Program No: 01	Date: 05/12/2025

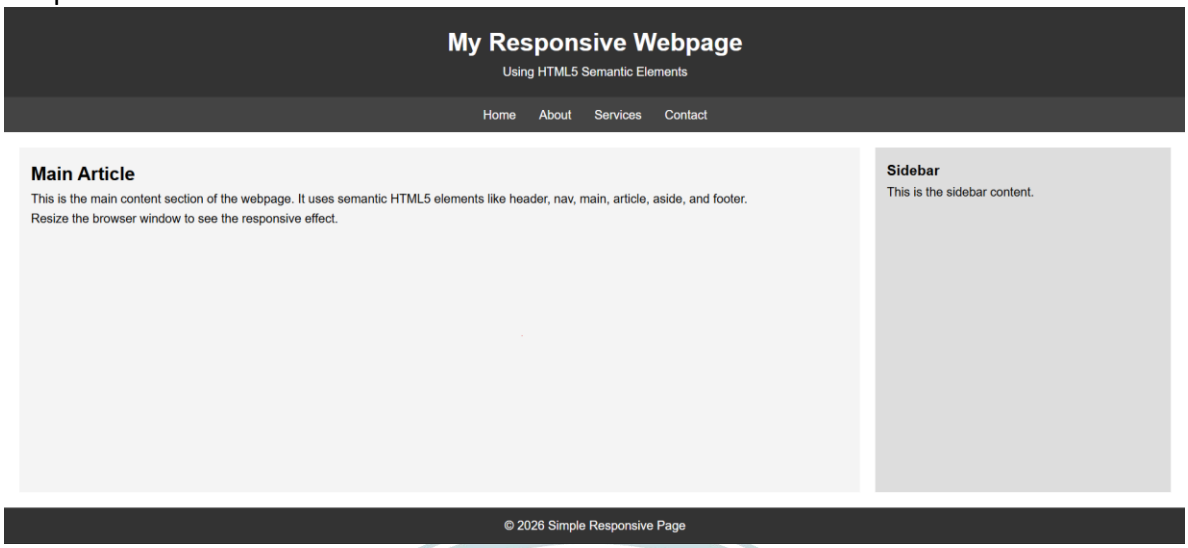
Program Title: Design a responsive webpage using HTML5 semantic elements and CSS.

```
<!-- Responsive webpage
@Ann Jo Mathew
Roll No: 12
05/12/2025 -->

<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <title>Responsive Semantic Webpage</title>
  <meta name="viewport" content="width=device-width, initial-scale=1.0">

  <style>
    * {
      margin: 0;
      padding: 0;
      box-sizing: border-box;
    }

    html, body {
      height: 100%;
    }

    body {
      font-family: Arial, sans-serif;
      line-height: 1.6;
      display: flex;
      flex-direction: column;
    }

    header {
      background: #333;
      color: white;
      padding: 20px;
      text-align: center;
    }

    nav {
      background: #444;
      display: flex;
      justify-content: center;
      flex-wrap: wrap;
```

```
    }

    nav a {
      color: white;
      padding: 10px 15px;
      text-decoration: none;
    }

    nav a:hover {
      background: #555;
    }

    main {
      display: flex;
      padding: 20px;
      gap: 20px;
      flex: 1;
    }

    article {
      flex: 3;
      background: #f4f4f4;
      padding: 15px;
    }

    aside {
      flex: 1;
      background: #ddd;
      padding: 15px;
    }

    footer {
      background: #333;
      color: white;
      text-align: center;
      padding: 10px;
      margin-top: auto;
    }

    @media (max-width: 768px) {
      main {
        flex-direction: column;
      }
    }
  </style>
</head>
<body>
```

```
  <header>
    <h1>My Responsive Webpage</h1>
    <p>Using HTML5 Semantic Elements</p>
  </header>

  <nav>
    <a href="#">Home</a>
    <a href="#">About</a>
    <a href="#">Services</a>
    <a href="#">Contact</a>
  </nav>

  <main>
    <article>
      <h2>Main Article</h2>
      <p>
        This is the main content section of the webpage. It uses semantic
        HTML5 elements like header, nav, main, article, aside, and footer.
      </p>
      <p>
        Resize the browser window to see the responsive effect.
      </p>
    </article>

    <aside>
      <h3>Sidebar</h3>
      <p>This is the sidebar content.</p>
    </aside>
  </main>

  <footer>
    <p>&copy; 2026 Simple Responsive Page</p>
  </footer>

</body>
</html>
```

