

# Python training - lab 20

# JavaScript

```
<html>
<head>
  <script>
    function addHello1 () {
      document.write('Hello World1 !<br/>');
    }
  </script>
  <script src="js/script.js"></script>
</head>
<body>
  <script>
    addHello1();addHello2();
  </script>
</body>
</html>
```

# JavaScript

```
// content of script.js
```

```
// this is a one line comment
```

```
/*  
    One multiline  
    comment  
*/
```

```
function addHello2 () {  
    document.write('Hello World 2 !<br/>'); // un comment  
}
```

# JavaScript data types

```
let a;  
let a = '12';  
let a = 12;  
let a = 12.0;  
let a = false;  
let a = ['one', 'two', 'three'];  
let a = {name: 'Ion Popa', phone: 0722123456};
```

```
typeof(a); // undefined | string | number |  
number | boolean | object | object
```

# JavaScript vs Python

```
// blocks between {...} instead of indentation
```

```
// parentheses  
if (condition) {  
  // no indentation necessary  
  console.log('bla bla')  
    console.log('ala bala')  
}
```

```
// variable block scope  
{ let x = 7; const y = 9}
```

```
// the following will work  
// differently in JavaScript  
10 / '5' // 2  
3 * '3' // 9  
3 * 'a' // NaN  
3 + '3' // 33
```

```
// conversion to numbers  
parseInt('-123 ') // -123  
parseInt('w123') // NaN  
parseInt('123.5') // 123  
parseInt(123.5) // 123  
parseFloat('-123.4 ') // -123.4  
parseFloat('w123.4') // NaN  
isNaN('w123.4') // true  
isNaN('123.4') // false
```

# JavaScript vs Python

// operators

// and - &&, or - ||  
while (a < b && b > c || a > c) {}

// not !  
if (! a) {}

// increment operator  
a++, --a  
b = ++a \* c--

5 == '5' // true  
5 === '5' // false, type is also checked

# JavaScript vs Python

```
// loops
```

```
// runs at least one time
```

```
do {  
} while (condition)
```

```
// parsing arrays
```

```
let a = ['a', 'b', 'c']  
for (let i=0; i < a.length; i++) {  
    console.log(a[i])  
}
```

```
for (e of a) {  
    console.log(e)  
}
```

```
// parsing objects
```

```
let o = {name: 'Dana', age: 34}  
for (a in o) {  
    console.log(a, o[a])  
}
```

# JavaScript vs Python

```
// conditions
```

```
// no elif  
if (condition) {}  
else {}
```

```
// true and false, not True and False  
if (true) {}
```

