JavaScript

DOM
document object model

PHP web development 2020/2021

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browser objects

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the browser window

document

the currently open document in the browser

screen

the visual part of the browser

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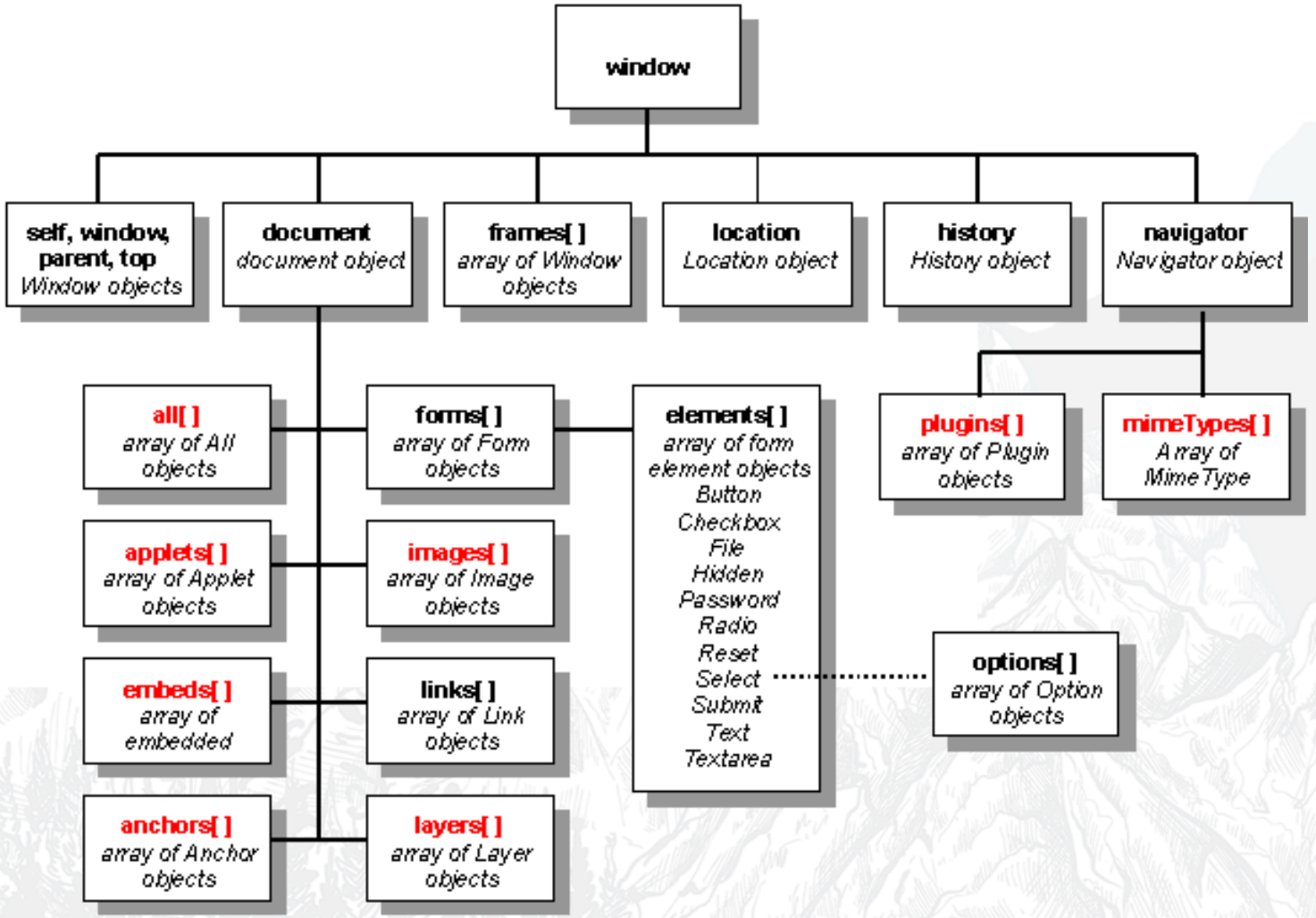
info about the currents browser



browser objects

Врача Софтуер Общество

document object properties and methods

```
document.links
document.links[0].href = "yahoo.com";
document.write("This is some <b>bold text</b>");
document.location
```

