

Image Carousel Component Documentation

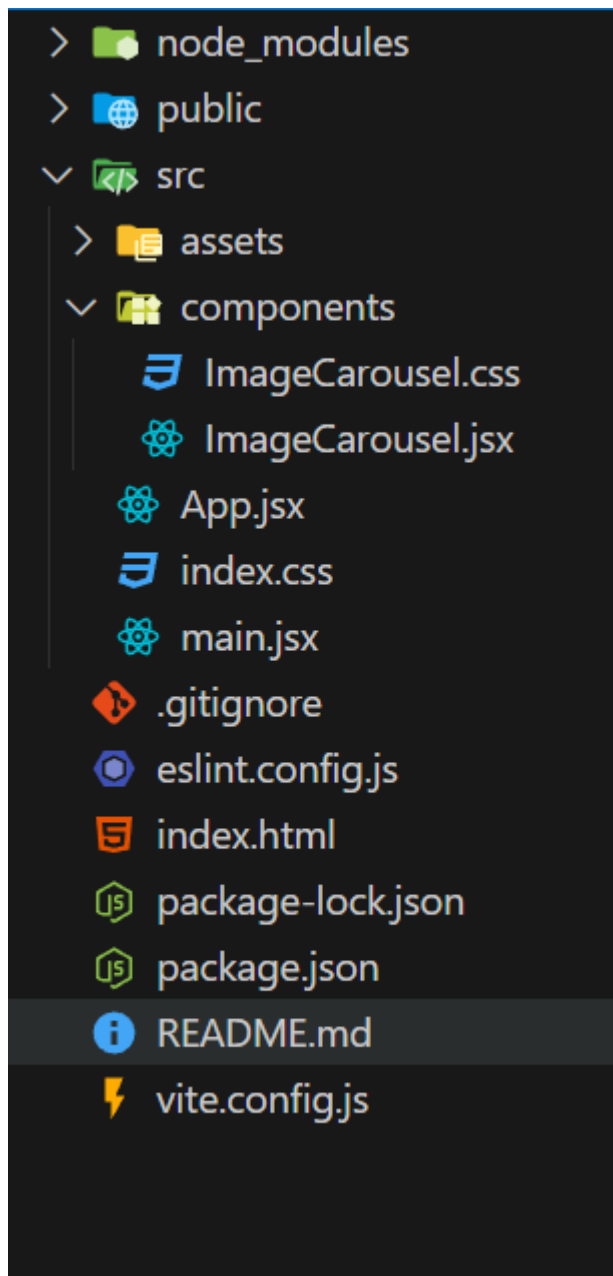
Overview

The **Image Carousel Component** is a React-based UI component that allows users to navigate through a collection of images. Users can manually change images using "Previous" and "Next" buttons, select specific images using dot indicators, and enjoy an auto-slide feature that changes images every 3 seconds.

Features

- **Manual Navigation:** Users can navigate through images using "Previous" and "Next" buttons.
- **Dot Indicators:** Users can click on dot indicators to jump to a specific image.
- **Auto-Slide:** The carousel automatically changes images every 3 seconds.
- **Pause on Interaction:** Auto-slide pauses temporarily when a user interacts with the carousel (e.g., clicks a button or dot).
- **Responsive Design:** The component is responsive and adapts to different screen sizes.

Folder Structure



Props

The ImageCarousel component accepts the following prop:

- **images** (Array of strings): A list of image URLs to be displayed in the carousel.

Example Usage

```
import React from 'react';  
import ImageCarousel from './components/ImageCarousel';  
import img1 from "../src/assets/img1.jpg";  
import img2 from "../src/assets/img2.jpg";  
import img3 from "../src/assets/img3.jpg";  
import img4 from "../src/assets/img4.jpg";  
import img5 from "../src/assets/img5.jpg";
```

```
const App = () => {  
  const images = [img1, img2, img3, img4, img5];  
  return (  
    <div>  
      <ImageCarousel images={images} />  
    </div>  
  );  
};
```

```
export default App;
```

Component Structure

State Management

- **currentIndex:** Tracks the index of the currently displayed image.
- **isAutoSlidePaused:** Tracks whether the auto-slide feature is paused due to user interaction.

Functions

- **handleNext():** Moves to the next image.

- **handlePrevious():** Moves to the previous image.
- **handleDotClick(index):** Jumps to the image corresponding to the clicked dot indicator.

Effects

- **Auto-Slide Effect:** Uses `setInterval` to automatically change images every 3 seconds. The interval is cleared when the component unmounts or when the user interacts with the carousel.
- **Reset Auto-Slide Pause:** Resumes auto-slide after a brief pause following user interaction.

CSS Styling

The component includes CSS for:

- **Carousel Container:** Styles for the container holding the images and navigation buttons.
- **Carousel Image:** Styles for the images, ensuring they fit within the container.
- **Navigation Buttons:** Styles for the "Previous" and "Next" buttons, including hover and disabled states.
- **Dot Indicators:** Styles for the dot indicators, including active and hover states.

Example CSS

```
.carousel {  
  width: 100%;  
  max-width: 800px;  
  margin: 100px auto;  
  display: flex;  
  justify-content: center;  
  align-items: center;  
  flex-direction: column;
```

```
    position: relative;
}
```

```
.carousel-container {
    width: 100%;
    height: 400px;
    overflow: hidden;
    border-radius: 10px;
    box-shadow: 0 4px 8px rgba(0, 0, 0, 0.2);
    position: relative;
}
```

```
.carousel-image {
    width: 100%;
    height: 100%;
    object-fit: cover;
    transition: opacity 0.5s ease-in-out;
}
```

```
.carousel-button {
    position: absolute;
    top: 50%;
    transform: translateY(-50%);
    background: rgba(0, 0, 0, 0.5);
    border: none;
    cursor: pointer;
```

```
font-size: 20px;  
height: 40px;  
width: 40px;  
color: white;  
padding: 10px;  
border-radius: 50%;  
transition: 0.3s ease;  
}
```

```
.carousel-button:hover:not(:disabled) {  
    background: rgba(0, 0, 0, 0.8);  
}
```

```
.carousel-button:disabled {  
    background: rgba(0, 0, 0, 0.2);  
    cursor: not-allowed;  
}
```

```
.prev-btn {  
    left: 10px;  
}
```

```
.next-btn {  
    right: 10px;  
}
```

```
.dot-indicators {  
    position: absolute;  
    bottom: 10px;  
    left: 50%;  
    transform: translateX(-50%);  
    display: flex;  
    gap: 8px;  
}
```

```
.dot {  
    width: 10px;  
    height: 10px;  
    border-radius: 50%;  
    background-color: gray;  
    cursor: pointer;  
    transition: background-color 0.3s ease;  
}
```

```
.dot.active {  
    background-color: black;  
}
```

```
.dot:hover {  
    background-color: rgba(255, 255, 255, 0.8);  
}
```

Conclusion

The Image Carousel Component is a versatile and user-friendly React component that enhances the user experience by providing an interactive way to browse through a collection of images. With its auto-slide feature and responsive design, it is suitable for a wide range of applications.