# Day 4

JSON
Web API's

# JSON

JSON is a great way of sending data over the internet. Huge amount of bandwidth is wasted in tag format, where you have opening and closing tags with same name.

```
1  var objectLiteral = {
2      firstname: 'Mary',
3      isAProgrammer: true
4  }
5
6  console.log(objectLiteral);
7
8  <object>
9      <firstname>Mary</firstname>
10     <isAProgrammer>true</isAProgrammer>
11 </object>
```

# JSON vs ObjectLiteral

## In JSON property has to be wrapped in quotes: unlike object literal syntax

```
 1  var objectLiteral = {
 2      firstname: 'Mary',
 3      isAProgrammer: true
 4  }
 5
 6  console.log(objectLiteral);
 7
 8  {
 9      "firstname": "Mary",
10      "isAProgrammer": true
11  }
```

# JSON methods

- **JSON.parse()** - converts string to Json

  - https://www.w3schools.com/jsref/jsref_parse_json.asp

- **JSON.stringify()** - converts Json to string

  - https://www.w3schools.com/jsref/jsref_stringify.asp

  https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/JSON

  https://www.w3schools.com/js/js_json_intro.asp

# JSON Data

- **http://ip-api.com/json/**

- **https://maps.googleapis.com/maps/api/geocode/json?address=1600+Amphitheatre+Parkway,+Mountain+View,+CA&key=AIzaSyBzCLtntxL6RAc06HearVEPBO-1Roubbtw**

# Web APIs

- https://developer.mozilla.org/en-US/docs/Web/API

- https://developer.mozilla.org/en-US/docs/Learn/JavaScript/Client-side_web_APIs/Introduction

  - https://developer.mozilla.org/en-US/docs/Web/API/Geolocation_API

- **Note**: WebApIs for Js works only on browser not on node.js.

  - Node.js have there own set of APIs

  - https://nodejs.org/api/.

    - eg: http, http-server

# CHALLENGE

- Use youtube search api to implement the youtube search functionality and play a video matching the search result.

   **Hint:**

- Use youtube search API to get the search result in JSON format

- Think what part of the JSON response will be useful to play the relevant video

- Extract the relevant info from JSON, to populate youtube URL and window function to play the video