YAML & JSON Essentials

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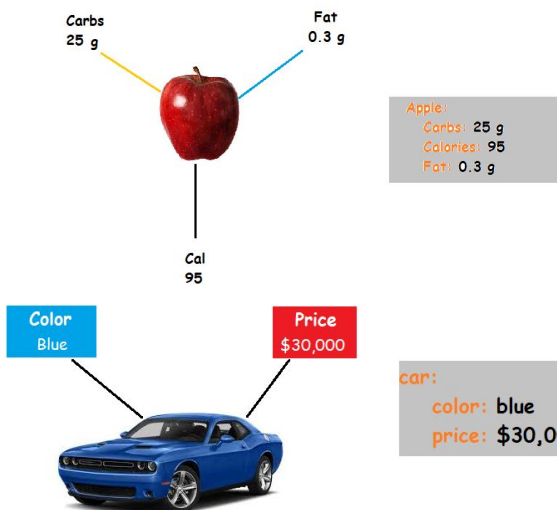# 1 What is YAML?

What is YAML?

Carbs
25 g

Fat
0.3 g

Cal
95

Apple:
Carbs: 25 g
Calories: 95
Fat: 0.3 g

Color
Blue

Price
$30,000

car:
color: blue
price: $30,000

```yaml
YAML
1 yaml:
2   - slim and flexible
3   - better for configuration
4 object:
5   key: value
6   array:
7     - null_value:
8     - boolean: true
9     - integer: 1
10 paragraph: >
11    Blank lines denote
12
13    paragraph breaks
14 content: |-
15   Or we
16   can auto
17   convert line breaks
18   to save space
```

What is YAML?

- **YAML** (a recursive acronym for "**YAML** Ain't Markup Language") is a human-readable data-serialization standard for programming languages.

- It is **commonly used for** configuration files and in applications where data is being stored or transmitted.

What is YAML?

- The files should have .yaml (or .yml) as the extension.

- YAML is designed by **Clark Evans**, **Ingy döt Net**, and **Oren Ben-Kiki**. (2001).

- https://yaml.org/

What is YAML?

- The **key-value** is YAML's **basic building block**.

- The key is always a **string**.

- The value is a **scalar** so that it can be various data types.

2 ▶ What is JSON?

What is JSON?
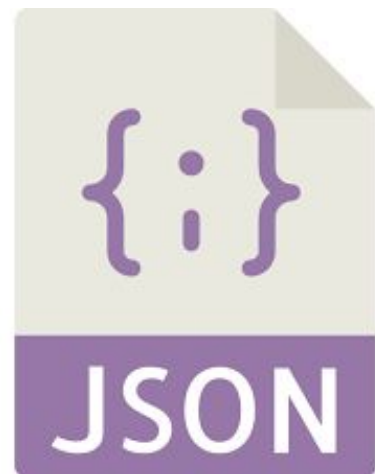
```
JSON
 1 {
 2     "json": [
 3         "rigid",
 4         "better for data interchange"
 5     ],
 6     "yaml": [
 7         "slim and flexible",
 8         "better for configuration"
 9     ],
10     "object": {
11         "key": "value",
12         "array": [
13             {
14                 "null_value": null
15             },
16             {
17                 "boolean": true
18             },
19             {
20                 "integer": 1
21             }
22         ]
23     }
24 }
```
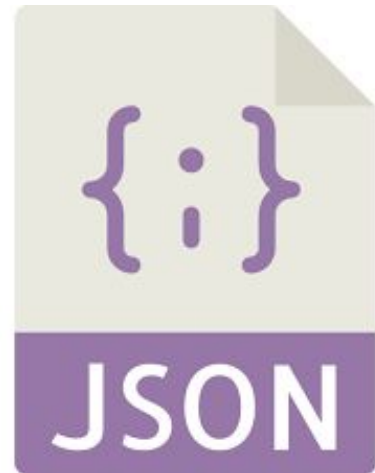
```
{
    "car": {
        "color": "blue",
        "price": "$30,000"
    }
}
```

What is JSON?

- **JSON** stands for **J**ava**S**crip**t** **O**bject **N**otation.

- JSON, is a **minimal**, **readable format** for **structuring data**. It is used primarily to transmit data between a server and web application; and also used for storing data.

What is JSON?

- The files should have .json as the extension.

- JSON is designed by **Douglas Crockford** (2001).

- https://json.org/

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3 Quick Comparison YAML vs. JSON

Quick Comparison

- **YAML** is best suited for configuration while **JSON** is better as a serialization format or serving up data for your APIs.

- **YAML** has a couple of big advantages including the ability to self-reference, support for complex datatypes, embedded block literals, comments, and more.

- Easily convertible to each other.

Quick Comparison

Type	YAML	JSON
Comments	Denoted with a hash/number sign	Not allowed
Hierarchy	Mappings, and sequences can be nested. Hierarchy is determined by the indentation level	Objects and arrays can be nested, and are denoted by braces and brackets, respectively.
Arrays	[first, second, 3]	["first", "second", 3]
Strings	Does not require quoting but supports both single and double quotes	Must be double-quoted. Allows character (tabs, newlines, etc.) escaping with a backslash as the escape character.
Numbers	Built-in support for integers, floating-point, octal and hexadecimal numbers	Floating point numbers in scientific notation. Infinity is not permitted.
Date/Timestamp	Supported	Not supported

Quick Comparison

```json
1 {
2   "json": [
3     "rigid",
4     "better for data interchange"
5   ],
6   "yaml": [
7     "slim and flexible",
8     "better for configuration"
9   ],
10  "object": {
11    "key": "value",
12    "array": [
13      {
14        "null_value": null
15      },
16      {
17        "boolean": true
18      },
19      {
20        "integer": 1
21      }
22    ]
23  }
24 }
```

```yaml
1 ---
2 json:
3 - rigid
4 - better for data interchange
5 yaml:
6 - slim and flexible
7 - better for configuration
8 object:
9   key: value
10  array:
11  - null_value:
12  - boolean: true
13  - integer: 1
14
```

JSON ♭   Copy JSON   YAML ♭   Copy YAML

THANKS!

Any questions?