**JAVA SCRIPT**

**Introduction:**

With the help of java script user is able to interact with the web page . it can be use to improve the web page and also for validation of forms etc .JS is directly emebed into to html pages .you can use java script in html page by using <script/> tag in your html page . with the help of JS you can make your text move and also with the help of it you can perform actions when the user click some button on your web page .you can also show date and time of your computer on to your web page and modify it with the help of js

**Types of JS:**

Inline JS  
External JS

Internal JS

To write JS in html page we use <script type=”text/javascript”></script>

**Document.wrtite:**

This command is used to give output on our web page

In this the document is the used as the object and the word write is the method of that word   
**Note:** when ever you write script in body tag then as you load your page in your browser then the script is loaded with it but if you write script in head tag then you have to trigger your script by calling it by creating a event such as when someone presses submit button

**Comments:** for commenting in java script we use “//”

**No Script:**

In some browser there is a problem that their java script is not enable so we use <noscript></noscript> to show them some output we can write it as   
**<noscript>your browser does not support javascript or your java script is disable</noscript>**

**Error Finding:**

We must keep in our mind that java script is a case sensitive language and also we should keep in our mind that if there is a error in a certain line that all the line of code below that line will not work you can add extension name **FIREBUG** in your browser then after this right click on your browser and **inspect with firebug**

**Scripts in <Head>:**

The scripts in heads are executed when they are called .these calls are made through some functions . **onload** its is a event in java script which is performs actions when your page is loaded   
**Script in <Body>:**if you don’t want to call your script with the help of a function or you want to write content of your web page then you write your script in body tag

**External Java Script:**its purpose is that if you want to use same script in several web pages then you make a single file of java script and embed that file in every web page we should keep this in mind that external script does not contain <script></script> these tags when you make a external java script file save it with a **JS** file extension to use the external file we use <script type=“text/javascript” src=”example.js”></script>

**Variables in java script:**there are some to write variables in javascript. In javascript variables are case sensitive to declare variable in java script we use var keyword

**Functions in java script:**

if we want to use same block o code at different parts of our program then we write a function and then we call that function on that part of our program where we want to use it . the question is how to call a function you can call the function with the help of onclick event s

**Return Statement:**

The return function is used to return any value outside of the function.

**Data Types:**

In java script you only have to declare variable with the help of **var** you don’t have to tell the data type

**Events in Java Script:**

All browser are expected to support some event which are known as the intrinsic events such as onload onclick and onsubmit these events are used to trigger script this means that you have written some script and you want that script to be executed when the certain event is performed .

There are two types of events which can be used to trigger scripts these are **windows events** and **user events .**

**Windows Events:** these are the events which trigger a script when a window is closed or open or we can say that when a web page is loaded or closed or when you re size the window or when we drag our mouse from one frame to other then the color of that frame changes this is also a windows event

**User Events:** user events are such events when the user interact with the elements of the web page such pressing a button or click mouse etc

**List of Events:**

1. Onlaod: applies to <body></body>,<frameset>
2. Onuload: applies to <body></body>,<frameset>
3. Onclick
4. Ondblclick
5. Onmousedown
6. Onmouseup
7. Onmouseover
8. Onmouseout
9. Onkeypress
10. Onkeydwon
11. Onkeyup
12. Onkeyfoucus: applies to <a>,<area>,<button>,<input>,<label>,<select>,<textarea>
13. Onblur: applies to <a>,<area>,<button>,<input>,<label>,<select>,<textarea>
14. Onsubmit : <form>
15. Onreset: <form>
16. Onselect: <input>,<textarea>
17. Onchange:<input><select><textarea>

**ONLOAD and ONUNLOAD:**

In **onload event** whenever you open your web page or website you see a popup box on the screen that is onload event

In **onunload** whenever you are closing your web page a warning message or popup box appears that are you sure you want to leave this page so this is basically the onunload event .we have to keep it in mind when all the content of our webpage or website is loaded then this event will work

Most of the time this does not work on browsers due it settings

**ON-BEFORE-UNLOAD:**

This is alternate to on-unload if on-unload is not working use this

**ONCLICK:**

this occurs when user click on anything on the webpage. You can put validations and warnings with the help of this and the click should be of the left button of the mouse

**ONDBLCLICK:**

this occurs when a user double clicks a mouse left-mouse button

**ONMOUSEDOWN:**

In this when you depress any element this means that when you click any element and doesn’t let the button go the color of your element changes

**ONMOUSEUP:**

And when you release the button then the element of the color changes to the other

**ONMOUSEOVER:**

Whenever we cursor on the element then the functionality will be performed on it which you have written

**ONMOUSEOUT:**

This will work as you push mouse cursor away from that element

**ONMOUSEENTER:**

It performs same functionality as on mouseover.

