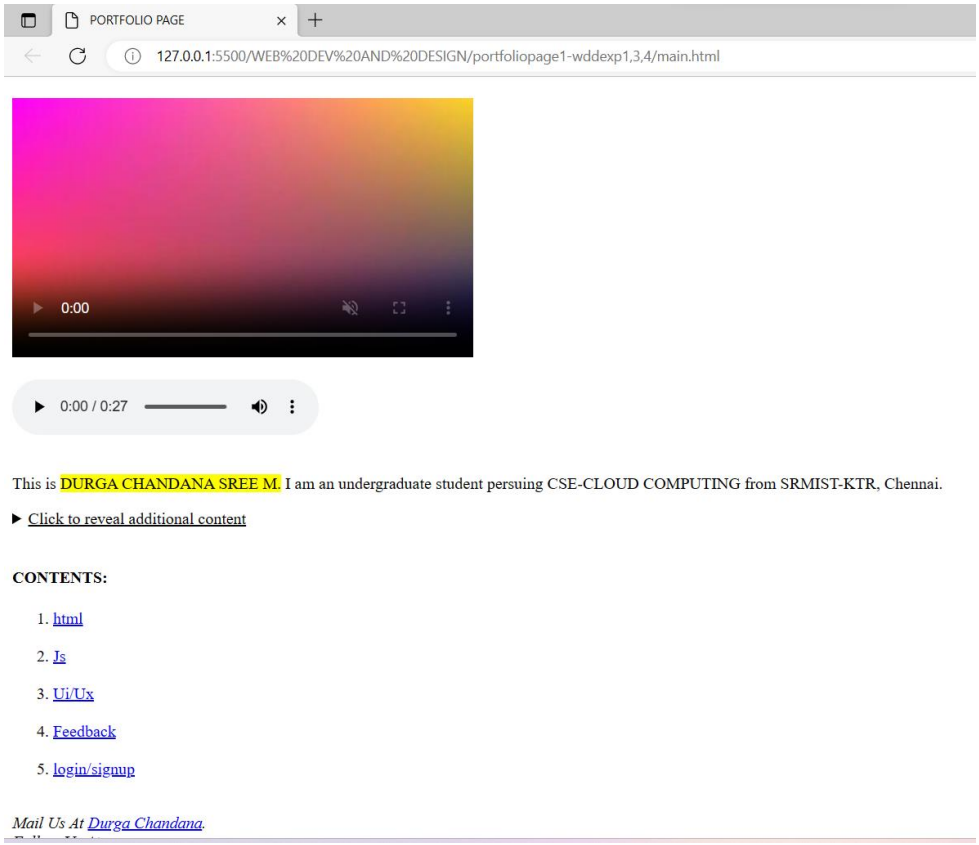
127.0.0.1:5500/WEB%20DEV%20AND%20DESIGN/portfoliopage1-wddexp1,3,4/main.h

DC-EXPO!

- HTML
- JS
- UI/UX
- FEEDBACK
- LOGIN/SIGNUP

ABOUT ME

DURGA CHANDANA SREE M.



This is DURGA CHANDANA SREE M. I am an undergraduate student persuing CSE-CLOUD COMPUTING from SRMIST-KTR, Chennai.

▶ Click to reveal additional content

CONTENTS:

1. html
2. Js
3. Ui/Ux
4. Feedback
5. login/signup

Mail Us At Durga Chandana.

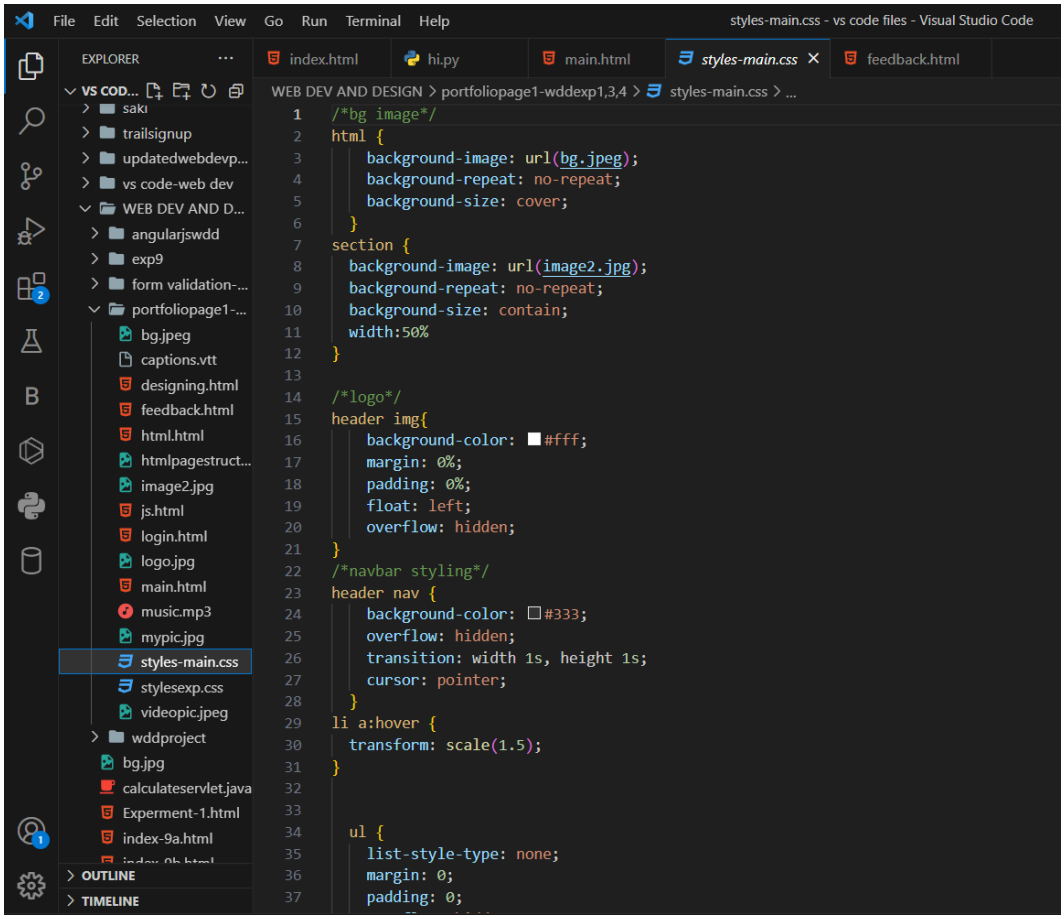
EXPERIMENT4: (vs code)

Aim: Add a Cascading Style sheet for designing the web page

Procedure:

1. Create a CSS file with a .css extension.
2. Link the CSS file to your HTML page using the <link> tag in the <head> section of your HTML file. Set the href attribute to the path of your CSS file.
3. Open the CSS file and add your CSS rules to style the webpage.
4. Save the CSS file and ensure it is located at the specified path.
5. Refresh your HTML page in the web browser, and the styles from the CSS file will be applied to the webpage.

Program:



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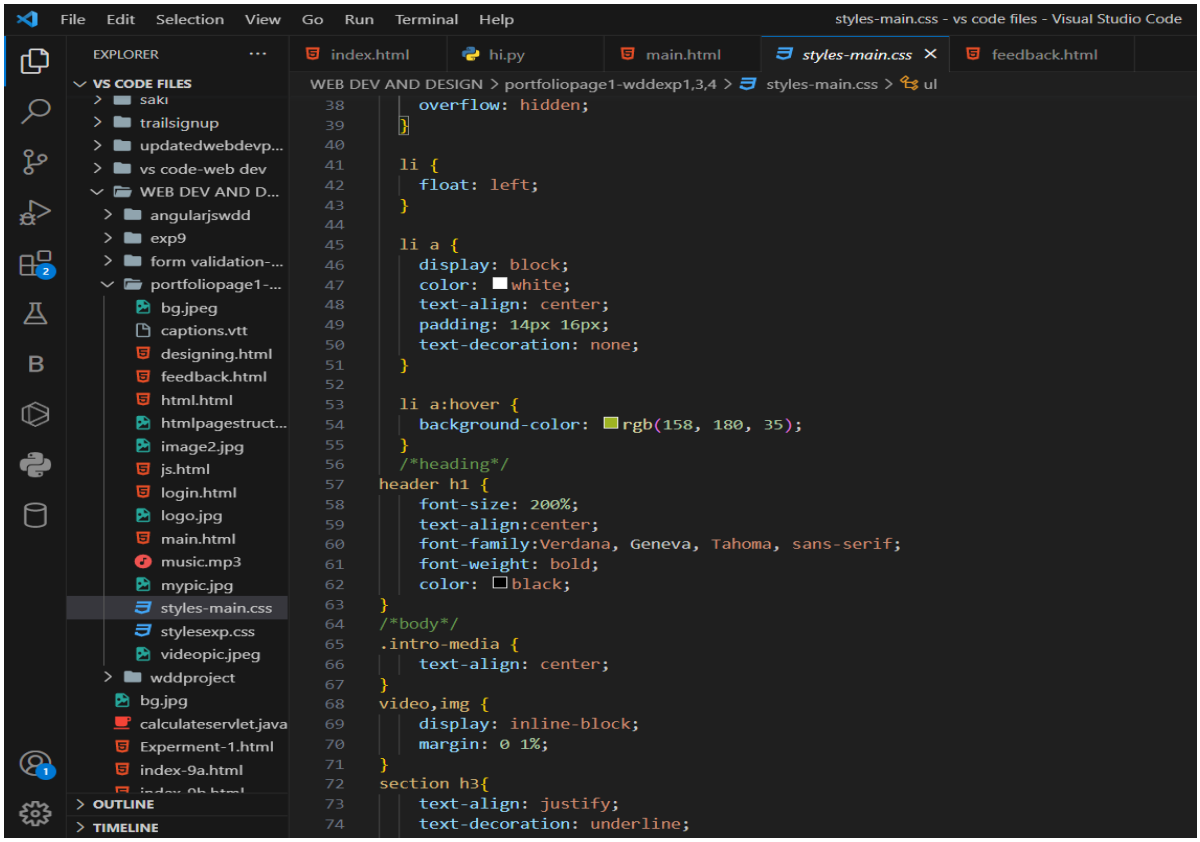
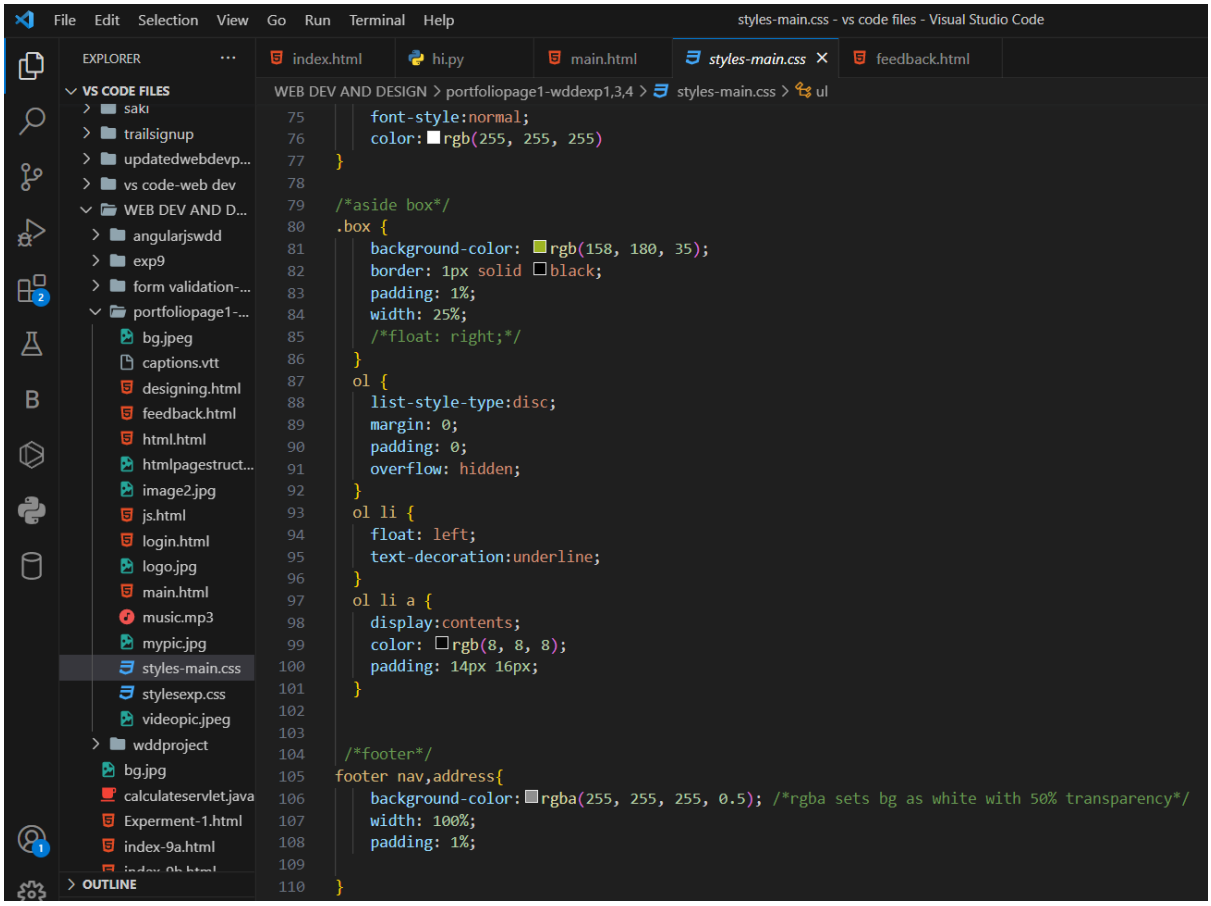
DURGA CHANDANA SREE M



