

JSON och API'er

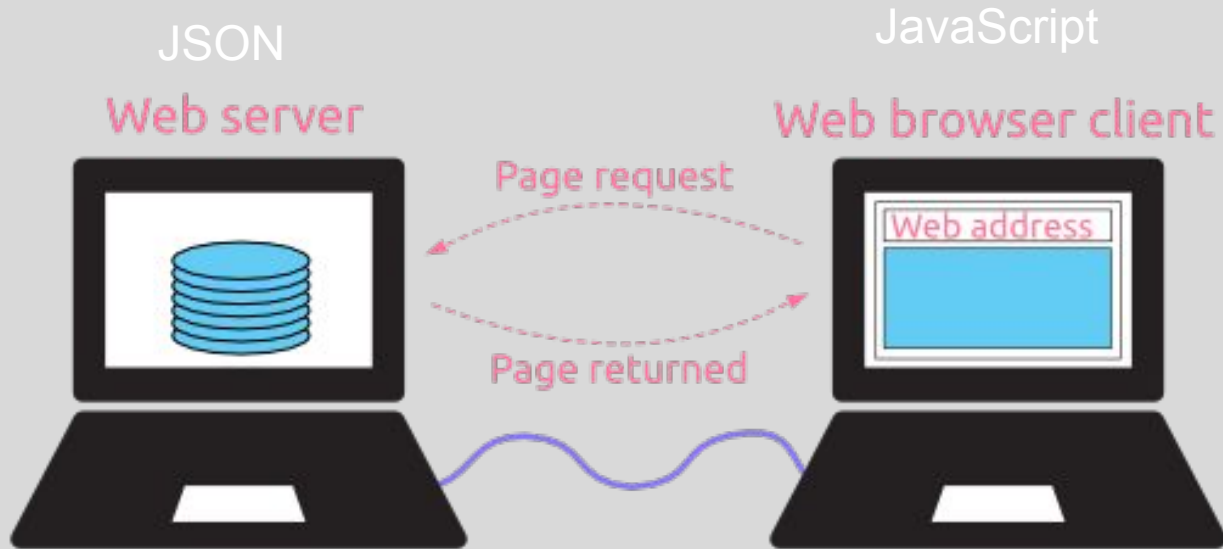
(JavaScript Object Notation)

(Application Programming Interface)

JSON

JSON är ett kompakt, textbaserat format som används för att utbyta data

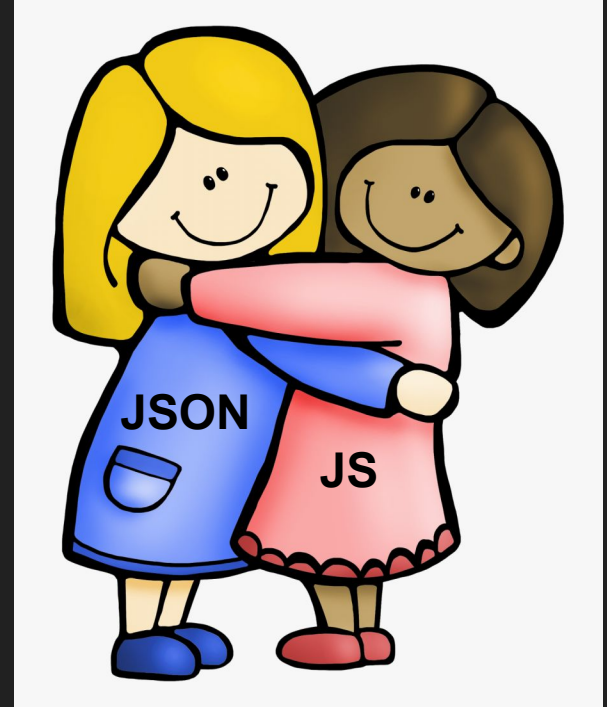
JSON → JavaScript



JSON - JavaScript

```
var myJsObj = JSON.parse(myJsonString);  
// gör om JSON string till JavaScript Object
```

```
var myJsonString = JSON.stringify(myJsObj);  
// gör om JavaScript object till JSON string
```



Exempel, JSON string

```
{  
  "name" : "Aryan Mann",  
  "current website" : "http://www.quora.com/",  
  "favorite game" : {  
    "name" : "Crash Bandicoot",  
    "developer" : "Naughty Dog",  
    "scores": [91 93 -120 97]  
  },  
}
```

