

Using Axios in React

Definition:

Axios is a promise-based HTTP client for the browser and Node.js. It is used to make HTTP requests to fetch or save data. Axios provides a simple API for interacting with RESTful services, making it a popular choice for handling HTTP communication in React applications.

Example Explanation:

Let's break down the provided example to understand how Axios is used in a React component and enhance it with some inline CSS for a better user experience.

Step-by-Step Explanation:

1. Component (`Package2Axios`):

```
import axios from 'axios'

import React, { useState, useEffect } from 'react'

const Package2Axios = () => {
  const [myApi, setMyApi] = useState([])

  useEffect(() => {
    axios.get("https://api.github.com/users")
      .then(resp => setMyApi(resp.data))
      .catch(error => console.error("Error fetching data:", error))
  }, [])
```

```
return (  
  <div style={{  
    textAlign: 'center',  
    fontFamily: 'Arial, sans-serif',  
    padding: '20px'  
  }}>  
    <h1 style={{ color: '#333', marginBottom: '20px' }}>GitHub Users</h1>  
    <div style={{  
      display: 'flex',  
      flexWrap: 'wrap',  
      justifyContent: 'center'  
    }}>  
      {  
        myApi.length > 0 && myApi.map((val, i) => {  
          return (  
            <div key={i} style={{  
              border: '1px solid #ddd',  
              borderRadius: '5px',  
              margin: '10px',  
              padding: '10px',  
              width: '200px',  
              textAlign: 'center',  
              boxShadow: '0 4px 8px 0 rgba(0, 0, 0, 0.2)'  
            }}>  
              <p style={{
```

```

        fontWeight: 'bold',

        fontSize: '16px',

        marginBottom: '10px'

    }}>{val.login}</p>

    <img src={val.avatar_url} alt="User Avatar" style={{ borderRadius: '50%' }} width="100" />

</div>

)

})

}

</div>

</div>

)

}

```

export default Package2Axios

- ****Purpose of Axios:****

- Axios is used to make HTTP requests to fetch or save data.
- It is promise-based and can handle both synchronous and asynchronous operations.

- ****Using Axios in a React Component:****

- Import Axios using ``import axios from 'axios'``.
- Make a GET request to an API endpoint using ``axios.get(url).then(response => ...)``.
- Handle errors using `` .catch(error => ...)``.
- Store the fetched data in a state variable using ``useState``.

- **Fetching Data on Component Mount:**
 - Use the `useEffect` hook to fetch data when the component mounts.
 - Pass an empty dependency array `[]` to `useEffect` to ensure it runs only once.
- **Inline CSS for Better User Experience:**
 - Use inline styles to add CSS directly to HTML elements.
 - Define styles as JavaScript objects and apply them using the `style` attribute.

Advantages of Axios

- **Simple API:** Axios provides a straightforward API for making HTTP requests.
- **Promise-Based:** Allows for easier handling of asynchronous operations.
- **Error Handling:** Provides built-in methods for handling errors.
- **Interceptors:** Allows for modifying requests or responses before they are handled by `then` or `catch`.

Conclusion

Axios is a powerful and easy-to-use HTTP client for making requests to APIs. By using Axios in combination with React hooks like `useState` and `useEffect`, you can easily fetch and display data in your React applications. Adding inline CSS helps improve the user experience by making the UI more visually appealing.