

Web tech (Sessional 2)

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Data Science

DS "B"

101 B

Q1)

```
<!DOCTYPE html>
<html lang="en">

<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Factorial Calculator</title>
  <style>
    body {
      font-family: Arial, sans-serif;
      background-color: #f0f0f0;
      display: flex;
      justify-content: center;
      align-items: center;
      height: 100vh;
      margin: 0;
    }

    .container {
      text-align: center;
      background-color: #fff;
      padding: 30px;
      border-radius: 10px;
      box-shadow: 0 0 15px rgba(0, 0, 0, 0.1);
    }

    input[type="number"] {
      width: 60%;
      padding: 10px;
```

```

        margin-bottom: 20px;
        border: 1px solid #ccc;
        border-radius: 5px;
        font-size: 16px;
    }

    button {
        padding: 10px 20px;
        border: none;
        background-color: #007bff;
        color: #fff;
        border-radius: 5px;
        cursor: pointer;
        font-size: 16px;
    }

    button:hover {
        background-color: #0056b3;
    }

    #niet {
        margin-top: 20px;
        font-size: 18px;
        color: #333;
    }
}
</style>

</head>

<body>
    <div class="container">
        <h1>Factorial Calculator</h1>
        <input type="number" id="numberInput" placeholder="Enter a number">
        <button onclick="calculateFactorial()">Calculate Factorial</button>
        <p id="niet"></p>
    </div>
    <script>
        function calculateFactorial() {
            const number =
parseInt(document.getElementById("numberInput").value);
            let result = 1;

            if (number < 0) {
                document.getElementById("niet").innerHTML = "Factorial of a
negative number is undefined.";
            }
        }
    </script>

```

```
        return;
    }

    for (let i = 1; i <= number; i++) {
        result *= i;
    }

    document.getElementById("niet").innerHTML = "Factorial of " + number
+ " is: " + result;
    }

</script>
</body>

</html>
```

Factorial Calculator

Calculate Factorial

Q2)

```
<!DOCTYPE html>
<html lang="en">

<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Login Page</title>
</head>

<body>
  <style>
    body {
      font-family: Arial, sans-serif;
      background-color: #f4f4f4;
    }

    .login-container {
      width: 300px;
      margin: 100px auto;
      padding: 20px;
      background-color: #fff;
      border-radius: 10px;
      box-shadow: 0px 0px 10px rgba(0, 0, 0, 0.1);
      text-align: center;
    }

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

    input {
      width: 90%;
      padding: 10px;
      margin-bottom: 20px;
      border: 1px solid #ccc;
      border-radius: 5px;
    }
  </style>

```

```

    button {
        padding: 10px 15px;
        background-color: #5cb85c;
        color: #fff;
        border: none;
        border-radius: 5px;
        cursor: pointer;
    }

    button[type="reset"] {
        background-color: #d9534f;
    }

    #message {
        margin-top: 20px;
        color: red;
    }
</style>
<div class="login-container">
    <h2>Login</h2>
    <form id="loginForm">
        <label for="username">User Name:</label>
        <input type="text" id="username" placeholder="Enter your username">
        <br>
        <label for="password">Password:</label>
        <input type="password" id="password" placeholder="Enter your
password">
        <br>
        <button type="button" onclick="validateLogin()">Submit</button>
        <button type="reset">Reset</button>
    </form>
    <p id="message"></p>
</div>
<script>
    const validUsers = [
        { username: "user1", password: "pass1" },
        { username: "user2", password: "pass2" },
        { username: "admin", password: "admin123" }
    ];

    function validateLogin() {
        // Get the input values
        const usernameInput = document.getElementById('username').value;
        const passwordInput = document.getElementById('password').value;
    }

```

```
        // Find if the user exists in the validUsers array
        const user = validUsers.find(user => user.username === usernameInput
&& user.password === passwordInput);

        const messageElement = document.getElementById('message');
        if (user) {
            messageElement.style.color = "green";
            messageElement.innerHTML = "Login successful!";
        } else {
            messageElement.style.color = "red";
            messageElement.innerHTML = "Invalid username or password.";
        }
    }

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

Login

User Name:

Password:

