1. Login Page Validation Create a login form with email and password fields. When the user clicks "Login," show an alert saying "Login Successful" if both fields are filled, otherwise "Please enter all details." Login Page Validation.
Code :-

```
<!DOCTYPE html>
<html>
<head>
  <title>Login Page Validation</title>
  <style>
    body { font-family: Arial; text-align: center; margin-top: 100px; }
    input { margin: 5px; padding: 8px; }
    button { padding: 8px 15px; }
  </style>
</head>
<body>
  <h2>Login Form</h2>
  <input type="email" id="email" placeholder="Enter Email"><br>
  <input type="password" id="password" placeholder="Enter Password"><br>
  <button onclick="login()">Login</button>
  <script>
    function login() {
      const email = document.getElementById("email").value.trim();
      const pass = document.getElementById("password").value.trim();
      if (email && pass) alert("Login Successful");
      else alert("Please enter all details.");
    }
  </script>
</body>
</html>
```

2. Dark Mode Toggle Build a simple webpage with text and a "Toggle Theme" button. Use JavaScript to switch between light and dark mode by changing background and text colors.
Code :-

```
<!DOCTYPE html>
<html>
<head>
  <title>Dark Mode Toggle</title>
  <style>
    body { font-family: Arial; text-align: center; padding: 50px; transition: 0.3s; }
    .dark { background: #222; color: #fff; }
  </style>
</head>
<body>
  <h2>Toggle Theme Example</h2>
  <p>This is a simple webpage.</p>
  <button onclick="toggleTheme()">Toggle Theme</button>

  <script>
```

```
  function toggleTheme() {
    document.body.classList.toggle("dark");
  }
 </script>
</body>
</html>
```

3. Character Counter Make a text box and show a live count of characters typed. Example: “Characters typed: 25 / 100”. Stop the user if they exceed 100 characters.
Code :-

```
<!DOCTYPE html>
<html>
<head>
 <title>Character Counter</title>
 <style>
  body { text-align:center; font-family:Arial; margin-top:50px; }
  textarea { width:300px; height:100px; }
 </style>
</head>
<body>
 <h3>Type your text below:</h3>
 <textarea id="text" maxlength="100" oninput="countChars()"></textarea>
 <p id="count">Characters typed: 0 / 100</p>
 <script>
  function countChars() {
    const text = document.getElementById("text").value.length;
    document.getElementById("count").innerText = `Characters typed: ${text} / 100`;
  }
 </script>
</body>
</html>
```

4. Image Slideshow Create a simple image slideshow with “Next” and “Previous” buttons. Use JS to switch images every 3 seconds automatically.
Code :-

```
<!DOCTYPE html>
<html>
<head>
<title>Image Slideshow</title>
<script>
let i=0;
let pics=["img1.jpg","img2.jpg","img3.jpg"];
function show(n){ i=(n+pics.length)%pics.length; document.getElementById("slide").src=pics[i]; }
function next(){ show(i+1); }
function prev(){ show(i-1); }
setInterval(next,3000);
</script>
```

```
</head>
<body onload="show(0)">
<h3>Image Slideshow</h3>
<img id="slide" src="" width="300" height="200"><br><br>
<button onclick="prev()">Previous</button>
<button onclick="next()">Next</button>
</body>
</html>
```

5. Online Order Form Make a simple food order form with name, item, and quantity fields. On clicking "Place Order," display a summary below the form using JS.

Code :-

```
<!DOCTYPE html>
<html>
<head>
  <title>Online Order Form</title>
  <style>
    body{text-align:center;font-family:Arial;margin-top:50px;}
    input,select{margin:5px;padding:8px;}
  </style>
</head>
<body>
  <h2>Food Order</h2>
  <input id="name" placeholder="Name"><br>
  <input id="item" placeholder="Item"><br>
  <input id="qty" type="number" placeholder="Quantity"><br>
  <button onclick="placeOrder()">Place Order</button>
  <p id="summary"></p>

  <script>
    function placeOrder(){
      const n=document.getElementById("name").value;
      const i=document.getElementById("item").value;
      const q=document.getElementById("qty").value;
      if(n && i && q)
        document.getElementById("summary").innerText=`Order placed by ${n}: ${q} × ${i}`;
      else alert("Please fill all fields.");
    }
  </script>
</body>
</html>
```

6. Change Background Color Add a button "Change Color." When clicked, randomly change the background color of the page using JavaScript.

Code :-

```
<!DOCTYPE html>
<html>
```

```
<head>
  <title>Change Background Color</title>
  <style>body{text-align:center;margin-top:100px;font-family:Arial;}</style>
</head>
<body>
  <button onclick="changeColor()">Change Color</button>

  <script>
    function changeColor(){
      const c = `#${Math.floor(Math.random()*16777215).toString(16)}`;
      document.body.style.backgroundColor = c;
    }
  </script>
</body>
</html>
```

7. You are developing a simple registration form for college events. Task: Design an HTML form that collects name, email, gender, and department. Bonus JS Task: Validate all fields before submission and show an alert when successfully registered.