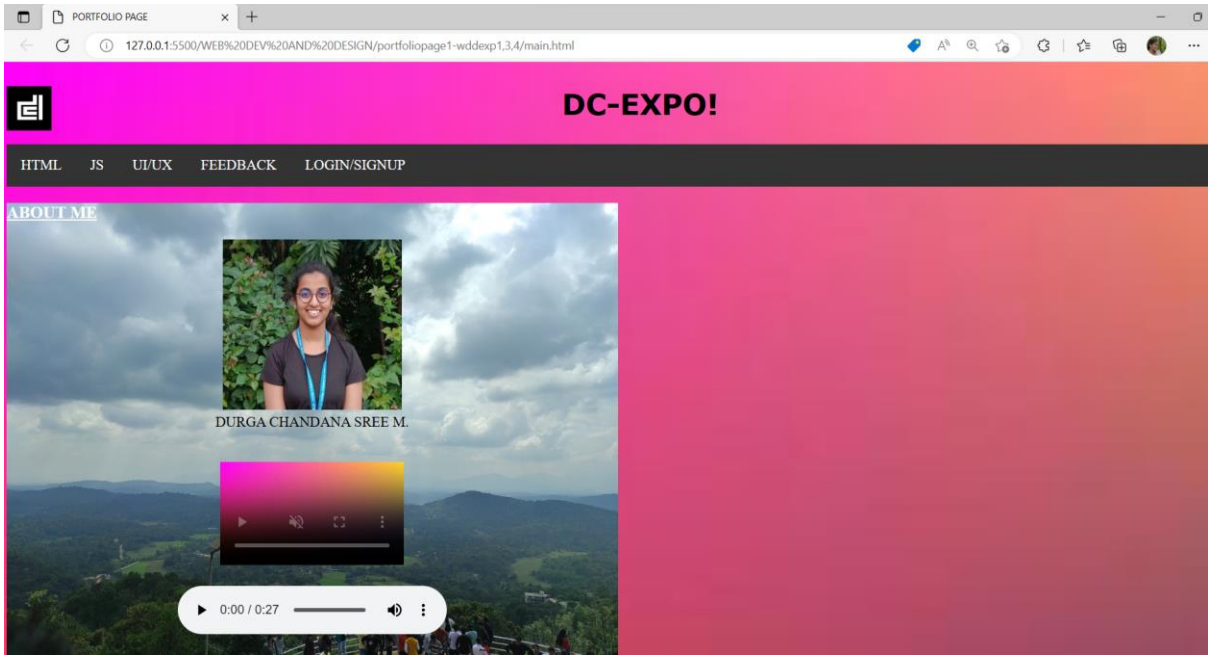


RA2011028010099
DURGA CHANDANA SREE M

```
header {
    font-family: 'Courier New', Courier, monospace;
    font-style:initial;
    color: black;
    text-decoration: underline;
}
form{
    margin: 5%;
    border: 2px solid #ccc;
    padding: 2%;

}
input[type=text], input[type=date], datalist, textarea:focus {
    width: 25%;
    padding: 5px;
    border: 1px solid #ccc;
    border-radius: 4px;
    box-sizing: border-box;
    margin-top: 6px;
    margin-bottom: 6px;
    resize: both; /*resize the textarea */
  }
input[type=submit],input[type=reset],input[type=file] {
    background-color: rgb(183, 183, 184);
}
```

Output:



This is DURGA CHANDANA SREE M. I am an undergraduate student persuing CSE-CLOUD COMPUTING from SRMIST-KTR, Chennai.

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EXPERIMENT :5: (vs code)

Aim: Design a dynamic web page with validation using JavaScript.

Procedure:

1. Create an HTML file with a .html extension.

2. Inside the <head> section of your HTML file, add a <script> tag to link the JavaScript file. Use the src attribute to specify the path to your JavaScript file or include the JavaScript code directly within the <script> tags.

3. Within the <body> section, design your web page's layout using HTML elements and CSS.

4. Use JavaScript to add interactivity and validation to your web page. Here are some common tasks you can perform using JavaScript:

5. Access HTML elements using the document.getElementById() or other relevant methods.
6. Attach event listeners to HTML elements to capture user interactions (e.g., button clicks, form submissions).
7. Validate form inputs by checking user input against predefined criteria or using regular expressions.
8. Display error messages or dynamically update the webpage based on user input or events.
9. Test your dynamic web page by opening the HTML file in a web browser. Verify that the JavaScript code executes correctly and that your validations and dynamic behavior work as expected.

Program:

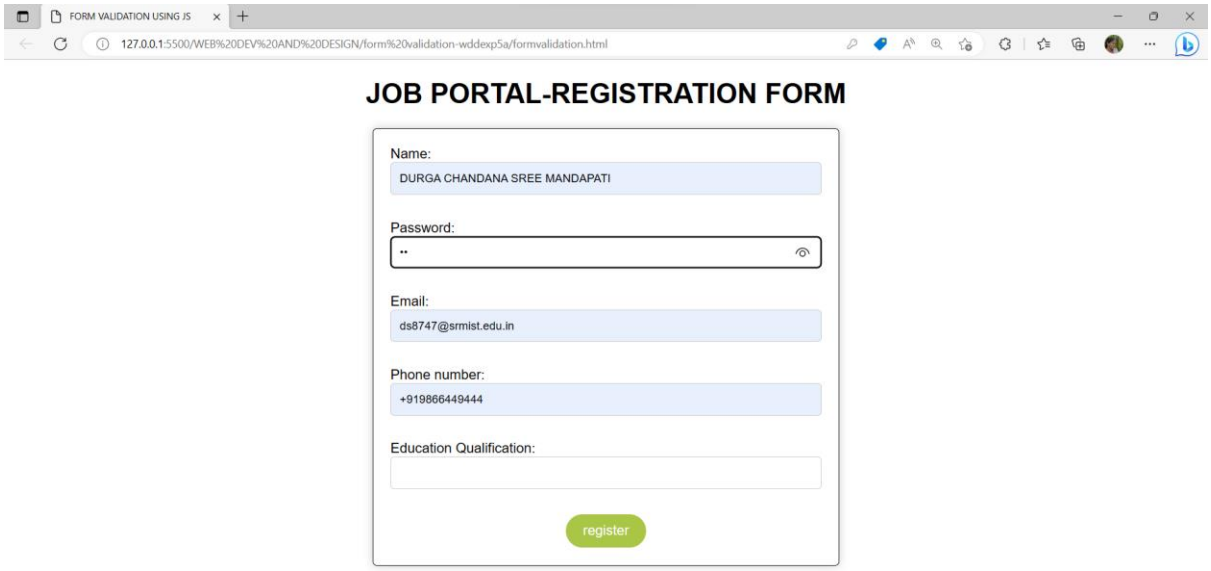
```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>FORM VALIDATION USING JS</title>
    <style>
        body {
            font-family: Arial, sans-serif;
            margin: 0;
            padding: 0;
        }

        h1 {
            text-align: center;
        }

        section {
            max-width: 500px;
            margin: 0 auto;
            padding: 20px;
            border: 1px solid #100e0e;
```

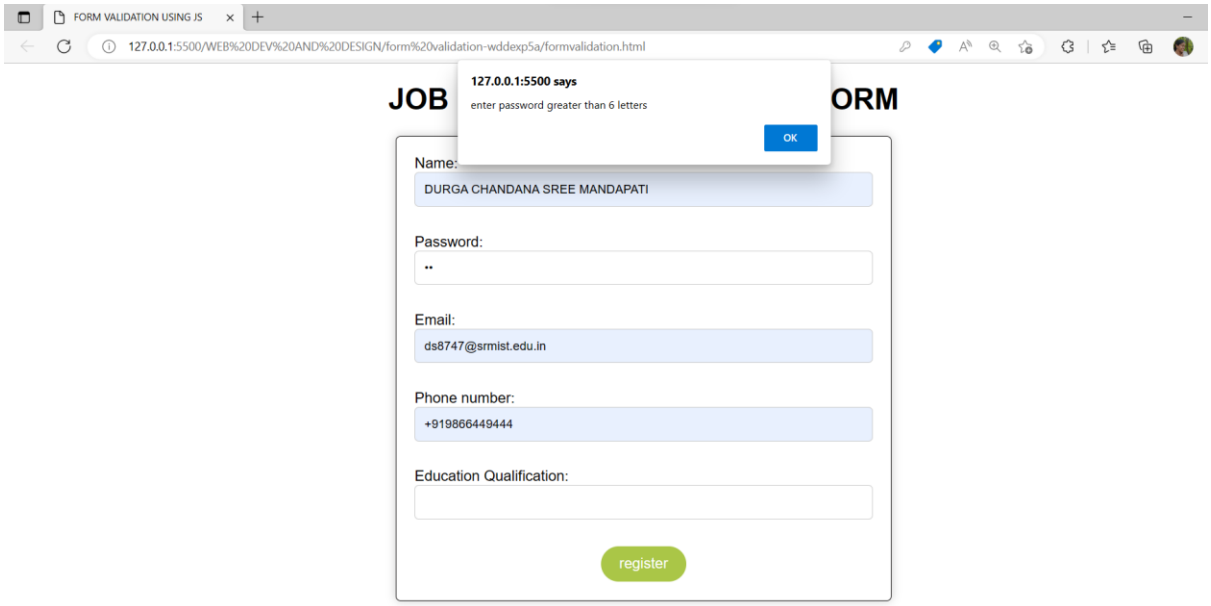
```
            border-radius: 5px;
            box-shadow: 0 0 10px rgba(0,0,0,0.2);
        }

        form input[type="text"],
        form input[type="password"],
        form input[type="email"],
        form input[type="tel"] {
            display: block;
            width: 100%;
            padding: 10px;
            margin-bottom: 10px;
            border-radius: 5px;
            border: 1px solid #ccc;
            box-sizing: border-box;
        }

        form input[type="submit"] {
            background-color: #4CAF50;
            color: white;
            padding: 10px 20px;
            border: none;
            border-radius: 25px;
            cursor: pointer;
            font-size: 16px;
        }

        form input[type="submit"]:hover {
            background-color: #aac647;
        }
    </style>

</head>
<body>
    <H1>JOB PORTAL-REGISTRATION FORM</H1>

        <script>
            function validation(){
                var name= document.myform.name.value;
                var phonenumber=document.myform.tel.value;
                var password=document.myform.password.value;
                var email=document.myform.email.value;
                var atpos=email.indexOf('@');
                var dotpos=email.indexOf('.');
                var qualification=document.myform.qualification.value
                if(name==""){
                    alert("Enter name");
                    document.myform.fname.focus();
```

```
                return false;
            }
            if(name.length<6){
                alert("enter name greater than 6 letters");
                document.myform.name.focus();
                return false;
            }
            if(password==""){
               alert("enter password");
               document.myform.password.focus();
               return false;
            }
            if(password.length<6){
              alert("enter password greater than 6 letters");
              document.myform.password.focus();
              return false;
            }
            if(email==""){
             alert("Enter email");
             document.myform.email.focus();
             return false;
            }
            if(atpos==0){
            alert("@ is 0");
            return false;
            }
            if(dotpos-atpos<=2){
             alert("@ 2 .");
             return false;
            }
            if(email.length-dotpos<=2){
            alert("last");
            return false;
            }
            if(tel==""){
             alert("Enter phone");
             document.myform.tel.focus();
             return false;
            }
            if(tel.length!=10){
             alert("Enter Phone Number");
             document.myform.pnum.focus();
              return false;
            }
        if(qualification==""){
            alert("Enter Qualifications");
            document.myform.qualification.focus();
            return false;
```

```
        }
    }
</script>

<section>
    <form name="myform" method="post" action="abc.jsp" onsubmit="return
validation()" >
    Name: <input type="text" name="name"><br>
    Password: <input type="password" name="password"><br>
    Email: <input type="email" name="email"> <br>
    Phone number: <input type="tel" name="tel"> <br>
    Education Qualification: <input type="text" name="qualification"> <br>
    <center><input type="submit" value="register"
onclick="validation()">   </center>
    </form>
</section>

</body>
</html>
```

Output:




FORM VALIDATION USING JS
127.0.0.1:5500/WEB%20DEV%20AND%20DESIGN/form%20validation-wddexp5a/formvalidation.html
127.0.0.1:5500 says
enter password greater than 6 letters
OK
JOB
ORM
Name:
DURGA CHANDANA SREE MANDAPATI
Password:
Email:
ds8747@srmist.edu.in
Phone number:
+919866449444
Education Qualification:
register

EXPERIMENT :6: (vs code)

Aim: Design a dynamic web page with validation using JavaScript

Procedure:

1. Create an HTML file with a .html extension.
2. Inside the <head> section of your HTML file, add a <script> tag to link the JavaScript file using the src attribute or include the JavaScript code directly within the <script> tags.
3. Within the <body> section, design your web page's layout using HTML elements and CSS.
4. Use JavaScript to add interactivity and validation to your web page:
5. Access HTML elements using methods like document.getElementById() or document.querySelector().
6. Attach event listeners to elements to capture user interactions (e.g., button clicks, form submissions).
7. Implement validation logic by checking user input against predefined criteria or using regular expressions.
8. Display error messages or dynamically update the webpage based on user input or events.
9. Test your dynamic web page by opening the HTML file in a web browser. Verify that the JavaScript code executes correctly and that your validations and dynamic behavior work as expected.

