Week 4 Day 5

25-11-2021

In JavaScript we can create the User-defined object using literal style.

To share the data between two technologies like Java to JavaScript or Java to Python or asp.net or php etc.

Java Technologies java (req) Asp.net

HDFC XML/JSON HSBC

Asp.net(res)

XML : eXtensible Mark up Language

JSON : JavaScript Object Notation.

JSON is use to store the data in the form of key-value pairs. Key must in double quote. Value can be number, string , boolean, array object, complex object type.

How to convert object to json and json to object or string.

JSON : It is a pre-defined object which help to convert string to json or json to string.

In Json key must be unique

convert object literal/json to string format.

JSON.strinify();

Converting string to json format.

JSON.parse()

Synchronous and Asynchronous communication

Synchronous statement level

L1

L2

L3

Synchronous function call level

fun1()

fun2()

fun3();

fun2() function execution start after fun1() and fun3() function execution start after fun2().

Synchronous means it execute the code line by line. L2 statement is depends upon the L1 and L3 statement depends upon the L2.

Asynchronous statement level

L1

L2

L3

Asynchronous means it execute independently. L1, L2 and L3 statement execute independently.

L2 doesn’t wait for L1 to execute and L3 doesn’t wait for L2 and L2 execute.

Asynchronous function call level

fun1()

fun2()

fun3();

fun2() doesn’t wait for fun1() to finish. Fun3() doesn’t wait for fun1() and fun2() finish.

All three function work independently.

Synchronous communication

1st req

2nd req

3rd req

Asynchronous communication

1st req

2nd req

3rd req

Client Server

Ajax : Asynchronous JavaScript and XML

Using Ajax we well backend technologies.

Using XMLHttpRequest : XMlHttpRequest is a pre-defined object provided by JavaScript to achieve asynchronous communication.

Let obj = new XMLHttpRequest();

obj.readyState

if readyState is

0 -🡪 not initialize

1 🡪 ready to send the request

2 🡪 sent

3🡪 processing

4 -🡪 ready to give the response.

Another way we can call REST API develop in any language using fetch() function.

Fetch() function internally use AJAX concept.

Fetch function return type is promise object.

Promise can be resolved or rejected

Promise resolved means done successfully and rejected means error generated.

How to create the user-defined promise.

To load the data may be success or failure we have to use then and catch.

then() function execute if promise resolve. catch() execute if promise rejected.

These function executed asynchronously.

setTimeout

setInterval

clearInterval

These three function is use to make custom asynchronous operation.

Scope of object.

If you want to store the data from one page to another page then we can take the help of scope object.

1. sessionStorage : if we store the value in sessionStorage it store the value till session open or application. Once session close or application the value get lost.
2. localStorage : local storage store the value permanently. If we have remove value explicitly.

Both the object provide the method ie

setItem(“key”,value)

getItem(“key”);

removeItem(“key”);

synch and await is ES7 features. They are replacement of then.

Await keyword we can use for that statement to make to wait the to perform asynchronous operation. But we can use await then then function written using keyword as asynch

Using await keyword we are making the statement as synchronous.