Javascript JSON

Lesson Time: 45 Minutes

JSON Allows us to import/export our objects to other systems.

JSON is a format for storing data. JSON is a very popular format because of its simplicity and how easy it is to transfer data from JSON to other systems. JSON stands for JavaScript Object Notation.

JSON is simply an organized string of text. Data is organized into a label and a value. The JSON object can have many label /value pairs as shown below.

This looks very similar to the JS objects we've already seen and worked with. This is because JSON is intended to be a way to import/export data between plain text data & objects.

The important thing to understand is that when data is in JSON format, it's just text. We can't add methods to a JSON or create variables in our JSON--it's just plain data. However, JSON gives us an easy way to convert this text data into an object so we can work with it, or export our objects so other systems can use it.

JSON can also contain many records, shown in the next example:

Here we have a JSON file that is two levels deep. The first JSON is “people” and it’s value is a list of JSON objects.

JSON can be stored in an .json text file, which makes it very portable. JSON data can be created and edited with a simple text editor, then used by Javascript.

Javascript has two built-in methods for working with JSON. The first is method is parse(), which takes a JSON string as input and turns it into a Javascript object. The second method is stringify(), which converts a Javascript object into JSON text.

JSON provides us with a great way to import/export data into JS. This is the typical case:

1. There is some data on a server that you want to pull and display on your page.
2. We'll use an HTTP GET request to get the JSON from the server. Javascript allows us to create a GET request by using the **XMLHttpRequest()** method. You'll use this method anytime you need to send and receive data from a web server using Javascript.
3. In Javascript, we issue a request to get the JSON data. The data arrives in as a JSON string.
4. We parse() the JSON string to convert it to Javascript object, and now we are ready to work with it.

Sending data works the opposite way.

1. In Javascript, we have a Javascript object we want to push to the web server as data.
2. We convert it to JSON text with stringify()
3. We send the data to a Web server using the HTTP POST method.

To learn more, check out the excellent tutorial on JSON at Mozilla Developer Network.
https://developer.mozilla.org/en-US/docs/Learn/JavaScript/Objects/JSON

Key Terms	JSON, XMLHttpRequest(), parse(), stringify()
Lesson Files	
Additional Resources	https://developer.mozilla.org/en-US/docs/Learn/JavaScript/Objects/JSON
Further Learning	