```
<!DOCTYPE html>
<html lang="en">

<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Registration Page</title>
  <style>
    body {
      font-family: Arial, sans-serif;
      background-color: #f0f0f0;
      display: flex;
      justify-content: center;
      align-items: center;
      height: 100vh;
      margin: 0;
    }

    .registration-container {
      background-color: #fff;
      padding: 20px;
      border-radius: 10px;
      box-shadow: 0 0 15px rgba(0, 0, 0, 0.1);
      width: 400px;
    }

    h2 {
      margin-bottom: 20px;
      text-align: center;
    }

    label {
      display: block;
      margin-bottom: 5px;
    }

    input[type="text"],
    input[type="email"],
    textarea,
    select {
      width: 95%;
```

```

        padding: 10px;
        margin-bottom: 10px;
        border: 1px solid #ccc;
        border-radius: 5px;
        font-size: 16px;
    }

    textarea {
        resize: none;
    }

    .error {
        color: red;
        font-size: 14px;
    }

    button {
        padding: 10px 20px;
        margin-right: 10px;
        border: none;
        background-color: #007bff;
        color: #fff;
        border-radius: 5px;
        cursor: pointer;
        font-size: 16px;
    }

    button:hover {
        background-color: #0056b3;
    }
</style>
</head>

<body>
    <div class="registration-container">
        <h2>Registration Form</h2>
        <form id="registrationForm">
            <label for="name">Name:</label>
            <input type="text" id="name" placeholder="Enter your full name">
            <span class="error" id="nameError"></span>

            <label for="doj">Date of Joining:</label>
            <input type="text" id="doj" placeholder="YYYY-MM-DD">
            <span class="error" id="dojError"></span>
        </form>
    </div>

```



```

<label for="email">Email ID:</label>
<input type="email" id="email" placeholder="Enter your email">
<span class="error" id="emailError"></span>

<label for="phone">Phone Number:</label>
<input type="text" id="phone" placeholder="Enter your phone number">
<span class="error" id="phoneError"></span>

<label for="address">Address:</label>
<textarea id="address" placeholder="Enter your address"></textarea>
<span class="error" id="addressError"></span>

<label for="pincode">Pin Code:</label>
<input type="text" id="pincode" placeholder="Enter your pin code">
<span class="error" id="pincodeError"></span>

<label>Gender:</label>
<input type="radio" name="gender" value="Male" id="male"> Male
<input type="radio" name="gender" value="Female" id="female"> Female
<input type="radio" name="gender" value="Other" id="other"> Other
<span class="error" id="genderError"></span>

<label for="state">State:</label>
<select id="state">
  <option value="">Select your state</option>
  <option value="State1">Delhi</option>
  <option value="State2">Uttar Pradesh</option>
  <option value="State3">Jammu & Kashmir</option>
</select>
<span class="error" id="stateError"></span>

<button type="button" onclick="validateForm()">Submit</button>
<button type="reset">Reset</button>
</form>
</div>
<script>
  function validateForm() {

    document.querySelectorAll(".error").forEach(error => error.innerHTML
= "");

    const name = document.getElementById("name").value;
    const doj = document.getElementById("doj").value;
    const email = document.getElementById("email").value;
    const phone = document.getElementById("phone").value;

```

