



# JavaScript

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# Origins of JavaScript

- Developed by Brenden Eich
- First name mocha
- Renamed to livescript
- Official name when it was released in 1995
- Later it became Javascript
- Standardised by ECMA(European Computer Manufactures Association)

# Including Scripts in Web pages

- Using `<script>` tag
- `<script language="JavaScript">`
- `</script>`

But we should use for standard format

```
<script type="text/JavaScript">  
</script>
```



# Including Scripts in Web pages

## continue

- 1. In the `<head>` of a page
- 2. In The `<body>` section
- 3. In External life

## 3. In external life

- When you use script in more than one page
- `<script type="JavaScript" src="Scripts/validation.js"/>`

# Script

## hiding

- `<script type="text/javascript">`

`<!--`

Put your JavaScript here

`//-->`



## <noscript> element

- Javascript aware browsers should ignore the content of <noscript> element
- Browsers that are not JavaScript aware will show the enclosed message

# Document Object Model(DOM)

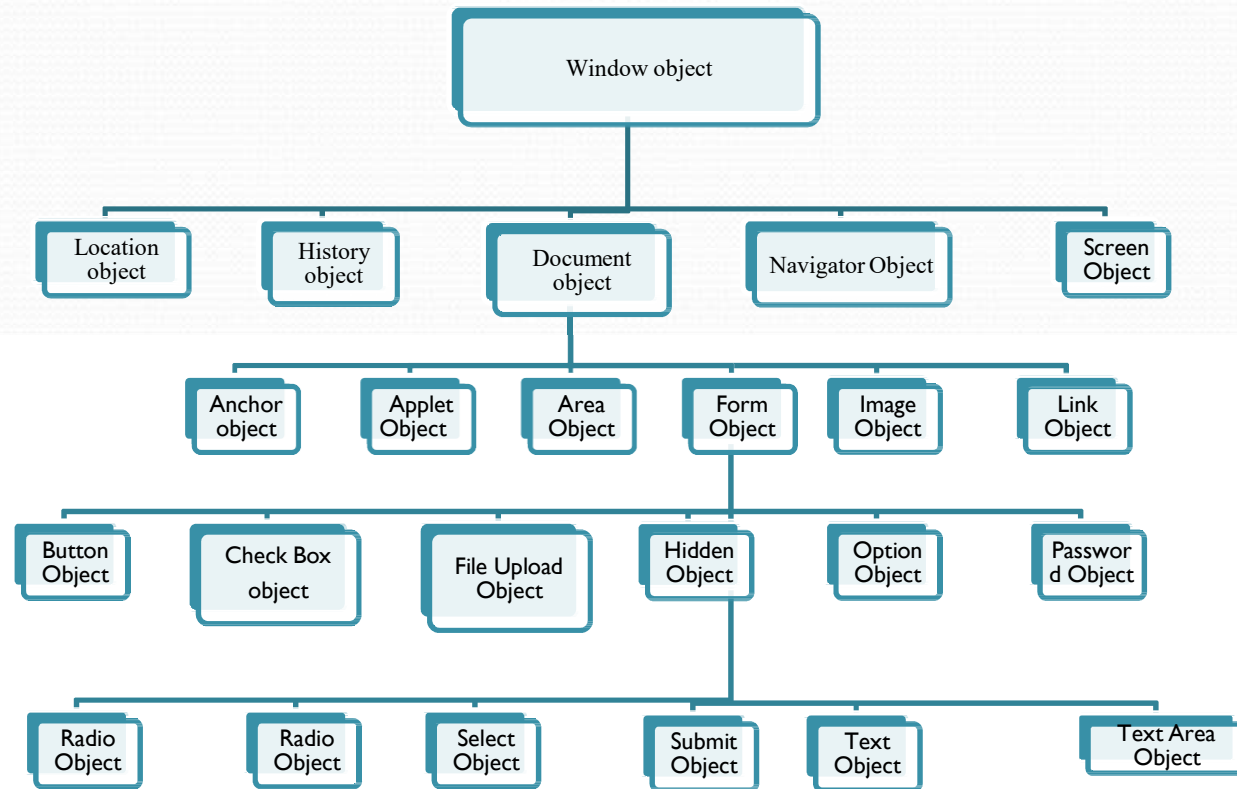
- It is a cross platform and language independent API
- It is a Web standard defined by W3C
- It provides methods for retrieving and setting the properties of objects.
- Creating dynamic contents
- DOM defines the logical structure of documents and the way a document is accessed and manipulated



