


Assignment no :- 04

Topics covered :-

- Javascript Object
- Document object model
- Event handler
- Exception handling

Date of performance :- 23-09-22

Evaluation Criteria	Marks (out of 3)	Date	Signature of Instructor
Punctuality	03	22-09-22 22/09/22	
Problem solving technique	03		
Attainment level (out of 3)	03		

Assignment NO-04

Q.1) What are javascript objects? list out all the built in objects with example.

⇒ A javascript object is an entity having State and Behavior (properties & method).

for example

① - Car, Pen, Bike, Chair, Keyboard, Monitor, etc

② Javascript is an Object Oriented language. Everything in Javascript is considered as an Object.

③ Examples of Objects :-

i) Boolean

ii) Number

iii) String

iv) Regular expression

v) Array

vi) Function

• Creating Object in javascript :-

There are 3 ways to create object :-

1) By Object literal

2) By creating instance of object

3) By using constructor

① • Javascript Object by Object literal

→ An object create using {}
to create an object directly

Syntax :- Object = { property 1 : value 1, property 2 : value 2, ..., property N : value N }

Ex. <script>

```
emp = { id : 01, name : "Harvik dadar", salary : 1,00,000 }
```

```
document.write (emp.id + " " + emp.name + " " + emp.salary);
```

</script>

Output = 01 Harvik dadar 1,00,000

② • Javascript Object By Instance of Object

→ Here the new keyword is used to create the object
instance to create object

Syntax :- var ObjectName = new Object();

Ex. <script>

```
var emp = new Object();
```

```
emp.id = 02
```

```
emp.name = "Priyush Khobrayade"
```

```
emp.salary = 10,00,00
```

```
document.write (emp.id + " " + emp.name + " " + emp.salary);
```

</script>

Output = 02 Priyush Khobrayade 10,00,000

8) By using an object constructor

— The "this" keyword returns to current object.

Ex. <script>

```
function emp (id, name, salary) {
```

```
  this.id = id;
```

```
  this.name = name;
```

```
  this.salary = salary;
```

```
}
```

```
e = new emp (103, "Rupesh K", 100000);
```

```
document.write (e.id, "+" + e.name + " " + e.salary);
```

</script>

Output = 03 Rupesh K 1,00,00

With Build In Object

① String Object = var val = new String (string)

② Array Object = var arryname = new Array (size).

ex. var arry = new array (5);

var str = new String ("")
 var arr = new Array (5)

2) What is Document Object Model? Explain its level 2 properties.

- The entire HTML document is represented by the document object.
- The HTML document becomes a document object when it is loaded in the browser.
- The root element represents the HTML document. The document object has properties and methods. The document object helps to edit content dynamically in web pages.

Hierarchy of Objects in Web Document

Document Object Model (DOM) is the method by which the content of a document is accessed and modified. In a web document, the organization of objects is implemented in a hierarchy structure.

DOM Level 1

The DOM provides JavaScript with all the features it needs to generate dynamic HTML:

- Change can be made in all HTML elements.
- Change can be made in attributes of HTML elements.
- Change can be made in all CSS styles in the page.
- Existing HTML elements and attributes can be deleted.
- New HTML elements and attributes can be added.
- Response can be given to HTML events.
- New HTML events can be created in HTML pages.

Q.3) Explain the event handler in javascript? in list all type of error and Explain the error with help of one program.

⇒ Event handling :

- Events are the actions performed by the end user while browsing the website. for example mouse move or mouse click on the buttons.
- When an event is fired, objects are triggered which are associated with that specific event.
- Events are basically classified in four categories:

Classification of events

- 1. window events
- 2. mouse events
- 3. keyboard events
- 4. form events

1. window Events :

There are various types of events associated with window.

- i) **onLoad** :- triggered when a new page is starting up
- ii) **onunload** :- triggered when a new page is shutting down
- iii) **onResize** :- triggers when a page is resized
- iv) **onmove** :- trigger when a page is moved
- v) **onError** - trigger when an error occur

2) Mouse Events :-

There are various type of events associated with mouse

- i) onmousedown :- trigger when mouse button is pressed on an element.
- ii) onmouseup :- trigger when mouse button is released.
- iii) onmousemove :- trigger when mouse pointer is moved to the pointer.
- iv) onmouseout :- trigger when mouse pointer is moving out of an element.
- v) onclick :- trigger when mouse button is clicked once.

3) Keyboard Events :

There are various type of events associated with keyboard

- i) onkeydown - trigger when a key is pressed down.
- ii) onkeyup - trigger when a key is released.
- iii) onkeypress - trigger when complete key sequence, down press & up.

4) Form events

There are following type of events associated with form:

- i) onreset - trigger when the reset button on the form is clicked.
- ii) onsubmit - trigger when the submit button is clicked.
- iii) onselect - trigger when a content is selected on a page.

#Code :-

<html>

<body>

<h2 id = "myid1" onmousedown = "fun1()" onmouseup = "fun2()"

> Click the text ! &lt; /h2>

<script>

function fun1() {

document.getElementById("myid1").style.color = "blue";

}

function fun2() {

document.getElementById("myid1").style.color = "black";

}

</script>

</body>

</html>

Output



Click the text!

Q.4) What is Exception handling in JavaScript? In 11st all type of error and explain the error with help of one program.

=> 1 "Exception handling is process or method used for handling the abnormal statements the code and executing them! it also enables to handle the flow control of the code/program. (11)

• TYPE OF error

While coding, there can be three type of error in the code

1) Syntax error :- When a user make a mistake in pre-define Syntax of a programming language, a Syntax error may appear.
- It done compile time.

2) Runtime Error :- When an error occur during the execution of the program, such an error is known as Runtime Error.

3) Logical Error :- An error which occurs when there is any logical mistake in the program that may not produce the desired output, and may terminate abnormally.
↓
(want)

• Throw, and Try... Catch... Finally

The try Statement defines a code block to run (to try)

The Catch Statement defines a code block to handle any error

The finally Statement defines a code block to run regardless of the result

The throw Statement defines a custom error

<html>

<head> Exception Handling </head>

<body>

{

var a = ["31", "32", "5", "31", "24", "45", "67"]; // a is array

document.write(a); // array

document.write(6); // undefined

} catch (e) {

alert ("There is error which show" + e.message); // handling error

}

</script>

</body>

</html>

Exception Handling

31, 32, 5, 31, 24, 45, 67

Q 5) What is different between JSON and XML

	JSON	XML
Diff	① JSON object has a type	XML data is typed
Diff	② JSON type: String, number, array, Boolean	All XML data should be <u>string</u>
Read only	③ Data is <u>readily accessible</u> as JSON object	XML data need to be <u>parse</u>
Browser	④ JSON is supported by <u>most</u> browsers	not supported in all browser Cross - browser XML parsing can be tricky
Secure	⑤ It is less secure	it is more secure than JSON
Name	⑥ It does not provide any support for <u>namespace</u>	it supports <u>namespaces</u>
Human	⑦ JSON file are <u>easy to read</u> as compared to XML	XML documents are relatively more difficult to <u>read</u> or <u>interpret</u>
Comment	⑧ It doesn't <u>support</u> comments	it <u>support</u> comments
Encoding	⑨ It <u>support</u> only <u>UTF-8 encoding</u>	it <u>support</u> various encoding
any	⑩ It <u>support</u> any	It doesn't support any
key	⑪ It doesn't <u>use</u> <u>entire</u> key	it has <u>start</u> and <u>end</u> key

write 10 points

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