**Assignment of day 3-1**

**Questions:.**

3.1 Explore and explain the various methods in console .function().

3.2 Write the difference between var, let, const with code example.

3.3 Write a brief introduction of available data types in javascript.

Solution:

**3.1 Explore and explain the various methods in console .function().**

Console is the tool which is used to log the information regarding executing program by which programmer can easily debug the program.

Console object in javascript has different method which are useful for debugging.

List of methods of console:

1.log()

2. error()

3.warn()

4.clear()

5.time() and timeEnd()

6.table()

7.count()

8. group() and groupEnd()

1.log(): This is used to print any user defined output on the console. We can put data with any type of data type inside console.log() method. It is mainly used as checkpoints in the program for debugging purpose.

For example:

console.log(‘hello’);

2. error() : This is used to print error message on console. By default on web browser console error is highlighted in red color. By using programmer can give user defined error message.

For example:

console.error(‘Page not found error’);

3.warn() : This is used to print warning message on the console. By default on web browser console warning is highlighted in yellow color. By using programmer can give user defined warning message.

For example:

console.warn(‘This is a warning’);

4.clear(): This is used to clear the console. This will not return any message.

For example:

console.clear()

5.time() and timeEnd(): This used to measure amount of time require for executing specific function or block of code. Measurement of time is useful for determine whether there is need of optimization or not.

While writing time() and timeEnd() methods there must be same label in both the functions so that we can get the result.

For example.

console.time(‘time’);

let fun1 = function(){

console.log(‘fun1 is running’);

}

Let fun2 = function(){

console.log(‘fun2 is running’);

}

fun1();

fun2();

console.timeEnd(‘time’);

6.table(): This method is used to generate table inside the console. But there must be an array or object as a parameter in table().

For example:

console.table({‘a’:1, ‘b’:2});

7.count() : This method is used to count the number that the function hit by this counting method.

For example:

for(let i=0;i<=5;i++){

console.count(i);

}

8. group() and groupEnd(): These two methods are used to separate set of instruction in particular block by using concept of indentation. And labels in both the methods must be the same.

For example:

console.group(‘group’);

console.log(‘Example of group method’);

console.log(‘Group method is working’);

console.groupEnd(‘group’);

**3.2 Write the difference between var, let, const with code example.**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **var** | **let** | **const** |
| **Global scope** | Yes | No | No |
| **Function scope** | Yes | Yes | Yes |
| **Block scope** | No | Yes | Yes |
| **Can be reassigned** | Yes | Yes | No |

**Coding example:**

if(true){

var test = true;

}

document.write(test)

This code will work fine because var has global scope and not restricted to block scope.

if(true){

let test = true;

}

document.write(test);

This code will give error test is not defined because let has strict block scope and no global scope.

const a = ‘hello’;

a= ‘hi’;

This will give and error Assignment to constant variable. Because constant cannot be reassigned.

**3.3 Write a brief introduction of available data types in javascript**

**Data types in javascript:**

1. String

A string is series of characters. It is defined in between single or double quotes.  
For example:

let a = ‘xyz’;

2.Numbers

In javascript numbers can be written with or without decimal. Number in javascript is single data type there is no subtypes of number.

Let c = 34;

3.boolean

Boolean data type have only two values as true or false.

let x=5;

let y=4;

(x==y);

About code will return false value.

4. array

Array is the set of elements separated by commas.

For example:

var fruit = [‘mango’, ‘banana’, ‘orange’];

5.object

Javascript object are written with curly braces.

Object properties are written as name:value pair separated by comma.

var person = {firstname:’abc’, lastname:’xyz’};