

Understanding React Components

In this lecture, we will learn what React components are and how to create them. Components are the building blocks of any React application.

What is a Component?

A component is a reusable piece of code that represents part of the user interface. Components can be as small as a button or as large as an entire page.

React components make your code modular and easier to maintain.

Types of Components

React supports two types of components:

- **Function Components:** These are the modern and recommended way to write components.
- **Class Components:** An older way of writing components (not commonly used today). We will focus only on function components.

Creating a Simple Component

Open `App.jsx` and you will see something like this:

```
function App() {  
  return (  
    <div>  
      <h1>Hello Vite + React</h1>  
    </div>  
  )  
}
```

```
export default App
```

This is a function component named `App`. It returns JSX, which looks like HTML but is actually JavaScript.

JSX in Action

JSX allows us to write HTML-like code inside JavaScript. For example:

```
function Greeting() {  
  return <h2>Welcome to React</h2>  
}
```

Here, `Greeting` is a component that can be reused anywhere in your application.

Using Components

To use a component, simply include it inside another component like this:

```
function App() {  
  return (  
    <div>  
      <Greeting />  
    </div>  
  )  
}
```

Notice that we use `<Greeting />` as if it were an HTML tag. This is how components are composed to build larger applications.

Recap

- Components are reusable building blocks in React.
- Function components are the modern way of creating components.

- JSX looks like HTML but allows JavaScript expressions inside.
- You can include components inside other components.