Discussion Board 6.1 – JSON

Eric McCool

Bellevue University - College of Science and Technology

Web231-339A Enterprise JavaScript I

Professor Krasso

November 22, 2022

This week we look at the JSON data structure, what it is, how it is used, why it is being adopted industry wide, and how to validate JSON markup. JSON is a “self-describing” lightweight format for storing and transporting data, often used when data is sent from a server to a webpage (W3S, 2022). The name JSON is an acronym which stands for “JavaScript object notation”, is often pronounced like the name “Jason”, and was first “specified” by Douglas Crockford (2022).

As the name suggests, a JSON file is written using the object notation from JavaScript employing the “name: value” model, the main difference being the use of only double-quotes, where JavaScript can use single-quotes or no quotes at all. Also, where JavaScript values can use any data type, including functions, dates, and ‘undefined’, JSON files cannot. JSON values can only be strings, numbers, objects, arrays, Booleans, and null (2022). Using braces for objects, brackets for arrays, and double-quotes, JSON files are able to write objects to a server in a pure text format (2022). While the text structure of a JSON file makes it viable with just about any programming language, JavaScript enjoys the built-in JSON.parse() and JSON.stringify() methods. This makes for efficiency in converting a JSON file into a JavaScript object, and vice-versa (2022).

Because JSON files are lightweight text files, it is being adopted industry-wide. As opposed to XML, it is easy for humans to read and write. It is also easy for machines to parse and generate. This text format is also completely language independent while using conventions familiar with the C programming languages, Java, Perl, Python, and others (json.org, 2022). This allows a diverse group of programmers access to its ease of use. To ensure programmers across the board create proper JSON files, there are a plethora of validation sites available where code can be tested for errors, including jsonlint.com (Krasso, 2022).

References

Crockford, D., 2022. *"ECMA-404 The JSON Data Interchange Standard."* Introducing JSON. Json.org, 2022. https://www.json.org/json-en.html. Referenced from https://www.crockford.com/2022.html.

Krasso, R., 2022. *"JSON Validator."* Week 6 – Reading and Videos. Web231 – Enterprise JavaScript I. Bellevue University, 1000 Galvin Road South, Bellevue, NE 68005. https://jsonlint.com/

W3S, 2022. *"JSON – Introduction."* JS JSON – JSON Intro. W3School.com. W3Schools, Larsamyraa 18, 4313 SANDNES, Norway. https://www.w3schools.com/js/js_json_intro.asp

W3S, 2022. *"What is JSON?"* Web Development. W3School.com. W3Schools, Larsamyraa 18, 4313 SANDNES, Norway. https://www.w3schools.com/whatis/whatis_json.asp