

# **JSON**

## JavaScript Object Notation

- syntax for storing data
- widely used on web for transmitting data
- easier / more efficient than xml
- many apis use json to return data

# JSON Format

- data is in key(name) - value pairs using key : value
- data is separated by commas
- square brackets hold arrays []
- curly braces hold objects {}

```
"animal" : "dog"
```

```
"animals" : ["dog","cat","platypus"]
```

```
"teachers" : [{ "name:chris", "school": "parsons" },  
{ "name:ben", "school": "parsons" }]
```

# JSON Syntax

- data is in key(name) - value pairs using key : value
- data is separated by commas
- square brackets hold arrays []
- curly braces hold objects {}

```
{ "name": "chris" }
```

```
{ "name": "chris", "school": "parsons" }
```

```
"teachers": [  
  { "name": "chris", "school": "parsons" },  
  { "name": "ben", "school": "parsons" }  
]
```

## Creating in Javascript:

```
var photo = {  
  "title": "IMG_001.jpg",  
  "width": 640,  
  "height": 480,  
  "tags": [ "vermont", "snowboarding", "vacation" ]  
};
```

## Accessing in Javascript:

```
document.getElementById( "myTitle" ).innerHTML = photo.title;
```

```
// or in jQuery
```

```
$( "myTitle" ).text( photo.title );
```

```
// or
```

```
$( "myTitle" ).text( photo[ 'title' ] );
```

```
$( "li" ).eq(1).text( photo.tags[1] );
```

**If we receive or create JSON as a text string, it can be parsed with JSON.parse function:**

```
var text = '{ "animal": "platypus" }';  
var obj = JSON.parse(text);
```

Note: some older browsers do not support the parse function. It is possible to use a library for this or the eval() function although this is potential security risk.

## Getting a JSON object via AJAX:

```
$.ajax({  
    url: "ajax/test.json",  
    dataType : "json",  
    success : function(data) {  
        console.log(data.item);  
        $("#info").text(data[ 'item' ] );  
    }  
});
```

### or the shortened:

```
$.getJSON( "ajax/test.json", function( data ) {  
    console.log(data.item);  
    $("#info").text(data[ 'item' ] );  
});
```

# artists.json

```
{ "artists": [
  {
    "name": "Laurie Anderson",
    "dob": 1947,
    "website": "http://www.laurieanderson.com/"
  },
  {
    "name": "Trevor Paglen",
    "dob": 1974,
    "website": "http://www.paglen.com/"
  }
]
```

# index.html

```
<!DOCTYPE html>
<html>
<head>
<script src="http://ajax.googleapis.com/ajax/libs/jquery/1.11.1/jquery.min.js"></script>
<script>
$(document).ready(function(){
    $.getJSON( "artists.json", function( data ) {
        $("#info").append(data.artists[0].name);
    });
});
</script>
</head>
<body>
<p id="info">Artists:<br/></p>
</body>
</html>
```