Handling JSON Data

This lesson teaches the use of JSON data in JavaScript through a series of interactive examples.

> **We'll cover the following** ∧
>
> - JSON and JavaScript
> - Example: Retrieving JSON Content

Let's advance to a more interesting and realistic scenario. Very often, data available on web servers are published under the JSON format.

JSON and JavaScript

The JavaScript language offers native support for the JSON format:

- The `JSON.parse()` method transforms a JSON string into a JavaScript object.
- On the contrary, the `JSON.stringify()` method transforms a JavaScript object into a JSON string.

```javascript
// Define a JavaScript object
const plane = {
  manufacturer: "Airbus",
  model: "A320"
};
console.log(plane); // Display

const planeText = JSON.stringi
console.log(planeText); // Dis

console.log(JSON.parse(planeTe
```

These methods can also handle JSON arrays.

```javascript
1   // Define an array containing two objects
2   const planes = [
3     {
4       manufacturer: "Airbus",
5       model: "A320"
6     },
7     {
8       manufacturer: "Boeing",
9       model: "737"
10    }
11  ];
12  console.log(planes); // Display the array of objects
13
14  const planesText = JSON.stringify(planes);
15  console.log(planesText); // Display the array as a JSON string
16
17  console.log(JSON.parse(planesText)); // Display the array of objects
```

Example: Retrieving JSON Content

For example, the following JSON file `movies.json` contains information about some movies. This file defines an array containing three objects.

```json
[
  {
    "title": "The Wolf of Wall Street",
    "year": "2013",
    "author": "Martin Scorsese"
  },
  {
    "title": "Inside Out",
    "year": "2015",
    "author": "Pete Docter"
  },
  {
    "title": "Babysitting",
    "year": "2013",
    "author": "Philippe Lacheau and Nicolas Benamou"
  }
]
```

Here's how to retrieve this file from its URL and display each movie title in the console.

```
fetch(
  "https://raw.githubusercontent.com/bpesquet/thejsway/master/resources/movies.json"
)
  .then(response => response.json()) // Access and return response's JSON content
  .then(movies => {
    // Iterate on the movie array
    movies.forEach(movie => {
      // Display title of each movie
      console.log(movie.title);
    });
  })
  .catch(err => {
    console.error(err.message);
  });
```

The `json()` method of the HTTP `Response` object returns a promise that resolves with the result of parsing the response text as JSON. As such, the `movies` parameter of the second `then()` is a plain JavaScript array that can be iterated upon.