```

const address = document.getElementById("address").value;
const pincode = document.getElementById("pincode").value;
const gender =
document.querySelector('input[name="gender"]:checked');
const state = document.getElementById("state").value;

let isValid = true;
const namePattern = /^[A-Za-z\s]+$/;
if (!namePattern.test(name)) {
    document.getElementById("nameError").innerHTML = "Name should
only contain alphabets and spaces.";
    isValid = false;
}

const datePattern = /^\d{4}-\d{2}-\d{2}$/;
if (!datePattern.test(doj)) {
    document.getElementById("dojError").innerHTML = "Date should be
in YYYY-MM-DD format.";
    isValid = false;
}

const emailPattern = /^[^\s@]+@[^\s@]+\.[^\s@]+$/;
if (!emailPattern.test(email)) {
    document.getElementById("emailError").innerHTML = "Please enter a
valid email address.";
    isValid = false;
}
const phonePattern = /^\d{10}$/;
if (!phonePattern.test(phone)) {
    document.getElementById("phoneError").innerHTML = "Phone number
should be a 10-digit number.";
    isValid = false;
}
if (address.trim() === "") {
    document.getElementById("addressError").innerHTML = "Address
cannot be empty.";
    isValid = false;
}

const pincodePattern = /^\d{6}$/;
if (!pincodePattern.test(pincode)) {
    document.getElementById("pincodeError").innerHTML = "Pin code
should be a 6-digit number.";
    isValid = false;
}

```

```
    }

    if (!gender) {
        document.getElementById("genderError").innerHTML = "Please select
your gender.";
        isValid = false;
    }

    if (state === "") {
        document.getElementById("stateError").innerHTML = "Please select
your state.";
        isValid = false;
    }

    if (isValid) {
        alert("Registration successful!");
    }
}

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

Registration Form

Name:

Date of Joining:

Email ID:

Phone Number:

Address:

Pin Code:

Gender:

☐ Male ☐ Female ☐ Other

State:



Q4)

```
<!DOCTYPE html>
<html lang="en">

<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Multiplication Table Generator</title>
  <style>
    body {
      font-family: Arial, sans-serif;
      background-color: #f0f0f0;
      display: flex;
      justify-content: center;
      align-items: center;
      height: 100vh;
      margin: 0;
    }

    .container {
      text-align: center;
      background-color: #fff;
      padding: 30px;
      border-radius: 10px;
      box-shadow: 0 0 15px rgba(0, 0, 0, 0.1);
      width: 300px;
    }

    input[type="number"] {
      width: 80%;
      padding: 10px;
      margin-bottom: 20px;
      border: 1px solid #ccc;
      border-radius: 5px;
      font-size: 16px;
    }

    button {
      padding: 10px 20px;
      border: none;
      background-color: #007bff;
      color: #fff;
    }
  </style>
</head>

<body>
  <div class="container">
    <input type="number" value="10" />
    <button>Generate</button>
  </div>
</body>
</html>
```

```

        border-radius: 5px;
        cursor: pointer;
        font-size: 16px;
        margin-bottom: 20px;
    }

    button:hover {
        background-color: #0056b3;
    }

    textarea {
        width: 80%;
        height: 200px;
        padding: 10px;
        border: 1px solid #ccc;
        border-radius: 5px;
        font-size: 16px;
        resize: none;
    }

    #errorMessage {
        color: red;
        font-size: 14px;
        margin-top: 10px;
    }
</style>
</head>

<body>
    <div class="container">
        <h1>Multiplication Table Generator</h1>
        <input type="number" id="numberInput" placeholder="Enter a number">
        <button onclick="generateTable()">Generate Table</button>
        <textarea id="tableOutput" readonly></textarea>
        <p id="errorMessage"></p>
    </div>
    <script>
        function generateTable() {
            const number =
parseInt(document.getElementById("numberInput").value);
            const tableOutput = document.getElementById("tableOutput");
            const errorMessage = document.getElementById("errorMessage");

            tableOutput.value = '';
            errorMessage.innerHTML = '';

```

```
    // Validate input
    if (isNaN(number) || number <= 0) {
        errorMessage.innerHTML = "Please enter a valid positive number.";
        return;
    }

    let table = '';
    for (let i = 1; i <= 10; i++) {
        table += `${number} x ${i} = ${number * i}\n`;
    }

    tableOutput.value = table;
}

</script>
</body>

</html>
```

Multiplication Table Generator

Enter a number

Generate Table

