Langage Javascript

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Structure

- Un programme Javascript est inséré dans une balise <script>……..</script>

Déclaration des variables

- On utilise le mot clé var comme suit:

```
var x, y;
x = 5;
y = 6;
```

- ES2015 introduced important **new** JavaScript keywords: **let**

```
var x = 10; // Here x is 10

{ let x = 2; // Here x is 2 }

// Here x is 10
```

Les constantes

- Variables defines avec **const** sont le même que **let** variables, à l'exception qu'on ne peut pas la changer

```
const PI = 3.141592653589793;
PI = 3.14; // This will give an error
PI = PI + 10; // This will also give an error
```

```
var x = 10; // Here x is 10
{ const x = 2; // Here x is 2 }
// Here x is 10
```

```
const PI; PI = 3.14159265359;
```

Les opérateurs mathématiques javascript

Operator	Description
+	Addition
-	Subtraction
*	Multiplication
**	Exponentiation (ES2016)
/	Division
%	Modulus (Division Remainder)
++	Increment
--	Decrement

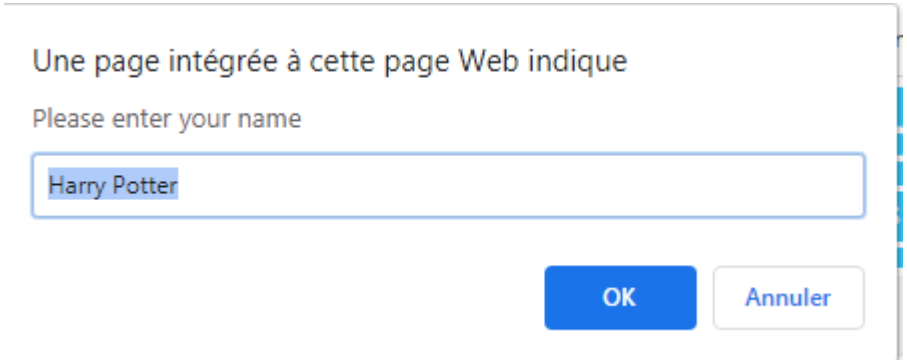
Types javascripts

- Number: tous les types de nombres
- String
- Array
- Object
- undefined

Prompt javascript

- Saisit les données à partir du clavier

```
var person = prompt("Please enter your name", "Harry Potter");
```



Affichage des données

document.write();

```
<script>
document.write(« hello world »);
</script>
```

If statement

```
if (condition)
 { // block of code to be executed if the
condition is true }
```

```
if (condition) { // block of code to be executed if
the condition is true }
 else
 { // block of code to be executed if the condition
is false }
```

```
if (condition1)
{ // block of code to be executed if condition1 is
true }
else if (condition2)
 { // block of code to be executed if the
condition1 is false and condition2 is true }
 else { // block of code to be executed if the
condition1 is false and condition2 is false }
```

Switch

```
switch(expression)
{ case x: // code block break;
case y: // code block break;
default: // code block
}
```

Switch exemple

```
switch (new Date().getDay())
{ case 0: day = "Sunday"; break;
case 1: day = "Monday"; break;
case 2: day = "Tuesday"; break;
case 3: day = "Wednesday"; break;
case 4: day = "Thursday"; break;
case 5: day = "Friday"; break;
case 6: day = "Saturday";
}
```

Boucle for

```
var i;

for (i = 0; i < N; i++)
{
//Instruction
}
```

Boucle while

```
while (condition)
{ // code block to be executed


}
n=0
while (i < 10)
{ n +=  i;
i++;
}
```

Boucle Do..While

```
do {
// code block to be executed
}
while (condition);
```

Le type Array

```
var array_name = [item1, item2, ...];
```

- Accéder à un élément d'un array

```
array_name[i]
```

i va de 0 à N-1

Les méthodes de Array

Les fonctions

```
function name(parameter1, parameter2, parameter3)
{ // code to be executed
return
}
```

Les fonctions

- `var x = myFunction(4, 3);`

```
// Function is called, return value
will end up in x f
```

- `function myFunction(a, b)`
- `{ return a * b; // Function returns the product of a and b }`

Les objets

- Dans la vie réelle tout est conçu sous forme de classe d'objet
- Une personne est une classe , une voiture est une classe ,
- Les instances de classes sont des objets
- Chaque classe possède des attributs et des méthodes

La classe voiture

objets	Attributs	Méthodes
	car.name = Fiat car.model = 500 car.weight = 850kg car.color = white	car.start() car.drive() car.brake() car.stop()

Accès aux propriétés

- Person.name
- Person.model
- ….

```
var full_name=person.firstName + " " + person.lastName;
document.write(full_name);
```

Déclarer un objet en javascript

```
var car = {
          type:"Fiat",
           model:"500",
           color:"white“
           };


var person = {
  firstName: "John",
  lastName: "Doe",
  age: 50,
  eyeColor: "blue"
};
```

Déclarer des objets

```
var person = {
    firstName: "John",
    lastName : "Doe",
    id       : 5566,
    fullName : function() {
        return this.firstName + "
" + this.lastName;
    }
};
```

```
<script>
        var person= prompt("donner votre nom");
        alert(person);
       document.write(person);

</script>
```