

Reading API Data with JavaScript

In the previous tutorial, you created a simple API using PHP.

The API returns JSON data when visited in a browser.

In this tutorial, you will use JavaScript to read data from the API and display it on a webpage.

Project Structure

Your project should contain:

```
api-demo
├── api.php
├── index.html
└── smart_security_data.json
```

Create the HTML Page

Create:

```
index.html
```

Add:

```
<!DOCTYPE html>
<html>
<head>
  <title>API Demo</title>
</head>
```

```
<body>

<h1>API Dashboard</h1>

<div id="output"></div>

<script>

</script>

</body>
</html>
```

Save the file.

Read the API

Inside the `<script>` tags add:

```
fetch("api.php")
  .then(response => response.json())
  .then(data => {

    console.log(data);

  });
```

Save the file.

Test the API Request

Open:

```
http://localhost/api-demo/
```

Press:

F12

Open the **Console** tab.

You should see the JSON object displayed.

Display the Home Information

Replace:

```
console.log(data);
```

with:

```
document.getElementById(  
    "output"  
).innerHTML = `  
  
    <p>  
        <strong>Home ID:</strong>  
        ${data.homeId}  
    </p>  
  
    <p>  
        <strong>Location:</strong>  
        ${data.location}  
    </p>  
  
`;  
`;
```

Refresh the page.

You should see:

Home ID: GC-HOME-014

Location: Gold Coast

Display Device Information

Replace the existing code with:

```
let html = `

    <h2>Devices</h2>

    <table border="1">

        <tr>
            <th>Device ID</th>
            <th>Device Type</th>
            <th>Room</th>
        </tr>

    `;

data.devices.forEach(device => {

    html += `

        <tr>
            <td>${device.deviceId}</td>
            <td>${device.deviceType}</td>
            <td>${device.room}</td>
        </tr>

    `;

});

html += "</table>";

document.getElementById(
    "output"
).innerHTML = html;
```

Refresh the page.

You should now see a table of devices.

Why Use an API?

Previously, the data was loaded directly from:

```
fetch("smart_security_data.json")
```

Now the data is loaded from:

```
fetch("api.php")
```

This means the data can be:

- Generated dynamically
- Stored in a database
- Updated automatically
- Filtered before being sent

The webpage does not need to know where the data comes from. It only needs the JSON returned by the API.

Complete Page

```
<!DOCTYPE html>
<html>
<head>
  <title>API Demo</title>
</head>
<body>

<h1>API Dashboard</h1>

<div id="output"></div>

<script>

fetch("api.php")
```

```
.then(response => response.json())
.then(data => {

    let html = `

        <h2>Devices</h2>

        <table border="1">

            <tr>
                <th>Device ID</th>
                <th>Device Type</th>
                <th>Room</th>
            </tr>

        `;

        data.devices.forEach(device => {

            html += `

                <tr>
                    <td>${device.deviceId}</td>
                    <td>${device.deviceType}</td>
                    <td>${device.room}</td>
                </tr>

            `;

        });

        html += "</table>";

        document.getElementById(
            "output"
        ).innerHTML = html;

    });

</script>
```

```
</body>
</html>
```

You have successfully consumed data from an API using JavaScript.

Next tutorial: **Creating a Database-Driven API with PHP and MySQL.**

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