Practical 7: Implement an Image Slideshow

Aim:

- To create an image slideshow with automatic and manual navigation.

Objective:

- Implement an image carousel using JavaScript, including next/previous buttons and an automated slideshow.

Prerequisites:

- Basic knowledge of HTML, CSS, and JavaScript.

Theory:

- **Slideshow**: A set of images displayed sequentially.
- **JavaScript**: Used to control the slideshow's automatic timing and user interaction.

Code:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Image Slideshow</title>
  <style>
    #slideshow {
      width: 500px;
      height: 300px;
      overflow: hidden;
    }
    img {
      width: 100%;
      height: auto;
      display: none;
    }
    img.active {
      display: block;
    }
  </style>
</head>
<body>
  <div id="slideshow">
    <img src="image1.jpg" class="active" alt="Image 1">
    <img src="image2.jpg" alt="Image 2">
    <img src="image3.jpg" alt="Image 3">
  </div>
  <button onclick="nextSlide()">Next</button>
  <button onclick="prevSlide()">Previous</button>

  <script>
    let currentIndex = 0;
    const slides = document.querySelectorAll('#slideshow img');

    function showSlide(index) {
      slides.forEach((slide, i) => {
        slide.classList.remove('active');
        if (i === index) {
          slide.classList.add('active');
        }
      });
    }

    function nextSlide() {
      currentIndex = (currentIndex + 1) % slides.length;
      showSlide(currentIndex);
    }

    function prevSlide() {
      currentIndex = (currentIndex - 1 + slides.length) % slides.length;
      showSlide(currentIndex);
    }

    setInterval(nextSlide, 3000);  // Auto-change every 3 seconds
  </script>
</body>
</html>
```

Output:

- A functional slideshow that cycles images automatically and lets users manually navigate using the next/previous buttons.

Conclusion:

- Creating a slideshow with JavaScript enhances user interaction and automates conte display, making web pages more dynamic.