



DOM : Document Object Model

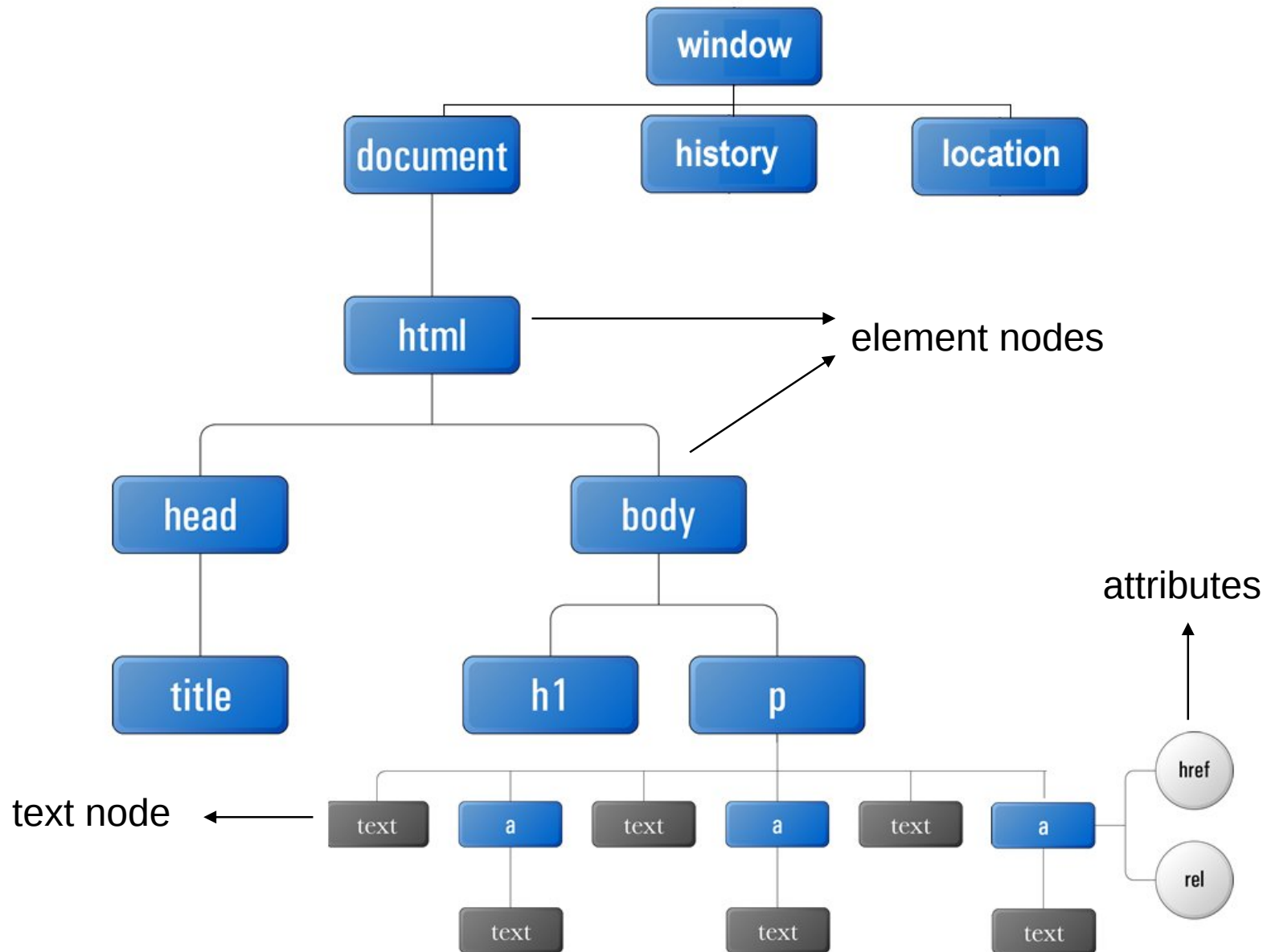
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Document Object Model

- The HTML DOM is a standard for how to get, change, add, or delete HTML elements.
 - The HTML DOM defines the **objects and properties** of all HTML elements, and the **methods** (interface) to access them.
 - When a page is requested the response is parsed by the browser and the data is converted to DOM
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HTML DOM





Node Parents, Children, Siblings

- In a node tree, the top node is called the root
 - Every node, except the root, has exactly one parent node
 - A node can have any number of children
 - A leaf is a node with no children
 - Siblings are nodes with the same parent
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HTML DOM Object Properties and Methods

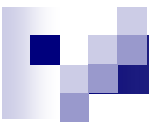
HTML DOM PROPERTIES

- `x.innerHTML` - the inner text value of `x` (a HTML element)
- `x.nodeName` - the name of `x`
- `x.nodeValue` - the value of `x`
- `x.parentNode` - the parent node of `x`
- `x.childNodes` - the child nodes of `x`
- `x.attributes` - the attributes nodes of `x`

HTML DOM METHODS

- `x.getElementById(id)` - get the element with a specified id
- `x.getElementsByTagName(name)` - get all elements with a specified tag name
- `x.appendChild(node)` - insert a child node to `x`
- `x.removeChild(node)` - remove a child node from `x`

```
txt=document.getElementById("intro").childNodes[0].nodeValue;
```



Accessing Nodes

- You can access a node in three ways:
 1. By using the getElementById() method
 2. By using the getElementsByTagName() method
 3. By navigating the node tree, using the node relationships.

1- The getElementById() method returns the element with the specified ID:

```
document.getElementById( "someID" );
```

2- getElementsByTagName() returns all elements with a specified tag name.

```
node.getElementsByTagName( "tagname" );
```

3- Use parentNode, childNodes, firstChild, lastChild properties

```
var x=document.getElementById("intro");  
var text=x.firstChild.nodeValue;
```



Accessing Nodes - Examples

```
x=document.getElementsByTagName("p");
```

```
for (i=0;i<x.length;i++) {  
document.write(x[i].innerHTML);  
document.write("<br />");  
}
```

```
x=document.getElementsByTagName("p");  
document.write("Second paragraph text: " + x[1].innerHTML);
```

```
x=document.body;  
alert(x.innerHTML);
```



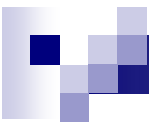
Changing HTML - Examples

Change the background color

```
<html>
<body>
<script type="text/javascript">
document.body.bgColor="yellow";
</script>
</body>
</html>
```

Change the text of an element

```
<html>
<body>
<p id="p1">Hello World!</p>
<script type="text/javascript">
document.getElementById("p1").innerHTML="New text!";
</script>
</body>
</html>
```



Changing Style of an Element

```
<html>
<head>
  <script type="text/javascript">
function ChangeText() {
document.getElementById("p1").style.color="blue";
document.getElementById("p1").style.fontFamily="Arial";
}
</script>
</head>
<body>
<p id="p1">Hello world!</p>
<input type="button" onclick="ChangeText()" value="Click me
to change text above">
</body>
</html>
```

For more info: http://www.w3schools.com/html/dom_reference.asp

Accessing Forms

HTML Form Code:

```
<form id="myForm">  
<input type="text" id="myText" />  
<input type="button" value="Click Me!" onclick="execute()"/>  
</form>
```

execute() function:

```
function execute(){  
  alert(document.forms['myForm'].elements['myText'].value);  
}
```

name of the form

name of the element