Program:

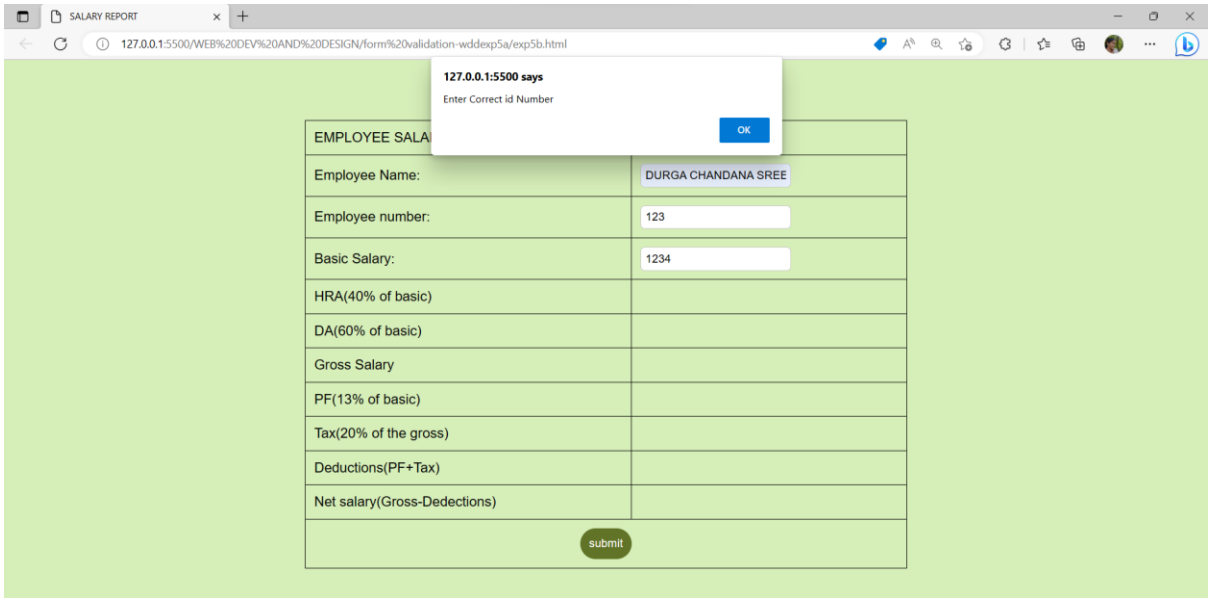
```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <title>SALARY REPORT</title>
    <style>
        html, body {
    margin: 0;
    padding: 0;
    font-family: Arial, sans-serif;
    background-color: #d6eeb8;
}

table {
    border-collapse: collapse;
    width: 50%;
    margin: 0 auto;
    padding: 20px;
    margin-top: 5%;
}

table, th, td {
    border: 1px solid black;
}

th, td {
    padding: 10px;
```

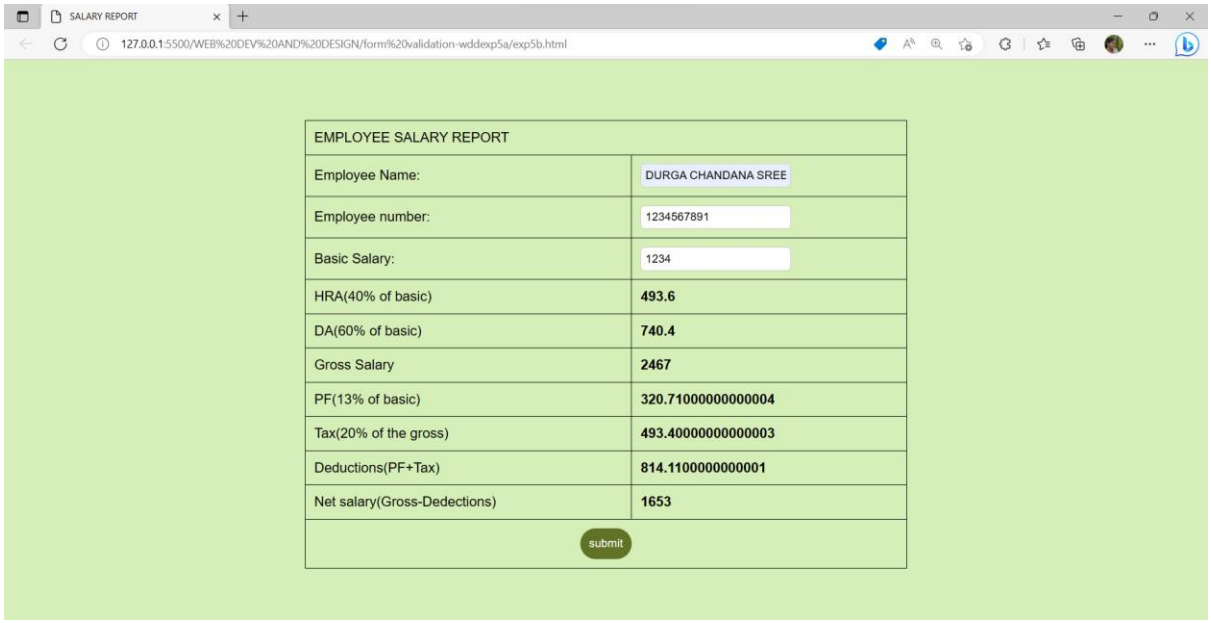
```
    text-align: left;
}

th {
    background-color: #ccc;
}

input[type=text], input[type=number] {
    padding: 5px;
    border-radius: 5px;
    border: 1px solid #ccc;
}

button {
    padding: 10px;
    background-color: #4CAF50;
    color: white;
    border: none;
    border-radius: 25px;
    cursor: pointer;
}

button:hover {
    background-color: #617326;
}

p {
    font-weight: bold;
    margin: 0;
}
    </style>
    <script>
        function calc(){
            var name=document.myform.name.value;
            var id=document.myform.id.value;
            if(name==""){
            alert("Enter name");
            document.myform.name.focus();
            return false;
        }
        if(name.length<6){
            alert("enter name greater than 6 letters");
            document.myform.name.focus();
            return false;
        }
        if(id.length!=10){
            alert("Enter Correct id Number");
            document.myform.id.focus();
```

```
            return false;
        }
            let salary=document.myform.salary.value;
            let hra=0.4*salary;
            let da=0.6*salary;
            let grsal=parseInt(salary)+parseInt(hra)+parseInt(da);
            let pf=0.13*grsal;
            let tax=0.2*grsal;
            let ded=pf+tax;
            let net=parseInt(grsal)-parseInt(ded);
            document.getElementById("hra").innerHTML=hra;

            document.getElementById("da").innerHTML=da;
            document.getElementById("grsal").innerHTML=grsal;
            document.getElementById("pf").innerHTML=pf;
            document.getElementById("tax").innerHTML=tax;
            document.getElementById("ded").innerHTML=ded;
            document.getElementById("net").innerHTML=net;
        }
    </script>
</head>
<body>
    <table border="1" cellpadding="0" cellspacing="0">
        <form action="" name="myform" method="post" onsubmit="return false">
            <tr>
                <td colspan="2">EMPLOYEE SALARY REPORT</td>
            </tr>
            <tr>
                <td>Employee Name:</td>
                <td><input type="text" name="name"></td>
            </tr>
            <tr>
                <td>Employee number:</td>
                <td><input type="number" name="id"></td>
            </tr>
            <tr>
                <td>Basic Salary:</td>
                <td><input type="number" name="salary"></td>
            </tr>
            <tr>
                <td>HRA(40% of basic)</td>
                <td><p id="hra"></p></td>
            </tr>
            <tr>
                <td>DA(60% of basic)</td>
                <td><p id="da"></p></td>
            </tr>
            <tr>
```

```
            <td>Gross Salary</td>
            <td><p id="grsal"></p></td>
        </tr>
        <tr>
            <td>PF(13% of basic)</td>
            <td><p id="pf"></p></td>
        </tr>
        <tr>
            <td>Tax(20% of the gross)</td>
            <td><p id="tax"></p></td>
        </tr>
        <tr>
            <td>Deductions(PF+Tax)</td>
            <td><p id="ded"></p></td>
        </tr>
        <tr>
            <td>Net salary(Gross-Dedections)</td>
            <td><p id="net"></p></td>
        </tr>
        <tr>
            <td colspan="2">
                <center><button onclick="calc()">submit</button></center>
                </td>
        </tr>
    </form>
</table>
</body>
</html>
```

Output:




SALARY REPORT
127.0.0.1:5500/WEB%20DEV%20AND%20DESIGN/form%20validation-wddexp5a/exp5b.html
EMPLOYEE SALARY REPORT
Employee Name:
DURGA CHANDANA SREE
Employee number:
1234567891
Basic Salary:
1234
HRA(40% of basic)
493.6
DA(60% of basic)
740.4
Gross Salary
2467
PF(13% of basic)
320.71000000000004
Tax(20% of the gross)
493.40000000000003
Deductions(PF+Tax)
814.1100000000001
Net salary(Gross-Dedections)
1653
submit

EXPERIMENT :7: (eclipse ide)

Aim: Simple applications to demonstrate Servlets

Procedure:

1. User Registration: Create a servlet that handles user registration. Users can enter their details through an HTML form, and the servlet validates and stores the information in a database.
2. Login and Authentication: Implement a servlet-based login system. Users enter their credentials on a login page, and the servlet authenticates the user against a predefined user database.
3. File Upload and Download: Develop a servlet that allows users to upload files to the server. The servlet handles the file upload and provides functionality to download the uploaded files.
4. CRUD Operations: Build a servlet-based application that performs CRUD (Create, Read, Update, Delete) operations on a specific entity. Users can interact with the servlet to create, retrieve, update, or delete records in a database.
5. Shopping Cart: Create a servlet-based shopping cart application. Users can add items to their cart, view the cart contents, and proceed to checkout. The servlet manages the cart state and handles order processing.

Program:

Loginselvlet.java

```
package com.servlet;


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 javax.servlet.ServletException;

import javax.servlet.http.HttpServlet;

import javax.servlet.http.HttpServletRequest;

import javax.servlet.http.HttpServletResponse;


public class loginservlet extends HttpServlet {

protected void doGet(HttpServletRequest req, HttpServletResponse res) throws ServletException, IOException{
```

```
PrintWriter pw =res.getWriter();
res.setContentType("text/html");
String name= req.getParameter("username");
String pwd = req.getParameter("userpass");
boolean status=false;
try {
	Class.forName("com.mysql.jdbc.Driver");
	Connection connection = DriverManager.getConnection("jdbc:mysql://localhost:3306/login?useSSL=false","root","Dc@04072002");
	java.sql.PreparedStatement ps = connection.prepareStatement("select * from users where username = ? and password = ?");
	ps.setString(1, name);
	ps.setString(2, pwd);
	System.out.println(ps);
	ResultSet rs=ps.executeQuery();
	status=rs.next();
}
catch(SQLException | ClassNotFoundException e) {
	System.out.println(e);
}
if(status) {
	pw.print("<p style=color:green>welcome "+name+"</p>");
}
else {
	pw.print("<p style=color:red>Username and Password invalid</p>");
}
}

protected void doPost(HttpServletRequest req, HttpServletResponse res) throws ServletException, IOException{
doGet(req,res); } }
```

Web.xml

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

    <welcome-file>index.html</welcome-file>

  </welcome-file-list>
  <servlet>
   <servlet-name>abc</servlet-name>
   <servlet-class>com.servlet.loginservlet</servlet-class>
</servlet>

<servlet-mapping>
   <servlet-name>abc</servlet-name>
   <url-pattern>/login</url-pattern>
</servlet-mapping>
</web-app>
```

Index.html

```
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Insert title here</title>
</head>
<body>
<form method="post" action="login">
<h2>Login</h2><br><br>
Name: <input type="text" name="username"><br><br>
Password: <input type="password" name="userpass"><br><br>
<input type="submit" value="Login">
</form>
</body>
</html>
```

7b gradeclaculator:

Index.html

```
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Insert title here</title>
</head>
<body>
```