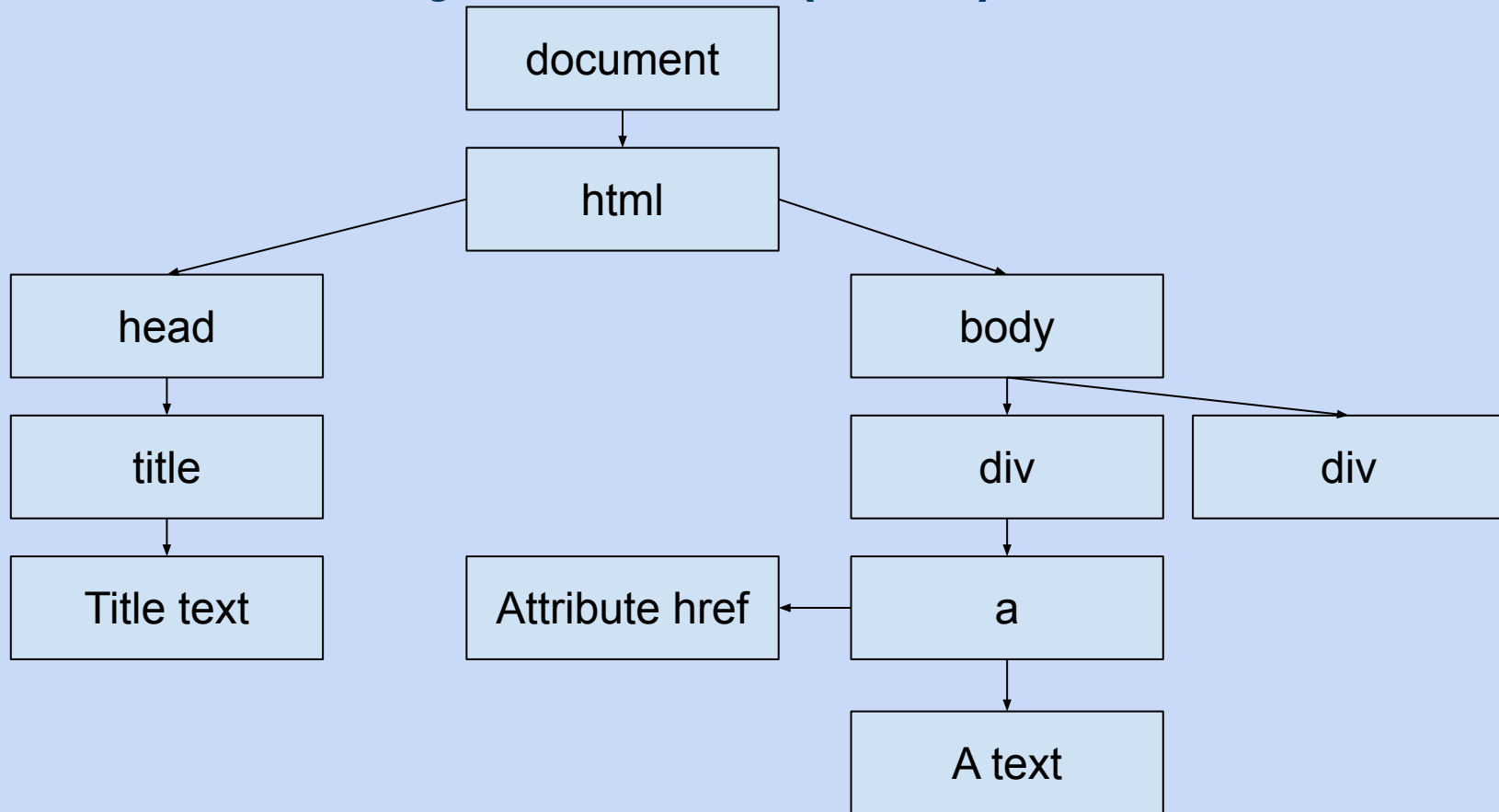
```
// switch  
switch (a) {  
  case 1: // do something  
    break;  
  case 2: // do something else  
    break;  
  default: // do something default  
    break;  
}
```



# Document object model (DOM)

```
<html>  
  <head>  
    <title>Some title</title>  
  </head>  
  <body>  
    <div>  
      <a href="somepage.html">link</a>  
    </div>  
    <div></div>  
  </body>  
</html>
```

# Document object model (DOM)



# Document object model (DOM)

```
// Properties  
element.innerHTML
```

```
// Methods  
document.getElementById('someid');  
document.getElementsByTagName('div');  
document.getElementsByClassName('className');
```

```
<div id='myDIV'>some content</div>  
<input type='text' name='username' id='uname' />  
<script>  
    document.getElementById('myDIV').innerHTML =  
        'new content';  
    document.getElementById('uname').value = 'popescu'  
</script>
```

# Document object model (DOM)

```
let theDiv = document.getElementById("myDIV");  
let allA = theDiv.getElementsByTagName("a");  
  
let element = document.getElementById('someDiv');  
let x = element.querySelectorAll("div.divClass");  
  
element.getAttribute('class');  
element.setAttribute('class', 'newclass');  
element.className = 'newclass';  
  
element.classList.add('newClass');  
element.classList.remove('oldClass');  
  
element.style.borderBottomColor = 'blue';
```

# Javascript events

```
<script>
    function function1() {

    }

    function function2() {

    }

    document.getElementById('id').onmouseover = function2;
</script>

<body onload='function1() '>
    <a href='page.html'
        onClick='function1()'
        onMouseOver='function2()'>
</body>
```

onclick, onmouseover, onmouseout, onchange, onfocus, onblur  
Reference [https://www.w3schools.com/tags/ref\\_eventattributes.asp](https://www.w3schools.com/tags/ref_eventattributes.asp)

# Javascript pop-ups

```
window.alert('alerta')
```

```
let answer = window.confirm('Are you sure ?')
if (answer == true) {
    // do something
} else {
    // do something else
}
```

```
let email = prompt("Enter the email", "aaa@example.com");
if (email != null) {
    // do something
}
```