

# Loading JSON Data with JavaScript

In this tutorial, you will load data from a JSON file and display it on a webpage using JavaScript.

The JSON file contains information about a smart home, including devices and security events.

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## Create the Project Files

Create a new folder called:

```
json-demo
```

Inside the folder create:

```
index.html  
smart_security_data.json
```

Copy the JSON file into the project folder.

Your folder structure should look like:

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

## Create the HTML Page

Open:

```
index.html
```

Add the following code:

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

<h1>Smart Home Dashboard</h1>

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

<script src="script.js"></script>

</body>
</html>
```

Save the file.

---

## Create the JavaScript File

Create a new file called:

script.js

Your folder should now look like:

```
json-demo
├─ index.html
├─ script.js
└─ smart_security_data.json
```

## Load the JSON File

Open:

script.js

Add:

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

    console.log(data);

  });
```

Save the file.

This code loads the JSON file and converts it into a JavaScript object.

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# Open Developer Tools

Open:

```
index.html
```

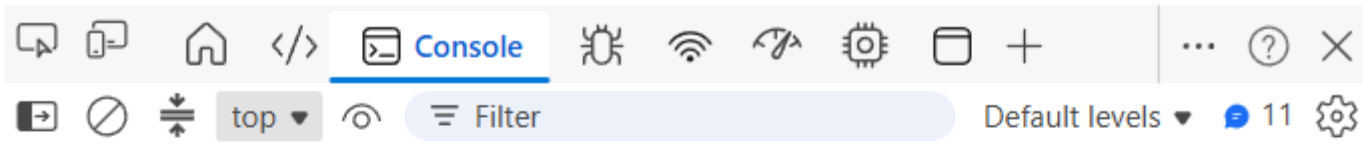
in your browser.

Press:

```
F12
```

and select the **Console** tab.

You should see the JSON data displayed.



[script.js:5](#)

```
▼ {homeId: 'GC-HOME-014', Location: 'Gold Coast', devices: Array(2)} ⓘ
  ▶ devices: (2) [{...}, {...}]
    homeId: "GC-HOME-014"
    location: "Gold Coast"
  ▼ [[Prototype]]: Object
    ▶ constructor: f Object()
    ▶ hasOwnProperty: f hasOwnProperty()
    ▶ isPrototypeOf: f isPrototypeOf()
    ▶ propertyIsEnumerable: f propertyIsEnumerable()
    ▶ toLocaleString: f toLocaleString()
    ▶ toString: f toString()
    ▶ valueOf: f valueOf()
    ▶ __defineGetter__: f __defineGetter__()
    ▶ __defineSetter__: f __defineSetter__()
    ▶ __lookupGetter__: f __lookupGetter__()
    ▶ __lookupSetter__: f __lookupSetter__()
    __proto__: (...)
    ▶ get __proto__: f __proto__()
    ▶ set __proto__: f __proto__()
```

>

## Display the Home Information

Replace the contents of:

```
.then(data => {

});
```

with:

```
.then(data => {

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

```
});
```

Save the file.

Refresh the page.

You should now see:

Home ID: GC-HOME-014

Location: Gold Coast

# Display the Devices

Update the code:

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

    let html = `
      <p><strong>Home ID:</strong> ${data.homeId}</p>
      <p><strong>Location:</strong> ${data.location}</p>

      <h2>Devices</h2>
      <ul>

    `;

    data.devices.forEach(device => {

      html += `
        <li>
          ${device.deviceId}
          (${device.deviceType})
        </li>
      `;

    });

    html += "</ul>";
```

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

});
```

Refresh the page.

You should now see:

Home ID: GC-HOME-014

Location: Gold Coast

Devices

CAM-01 (Security Camera)

LOCK-02 (Smart Door Lock)

# Complete JavaScript File

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

    let html = `
      <p><strong>Home ID:</strong> ${data.homeId}</p>
      <p><strong>Location:</strong> ${data.location}</p>

      <h2>Devices</h2>
      <ul>

    `;

    data.devices.forEach(device => {

      html += `
        <li>
          ${device.deviceId}
          (${device.deviceType})
        </li>
      `;
    });

    html += `
    </ul>
  `;

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

```
        `;  
  
    });  
  
    html += "</ul>";  
  
    document.getElementById("output").innerHTML = html;  
  
});
```

You have successfully loaded a JSON file and displayed data using JavaScript.

Next tutorial: **Displaying JSON Data in a Table.**

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Revision #1

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