Output

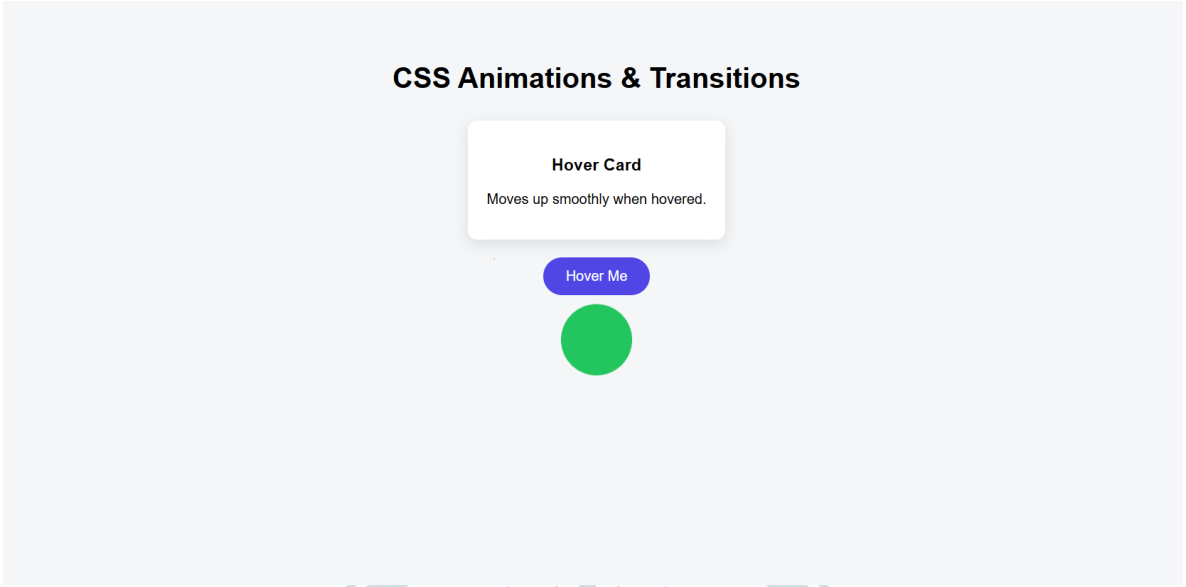


Program No: 02	Date: 05/12/2025
Program Title: Implement CSS animations and transitions on webpage elements	

```
<!-- Animations and transitions on webpage elements
@Ann Jo Mathew
Roll No: 12
07/12/2025 -->

<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="UTF-8">
    <title>CSS Animations & Transitions</title>
    <meta name="viewport" content="width=device-width, initial-scale=1.0">

    <style>
      body {
        font-family: Arial, sans-serif;
        background: #f4f6f8;
        text-align: center;
        padding: 40px;
      }

      h1 {
        margin-bottom: 30px;
      }
      .card {
        width: 250px;
        margin: 20px auto;
        padding: 20px;
        background: white;
        border-radius: 10px;
        box-shadow: 0 5px 15px rgba(0,0,0,0.1);
        transition: transform 0.4s ease, box-shadow 0.4s ease;
      }

      .card:hover {
        transform: translateY(-10px);
        box-shadow: 0 10px 25px rgba(0,0,0,0.2);
      }
      button {
        padding: 12px 25px;
        border: none;
        background: #4f46e5;
        color: white;
```

```
            border-radius: 25px;
            cursor: pointer;
            font-size: 16px;
            transition: background 0.3s ease, transform 0.3s ease;
        }

        button:hover {
            background: #3730a3;
            transform: scale(1.05);
        }
        .circle {
            width: 80px;
            height: 80px;
            background: #22c55e;
            border-radius: 50%;
            margin: 40px auto;

            animation: bounce 2s infinite;
        }
        @keyframes bounce {
            0% {
                transform: translateY(0);
            }
            50% {
                transform: translateY(-30px);
            }
            100% {
                transform: translateY(0);
            }
        }
    </style>
</head>
<body>
    <h1>CSS Animations & Transitions</h1>
    <div class="card">
        <h3>Hover Card</h3>
        <p>Moves up smoothly when hovered.</p>
    </div>
    <button>Hover Me</button>
    <div class="circle"></div>
</body>
</html>
```

