React

Axios

vs

Fetch

Why Do We Need HTTP Request Tools?

Handling HTTP requests can be complex, but tools like **Axios and Fetch simplify the process** with abstractions that streamline error handling, response parsing, and request configuration.

They help address common problems such as:

- Boilerplate Code
- Error Handling
- Interceptors

- **What is axios**

Axios is a **promise-based library** for **making HTTP requests**, offering more features and convenience than the native Fetch API.

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Axios - Example

```
// Making a GET request using Axios

axios.get('https://api.example.com/data')

  .then(response => console.log(response.data))

  .catch(error => console.error('There was a
problem with the axios request:', error));
```

• What is Fetch

The Fetch API is a **promise-based JavaScript method** for making HTTP requests, offering a **simpler alternative** to older methods like XMLHttpRequest.

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Fetch - Example

```
// Making a GET request using Fetch

fetch('https://api.example.com/data')

  .then(response => {
    if (!response.ok) {
      throw new Error('Network response was not ok');
    }
    return response.json();
  })

  .then(data => console.log(data))
  .catch(error => console.error('There was a problem with the
fetch operation:', error));
```

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- **Key Differences**

1. Default Handling of JSON

Fetch

Requires manual conversion of response data to JSON.

```
fetch('https://api.example.com/data')
  .then(response => response.json()) // Manual conversion
  .then(data => console.log(data));
```

Axios

Automatically parses JSON responses.

```
axios.get('https://api.example.com/data')
  .then(response => console.log(response.data)); // Automatic conversion
```

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2. Error Handling

Fetch

Only rejects a promise for network errors, not for HTTP errors (e.g., 404 or 500 status codes).

```
fetch('https://api.example.com/data')
  .then(response => {
    if (!response.ok) {
      throw new Error('Network response was not ok');
    }
    return response.json();
  })
  .catch(error => console.error('Fetch error:', error));
```

Axios

Rejects a promise for both network errors and HTTP errors.

```
axios.get('https://api.example.com/data')
  .catch(error => console.error('Axios error:', error));
```

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3. Request Configuration

Fetch

Requires manual configuration of options like headers

```
fetch('https://api.example.com/data', {
  method: 'POST',
  headers:
    { 'Content-Type': 'application/json' },
  body: JSON.stringify({ key: 'value' })
});
```

Axios

Provides a more concise and readable syntax for

```
axios.post('https://api.example.com/data', { key: 'value' }, {
  headers: {
    'Content-Type': 'application/json'
  }
});
```

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