**ONMOUSELEAVE:**

It performs same functionality as onmouseout.

**ONMOUSEMOVE:**

As from the name is suggested it performs its functionality when we move mouse cursor on the element of the page in this you have to pass the parameter of **event** otherwise it will not work.

**ONKEYDOWN:**

when you press down key on you keyboard then this event will be performed .for example you entered a value in textbox then it will give you a message

**ONKEYUP:**

This will perform its functionality as you release the pressed button

**ONKEYPRESS:**

It works as you press a key on the keyboard and it has a property from which we can find out the Unicode and that is keycode but this doesn’t work in all the browser that’s we use **which** instead of it .

**ONFOCUS:**

If you focus on any input field means that you enter in any input field click from mouse or go in that field with the help of tab then onfocus event will be triggered and whatever functionality we have written it will be performed

**ONBLUR:**

As we move out of the input field then onblur event will be triggered

**ONCHANGE:**

as you make change in your input field such as text changed and then leave then this event will be triggered.

**ONSUBMIT:**

On this event you can perform form validations .this event is performed into the form because you have to submit the whole form

**ONRESET:**

this event help you to reset your value .

**JS\_STRING:**

A string stores series of characters if we want to write any thing in double quoates in string then we use escape characters var name=”My name is \”hamza\””;

In javascript you can use html tags you are permitted to do so

**JAVASCRIPT METHODS & PROPERTIES:**

var str ="my name is hamza and hamza";

document.write("String Length="+str.length+"<br>");

document.write("big : "+str.big()+"<br>");//here big()is a method

document.write("Bold : "+str.bold()+"<br>");

document.write("italic : "+str.italics()+"<br>");

document.write("Small : "+str.small()+"<br>");

document.write("Strike : "+str.strike()+"<br>");

document.write("Fix : "+str.fixed()+"<br>");

document.write("UpperCAse : "+str.toUpperCase()+"<br>");

document.write("LowerCase : "+str.toLowerCase()+"<br>");

document.write("Supperscript : "+str.sup()+"<br>");

document.write("SubScript : "+str.sub()+"<br>");

document.write("Link : "+str.link("https://www.facebook.com/")+"<br>");

document.write("FontColor : "+str.fontcolor("red")+"<br>");

document.write("FontSize : "+str.fontsize(10)+"<br>");

document.write("Slice : "+str.slice(0,11)+"<br>");//use to find out substring

document.write("Substring : "+str.substring(0,9)+"<br>");

document.write("Substr : "+str.substr(0,5)+"<br>");//in substr the last endinf position is also consider

document.write("CharAt : "+str.charAt(0)+"<br>");

document.write("CharCodeAt : "+str.charCodeAt(0)+"<br>");//it will give the unicode

document.write("Indexof : "+str.indexOf("hamza")+"<br>");//it will provide us with the of the element that we searching and also it will give the index of firstr hamza in the string

document.write("LastIndexof : "+str.lastIndexOf("hamza")+"<br>");//it will give the index of hamza which is coming last in string

document.write("Search : "+str.search("hamza")+"<br>");//it will give the index of the element that yu are searching

document.write("Replace : "+str.replace("and hamza","raza kazmi")+"<br>");

document.write("Replace : "+str.replace(/hamza/g,"Ali")+"<br>");// if you want to replace evry hamza with ali in your string

**JAVASCRIPT OBJECTS:**

When we use the new keyword in java script then it becomes a object

**THIS KEYWORD:**

“this” keyword is use to point out any thing

**DATE OBJECT:**

This objects help you to work with dates and time you can create new date object using constructor of date such as **new Date()**. There are four parameters which you can pass to the date parameter the first one is

**Millisecond, datestring**

When working with days the Sunday is consider as 0

**DIALOUGE BOXES:**

There are three types of dialogue boxes in java script

These are

1. Alert box()
2. Confirmation box()
3. Prompt box() this is use to get input from the user

**DOCUMENT OBJECT MODEL:**

We can say that Dom is a interface or model which manipulates your html document this divides the whole document into different objects this means that for example it tells in your browser how your script and where your script is executed it work on almost every operating system and also it is language independent

**Push() method:**

adds new item to the end of the array this method also changes the length of the array

**pop() method:**

removes the last element of an array and returns that element this method changes the length of and array

**unshift() method:**

this method is used to add elements at the beginning of array

**shift() method:**

this method the first item of an array