



# JSON & client side data formatting

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## What is JSON?

- a lightweight text-only data format
- syntactically similar to JavaScript object definitions => data represented in JSON can easily be converted into a JavaScript object
- vice versa gives us an easy way to store Javascript objects as text
- since the data is in text form, it can be used by different programming languages and can be sent between computers



## JSON syntax rules

- data is written in name/value pairs separated by commas
- Ex: **"name": "John"**
- field name in quotes + colon + value
- values must be of one of the following types: string, numeric, object, array, boolean, null
- curly braces are used for objects and square brackets for arrays



## JSON example

```
'{"name": "John", "age": 39, "city": "New York"}'
```

- a string that defines an object with 3 properties: name, age and city



# JSON functions in JavaScript

- `JSON.parse`(put a JSON string here parses JSON into a JavaScript object)
- `const obj = JSON.parse('{ "name": "John", "age": 30, "city": "New York" }');`
- `JSON.stringify`(JavaScript object turns a JavaScript object into a JSON)
- `const myJSON = JSON.stringify(obj);`



## Client side data formatting with JSON and HTML

- Often answers to SQL queries will be returned in JSON format from the server
- Because we can easily convert between JavaScript objects and JSON, we can manipulate the data from the client-side
- No need to query again!



## Sources

[https://www.w3schools.com/js/js\\_json\\_intro.asp](https://www.w3schools.com/js/js_json_intro.asp)

<https://www.aspsnippets.com/Articles/Convert-JSON-data-to-HTML-Table-using-JavaScript.aspx>

[https://www.w3schools.com/howto/howto\\_js\\_sort\\_table.asp](https://www.w3schools.com/howto/howto_js_sort_table.asp)