Introduction to JSON, API, and JQuery (AJAX)

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GOAL: Try to implement a codepen where user is able to search Wikipedia Pages

JSON

- JSON stands for **J**ava**S**cript **O**bject **N**otation.
- JSON it's just a fancy way for saying object in JavaScript. It's a file format.
- It's commonly used when getting request from the API (servers), which we are going to implement today.
- Example of JSON Data:

```
JSON Object ──▶ {                              String Value
        "company": "mycompany",
        "companycontacts": {  ◀──── Object Inside Object
            "phone": "123-123-1234",
            "email": "myemail@domain.com"
        },
        "employees": [  ◀──── JSON Array
            {
                "id": 101,
                "name": "John",
Array Inside Array ──▶ "contacts": [
                    "email1@employee1.com",
                    "email2@employee1.com"
                ]
            },
            {
                "id": 102,  ◀──── Number Value
                "name": "William",
                "contacts": null  ◀──── Null Value
            }
        ]
}
```

https://techeplanet.com/json-example/

API

- API stands for **A**pplication **P**rogramming **I**nterface.
- API is a way to connect different website together. Such as you can using Google Map API to access Google Map service
- It's a really powerful tool since developer can save a lot of time by using interfaces provided by other developers. And as internet grow, there is tend to be more API call every second.
- We will use Postman (https://getpostman.com) for some basic API testing.
- HTTP: There is different HTTP request, but for this time, we are going to focus on GET, which is most basic way for getting information.
- The information returned is usually in JSON format.

JQuery

- JQuery is actually another kinds of API, or JavaScript library.
- The purpose of jQuery is to make it much easier to use JavaScript on your website.
- We are going to use one of really important function in JQuery: AJAX

AJAX (JQuery)

- AJAX is the art of exchanging data with a server, and updating parts of a web page - without reloading the whole page.
- We are going to use AJAX to interact with the Wikipedia server.