Output



Program No: 03	Date: 05/12/2025
Program Title: Create a webpage demonstrating CSS Flexbox layouts.	

```
<!-- CSS Flexbox layouts
@Ann Jo Mathew
Roll No: 12
Date: 07/12/2025 -->

<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<title>CSS Flexbox Example</title>
<meta name="viewport" content="width=device-width, initial-scale=1.0">

<style>
  body {
    font-family: Arial, sans-serif;
    background: #f1f5f9;
    padding: 20px;
  }

  h1 {
    text-align: center;
    margin-bottom: 30px;
  }

  .flex-container {
    display: flex;
    justify-content: space-between;
    align-items: center;
    gap: 15px;
    flex-wrap: wrap;
  }

  .box {
    flex: 1;
    min-width: 200px;
    background: #6366f1;
    color: white;
    padding: 30px;
    text-align: center;
    border-radius: 8px;
  }
</style>
```

```
</head>
<body>
<h1>CSS Flexbox Layout</h1>
<div class="flex-container">
   <div class="box">Box 1</div>
   <div class="box">Box 2</div>
   <div class="box">Box 3</div>
</div>
</body>
</html>
```

Output

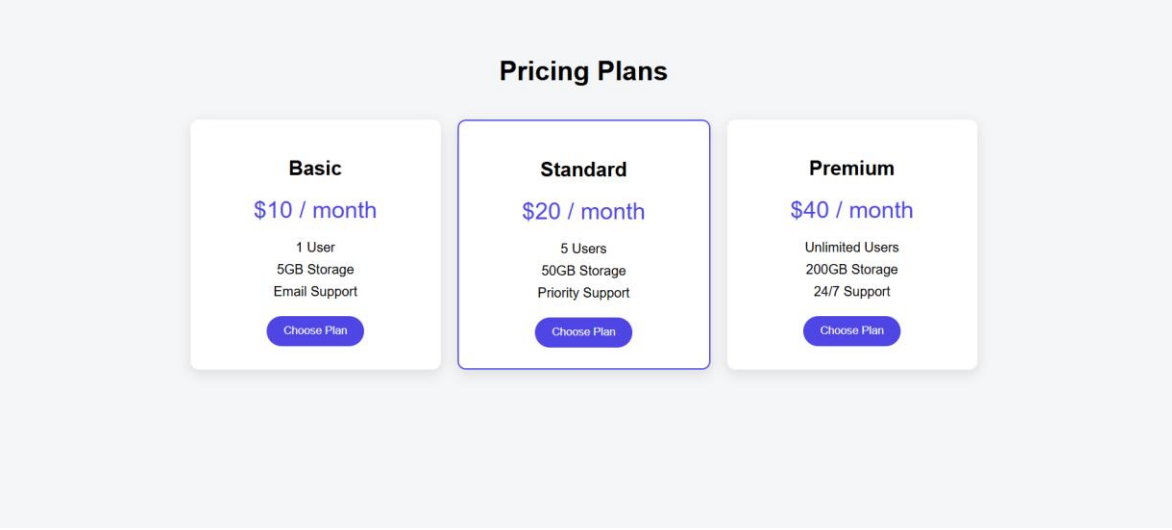
Program No: 04	Date: 05/12/2025
Program Title: Design a pricing table layout using HTML and CSS.	

```
<!-- Pricing table layout
@Ann Jo Mathew
Roll No: 12
08/12/2025 -->

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

<style>
  body {
    font-family: Arial, sans-serif;
    background: #f4f6f8;
    text-align: center;
    padding: 40px;
  }

  h1 {
    margin-bottom: 40px;
  }

  .pricing-container {
    display: flex;
    justify-content: center;
    gap: 20px;
    flex-wrap: wrap;
  }

  .pricing-card {
    background: white;
    padding: 25px;
    width: 250px;
    border-radius: 10px;
    box-shadow: 0 5px 15px rgba(0,0,0,0.1);
    transition: transform 0.3s ease;
  }

  .pricing-card:hover {
    transform: translateY(-10px);
```

```
    }

    .price {
        font-size: 28px;
        margin: 15px 0;
        color: #4f46e5;
    }

    ul {
        list-style: none;
        padding: 0;
        margin: 20px 0;
    }

    ul li {
        margin: 8px 0;
    }

    button {
        padding: 10px 20px;
        border: none;
        background: #4f46e5;
        color: white;
        border-radius: 20px;
        cursor: pointer;
    }

    button:hover {
        background: #3730a3;
    }

    .popular {
        border: 2px solid #4f46e5;
    }

</style>
</head>
<body>
<h1>Pricing Plans</h1>
<div class="pricing-container">
    <div class="pricing-card">
        <h2>Basic</h2>
        <p class="price">$10 / month</p>
        <ul>
            <li>1 User</li>
            <li>5GB Storage</li>
            <li>Email Support</li>
```

```
      </ul>
      <button>Choose Plan</button>
    </div>
    <div class="pricing-card popular">
      <h2>Standard</h2>
      <p class="price">$20 / month</p>
      <ul>
        <li>5 Users</li>
        <li>50GB Storage</li>
        <li>Priority Support</li>
      </ul>
      <button>Choose Plan</button>
    </div>
    <div class="pricing-card">
      <h2>Premium</h2>
      <p class="price">$40 / month</p>
      <ul>
        <li>Unlimited Users</li>
        <li>200GB Storage</li>
        <li>24/7 Support</li>
      </ul>
      <button>Choose Plan</button>
    </div>
  </div>
  </body>
  </html>
```