Code :-

```
<!DOCTYPE html>
<html>
<head>
<title>Registration Form</title>
<script>
function register(){
  let n=document.getElementById("name").value;
  let e=document.getElementById("email").value;
  let g=document.querySelector('input[name="gender"]:checked');
  let d=document.getElementById("dept").value;
  if(n==""||e==""||!g||d=="") alert("Please fill all fields.");
  else alert("Registered Successfully!");
}
</script>
</head>
<body>
<h3>Event Registration</h3>
<form onsubmit="register();return false;">
Name: <input id="name"><br><br>
Email: <input id="email" type="email"><br><br>
Gender:
<input type="radio" name="gender" value="M">Male
<input type="radio" name="gender" value="F">Female<br><br>
Department:
<select id="dept">
  <option value="">Select</option>
  <option>CSE</option><option>ECE</option><option>ME</option>
</select><br><br>
```

```
<button type="submit">Register</button>
</form>
</body>
</html>
```

8. You are designing a basic calculator for daily arithmetic operations. Task: Create a calculator using HTML for layout, CSS for styling, and JavaScript for functionality (Add, Subtract, Multiply, Divide). Bonus JS Task: Handle invalid input and show "Error" for wrong operations.
Code :-

```
<!DOCTYPE html>
<html>
<head>
  <title>Calculator</title>
  <style>
    body{text-align:center;margin-top:60px;font-family:Arial;}
    input{width:200px;padding:5px;margin:5px;}
    button{padding:5px 10px;margin:3px;}
  </style>
</head>
<body>
  <h2>Simple Calculator</h2>
  <input id="num1" type="number" placeholder="First Number"><br>
  <input id="num2" type="number" placeholder="Second Number"><br>
  <div>
    <button onclick="calc('+')">Add</button>
    <button onclick="calc('-')">Subtract</button>
    <button onclick="calc('*')">Multiply</button>
    <button onclick="calc('/')">Divide</button>
  </div>
  <h3 id="result"></h3>

  <script>
    function calc(op){
      const a=parseFloat(num1.value),b=parseFloat(num2.value);
      if(isNaN(a)||isNaN(b)){result.innerText="Error";return;}
      let res;
      switch(op){
        case '+':res=a+b;break;
        case '-':res=a-b;break;
        case '*':res=a*b;break;
        case '/':res=b!==0?a/b:"Error";break;
      }
      result.innerText=res;
    }
  </script>
</body>
</html>
```

9. A small web portal needs a simple login page. Task: Create a login form with username and password fields. Bonus JS Task: If the username and password match predefined values, display a welcome message; otherwise show "Invalid Credentials."
Code :-

```
<!DOCTYPE html>
<html>
<head>
  <title>Login Page</title>
  <style>
    body{text-align:center;margin-top:100px;font-family:Arial;}
    input{margin:5px;padding:8px;}
  </style>
</head>
<body>
  <h2>Login Portal</h2>
  <input id="user" placeholder="Username"><br>
  <input id="pass" type="password" placeholder="Password"><br>
  <button onclick="checkLogin()">Login</button>
  <p id="msg"></p>

  <script>
    function checkLogin(){
      const u=user.value,p=pass.value;
      if(u==="admin" && p==="1234") msg.innerText="Welcome, "+u+"!";
      else msg.innerText="Invalid Credentials.";
    }
  </script>
</body>
</html>
```

10. A company wants an online feedback form for users. Task: Design a form to collect name, email, rating (1–5), and comments. Bonus JS Task: Validate all fields and show a thank-you alert after submission.
Code :-

```
<!DOCTYPE html>
<html>
<head>
<title>Feedback Form</title>
<script>
function submitForm(){
  let n=document.getElementById("name").value;
  let e=document.getElementById("email").value;
  let r=document.getElementById("rate").value;
  let c=document.getElementById("comment").value;
  if(n==""||e==""||r==""||c=="") alert("Please fill all fields.");
  else alert("Thank you for your feedback!");
}
```

```
</script>
</head>
<body>
<h3>Feedback Form</h3>
<form onsubmit="submitForm();return false;">
Name: <input id="name"><br><br>
Email: <input id="email" type="email"><br><br>
Rating (1-5): <input id="rate" type="number" min="1" max="5"><br><br>
Comments:<br>
<textarea id="comment" rows="3" cols="25"></textarea><br><br>
<button type="submit">Submit</button>
</form>
</body>
</html>
```