```
<form method="post" action="result" >
<h2>Grade Calculator</h2><br><br>
mark-1 <input type="number" name="mark1"/><br><br>
mark-2 <input type="number" name="mark2"/><br><br>
mark-3 <input type="number" name="mark3"/><br><br>
mark-4 <input type="number" name="mark4"/><br><br>
mark-5 <input type="number" name="mark5"/><br><br>
<input type="submit" value="submit"/><br>
</form>
</body>
</html>
```

Web.xml

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

    <welcome-file>index.html</welcome-file>

  </welcome-file-list>
  <servlet>
   <servlet-name>CalculateServlet</servlet-name>
   <servlet-class>com.servlet.CalculateServlet</servlet-class>
</servlet>

<servlet-mapping>
   <servlet-name>CalculateServlet</servlet-name>
   <url-pattern>/result</url-pattern>
</servlet-mapping>
</web-app>
```

CalculateServlet.java

package com.servlet;

import java.io.IOException;

import java.io.PrintWriter;

import javax.servlet.ServletException;

import javax.servlet.http.HttpServlet;

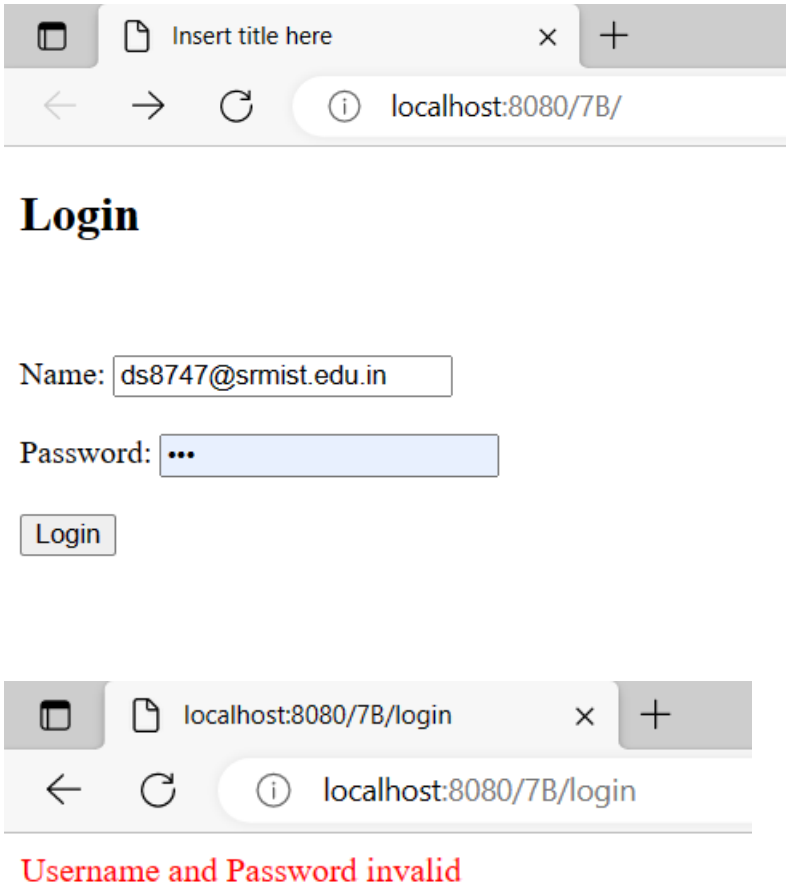
import javax.servlet.http.HttpServletRequest;

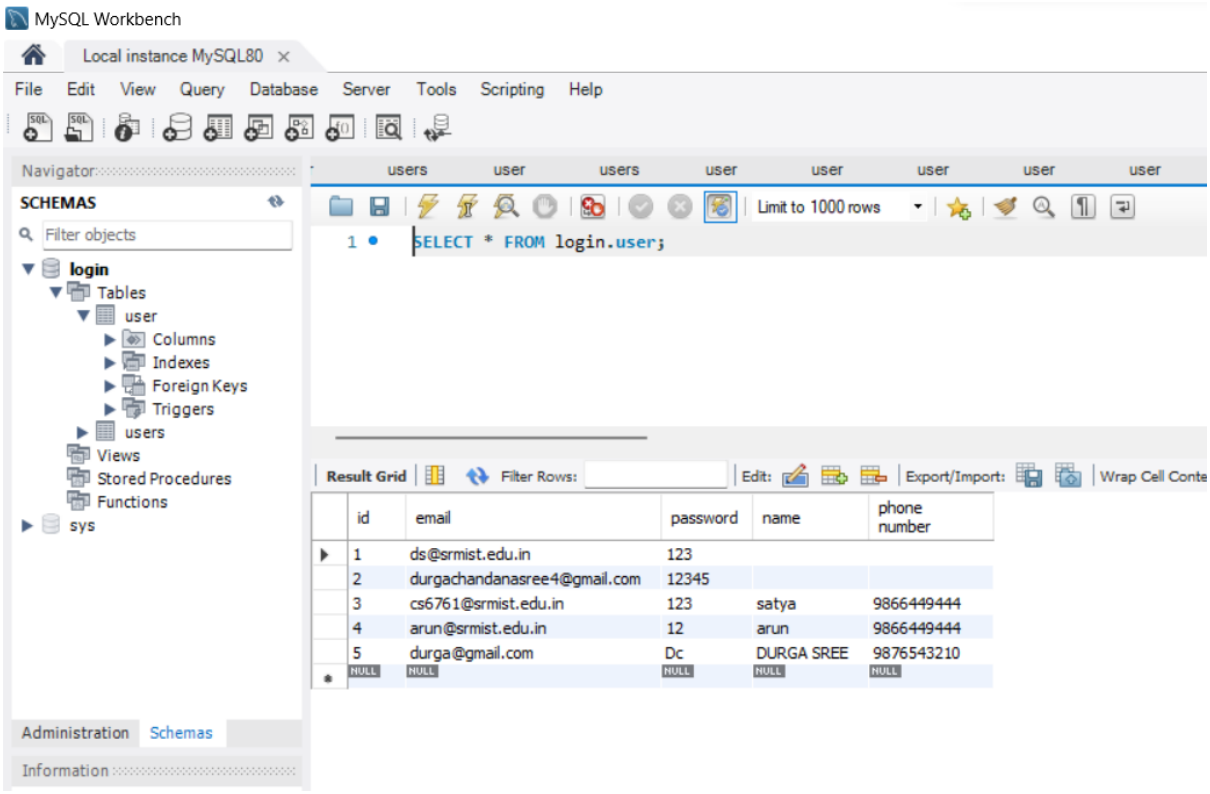
import javax.servlet.http.HttpServletResponse;

```
public class CalculateServlet extends HttpServlet {
	private static final long serialVersionUID = 1L;
	protected void doGet(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {
		// TODO Auto-generated method stub
		response.getWriter().append("Served at: ").append(request.getContextPath());
		PrintWriter pw=response.getWriter();
		response.setContentType("text/html");
		int mark1=Integer.parseInt(request.getParameter("mark1"));
		int mark2=Integer.parseInt(request.getParameter("mark2"));
		int mark3=Integer.parseInt(request.getParameter("mark3"));
		int mark4=Integer.parseInt(request.getParameter("mark4"));
		int mark5=Integer.parseInt(request.getParameter("mark5"));
		int total=mark1+mark2+mark3+mark4+mark5;
		int percentage=total/5;
		if(percentage>=90) {
			pw.print("<p style=color:green>Your Grade is O</p>");
		}
		else if(percentage>=80 && percentage<90) {
			pw.print("<p style=color:green>Your Grade is A</p>");
		}
		else if(percentage>=70 && percentage<80) {
			pw.print("<p style=color:yellow>Your Grade is B</p>");
		}
		else if(percentage>=60 && percentage<70) {
			pw.print("<p style=color:orange>Your Grade is C</p>");
		}
		else {
			pw.print("<p style=color:red>Your Grade is F</p>");
		} }
```

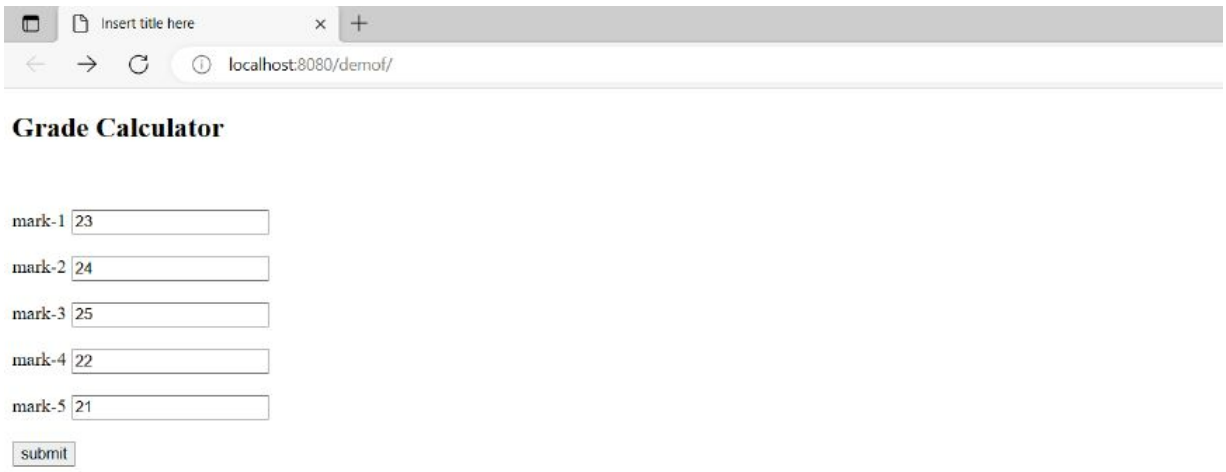
```
/**
 * @see HttpServlet#doPost(HttpServletRequest request, HttpServletResponse response)
 */
protected void doPost(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {
        // TODO Auto-generated method stub
        doGet(request, response); } }
```

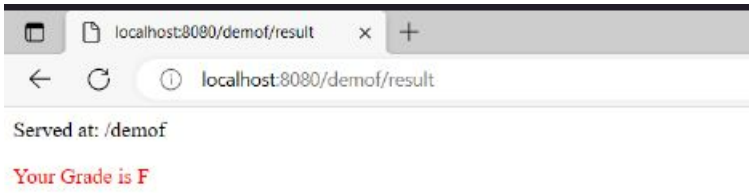
Output:





7b gradeclaculator:





EXPERIMENT :8: (eclipse ide**)**

Aim : Simple applications using JSP.

Procedure:

1. Create a new JSP file with a .jsp extension.
2. Declare the page directive to specify the language and import necessary packages.
3. Design an HTML form where users can enter the number for which they want to find the factorial.
4. Handle the form submission in the same JSP file.
5. Process the input and calculate the factorial using JSP scriptlets
6. Display the factorial result on the page using JSP expression tags.
7. Save the JSP file and deploy it to your JSP container or application server.
8. Access the JSP page through a web browser, enter a number, and submit the form. The factorial result will be displayed on the page.

Program:

8a finding factorial of a number

Index.html

```
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Factorial of a Number</title>
<style>
form{
border:1px solid black;
margin:15% 35%;
padding:2%;

}
</style>
</head>
<body>
<form action="factorial.jsp">
<h1>Factorial Calculator</h1>
Enter a number : <input type="number" name="num"/>
<input type="submit" value="submit"/>
</form>
</body>
</html>
```

Factorial.jsp

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
    pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Insert title here</title>
</head>
<body>
<%!
int find_factorial(int n)
```

```
{
      if(n==0)
            return 1;
      return n*find_factorial(n-1);
}
%>
<%
String inp=request.getParameter("num");
if(inp!=null)
{
      int px=Integer.parseInt(inp);
      int fact=find_factorial(px);
      out.println("<h1>Factorial = " + fact+"</h1");
}
%>

