Week 8 Activities

Download the "JSON empty.html" file from Moodle and use the <script> </script> section to write JavaScript code.

1. Parse JSON JavaScript

```
var myObject = JSON.parse('{"color" : "blue", "animal" : {"dog" : "friendly"}}')
console.log(myObject);
```

Check the console in your browser

Note: To use JSON in JavaScript it must be loaded from a string

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2. Parse JSON JavaScript

```
var myJSON = "{\"name\":\"John\", \"age\":31,\"city\":\"New York\"}";
var myObj = JSON.parse(myJSON);
document.getElementById("demo").innerHTML = myObj.name;
```

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3. Serialise JSON JavaScript

```
var myObject = {"color" : "blue", "animal" : {"dog" : "friendly"}}
var jsonData = JSON.stringify(myObject);
console.log(jsonData);
```

Check the console in your browser

Note: To transfer JSON data it a JavaScript object (or array) it must be serialised into a string

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4. Serialise JSON JavaScript

```
var myObj = {    name: "John",
                 age: 31,
                 city: "New York" };
var myJSON = JSON.stringify(myObj);
document.getElementById("demo").innerHTML = myJSON;
```

---

5. Accessing JSON properties in JavaScript

```
var myObject = JSON.parse('{"color" : "blue", "animal" : {"dog" : "friendly"}}')
var color = myObject.color;
var dog = myObject.animal.dog;
console.log(color);
console.log(dog);

var color = myObject["color"];
var dog = myObject["animal"].dog;
console.log(color);
console.log(dog);
```

Key Notes:
- The most common way to access JSON data is through dot notation.
  - This is simply the object name followed by a period and then followed by the name/property you would like to access.
- Another way to access JSON data is through bracket notation.

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6. Accessing JSON array in JavaScript

```
var myObject = JSON.parse('{"people": [ { "name": "harry", "age": "30"},{ "name": "john", "age": "31"}, { "name": "luke", "age": "32"}]}');
var name = myObject.people[0].name;
var age = myObject["people"][0].age;
console.log(name);
console.log(age);
```

Note: Members can be retrieved using bracket notation.

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7. JavaScript Loops with JSON

```
var myObj = JSON.parse('{"name":"John","age":30, "car":null}');

for (x in myObj) {
      console.log( x + " : " + myObj[x] );
}
```

Use "for – in" to loop through all the properties of a specific JSON Object

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8. Using Browser Local Storage with JSON

```
var myObj, myJSON, text, obj;

//Storing data:
myObj = { name: "John", age: 31, city: "New York" };
myJSON = JSON.stringify(myObj);
localStorage.setItem("testJSON", myJSON);

//Retrieving data:
text = localStorage.getItem("testJSON");
obj = JSON.parse(text);
document.getElementById("demo").innerHTML = obj.name;
```

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9. Class exercise

Download the "JSON activities.html" file from Moodle and write JavaScript code as instructed in the comments inside the file
- Print details of Sally Green
- Print age of Mary Smith
- Use a for loop to print all the information about the staff in the Accounting section
- Use a for loop to print all the details from Sales
- Print the details of staff only from the second element
- Print the First name, Last name, and Age of everybody from Accounting