Output



Program No: 05	Date: 12/12/2025
Program Title: Design a multi-section landing page using HTML and CSS.	

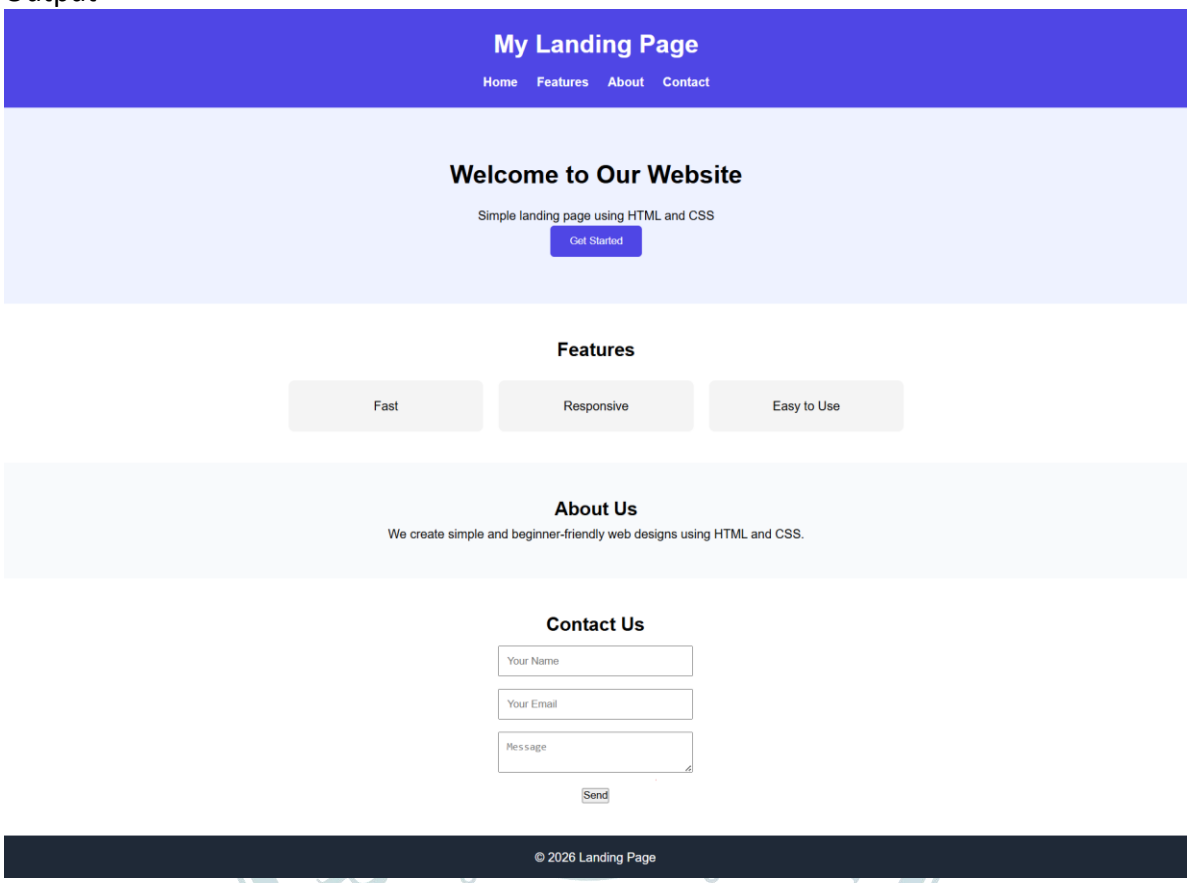
```
<!-- Multi-section landing page
@Ann Jo Mathew
Roll No: 12
14/12/2025 -->

<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<title>Landing Page</title>
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<style>
  * {
    margin: 0;
    padding: 0;
    box-sizing: border-box;
  }
  body {
    font-family: Arial, sans-serif;
    line-height: 1.6;
  }
  header {
    background: #4f46e5;
    color: white;
    padding: 20px;
    text-align: center;
  }
  nav {
    margin-top: 10px;
  }
  nav a {
    color: white;
    margin: 0 10px;
    text-decoration: none;
    font-weight: bold;
  }
  .hero {
    background: #eef2ff;
    padding: 60px 20px;
    text-align: center;
  }
  .hero h1 {
```

```
    margin-bottom: 15px;
}
.hero button {
    padding: 12px 25px;
    border: none;
    background: #4f46e5;
    color: white;
    border-radius: 5px;
    cursor: pointer;
}
.features {
    padding: 40px 20px;
    text-align: center;
}
.feature-box {
    display: flex;
    gap: 20px;
    justify-content: center;
    flex-wrap: wrap;
    margin-top: 20px;
}
.feature {
    background: #f4f4f4;
    padding: 20px;
    width: 250px;
    border-radius: 8px;
}
.about {
    padding: 40px 20px;
    background: #f8fafc;
    text-align: center;
}
