JSON—Javascript object notation

Any string which looks similar to javascript object is called as JSON

To convert Javascript object into JSON format use JSON.stringify(ob)

To convert JSON into javascript object use JSON.parse(ob)

AJAX---Asynchronous Javascript and XML

1. AJAX is useful, when only portion of the page should get refreshed.
    a. after login , you want to add welcome and username at the top nd rest of the page will remain as it is
    b. If the form is rendered on the screen, and after selecting country only state dropdown should get populated
2. Internally javascript uses XMLHttpRequest class (XHR) object to send AJAX request.
3. In javascript to send AJAX request, we use fetch function. It is a asynchronous, function, every asynchronous function returns a promise object.

Promises in javascript

Promise Object Properties

It's a object which has 2 functions, resolve and reject.

A JavaScript Promise object can be in state:

Pending

Fulfilled

Rejected

The Promise object supports two properties: state and result.

While a Promise object is "pending" (working), the result is undefined.

When a Promise object is "fulfilled", the result is a value.

When a Promise object is "rejected", the result is an error object.

myPromise.state	myPromise.result
"pending"	undefined
"fulfilled"	a result value
"rejected"	an error object

You cannot access the Promise properties state and result.

You must use a Promise method to handle promises.

```
myPromise.then(
  function(value) { /* code if successful */ },
  function(error) { /* code if some error */ }
);
```

Promise.then() takes two arguments, a callback for success and another for failure.

Both are optional, so you can add a callback for success or failure only.

Example

```
function myDisplayer(some) {
  document.getElementById("demo").innerHTML = some;
}

let myPromise = new Promise(function(myResolve, myReject) {
  let x = 0;

// The producing code (this may take some time)

  if (x == 0) {
    myResolve("OK");
  } else {
    myReject("Error");
  }
});

myPromise.then(
  function(value) {myDisplayer(value);},
  function(error) {myDisplayer(error);}
);

async function f1(){
 return “hello”;
}
```

Jquery

Why use jquery

1. It reduces the size of code
2. The javascript code becomes browser independent
3. Lot of UI plugins are available

To download Jquery

https://code.jquery.com/jquery-3.7.1.min.js

copy this file in notepad and save it in folder jquerydemos/scripts

To use Jquery

http://localhost:5500/testjquery.html----> the file will get loaded in the RAM and gets converted into DOM-→ once DOM is ready then jQuery code will get executed

To use Jquery in HTML page

add one of the following entry in the html page

1. using local file downloaded on your machine

   <script src="./scripts/jquery1.js"></script>

2. By using CDN (Content delivery network)

<script src="https://code.jquery.com/jquery-3.7.1.js" integrity="sha256-eKhayi8LEQwp4NKxN+CfCh+3qOVUtJn3QNZ0TciWLP4=" crossorigin="anonymous"></script>

To select html elements in jquery we use css selectors

Javascript	jquery
document.getelementById(“myid”)	$(‘#myid’)
document.getElemetsByTagName(‘p’)	$(‘p’)

document.getElemetsByTagName(‘p’)
document.getElemetsByTagName(‘div’)
	$(‘p,div’)

to find selected radio button in javascript
var arr=document.getElementsByName("degree")
for(var d of arr)
{
  if(d.checked)
    alert(d.value)
}
	$(‘input[name=degree]:checked’).val()

to assign background color to all p and all h1 document after we click on the button
var arr=document.getElementsByTagName('p');
  for(var p of arr){
    p.style="background-color:cyan"
  }
  var arr=document.getElementsByTagName('h1');
  for(var p of arr){
	$(document).ready(function(){
	    $('#btn').click(function(){
	      $('p,h1').css({'background-color':'cyan',
	          'color':'red'})
	    })
	
	  }) ”,”cyan”)

p.style="background-color:cyan"
}	