

# JavaScript Object Notation (JSON)

JSON is another way of storing and transporting structured data like XML but with several advantages over XML.

JavaScript

```
{"students": [  
  {"name": "John", "age": "23", "city": "Agra"},  
  {"name": "Steve", "age": "28", "city": "Delhi"},  
  {"name": "Peter", "age": "32", "city": "Chennai"},  
  {"name": "Chaitanya", "age": "28", "city": "Bangalore"}  
]}
```

Markup

```
<students>  
  <student>  
    <name>John</name> <age>23</age> <city>Agra</city>  
  </student>  
  <student>  
    <name>Steve</name> <age>28</age> <city>Delhi</city>  
  </student>  
  <student>  
    <name>Peter</name> <age>32</age> <city>Chennai</city>  
  </student>  
  <student>  
    <name>Chaitanya</name> <age>28</age> <city>Bangalore</city>  
  </student>  
</students>
```

- JSON is much more light-weight than XML
- JSON supports arrays
- JSON is easier to read and write

## Syntax

- Curly braces hold objects `{ }`
- Data is in name:value pairs `:`
- Keys must be strings, engulfed with double quotes `"key"`
- Data is separated by commas `,`
- Square brackets hold arrays `[ ]`

- The file type for JSON files is `.json`
- The MIME type for JSON text is `application/json`

## Data Types

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- string `"name": "rick"`
- number `"age": 21`
- object (JSON object) `{"age": 21, "name": "rick"}`
- array `["red", "blue", 6, 4]`
- boolean `true` or `false`
- null `null`

Arrays can hold any type of data, even objects.

## Example JSON data from flickr:

```
JavaScript
({
  "title": "Talk On Travel Pool",
  "link": "http://www.flickr.com/groups/talkontravel/pool/",
  "description": "Travel and vacation photos from around the world.",
  "modified": "2009-02-02T11:10:27Z",
  "generator": "http://www.flickr.com/",
  "items": [
    {
      "title": "View from the hotel",
      "link": "http://www.flickr.com/photos/33112458@N08/3081564649/in/pool-99887",
      "media": {"m": "http://farm4.static.flickr.com/3037/3081564649_4a6569750c_m"},
      "date_taken": "2008-12-04T04:43:03-08:00",
      "description": " Talk On Travel< /a> has added a photo to the pool:< /p>
< /a>< /p> ", "published": "2008-12-04T12:43:03Z", "author": "nobody@flickr.com (Talk
```