.contact {
    padding: 40px 20px;
    text-align: center;
}
input, textarea {
    width: 250px;
    padding: 10px;
    margin: 8px 0;
}
footer {
    background: #1f2937;
    color: white;
    text-align: center;
    padding: 15px;
}
```

```
    @media (max-width: 768px) {
      nav {
        display: flex;
        flex-direction: column;
      }
    }
</style>
</head>
<body>
<header>
  <h1>My Landing Page</h1>
  <nav>
    <a href="#">Home</a>
    <a href="#">Features</a>
    <a href="#">About</a>
    <a href="#">Contact</a>
  </nav>
</header>
<section class="hero">
  <h1>Welcome to Our Website</h1>
  <p>Simple landing page using HTML and CSS</p>
  <button>Get Started</button>
</section>
<section class="features">
  <h2>Features</h2>
  <div class="feature-box">
    <div class="feature">Fast</div>
    <div class="feature">Responsive</div>
    <div class="feature">Easy to Use</div>
  </div>
</section>
<section class="about">
  <h2>About Us</h2>
  <p>
    We create simple and beginner-friendly web designs using
    HTML and CSS.
  </p>
</section>
<section class="contact">
  <h2>Contact Us</h2>
  <form>
    <input type="text" placeholder="Your Name"><br>
    <input type="email" placeholder="Your Email"><br>
    <textarea placeholder="Message"></textarea><br>
    <button>Send</button>
  </form>
</section>
```

```
<footer>
   <p>&copy; 2026 Landing Page</p>
</footer>
</body>
</html>
```

