**Introduction of nodejs,advantagesof node.js over other programming languages**

**Javascript basics:**

1. Var key word,
2. JavaScript evaluates expressions from left to right.
3. var x = 12 + 4 + "nodejs"; 16nodejs
4. var x = "volvo" + 20 + 4; Volvo204

var x=”123”

var y=NUMBER(x) //y=123

string,number,double

**array:**

Array declaration varmyarry=[ 1,2,4],

Array temp = new array[],

var array=[element1,element2…..]

**Object:**Object,

Varobj={};

Obj.place=”banglore”

Obj.name=”hyd”

**Function:**

To create function in javascript we use “function key word”

1. function myfunction(){

//do something…

}

2)function myfunction(arg1,arg2…..){

Varcheckvalue =Myfunction()

}

3)function myfunction(){

Return “abc”

}

**Typeof (operator):**

var x = 123;  
var y = new Number(123);  
  
// typeof x returns number  
// typeof y returns object

https://developer.mozilla.org/en/docs/Web/JavaScript

When using the === equality operator, equal numbers are not equal, because the === operator expects equality in both type and value.

var x = 500;               
var y = new Number(500);  
  
// (x === y) is false because x and y have different types

var x = new Number(500);               
var y = new Number(500);  
  
// (x == y) is false because objects cannot be compared

Null,undefined,nan:

**Scope of javascript variable:**

**The Lifetime of JavaScript Variables**

The lifetime of a JavaScript variable starts when it is declared.

Local variables are deleted when the function is completed.

Global variables are deleted when you close the page.

Use of strictkey word;

* Write in the beginging of js file or starting of function. Based on need

“use strict”

* Without Var keyword you can define a variable, Aslo you can use Var keyword to declare a variable

Name = “myname”

ID = 1234

* If you declare a variable & not used anywhere (not initialized), then it will through an error.

Var nickname // variable declared

But not used anywhere through out ,Now compiler will give error.

**Comparision:**

|  |  |
| --- | --- |
|  | If you're testing for an empty string:  if(myVar===''){// do stuff };  If you're checking for a variable that has been declared, but not defined:  if(myVar===null){// do stuff };  If you're checking for a variable that may not be defined:  if(myVar===undefined){// do stuff };  If you're checking both i.e, either variable is null or undefined:  if(myVar==null){// do stuff }; |

**Explanation of json objectnotaion and retriving values:**

A JSON object contains data in the form of key/value pair. The keys are strings and the values are the JSON types. Keys and values are separated by colon. Each entry (key/value pair) is separated by comma.

The **{** (curly brace) represents the JSON object.

1. {
2. "employee": {
3. "name":       "sonoo",
4. "salary":      56000,
5. "married":    **true**
6. }
7. }

### JSON Array example

The **[** (square bracket) represents the JSON array. A JSON array can have values and objects.

Let's see the example of JSON array having values.

1. ["Sunday", "Monday", "Tuesday", "Wednesday", "Thursday", "Friday", "Saturday"]

Let's see the example of JSON array having objects.

1. [
2. {"name":"Ram", "email":"Ram@gmail.com"},
3. {"name":"Bob", "email":"bob32@gmail.com"}
4. ]

**methods:**

JSON.stringify()

JSON.parse()

**Online json validators:**

<http://json.parser.online.fr/>

<http://jsonlint.com/>

Tasks:1

print username and password from the following string(use string methods )

Var string= ‘UsernameToken Username=My Name, Password=Qd0QnQn0eaAHpOiuk,Created=2013-09-05T02:12:21Z ‘

Output:

Username::myname

Password:: Qd0QnQn0eaAHpOiuk

Task:2

Create string array and print the even index of the array

Var a=[“banglore”,”hyd”,”Chennai”,”delhi”]

Output: hyd and delhi

Task: 3

create two functions(parameterized and normal) .pass the username and password strings to second function from first function and concatenate username and password and return the concatenate string to first function and print.

Task4: create sample object and print the values of the object

Varmyobject={

name:”siva”,

place:”hyderabad”

}

Task 4

Create following json object and print each value of the json

{

“Name” : “krishna”,

“place”:”banglore”,

“Qualification”:”diploma”

}