# DOM

- DOM is separated into 3 parts
- Core, HTML, XML
- Core :a low level set of objects that can represent any structured document
- HTML and XML specifications provide additional, higher-level interfaces that are used with the core specification to provide a more convenient view into the document

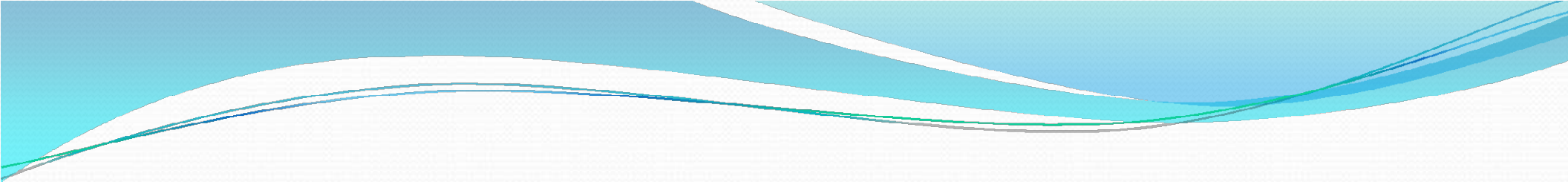
# DOM object Hierarchy



# Window Object

- It represents the browsers frame or window
- It includes number of properties
- What browser is running
- Pages the user has visited
- Size of browser window
- Size of users screen



- 
- To access and change the text in the browsers status bar
  - Change the page that is loaded

# Window object

- Window is the global object
- `window.alert("hello");`
- To change the status bar
- `<script type="text/JavaScript">  
Window.defaultstatus="Hello";  
</script>`

# History Object

- It keeps track of each page the user visits
- The list of pages is commonly called **History stack**
- Length property- How many pages are in the history stack
- Back( ) and forward( ) methods
- Another method is go( )- one parameter
- history.go(-2) or history.go(3)
- go(-1) = back & go(1)=forward



# Location object

- It contains the information about the current pages location
- URL, server hosting page, port number of server location and protocol used
- These are available through location object`s href, host name, port, and protocol properties

# Location object

- For navigating 2 methods
- Use href property or replace( ) method
- The replace( ) method removes the current page from history stack
- href property adds the new page into the history stack
- `window.location.replace("mypage.html");`
- `window.location.href= mypage.html`

# Navigator Object

- The better name will be browser object
- It contains the information about the browser and the OS in which it is running



# Screen Object

- Display capabilities of the client machine
- Its properties include height and width properties –which indicates the vertical and horizontal range of the screen in pixels
- Colordepth property This tells you the number of bits used for colors on the clients screen

# Document object

- Most important object
- *Forms* collection contains all the <form> tags
- *Image* collection represents all the image in a document
- The *link* collection represents all the hyperlink within a page
- The *anchor* collection represents all the anchors in the document
- The *area* collection represents all the image maps that use an area element in the document
- The *applet* collection represents all the applets

# Document object

- Form has button,checkbox,radiobutton etc...
- Page no: | 6 |
- Document.links[0].href
- Document – we are accessing the document object
- Link- it indicates links collection
- The[0 ] indicates we want first link in the document



# Document object

- Href- we want href property
- Alternative method
- `Document.frmlogin.frmpassword.value`

# Objects, Methods, and Properties

- The document object model is made up of several objects that represents different part of the document.
- Each object can have properties and methods
- Property tells you something about an object
- Method perform an action