

Image Carousel Component Documentation

Overview :

The ImageCarousel component is a React functional component that displays a set of images in a carousel format. It features automatic sliding, manual navigation, and dot indicators for selecting specific images.

Features :

Auto-Sliding:

The images automatically transition every 3 seconds if isAutoSliding is true.

Manual Navigation:

Users can navigate using Previous (<) and Next (>) buttons.

Dot Navigation:

Users can click on dots to directly jump to a specific image.

Requirements :

- React
- JavaScript
- CSS
- JSON

Dependencies :

- **react:** Uses the React library for building the component.
- **useState:** Uses the useState hook for managing state variables.
- **useEffect:** Uses the useEffect hook for handling side effects, such as setting up and clearing intervals.

Functional Breakdown :

Image Data Handling

- The component receives an array of image URLs via the images prop.
- The images prop is stored in the component's state to control image display.

Auto-Sliding

- The carousel automatically moves to the next image every 3 seconds.
- Auto-sliding is controlled by the useEffect hook, which sets an interval.
- The interval is cleared when the component unmounts to prevent memory leaks.

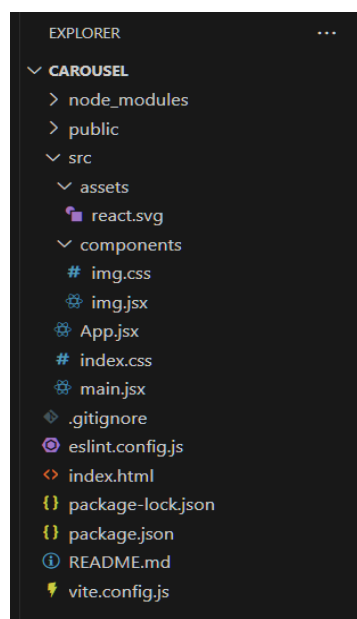
Manual Navigation

- Users can click the Previous (<) and Next (>) buttons to manually navigate images.
- The handleNext function advances to the next image, looping back to the first image if at the end.
- The handlePrevious function moves to the previous image, looping to the last image if at the beginning.

Dot Indicator Navigation

- A series of dots below the images represent available images in the carousel.
- Users can click on a dot to jump to a specific image using the handleDotClick function.
- The currently active image's dot is visually highlighted.

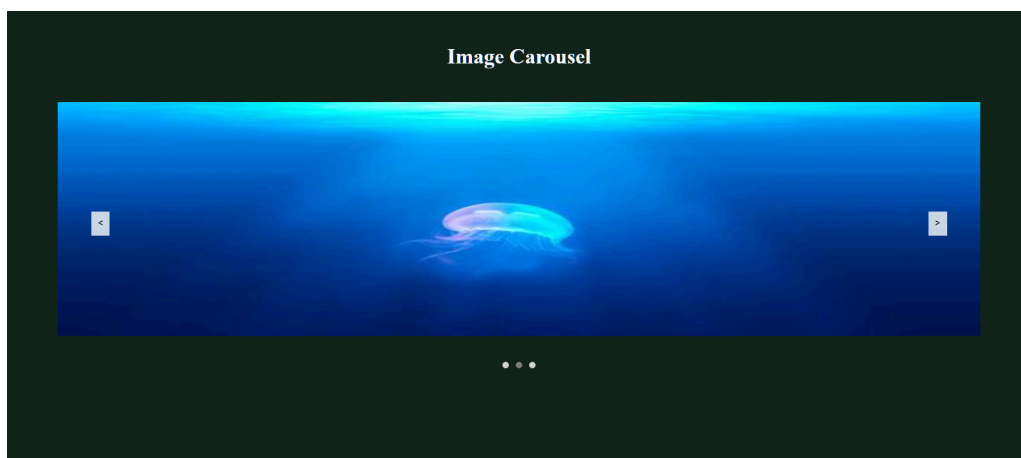
Project Structure :



Event Handlers :

- **handleNext():** Handles the click event on the Next button, advancing to the next image.
- **handlePrevious():** Handles the click event on the Previous button, moving to the previous image.
- **handleDotClick(index):** Handles the click event on a dot, setting the active image to the selected index.

Output :



Conclusion :

The ImageCarousel component is an interactive UI element that allows users to view a series of images in a slideshow format. It offers automatic and manual navigation features, along with a simple and intuitive dot navigation system.