</body>
</html>
```

8b

Student registration form

Index.html

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Registeration form</title>
    <style type="text/css">
        table{

            margin-top: 20%;
        margin-left:auto;
        margin-right:auto;
        border: 1px solid black;
        }
        td,th{
        padding:10px 20px;
        text-align:center;
        }
        .inptxt{
        width:100%;
        }
        </style>
    <script>
        function validate(){
            var studentname=document.myform.studentname.value;
            var fathername=document.myform.fathername.value;
            var mothername=document.myform.mothername.value;
            var email=document.myform.email.value;
            var gender=document.myform.gender.value;
            var date=document.myform.date.value;
            var level=document.myform.level.value;
            var atpos=email.indexOf('@');
            var dotpos=email.indexOf('.');
            var mobile=document.myform.mobile.value;
```

```
            if(studentname==""){
                document.getElementById("error").innerHTML="Enter Student
name";
                document.myform.studentname.focus();
                return false;
            }

            if(studentname.length<6){
                document.getElementById("error").innerHTML="enter Student
name greater than 6 letters";
                document.myform.studentname.focus();
                return false;
            }
            if(fathername==""){
                document.getElementById("error").innerHTML="Enter Father
name";
                document.myform.fathername.focus();
                return false;
            }
            if(fathername.length<6){
                document.getElementById("error").innerHTML="enter Father
name greater than 6 letters";
                document.myform.fathername.focus();
                return false;
            }
            if(mothername==""){
            document.getElementById("error").innerHTML="Enter Mother
Student name";
            document.myform.mothername.focus();
            return false;
        }
        if(mothername.length<6){
            document.getElementById("error").innerHTML="enter Mother name
greater than 6 letters";
            document.myform.mothername.focus();
            return false;
        }
        if(gender==""){
            document.getElementById("error").innerHTML="select gender";
            document.myform.mothername.focus();
            return false;
        }
        if(date==""){
            document.getElementById("error").innerHTML="select date";
            document.myform.mothername.focus();
            return false;
        }
        if(email==""){
            document.getElementById("error").innerHTML="Email Can't be
empty";
            document.myform.email.focus();
            return false;
        }
        if(atpos==0 || dotpos-atpos<=2 || email.length-dotpos<=2){
            document.getElementById("error").innerHTML="Enter valid Email";
            document.myform.email.focus();
            return false;
        }
        if(level==""){
            document.getElementById("error").innerHTML="select level of
education";
```

```
            document.myform.level.focus();
            return false;
        }
        if(mobile.length!=10){
            document.getElementById("error").innerHTML="Enter Phone
Number";
            document.myform.mobile.focus();
            return false;
        }
            return true;
        }
    </script>
</head>
<body>
    <table border="0" cellpadding="0" cellspacing="0">
    <form action="registeration.jsp" name="myform" method="post"
onsubmit="return validate()">
        <tr><th colspan=2>STUDENT REGISTRATION</th></tr>
        <tr>
            <td>Student Name:</td><td>
            <input type="text" name="studentname" class="inptxt"></td>
        </tr>

        <tr>
            <td>Father Name:</td>
            <td><input type="text" name="fathername" class="inptxt"></td>
        </tr>
        <tr>
            <td>Mother Name:</td>
            <td> <input type="text" name="mothername" class="inptxt"></td>
        </tr>
        <tr>
            <td>Gender:</td>
            <td><input type="radio" name="gender" value="male">male  <input
type="radio" name="gender" value="female">female <input type="radio"
name="gender" value="others">others</td>
        </tr>
        <tr>
            <td>Date of Birth:</td>
            <td> <input type="date" name="date" class="inptxt"></td>
        </tr>
        <tr>
            <td>Email:</td>
            <td> <input type="text" name="email" class="inptxt"></td>
        </tr>
        <tr>
            <td>Level:</td>
            <td>
                <select id=" " name="level" class="inptxt">
                    <option value=""></option>
                      <option value="primary">Primary</option>
                      <option value="secondary">Secondary</option>
                      <option value="intermidiate">Intermediate</option>
                     <option value="under graduation">Under
Graduation</option>
                </select>
            </td>
        </tr>
        <tr>
            <td>Mobile: </td>
            <td><input type="number" name="mobile" class="inptxt"></td>
```

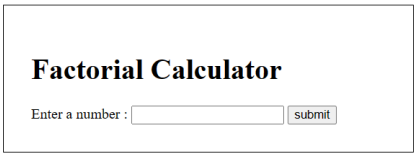
```
        </tr>
        <tr><td colspan=2><p id="error" style="color: red;"></p></td></tr>
        <tr>
              <td><input type="reset" value="reset"></td>
              <td><input type="submit" value="submit"></td>
        </tr>

    </form>
    </table>
</body>
</html>
```

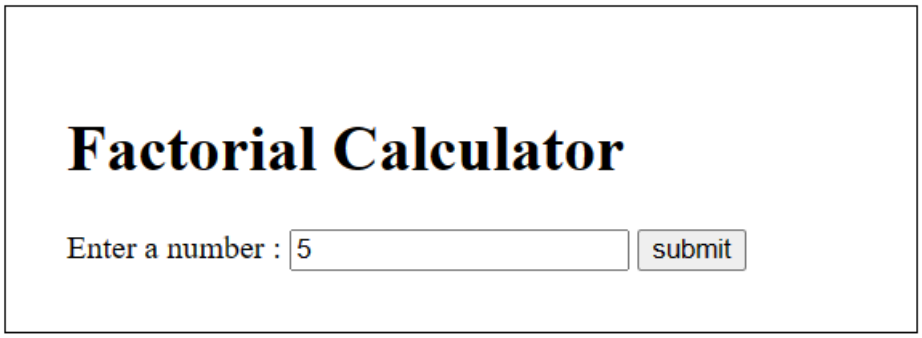
Registeration.jsp

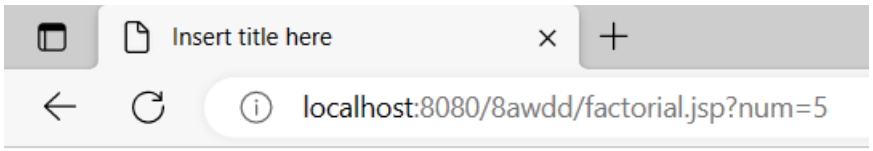
```
<%@ page language="java" contentType="text/html; charset=UTF-8"
    pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Insert title here</title>
<style>
      section{
      width:20%;
      margin-top:15%;
      margin-left:auto;
      margin-right:auto;
      border:1px solid black;
      padding:1%;
      }
</style>
</head>
<body>
<section>
<%
String studentname=(String)request.getParameter("studentname");
String fathername=(String)request.getParameter("fathername");
String mothername=(String)request.getParameter("mothername");
String gender=(String)request.getParameter("gender");
String date=(String)request.getParameter("date");
String email=(String)request.getParameter("email");
String level=(String)request.getParameter("level");
String mobile=(String)request.getParameter("mobile");

out.print("Student name: "+ studentname+"<br>");
out.print("Father name: "+ fathername+"<br>");
out.print("Mother name: "+ mothername+"<br>");
out.print("Gender: "+ gender+"<br>");
out.print("Date: "+ date+"<br>");
out.print("Email: "+ email+"<br>");
out.print("Education Level: "+ level+"<br>");
out.print("Mobile: "+ mobile+"<br>");
%>
</section>
</body>
</html>
```

Output:

8a



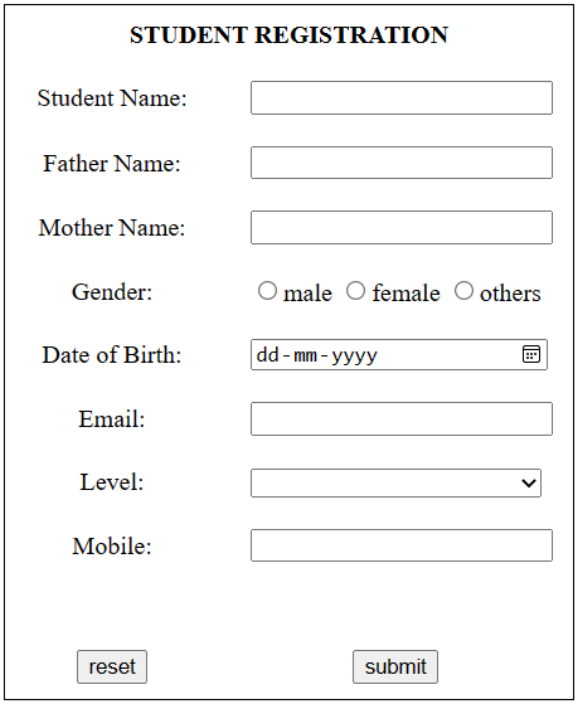


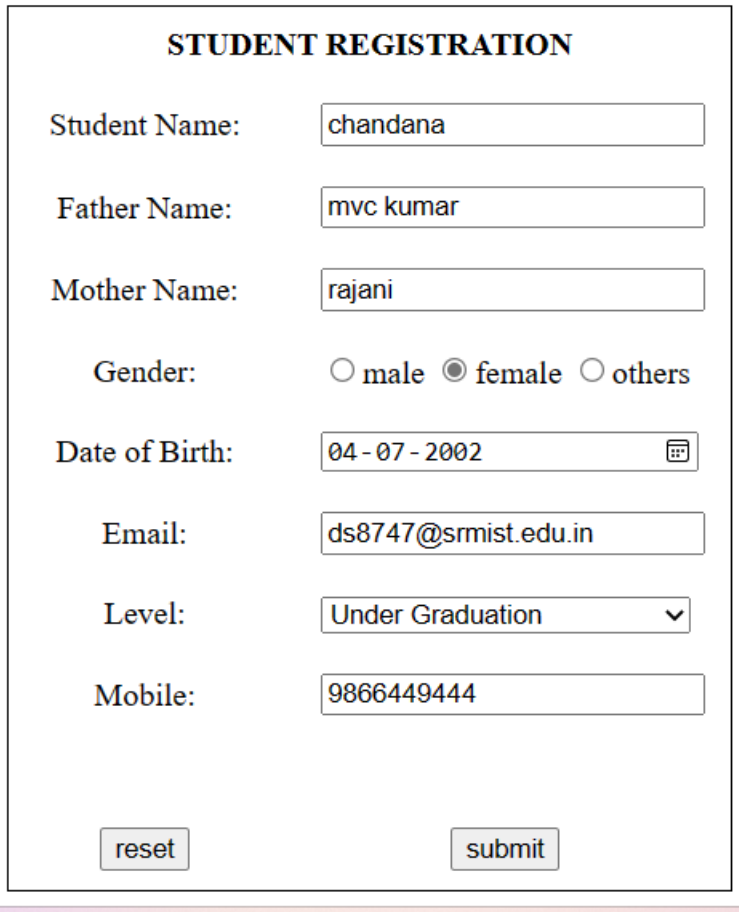


Factorial = 120

8b

Student name: chandana
Father name: mvc kumar
Mother name: rajani
Gender: female
Date: 2002-07-04
Email: ds8747@srmist.edu.in
Education Level: under graduation
Mobile: 9866449444


STUDENT REGISTRATION
Student Name:
Father Name:
Mother Name:
Gender:
male
female
others
Date of Birth:
dd-mm-yyyy
Email:
Level:
Mobile:
reset
submit


STUDENT REGISTRATION
Student Name:
chandana
Father Name:
mvc kumar
Mother Name:
rajani
Gender:
male
female
others
Date of Birth:
04-07-2002
Email:
ds8747@srmist.edu.in
Level:
Under Graduation
Mobile:
9866449444
reset
submit

EXPERIMENT :9 (vs code)

Aim : Simple application using Ajax.

Procedure:

1. Save the code in a file with a .html extension, such as ajax.html.
2. Save the necessary image file (sun.jpg) in the same directory as the ajax.html file.
3. Ensure that the ajax.txt file exists in the same directory as the ajax.html file or update the xhttp.open() method's URL parameter to point to the correct location of the text file.
4. Open the ajax.html file in a web browser of your choice.
5. Click on the "Description" button. The Ajax request will be sent to the server to retrieve the content of the ajax.txt file. Once the response is received, the content will replace the element, updating the page with the new text.

Program:

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>AJAX</title>
</head>
<body>
  <center>
    <div id="demo">
        <h3>SUN</h3>
        <button type="button" onclick="loadDoc()">Discription</button>
    </div>
    <div>
      <img src="./sun.jpg" alt="">
    </div>
  </center>
    <script>
        function loadDoc() {
          var xhttp = new XMLHttpRequest();
          xhttp.onreadystatechange = function() {
            if (this.readyState == 4 && this.status == 200) {
              document.getElementById("demo").innerHTML =this.responseText;
            }
          };
          xhttp.open("GET", "ajax.txt", true);
          xhttp.send();
        }
    </script>

</body>
</html>
```

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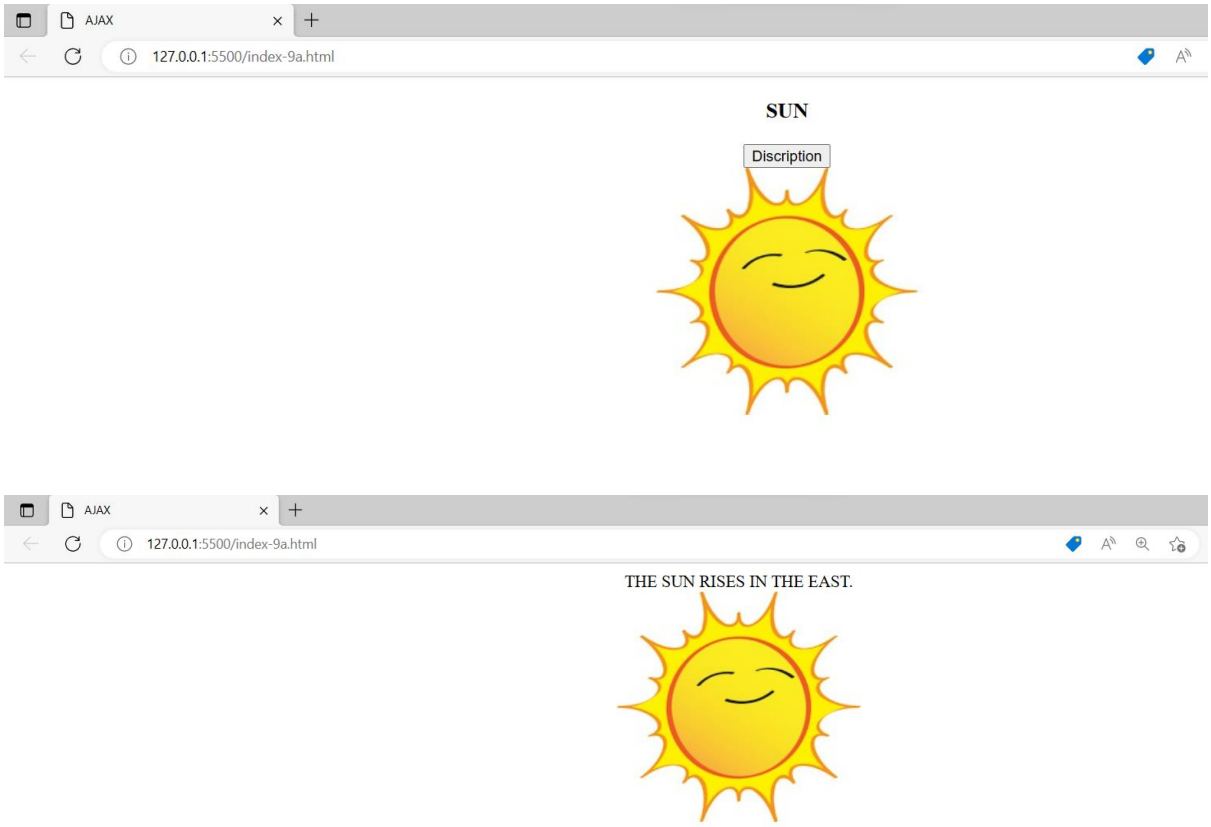
Output:



9b

Index.html