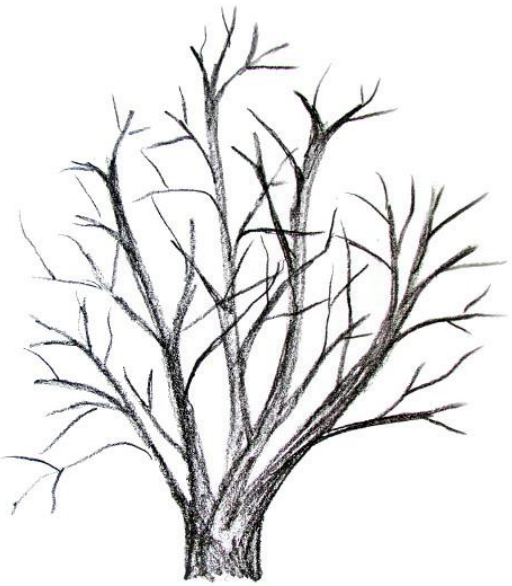

DOM

DOM

Document
Object
Model

When a web page is loaded, the browser creates a **D**ocument **O**bject **M**odel of the page.

The **HTML DOM**
model is constructed as a tree
of **Objects** -
of all the elements
present
in the document



DOM

The **HTML DOM** is an **Object Model** for **HTML**. It defines:

- HTML elements as **objects**
- **Properties** for all HTML elements
- **Methods** for all HTML elements
- **Events** for all HTML elements

The **HTML DOM** is an **API** (Programming Interface) for **JavaScript**:

- JavaScript can add/change/remove HTML elements
- JavaScript can add/change/remove HTML attributes
- JavaScript can add/change/remove CSS styles
- JavaScript can react to HTML events
- JavaScript can add/change/remove HTML events

Selecting DOM elements

Selecting ...

Selecting ...

HTML elements can be targeted and stored in **variables** using the DOM API

Selecting … IMPORTANT

IMPORTANT

Of a special importance is

to remember

which selectors

target one element only

and which

target more than one element.

Selecting … a single element

target an html element by id or why id is to **be unique**

```
let email_2 = document.getElementById('email_address2');
                //returns one element
let span = document.querySelector('#email_form span');
                //returns the first element of that selector
```

Selecting … a group of elementS

Врaца Софтуер Общество

targeting a group of html elements

```
let inputs = document.getElementsByTagName('input');

let email = document.getElementsByName('email_address2');

let classGroup = document.getElementsByClassName('className');

let formInputs = document.querySelectorAll('#email_form input');

                                    //all of that selector
```

Selecting ...

Врача Софтуер Общество

targeting by element type

```
let body = document.body;

let links = document.links; //all the links elements in a
                            document

let forms = documents.forms; //all the form elements

let form = documents.forms[2] //third form in the forms
                              collection
```

Selecting ...

Врaца Софтуер Общество

selecting nested elements

```
<div id="wrapper">
    <div>Divs in wrapper</div>
    <div>Divs in wrapper</div>
 </div>
```

```
var wrapper = document.getElementById('wrapper');
var divsInWrapper = wrapper.getElementsByTagName('div');
```

Selecting ...

Враца Софтуер Общество

selecting nested elements

```
<div id="wrapper">
   <div>Divs in wrapper</div>
   <div>Divs in wrapper</div>
 </div>
```

```
var divsInWrapper = wrapper.querySelectorAll('.wrapper div');
```

Selecting ...

Return a **single element**

getElementById()

querySelector(‘selector’)

Return a **collection of elements**

getElementsByTagName('tag name');

getElementsByName('name');

getElementsByClassName('className');

querySelectorAll(‘selector’)

Node, Nodes, Nodes List

Node, Nodes, Nodes List

Node,
Nodes,
Nodes List

NodeList - elements/collection returned by the DOM API method -

- getElementsByTagName(tagName)
- getElementsByName(name)
- getElementsByClassName(className)
- querySelectorAll(selector)

Node, Nodes, Nodes List

Node,
Nodes,
Nodes List

NodeList is a JavaScript Object

has
- length property
- index for every node in the list

Node, Nodes, Nodes List

Node,
Nodes,
Nodes List

There are -

live node lists

- returned by the **getElementsBy** methods

static node lists

- returned by the **querySellector** methods

Node, Nodes, Nodes List

Node,
Nodes,
Nodes List

live node list

watches for changes in its nodes and reflects them

static node list

doesn`t change the data for its nodes if they have been changed

Questions?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