Output

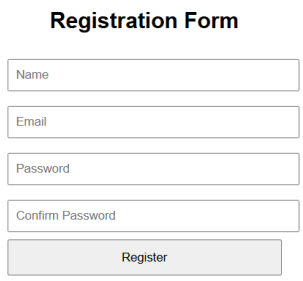


Program No: 06	Date: 12/12/2025
Program Title: Write a JavaScript program to validate a registration form.	

```
<!-- Registration form
@Ann Jo Mathew
Roll No: 12
16/12/2025 -->

<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<title>Form Validation</title>
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<style>
   body {
      font-family: Arial, sans-serif;
      padding: 30px;
      text-align:center ;
   }
   form {
      max-width: 300px;
      margin: auto;
   }
   input {
      width: 100%;
      padding: 8px;
      margin: 8px 0;
   }
   button {
      width: 100%;
      padding: 10px;
   }
</style>
<script>
function validateForm() {
   let name = document.getElementById("name").value;
   let email = document.getElementById("email").value;
   let password = document.getElementById("password").value;
   let confirmPassword = document.getElementById("confirm").value;
   if (name === "") {
      alert("Name is required");
      return false;
   }
   if (email === "") {
```

```
      alert("Email is required");
      return false;
    }
    if (password.length < 6) {
      alert("Password must be at least 6 characters");
      return false;
    }
    if (password !== confirmPassword) {
      alert("Passwords do not match");
      return false;
    }
    alert("Registration successful!");
    return true;
}
</script>
</head>
<body>
<h2>Registration Form</h2>
<form onsubmit="return validateForm()">
    <input type="text" id="name" placeholder="Name">
    <input type="email" id="email" placeholder="Email">
    <input type="password" id="password" placeholder="Password">
    <input type="password" id="confirm" placeholder="Confirm Password">
    <button type="submit">Register</button>
</form>
</body>
</html>
```

Output



Program No: 07	Date: 12/12/2025

Program Title: Write a JavaScript program to filter and search data dynamically.

```
<!-- Filter and search data dynamically
@Ann Jo Mathew
Roll No: 12
16/12/2025 -->

<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Search and Filter</title>

<style>
  body {
    font-family: Arial;
    padding: 30px;
  }

  input, select {
    padding: 8px;
    margin-right: 10px;
    margin-bottom: 15px;
  }

  .item {
    padding: 8px;
    background: #f4f4f4;
    margin-bottom: 5px;
    border-radius: 4px;
  }
</style>

<script>
function filterData() {
  let searchText = document.getElementById("search").value.toLowerCase();
  let category = document.getElementById("category").value;
  let items = document.getElementsByClassName("item");

  for (let i = 0; i < items.length; i++) {
    let name = items[i].getAttribute("data-name").toLowerCase();
    let type = items[i].getAttribute("data-category");

    let matchSearch = name.includes(searchText);
```

```
      let matchCategory = (category === "all" || type === category);

      if (matchSearch && matchCategory) {
         items[i].style.display = "block";
      } else {
         items[i].style.display = "none";
      }
   }
}
</script>

</head>
<body>
<h2>Search and Filter Products</h2>
<input type="text" id="search" placeholder="Search..." onkeyup="filterData()">
<select id="category" onchange="filterData()">
   <option value="all">All</option>
   <option value="electronics">Electronics</option>
   <option value="accessories">Accessories</option>
</select>
<div class="item" data-name="Laptop" data-category="electronics">Laptop</div>
<div class="item" data-name="Mobile" data-category="electronics">Mobile</div>
<div class="item" data-name="Keyboard" data-category="accessories">Keyboard</div>
<div class="item" data-name="Mouse" data-category="accessories">Mouse</div>
</body>
</html>
```

