**Project Report:**

****Image Slider****

**1. Introduction**

The image slider project aims to develop a highly interactive and visually appealing component for displaying a series of images.

The component will allow users to navigate through images seamlessly, both automatically and manually, providing a smooth and engaging experience.

1. **Objectives**

* Create a responsive and user-friendly image slider.
* Implement both automatic and manual image navigation.
* Ensure compatibility across various devices and browsers.
* Provide customization options for different use cases.

**3.Frontend Technologies**

HTML: Used for structuring the slider component. Key elements include containers for images, navigation arrows, and indicators.

<body>

    <section class="wrapper">

      <i class="fa-solid fa-arrow-left button" id="prev"></i>

      <div class="image-container">

        <div class="carousel">

          <img src="images/11.jpg" alt="" />

          <img src="images/12.jpg" alt="" />

          <img src="images/13.jpg" alt="" />

          <img src="images/14.jpg" alt="" />

          <img src="images/15.jpg" alt="" />

        </div>

        <i class="fa-solid fa-arrow-right button" id="next"></i>

      </div>

    </section>

  </body>

CSS: Applied for styling the slider, ensuring it is responsive and visually appealing. Includes media queries for different screen sizes.

.wrapper {

  display: flex;

  max-width: 650px;

  width: 100%;

  height: 500px;

  background: #d0aed1;

  align-items: center;

  justify-content: center;

  position: relative;

  border-radius: 12px;

}

.wrapper i.button {

  position: absolute;

  top: 50%;

  transform: translateY(-50%);

  height: 36px;

  width: 36px;

  background-color: #2758a0;

  border-radius: 300%;

  text-align: center;

  line-height: 36px;

  color: #dfc9c9;

  font-size: 15px;

  transition: all 0.3s linear;

  z-index: 100;

  cursor: pointer;

}

JavaScript: Manages the logic for image transitions, auto-sliding, and user interactions.

const wrapper = document.querySelector(".wrapper"),

  carousel = document.querySelector(".carousel"),

  images = document.querySelectorAll("img"),

  buttons = document.querySelectorAll(".button");

let imageIndex = 1,

  intervalId;

const autoSlide = () => {

  intervalId = setInterval(() => slideImage(++imageIndex), 3000);

};

autoSlide();

const slideImage = () => {

  imageIndex = imageIndex === images.length ? 0 : imageIndex < 0 ? images.length - 1 : imageIndex;

  carousel.style.transform = `translate(-${imageIndex \* 100}%)`;

};

const updateClick = (e) => {

  clearInterval(intervalId);

  imageIndex += e.target.id === "next" ? 1 : -1;

  slideImage(imageIndex);

  autoSlide();

};

buttons.forEach((button) => button.addEventListener("click", updateClick));

wrapper.addEventListener("mouseover", () => clearInterval(intervalId));

wrapper.addEventListener("mouseleave", autoSlide);

**4**.**Implementation**

HTML Structure: Developed a basic structure with a container for images, and navigation controls.

CSS Styling: Applied styles to ensure the slider is visually appealing and responsive.

JavaScript Functionality: Implemented logic for auto-sliding, navigation controls, and transition effects.

**5.Testing**

* Functionality Testing: Verified that all features (auto-sliding, manual navigation) work as expected. Addressed any bugs or issues.
* Performance Testing: Ensured the slider performs efficiently without lag, particularly with larger image files.
* Cross-Browser Testing: Tested the slider on various browsers (Chrome, Firefox, Safari, Edge) to ensure consistent behavior.
* Responsiveness Testing: Checked the slider on different devices and screen sizes to confirm it adapts appropriately.

**6.Conclusion**

* The image slider project was successfully completed, meeting the project objectives.
* The resulting slider is a versatile and user-friendly component that can be integrated into various web projects.
* Future enhancements can further expand the slider's capabilities and user experience.

**Check the source code on github profile :-**

<https://github.com/BhupendraSingh7076/Image-Slider>

**Thank You**