```
<!DOCTYPE html>
<html>
<head>
    <title>AJAX Program to read a message from text file</title>
    <script src="https://code.jquery.com/jquery-3.6.0.min.js"></script>
    <script>
        $(document).ready(function(){
            $.ajax({
                url: "message.txt",
                success: function(data){
                    $("#message").text(data);
                }
            });
        });

    </script>
</head>
<body>
    <div id="message"></div>
```

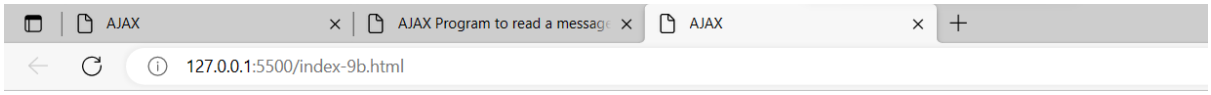
```
    <div id="car-info">
        <h2>Car Information</h2>
        <p>Make: </p>
        <p>Model: </p>
        <p>Year: </p>
        <p>Color: </p>
    </div>

    <script>
        $(document).ready(function() {
            $.getJSON("car.json", function(data) {
                $("#car-info p:nth-of-type(1)").append(data.make);
                $("#car-info p:nth-of-type(2)").append(data.model);
                $("#car-info p:nth-of-type(3)").append(data.year);
                $("#car-info p:nth-of-type(4)").append(data.color);
            });
        });
    </script>
</body>
</html>
```

Car.json

```
{
    "make": "Toyota",
    "model": "Corolla",
    "year": 2021,
    "color":"Red"


}
```

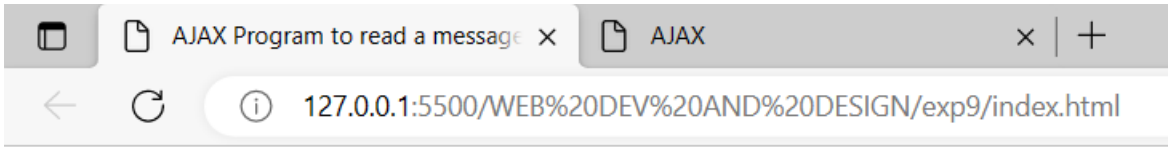
Message.txt

WELCOME TO CAR WORLD!



CAR DETAILS

display



WELCOME TO CAR WORLD!

Car Information

Make: Toyota

Model: Corolla

Year: 2021

Color: Red

EXPERIMENT :10: (vs code+xampp server)

Aim: Design a simple online test web page in PHP.

Procedure:

1. Save the first code block in a file with a .php extension, such as test.php.
2. Save the second code block in a file named submit.php.
3. Ensure that both files (test.php and submit.php) are saved in the same directory.
4. Set up a web server environment (such as Apache with PHP support-xampp control plane) to execute the PHP code. Make sure the web server is running and configured correctly.
5. Access the test.php file through a web browser. The online test page will be displayed, and you can select the answers for the questions. Upon submitting the form, the page will redirect to submit.php, which will display the test results.

Program:

Index.php

```
<!DOCTYPE html>
<html>
<head>
    <title>Simple Online Test</title>
    <style>
        html{
            background-color: white;
        }
        .container {
  max-width: 600px;
  margin: 0 auto;
  padding: 20px;
  background-color: #f5f5f5;
  border-radius: 10px;
}

.header {
  text-align: center;
  margin-bottom: 20px;
}

.question {
  margin-bottom: 20px;
}

h2 {
  font-size: 20px;
  margin-bottom: 10px;
}

p {
  margin-bottom: 10px;
```

```
}

label {
  display: block;
  margin-bottom: 10px;
}

input[type="radio"] {
  margin-right: 10px;
}

button[type="submit"] {
  display: block;
  margin: 20px auto 0;
  padding: 10px 20px;
  background-color: #4CAF50;
  color: #fff;
  border: none;
  border-radius: 5px;
  cursor: pointer;
}

button[type="submit"]:hover {
  background-color: #3e8e41;
}

    </style>
</head>
<body>
    <div class="container">
        <div class="header">
            <h1>Simple Online Test</h1>
        </div>
        <form method="post" action="submit.php">
            <div class="question">
                <h2>Question 1</h2>
                <p>What is the full form of HTML?</p>
                <label><input type="radio" name="q1" value="a"> A. hyper text
markup language</label><br>
                <label><input type="radio" name="q1" value="b"> B. hyper
markup text</label><br>
                <label><input type="radio" name="q1" value="c"> C. marckup
language</label><br>
                <label><input type="radio" name="q1" value="d"> D. hyper text
tool</label><br>
            </div>
            <div class="question">
                <h2>Question 2</h2>
```

```
                <p>find the odd one out ?</p>
                <label><input type="radio" name="q2" value="a"> A.
css</label><br>
                <label><input type="radio" name="q2" value="b"> B.
html</label><br>
                <label><input type="radio" name="q2" value="c"> C.
js</label><br>
                <label><input type="radio" name="q2" value="d"> D.
mysql</label><br>
            </div>
            <button type="submit">Submit</button>
        </form>
    </div>
</body>
</html>
```

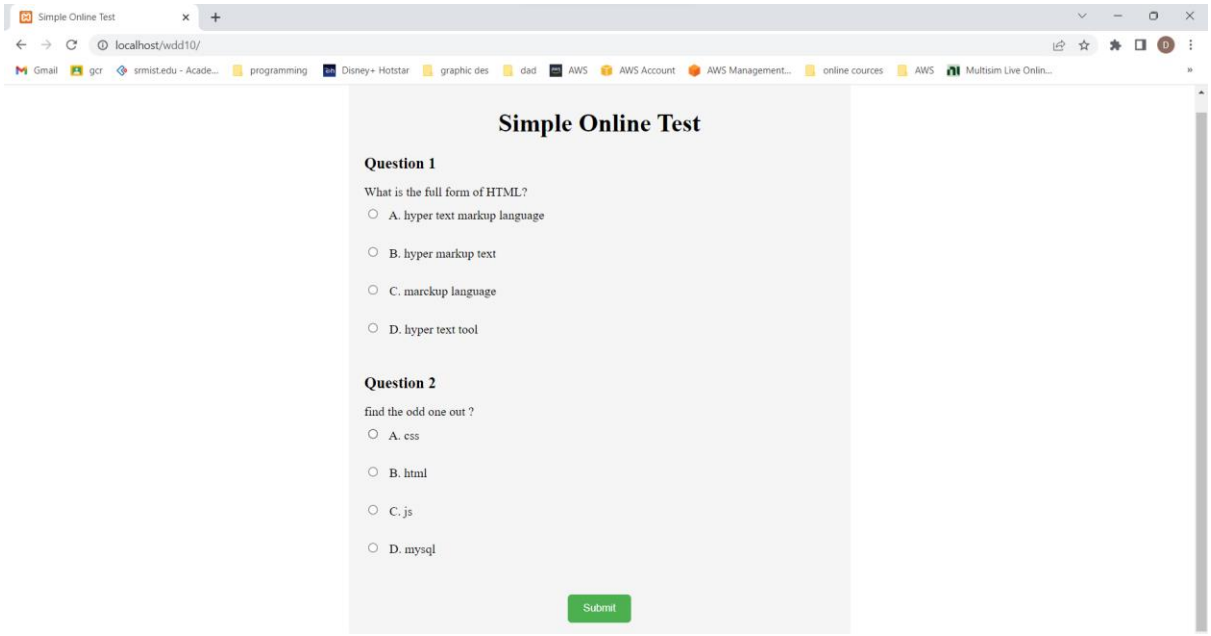
Submit.php

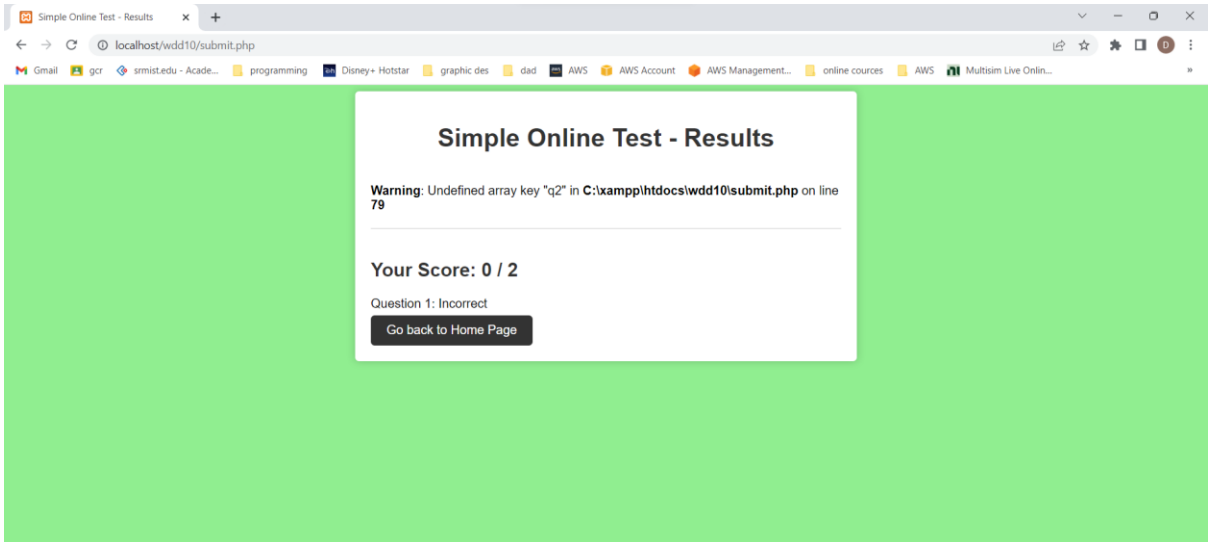
```
<!DOCTYPE html>
<html>
<head>
  <title>Simple Online Test - Results</title>
  <style>
    /* Style the body */
body {
  font-family: Arial, sans-serif;
  background-color: lightgreen;
}

/* Style the container */
.container {
  max-width: 600px;
  margin: 0 auto;
  background-color: #fff;
  border-radius: 5px;
  padding: 20px;
  box-shadow: 0px 0px 10px rgba(0, 0, 0, 0.2);
}

/* Style the header */
.header {
  text-align: center;
  margin-bottom: 20px;
}

.header h1 {
  color: #333;
}
```

```
/* Style the results */
.results {
  border-top: 1px solid #ccc;
  margin-top: 20px;
  padding-top: 20px;
}

.results h2 {
  color: #333;
}

.results p {
  margin-bottom: 5px;
}

/* Style the correct and incorrect messages */
.results p.correct {
  color: green;
}

.results p.incorrect {
  color: red;
}
.btn {
  content: '\f106';
  display: inline-block;
  background-color: #333;
  color: #fff;
  padding: 10px 20px;
  border-radius: 5px;
  text-decoration: none;
  transition: background-color 0.3s ease-in-out;
}

.btn:hover {
  background-color: #555;
}

  </style>
</head>
<body>
  <div class="container">
    <div class="header">
      <h1>Simple Online Test - Results</h1>
    </div>
    <?php
    $answers = array("a", "a");
```