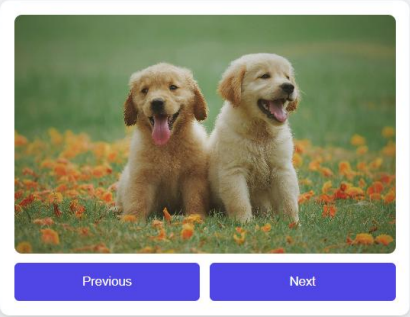
Output

Program No: 08	Date: 12/12/2025
Program Title: Implement image slideshow using JavaScript and CSS Grid.	

```
<!-- Image slideshow using JavaScript and CSS Grid
@Ann Jo Mathew
Roll No: 12
19/12/2025 -->

<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<title>Image Slideshow</title>
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<style>
  body {
    font-family: Arial, sans-serif;
    background: #f4f6f8;
    display: flex;
    justify-content: center;
    align-items: center;
    height: 100vh;
  }

  .slideshow {
    display: grid;
    grid-template-rows: auto 50px;
    width: 400px;
    background: white;
    padding: 15px;
    border-radius: 10px;
    box-shadow: 0 5px 15px rgba(0,0,0,0.2);
  }

  img {
    width: 100%;
    height: 250px;
    object-fit: cover;
    border-radius: 8px;
  }

  .controls {
    display: grid;
    grid-template-columns: 1fr 1fr;
    gap: 10px;
```

```
      margin-top: 10px;
    }

    button {
      padding: 10px;
      border: none;
      background: #4f46e5;
      color: white;
      border-radius: 5px;
      cursor: pointer;
    }

    button:hover {
      background: #3730a3;
    }
</style>
</head>
<body>
<div class="slideshow">
    <img id="slide" src="https://via.placeholder.com/400x250?text=Image+1">
    <div class="controls">
      <button onclick="prevSlide()">Previous</button>
      <button onclick="nextSlide()">Next</button>
    </div>
</div>
<script>
    let images = [
      "https://images.pexels.com/photos/1108099/pexels-photo-1108099.jpeg",
      "https://images.pexels.com/photos/4587993/pexels-photo-4587993.jpeg",
      "https://images.pexels.com/photos/1805164/pexels-photo-1805164.jpeg",
      "https://images.pexels.com/photos/4587991/pexels-photo-4587991.jpeg",
      "https://images.pexels.com/photos/4587999/pexels-photo-4587999.jpeg",
      "https://images.pexels.com/photos/4588002/pexels-photo-4588002.jpeg"
    ];
    let index = 0;
    function nextSlide() {
      index = (index + 1) % images.length;
      document.getElementById("slide").src = images[index];
    }
    function prevSlide() {
      index = (index - 1 + images.length) % images.length;
      document.getElementById("slide").src = images[index];
    }
</script>
</body>
</html>
```

