JSON: **J**ava**S**cript **O**bject **N**otation.

JSON is a syntax for storing and exchanging data.

JSON is text, written with JavaScript object notation.

JSON syntax is derived from JavaScript object notation syntax:

* Data is in name/value pairs
* Data is separated by commas
* Curly braces hold objects
* Square brackets hold arrays

Valid Data Types

In JSON, values must be one of the following data types:

a string

a number

an object (JSON object)

an array

a boolean

null

JSON values cannot be one of the following data types:

a function

a date

undefined

JSON Strings

{ "name":"John" }

JSON Numbers

{ "age":30 }

JSON Objects

{

"employee":{ "name":"John", "age":30, "city":"New York" }

}

JSON Arrays

{

"employees":[ "John", "Anna", "Peter" ]

}

JSON Booleans

{ "sale":true }

JSON null

{ "middlename":null }

JSON objects are surrounded by curly braces {}.

JSON objects are written in key/value pairs.

Keys must be strings, and values must be a valid JSON data type (string, number, object, array, boolean or null).

Keys and values are separated by a colon.

Each key/value pair is separated by a comma.

JSON is Like XML Because

Both JSON and XML are "self describing" (human readable)

**{ "name":"John" }**

**JSON Files**

* The file type for JSON files is ".json"
* The MIME type for JSON text is "application/json"

Json is like XML :

Both JSON and XML are hierarchical (values within values)

Both JSON and XML can be parsed and used by lots of programming languages

Both JSON and XML can be fetched with an XMLHttpRequest

JSON is Unlike XML Because

JSON doesn't use end tag

JSON is shorter

JSON is quicker to read and write

JSON can use arrays

The biggest difference is:

XML has to be parsed with an XML parser. JSON can be parsed by a standard **JavaScript function**.

Why JSON is Better Than XML

XML is much more difficult to parse than JSON.

JSON is parsed into a ready-to-use JavaScript object.

For AJAX applications, JSON is faster and easier than XML:

Using XML

Fetch an XML document

Use the XML DOM to loop through the document

Extract values and store in variables

Using JSON

Fetch a JSON string

JSON.Parse the JSON string