```
    $userAnswers = array($_POST["q1"], $_POST["q2"]);
    $score = 0;
    for ($i=0; $i < count($answers); $i++) {
      if ($answers[$i] === $userAnswers[$i]) {
        $score++;
      }
    }
    ?>
    <div class="results">
      <h2>Your Score: <?php echo $score; ?> / <?php echo count($answers);
?></h2>
      <p>Question 1: <?php echo ($userAnswers[0] === $answers[0]) ? "Correct"
: "Incorrect"; ?></p>
      <a href="index.php" class="btn">Go back to Home Page</a>
  </div>
  </body>
  </html>
```

Output:





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EXPERIMENT :11: (xampp)

Aim Design a simple online test web page in PHP.

Procedure:

1. Save the HTML code in a file named index.php.
2. Create a MySQL database and update the database connection details in the db.php file.
3. Save the database connection details in the db.php file.
4. Create a table named questions in the database with the necessary columns (question_no and question_txt).
5. Create another table named options in the database with the necessary columns (question_no, id, and coption).
6. Insert the questions and options into the respective tables in the database.
7. Access the index.php file through a web browser. The quiz application will be displayed with a "START QUIZ" button.
8. Click on the "START QUIZ" button to proceed to the first question.
9. Answer the questions one by one, and upon submitting each answer, you will be redirected to the next question.
10. After answering all the questions, the final page (final.php) will display the results with the score.

Program:

Index.php

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Quiz Application</title>
    <style>
        body{
            margin-top: 15%;
            margin-left: auto;
            margin-right: auto;
            width:50%;
            background-color: #f5f5f5;
            font-family: Arial, sans-serif;
            background-color: lightgreen;

        }
        h1{
            text-align: center;
            color: #2c3e50;
            font-size: 3rem;
            margin-bottom: 1rem;
        }
        button{
            padding: 1.5rem 5rem;
```

```
            font-size: 2rem;
            border: 2px solid #2c3e50;
            border-radius: 1rem;
            margin-left: 30%;
            background-color: #2c3e50;
            color: #fff;
            cursor: pointer;
        }
        button:hover{
            background-color: #1abc9c;
            border-color: #1abc9c;
        }
        button:active{
            background-color: #16a085;
            border-color: #16a085;
        }
        main{
            padding: 2%;
            background-color: #fff;
            border: 2px solid #2c3e50;
            border-radius: 1rem;
        }
    </style>
</head>
<body>
    <main>
        <h1>QUIZ APPLICATION</h1>
        <button onclick="location.href = 'quiz.php?n=1';">START QUIZ</button>
    </main>
</body>
</html>
```

Db.php

```
<?php
    $dbhost="localhost";
    $dbuser="root";
    $dbpass="";
    $dbname="db";
    $connection= mysqli_connect($dbhost,$dbuser,$dbpass,$dbname);
    if(mysqli_connect_errno()){
        die("Database connection failed");
    }


?>
```

Final.php

```php
<?php
session_start();
?>
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
    <style>
        body{
            margin: 3%;
            background-color: lightgreen;
        }
        main{
            padding: 2%;
            background-color: #ffffff;
            border: 2px solid black;
            border-radius: 1rem;
        }
        h2{
            font-size: xxx-large;
            margin: 0%;
        }
        #score{
            font-size: x-large;
        }
        button{
            background-color: #ffffff;
            border: 1.5px solid black;
            width: 7rem;
            height: 2.5rem;
            margin-left: 42%;
            border-radius: 10px;
        }
        button:active{
            background-color: black;
            color: #ffffff;
        }
    </style>
</head>
<body>
    <main>
        <div>
            <h2>Results</h2>
            <p>Congratulations You have comnpleted this test successfully.</p>
```

```
            <p id="score">Your Score is <?php echo $_SESSION['score'];?></p>
            <?php unset($_SESSION['score']); ?>
            <button onclick="location.href = 'index.php';">Retake
Test</button>
        </div>
    </main>
</body>
</html>
```

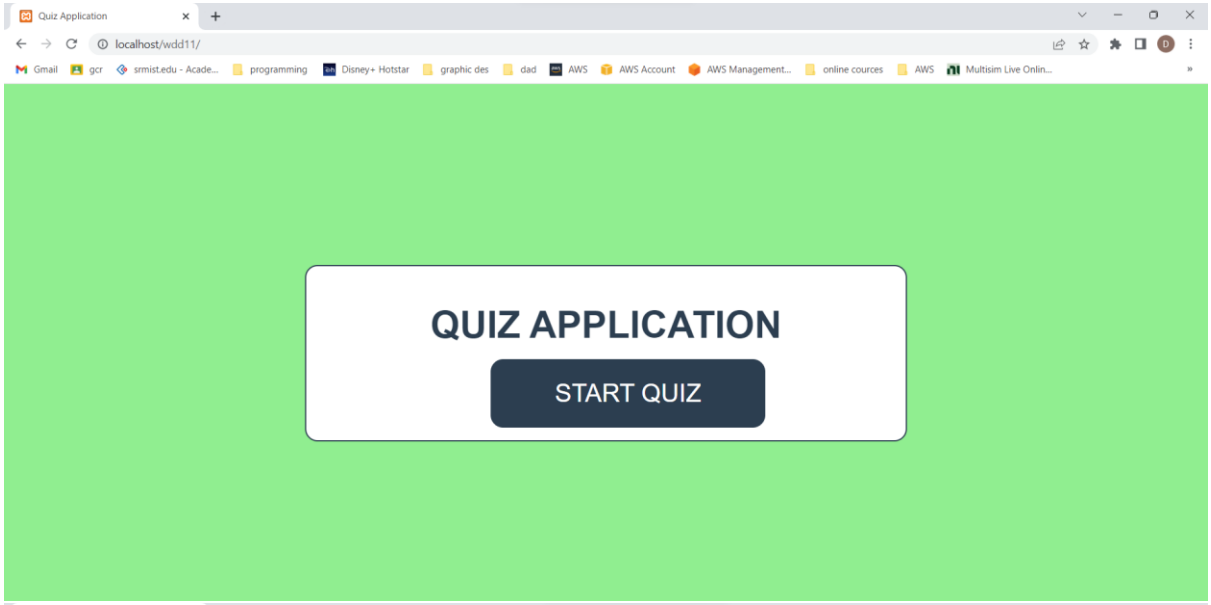
Quiz.php

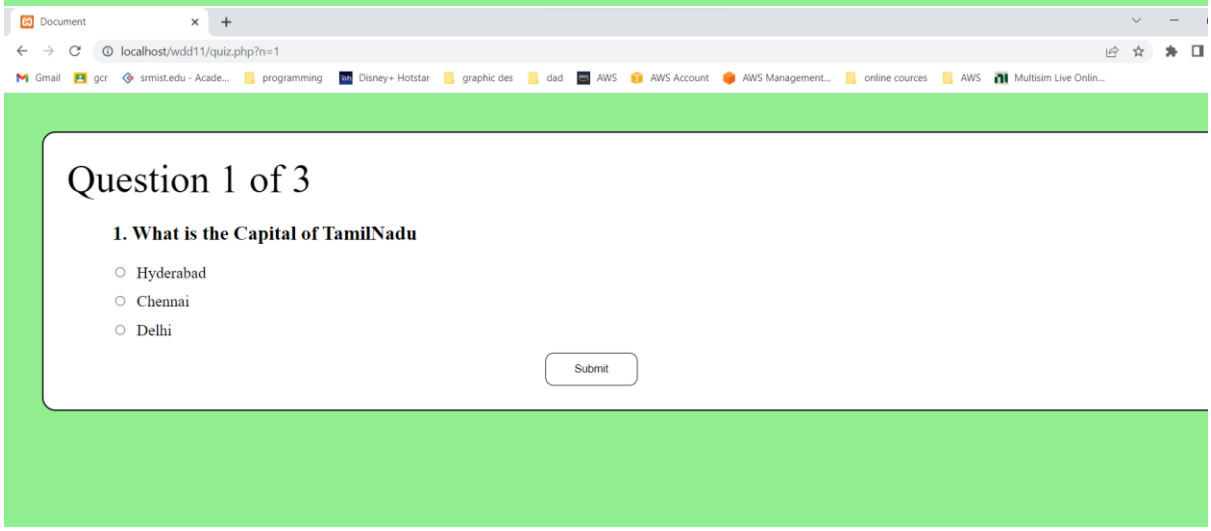
```
<?php
include 'db.php';
session_start();
$number=$_GET['n'];
$query="SELECT * FROM questions WHERE question_no = $number";
$result= mysqli_query($connection,$query);
$question=mysqli_fetch_assoc($result);

$query="SELECT * FROM options WHERE question_no=$number";
$choices=mysqli_query($connection,$query);

$query="SELECT * FROM questions";
$total_questions=mysqli_num_rows(mysqli_query($connection,$query));


?>

<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
    <style>
        body{
            margin: 3%;
            background-color: lightgreen;
        }
        main {
            background-color: white;
        }
        main{
            padding: 2%;
            background-color:;
            border: 2px solid black;
            border-radius: 1rem;
```

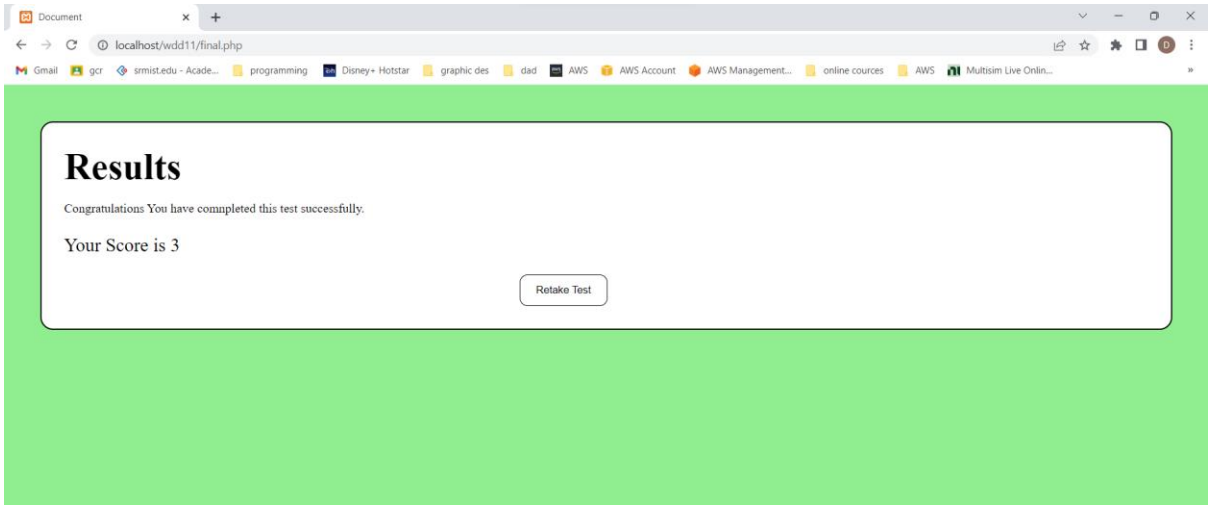
```
        }
        .qno{
            /* height: 5vh; */
            font-size: xxx-large;
        }
        p{
            font-size: x-large;
            background-color: white;
        }
        ul{
            margin-left: 0%;
        }
        .question{
            margin-left: 4%;
        }
        li{
            list-style: none;
            font-size: larger;
            margin: 1%;
        }
        input{
            margin-right: 1%;
        }
        #submit{
            background-color: #ffffff;
            border: 1.5px solid black;
            width: 7rem;
            height: 2.5rem;
            margin-left: 42%;
            border-radius: 10px;
        }
        #submit:active{
            background-color: black;
            color: #ffffff;
        }
    </style>
</head>
<body>
    <main>
        <div class="qno">Question <?php echo $number; ?> of <?php echo
$total_questions; ?></div>
        <session>
        <p class="question"><strong><?php echo $number; ?>. <?php echo
$question['question_txt'];?></strong></p>
        <form method="post" action="process.php">
            <ul class="choicess">
                <?php while($row=mysqli_fetch_assoc($choices)){ ?>
```

```
                    <li><input type="radio" name="choice" id="" value="<?php
echo $row['id']; ?>"><?php echo $row['coption']; ?></li>
                <?php } ?>
            </ul>
            <input type="hidden" name="number" value="<?php echo $number; ?>">
            <input type="submit" name="submit" value="Submit" id="submit">
        </form></session>
    </main>
</body>
</html>
```

Output:







RA2011028010099
DURGA CHANDANA SREE M

EXPERIMENT :12:(vs code)

Aim Design a simple application for accessing the data using XML.

Procedure:

1. Save the HTML code in a file named index.html.
2. Save the XML data in a file named Patients.xml in the same directory as the HTML file.
3. Save the background image (e.g., bg.jpg) in the same directory as the HTML file, or provide the correct path to the background image in the CSS code.
4. Make sure you have included the jQuery library in your HTML file by adding the following line before the closing </head> tag.
5. Access the index.html file through a web browser. You will see a heading, a button, and an empty table.
6. Click on the "Get Patients Details" button.
7. The JavaScript code will use AJAX to read the Patients.xml file and parse its data.
8. Once the XML data is successfully loaded, the empDetails function will be called.
9. The empDetails function will extract the patient details from the XML and generate HTML code for a table row for each patient.
10. The generated table rows will be appended to the empty table in the HTML.
11. The table will be populated with the patient details fetched from the XML.
12. The background image, heading, and button styles defined in the CSS will be applied to the HTML elements.