Output

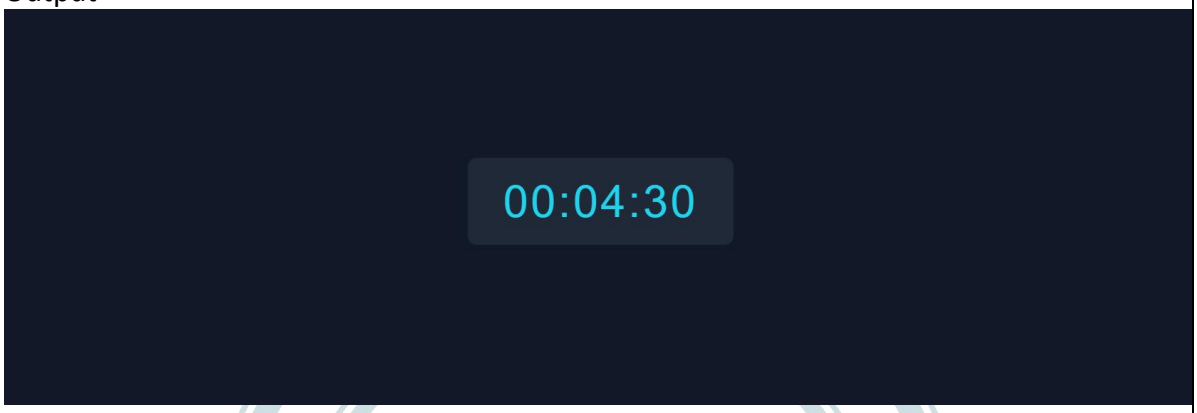


Program No: 09	Date: 19/12/2025
Program Title: Create a real-time digital clock using JavaScript.	

```
<!-- Real-time digital clock using JavaScript
@Ann Jo Mathew
Roll No: 12
19/12/2025 -->

<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<title>Digital Clock</title>
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<style>
   body {
      height: 100vh;
      display: flex;
      justify-content: center;
      align-items: center;
      background: #111827;
      font-family: Arial, sans-serif;
   }

   .clock {
      font-size: 50px;
      color: #22d3ee;
      background: #1f2937;
      padding: 20px 40px;
      border-radius: 10px;
      letter-spacing: 3px;
   }
</style>
</head>
<body>
<div class="clock" id="clock"></div>
<script>
function updateClock() {
   let now = new Date();
   let hours = now.getHours();
   let minutes = now.getMinutes();
   let seconds = now.getSeconds();
   hours = hours < 10 ? "0" + hours : hours;
   minutes = minutes < 10 ? "0" + minutes : minutes;
   seconds = seconds < 10 ? "0" + seconds : seconds;
```

```
    let time = hours + ":" + minutes + ":" + seconds;
    document.getElementById("clock").innerHTML = time;
}
setInterval(updateClock, 1000);
updateClock();
</script>
</body>
</html>
```

Output



Program No: 10	Date: 19/12/2025
Program Title: Implement dropdown-based content rendering using JavaScript.	

```
<!-- Dropdown-based content rendering using JavaScript
@Ann Jo Mathew
Roll No: 12
21/12/2025 -->

<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<title>Dropdown Content Rendering</title>
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<style>
   body {
      font-family: Arial, sans-serif;
      padding: 40px;
      text-align: center;
   }

   select {
      padding: 8px;
      margin-bottom: 20px;
   }

   .content-box {
      width: 300px;
      margin: auto;
      padding: 20px;
      background: #f4f4f4;
      border-radius: 8px;
   }
</style>
</head>
<body>
<h2>Select a Course</h2>
<select id="course" onchange="showContent()">
   <option value="">-- Select Course --</option>
   <option value="html">HTML</option>
   <option value="css">CSS</option>
   <option value="js">JavaScript</option>
</select>
<div class="content-box" id="content">
   Please select a course to see details.
```

```
</div>
<script>
function showContent() {
   let value = document.getElementById("course").value;
   let contentBox = document.getElementById("content");
   if (value === "html") {
      contentBox.innerHTML = "HTML is used to structure web pages.";
   }
   else if (value === "css") {
      contentBox.innerHTML = "CSS is used to style web pages.";
   }
   else if (value === "js") {
      contentBox.innerHTML = "JavaScript is used to make web pages interactive.";
   }
   else {
      contentBox.innerHTML = "Please select a course to see details.";
   }
}
</script>
</body>
</html>
```

Output

Program No: 11	Date: 19/12/2025

Program Title: Write a program to display student details (name, age, grade) using JSON.

```
<!-- student details using JSON
@Ann Jo Mathew
Roll No: 12
21/12/2025 -->

<!DOCTYPE html>
<html>
<head>
<title>Student Details (JSON)</title>
<style>
   body {
      font-family: Arial;
      text-align: center;
      padding: 40px;
   }
</style>
</head>
<body>
<h2>Student Details</h2>
<div id="output"></div>
<script>
   let studentJSON = `{
      "name": "Ann Jo Mathew",
      "age": 22,
      "grade": "A"
   }`;
   let student = JSON.parse(studentJSON);
   document.getElementById("output").innerHTML =
      "Name: " + student.name + "<br>" +
      "Age: " + student.age + "<br>" +
      "Grade: " + student.grade;
</script>
</body>
</html>
```

Output