JSON med LocalStorage

```
<script>
var myObj, myJSON, text, obj;

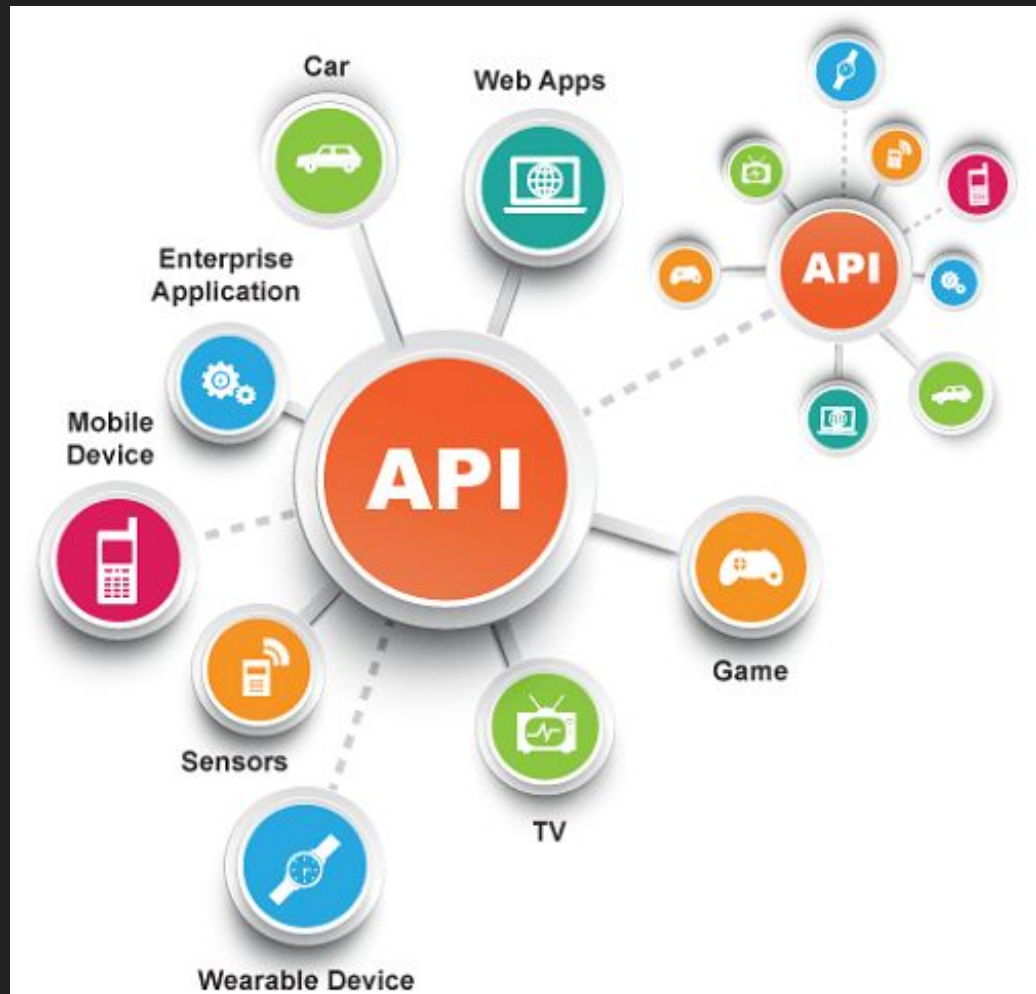
// Storing data:
myObj = { name: "John", age: 31, city: "New York" };
myJSON = JSON.stringify(myObj);
localStorage.setItem("testJSON", myJSON);

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

Ni kan testa scriptet på: https://www.w3schools.com/js/tryit.asp?filename=tryjson_store

API

(Application Programming Interface)



Exempel: Google Maps

```
<body>
  <div id="map"></div>
  <script>
    var map;
    function initMap() {
      map = new google.maps.Map(document.getElementById('map'), {
        center: {lat: -34.397, lng: 150.644},
        zoom: 8
      });
    }
  </script>
  <script
src="https://maps.googleapis.com/maps/api/js?key=YOUR_API_KEY&callback=initM
ap" async defer></script>
</body>
```


API Request

```
/json?origins=59.290937,18.088086&destinations=59.243389,18.093413&mode=transit&language=fr-FR&key=HemligNyckel
```

```
{  
  origins: [{lat: 55.93, lng: -3.118}, 'Greenwich, England'],  
  destinations: ['Stockholm, Sweden', {lat: 50.087, lng: 14.421}],  
  travelMode: 'DRIVING',  
  drivingOptions: {  
    departureTime: new Date(Date.now() + N), // for the time N milliseconds from now.  
    trafficModel: 'optimistic'  
  }  
}
```

<https://developers-dot-devsite-v2-prod.appspot.com/maps/documentation/javascript/reference/distance-matrix/>

Response JSON , Google Maps

```
"elements": [ {  
  "status": "OK",  
  "duration": {  
    "value": 70778,  
    "text": "19 hours 40 mins"  
  },  
  "distance": {  
    "value": 1887508,  
    "text": "1173 mi"  
  }  
}
```

REST API

Ett REST API är ett sätt på vilket man bygger ett API som baseras på de funktioner som finns i HTTP (Hyper Text Transfer Protocol).