Program:

Index.html

```
<!DOCTYPE html>
<head>
    <title>Reads the XML data using JavaScript(jquery)</title>
    <style>
        body {

  background-image: url('bg.jpg');
  background-repeat: no-repeat;
  background-size: cover;

        font-family: Arial, sans-serif;
        color: #333;
        text-align: center;
    }
    p{
    text-align:center;
    background-color: antiquewhite;
    }
    h1 {
        text-align: center;
        margin-top: 50px;
    }
    button {
        display: block;
        margin: 0 auto;
```

```
        padding: 12px 24px;
        border: none;
        border-radius: 4px;
        background-color: #007bff;
        color: #fff;
        font-size: 16px;
        cursor: pointer;
        transition: all 0.2s ease-in-out;
    }

    button:hover {
        background-color: #0062cc;
    }

    table {
        border-collapse: collapse;
        width: 90%;
        margin: 50px auto 0;
        background-color: #fff;
        box-shadow: 0 0 10px rgba(0,0,0,0.2);
    }

    th, td {
        padding: 12px;
        text-align: left;
        border-bottom: 1px solid #ddd;
    }

    th {
        background-color: #f2f2f2;
        font-weight: bold;
        text-transform: uppercase;
        letter-spacing: 1px;
    }

    tr:hover {background-color: #f5f5f5;}

    </style>

    <!--JavaScript-->
    <script>
        function loadXMLDoc() {
            var xmlhttp = new XMLHttpRequest();
            xmlhttp.onreadystatechange = function () {

                // Request finished and response
                // is ready and Status is "OK"
                if (this.readyState == 4 && this.status == 200) {
```

```
                    empDetails(this);
                }
            };

            // Patient.xml is the external xml file
            xmlhttp.open("GET", "Patients.xml", true);
            xmlhttp.send();
        }

        function empDetails(xml) {
            var i;
            var xmlDoc = xml.responseXML;
            var table =
                `<tr><th>id</th><th>Firstname</th><th>Lastname</th>
                    <th>Disease</th>
                    <th>Appointment</th><th>Room</th>
                </tr>`;
            var x = xmlDoc.getElementsByTagName("Patient");

            // Start to fetch the data by using TagName
            for (i = 0; i < x.length; i++) {
                table += "<tr><td>" +
                    x[i].getElementsByTagName("id")[0]
                    .childNodes[0].nodeValue + "</td><td>" +
                    x[i].getElementsByTagName("firstname")[0]
                    .childNodes[0].nodeValue + "</td><td>" +
                    x[i].getElementsByTagName("lastname")[0]
                    .childNodes[0].nodeValue + "</td><td>" +
                    x[i].getElementsByTagName("Disease")[0]
                    .childNodes[0].nodeValue + "</td><td>" +
                    x[i].getElementsByTagName("Appointment")[0]
                    .childNodes[0].nodeValue + "</td><td>" +
                    x[i].getElementsByTagName("room")[0]
                    .childNodes[0].nodeValue + "</td></tr>";
            }

            // Print the xml data in table form
            document.getElementById("id").innerHTML = table;
        }
    </script>
</head>

<body>
    <p> <h1> DC hospitals </h1> <br>
        We care for u...!
    </p>
    <center>
        <button type="button" class="button"
```

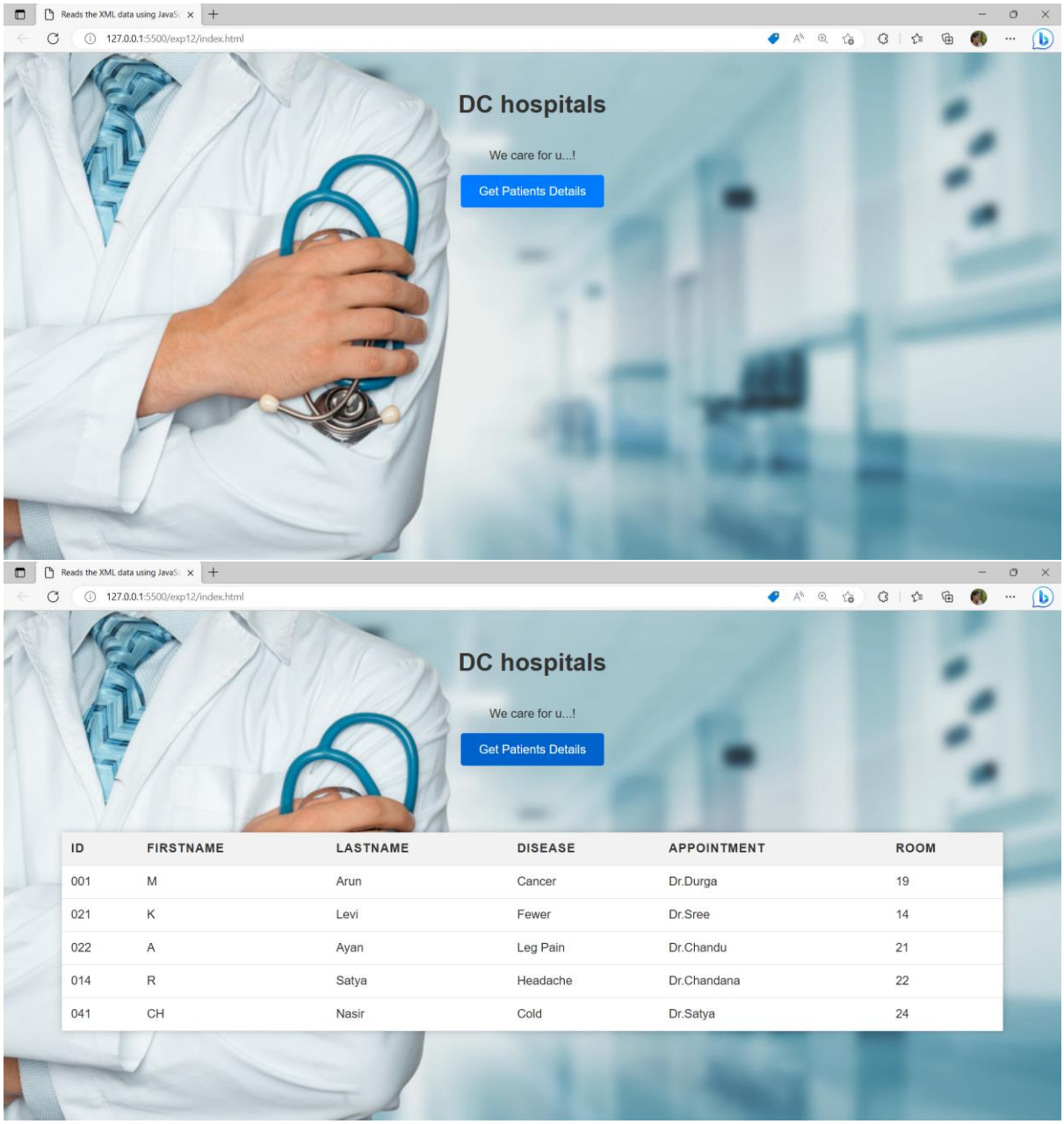
```
            onclick="loadXMLDoc()">
            Get Patients Details
        </button>
    </center>

    <br><br>
    <table id="id"></table>
</body>

</html>
```

Patients.xml

```
<?xml version="1.0" encoding="utf-8"?>
<Patients>
    <Patient id="be129">
        <id>001</id>
        <firstname>M</firstname>
        <lastname>Arun</lastname>
        <Disease>Cancer</Disease>
        <Appointment>Dr.Durga</Appointment>
        <room>19</room>
    </Patient>
    <Patient id="be130">
        <id>021</id>
        <firstname>K</firstname>
        <lastname>Levi</lastname>
        <Disease>Fewer</Disease>
        <Appointment>Dr.Sree</Appointment>
        <room>14</room>
    </Patient>
    <Patient id="be131">
        <id>022</id>
        <firstname>A</firstname>
        <lastname>Ayan</lastname>
        <Disease>Leg Pain</Disease>
        <Appointment>Dr.Chandu</Appointment>
        <room>21</room>
    </Patient>
    <Patient id="be132">
        <id>014</id>
        <firstname>R </firstname>
        <lastname>Satya</lastname>
        <Disease>Headache</Disease>
        <Appointment>Dr.Chandana</Appointment>
        <room>22</room>
    </Patient>
```

```
    <Patient id="be133">
        <id>041</id>
        <firstname>CH</firstname>
        <lastname>Nasir</lastname>
        <Disease>Cold</Disease>
        <Appointment>Dr.Satya</Appointment>
        <room>24</room>
    </Patient>
    <!--<Patient id="be135">
        <id>Engineer</id>
        <firstname>Vikash</firstname>
        <lastname>kumar</lastname>
        <Disease>Management</Disease>
        <Appointment>216</Appointment>
        <room>26</room>
    </Patient>
    <Patient id="be136">
        <id>Engineer</id>
        <firstname>Suvam</firstname>
        <lastname>Basak</lastname>
        <Disease>Accts Payable</Disease>
        <Appointment>326</Appointment>
        <room>30</room>
    </Patient>
    <Patient id="be135">
        <id>Engineer</id>
        <firstname>Abhinav</firstname>
        <lastname>kumar</lastname>
        <Disease>Management</Disease>
        <Appointment>216</Appointment>
        <room>32</room>
    </Patient>
    <Patient id="be131">
        <id>Engineer</id>
        <firstname>DhanPal</firstname>
        <lastname>Singh</lastname>
        <Disease>Materials</Disease>
        <Appointment>327</Appointment>
        <room>21</room>
    </Patient>-->

</Patients>
```

Output:


Reads the XML data using JavaS
127.0.0.1:5500/exp12/index.html
DC hospitals
We care for u...!
Get Patients Details
Reads the XML data using JavaS
127.0.0.1:5500/exp12/index.html
DC hospitals
We care for u...!
Get Patients Details
ID FIRSTNAME LASTNAME DISEASE APPOINTMENT ROOM
001 M Arun Cancer Dr.Durga 19
021 K Levi Fewer Dr.Sree 14
022 A Ayan Leg Pain Dr.Chandu 21
014 R Satya Headache Dr.Chandana 22
041 CH Nasir Cold Dr.Satya 24

EXPERIMENT :13(eclipse ide)

Aim: Design a simple RESTful web service using Spring boot.

Procedure:

1. Set up a Spring Boot project with necessary dependencies like Spring Web for RESTful web services.
2. Define data entities or resources as Java classes with appropriate annotations (@Entity for JPA entities, @Data for simple data classes).
3. Create a repository by extending JpaRepository or a similar interface provided by Spring Data and define custom methods.
4. Implement the service layer by creating a service class, injecting the repository, and implementing required methods.
5. Define RESTful endpoints in a controller class using @RestController and annotations like @GetMapping, @PostMapping, etc. Inject the service class into the controller.
6. Implement endpoint methods in the controller, calling corresponding service methods, and returning appropriate responses.
7. Test the web service using tools like cURL, Postman, or a web browser to send requests and verify responses. Test CRUD operations and different scenarios.
8. Enhance the web service by adding validation, error handling, security measures, logging, monitoring, and additional features like pagination or filtering as needed.

Program:

WelcomeApplication.java

```
package com.springboot.welcome;

import org.springframework.boot.SpringApplication;

import org.springframework.boot.autoconfigure.SpringBootApplication;

@SpringBootApplication

public class WelcomeApplication {

	public static void main(String[] args) {

		SpringApplication.run(WelcomeApplication.class, args); }}
```

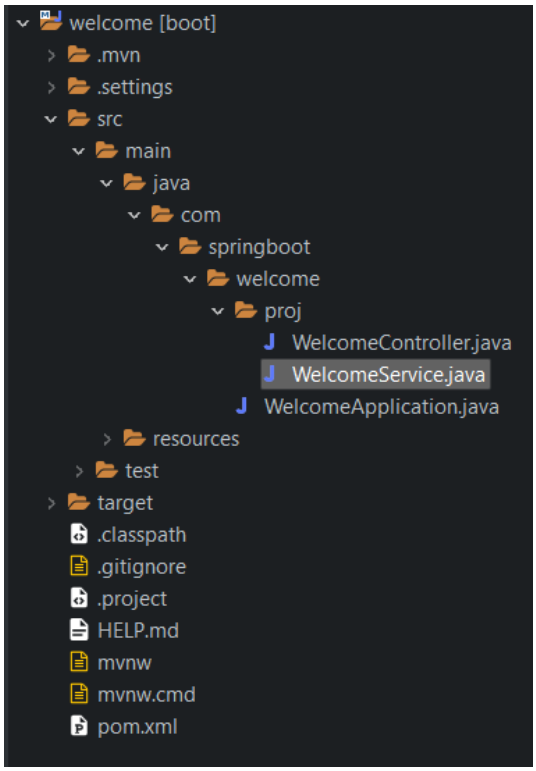
WelcomController.java

```
package com.springboot.welcome.proj;

import org.springframework.web.bind.annotation.GetMapping;

import org.springframework.web.bind.annotation.RestController;

@RestController

public class WelcomeController {

	@GetMapping("/welcome")

	public String welcome() {
```

return "Welcome to spring boot development"; }}

WelcomeService.java

```
package com.springboot.welcome.proj;

import org.springframework.stereotype.Service;

        @Service

        public class WelcomeService {

           public String getWelcomeMessage() {

              return "Welcome to spring boot development";          }       }
```



Output: