

## Declaració d'un vector

```
var array_name = new Array();
```

### **Example:**

```
var months = new Array();  
months[0]="January";  
months[1]="February";  
months[2]="March"
```

```
<html>  
  <head><title>The Array Object</title>  
    <h2>An Array of Books</h2>  
    <script type="text/javascript">  
1      var book = new Array(6);    // Create an Array object  
2      book[0] = "War and Peace"; // Assign values to its elements  
      book[1] = "Huckleberry Finn";  
      book[2] = "The Return of the Native";  
      book[3] = "A Christmas Carol";  
      book[4] = "The Yearling";  
      book[5] = "Exodus";  
    </script>  
  </head>  
  <body bgcolor="lavender">  
    <big>  
    <script type="text/javascript">  
3      for(var i in book){  
4        document.write("book[" + i + "] " + book[i] + "<br />");  
      }  
    </script>  
    </big>  
  </body>  
</html>
```

```

<html>
  <head><title>The Literal Way</title>
    <h2>An Array of Pets</h2>
    <script type="text/javascript">
1      var pet = [ "Fido", "Slinky", "Tweetie","Wanda" ];
    </script>
  </head>
  <body bgcolor="lavender">
    <font size="+2">
    <script type="text/javascript">
2      for(var i in pet){
3        document.write("pet[" + i + "] " + pet[i] + "<br />");
        }
    </script>
    </font>
  </body>
</html>

```

Omplir un vector mitjançant un bucle

```

<html>
  <head><title>The Array Object</title></head>
  <body>
    <h2>An Array of Numbers</h2>
    <script type="text/javascript">
1      var years = new Array(10);
2      for(var i=0; i < years.length; i++ ){
3        years[i]=i + 2000;
4        document.write("years[" + i + "] = " + years[i]
                        + "<br />");
        }
    </script>
  </body>
</html>

```

## Omplir un vector en la seva declaració

```
<html>
  <head><title>The Array Object</title></head>
  <body>
    <h2>An Array of Colored Strings</h2>
    <script type="text/javascript">
1      var colors = new Array("red", "green", "blue", "purple");
2      for(var i in colors){
3        document.write("<font color='"+colors[i]+'>");
4        document.write("colors[" + i + "] = " + colors[i]
                          + "<br />");
      }
    </script>
  </body>
</html>
```

## Vector associatiu

```
<html>
  <head><title>Associative Arrays</title></head>
  <body>
    <h2>An Array Indexed by Strings</h2>
1    <script type="text/javascript">
2      var states = new Array();
3      states["CA"] = "California";
      states["ME"] = "Maine";
      states["MT"] = "Montana";
4      for( var i in states ){
        document.write("The index is:<em> " + i );
        document.write("</em> The value is: <em>" + states[i]
                          + "</em><br />");
      }
    </script>
  </body>
</html>
```

Accés a un element d'un vector. Es pot fer de dues formes :

```
cat.color = "black";  
cat["color"] = "black";
```

```
<script type="text/javascript">  
1   cat = new Object();  
2   c = "color"  
3   cat["name"] = "Powder"; // same as cat.name = "Powder"  
4   cat[c] = "gray"; // same as cat.color = "gray";  
5   document.write(cat.name + " is " + cat.color + "<br />");  
   document.write(cat["name"] + " is " + cat[c] + "<br />");  
</script>
```

Declaració d'una matriu de 3x3 :

```
var array_name=new Array(new Array(77,88,99),  
new Array(50,60,99),  
new Array(99,88,78)  
);
```

o bé :

```
var array_name= [ [77,88,99],  
[50,60,99],  
[99,88,78]  
];
```

```
<html>  
  <head><title>Two-dimensional array</title></head>  
  <body>  
    <table border="2" bordercolor="blue">  
      <caption>Grade Sheet</caption>  
      <tr>  
        <script type="text/javascript">  
1          var grades= [ [77,88,99,75],  
                      [50,60,99,89],  
                      [99,88,78,92]  
                      ];  
  
          // alert(grades.length);   Output is 3  
          // alert(grades);           Output is 77,88,99,75,50,60,99,89,  
          //                               99,88,78,92
```

```

2      for (var i=0; i < grades.length; i++) {
3          for (var j=0; j < grades[i].length; j++) {
4              document.write(
5                  "<td bgcolor='#fff00'>" + grades[i][j] + "</td>");
6              }
7          document.write("</tr>");
8      }
9      </script>
10     </table>
11 </body>
12 </html>

```

Ús d'un vector com a índex d'un vector associatiu

```

<html>
  <head><title>Associative Array</title></head>
  <body>
    <p style="font-size:150%">
      <script type="text/javascript">
1         var student=new Array();
2         student["Name"]="John Doe"; //one key, one value
3         student["Courses"]=new Array("Math","English", "PE");
4         student["Phones"]=new Array("415-333-1234","530-345-5432");

5         document.write("The student's name is " + student["Name"] +
6             ".<br />");
7         document.write("His courses are " + student["Courses"] +
8             ".<br />");
9         document.write("His favorite course is " +
10             student["Courses"][2] + ".<br />");
11        document.write("His cell phone number is " +
12            student["Phones"][0] + ".<br />");

13        </script>
14        </p>
15    </body>
16 </html>

```

Mètode d'un vector : concat() Concatena dos vectors.

```
<html>
  <head>
    <title>Array concat() methods</title>
  </head>
  <body>
    <script type="text/javascript">
1      var names1=new Array("Dan", "Liz", "Jody" );
2      var names2=new Array("Tom", "Suzanne");
      document.write("<b>First array: " + names1 + "<br />");
      document.write("<b>Second array: " + names2 + "<br />");
      document.write("<b>After the concatenation <br />");
3      names1 = names1.concat( names2);
      document.write(names1);
    </script>
  </body>
</html>
```

Mètode d'un vector : pop() Esborra el últim element d'un vector

```
<html>
  <head><title>Array pop() method</title></head>
  <body>
    <script type="text/javascript">
1      var names=new Array("Tom", "Dan", "Liz", "Jody");
2      document.write("<b>Original array: " + names + "<br />");
3      var newstring=names.pop(); // Pop off last element of array
4      document.write("Element popped: " + newstring);
5      document.write("<br />New array: " + names + "</b>");
    </script>
  </body>
</html>
```

Mètode d'un vector : push() Afegeix un element al final d'un vector

```
<html>
  <head><title>Array push() method</title></head>
  <body>
    <script type="text/javascript">
1      var names=new Array("Tom", "Dan", "Liz", "Jody");
2      document.write("<b>Original array: " + names + "<br />");
3      names.push("Daniel","Christian");
4      document.write("New array: " + names + "</b>");
    </script>
  </body>
</html>
```

Mètode d'un vector : `shift()` `unshift()` . `shift()` esborra el primer element d'un vector i `unshift()` afegeix un element al principi del vector

```
<html>
  <head><title>Array shift() and unshift() methods</title></head>
  <body>
    <script type="text/javascript">
1      var names=new Array("Dan", "Liz", "Jody" );
      document.write("<b>Original array: " + names + "<br />");
2      names.shift();
      document.write("New array after the shift: " + names);
3      names.unshift("Nicky","Lucy");
      // Add new elements to the beginning of the array
      document.write("<br />New array after the unshift: " + names);
    </script>
  </body>
</html>
```

Mètode d'un vector : `slice()` Copia elements d'un vector a un altre vector

```
var newArray = Arrayname.slice(first element, last element);
```

L'últim element no s'inclou. Recordeu que l'índex de la primera posició d'un vector és zero.

```
var ArraySlice = myArray.slice(2,6);    // ArraySlice contains elements
                                         // 2 through 5 of myArray.
```

```
<html>
  <head><title>Array slice() method</title></head>
  <body>
    <script type="text/javascript">
1      var names=new Array("Dan", "Liz", "Jody", "Christian",
                           "William");
      document.write("<b>Original array: " + names + "<br />");
2      var sliceArray=names.slice(2, 4);
      document.write("New array after the slice: ");
3      document.write(sliceArray);
    </script>
  </body>
</html>
```

Mètode d'un vector : splice() Esborra i/o reemplaça elements d'un vector

```
Arrayname.splice(index position, number of elements to remove);  
Arrayname.splice(index position, number of elements to remove,  
                  replacement elements);
```

```
myArray.splice(3, 2);  
myArray.splice(3, 2, "apples", "oranges");
```

```
<html>  
  <head><title>Array splice() method</title></head>  
  <body>  
    <script type="text/javascript">  
      // splice(starting_pos, number_to_delete, new_values)  
1      var names=new Array("Tom","Dan", "Liz", "Jody");  
      document.write("<b>Original array: " + names + "<br />");  
2      names.splice(1, 2, "Peter","Paul","Mary");  
3      document.write("New array: " + names + "</b>");  
    </script>  
  </body>  
</html>
```

EXERCICIS :

1. Donat el següent vector (A,B,C,D,E,F,G)
  1. Inserir la lletra H al final de vector.Resultat : (A,B,C,D,E,F,G,H)
  2. Inserir AA i AAA al principi del vector.Resultat (AA,AAA,C,D,E,F,G,H)
  3. Inserir la lletra HH al final de vector.Resultat : (AA,AAA,A,B,C,D,E,F,G,H,HH)
  4. Inserir i reemplaçar A,B,C,D,E,F,G per BB,CC,DD,EE,FF,GG.Resultat ( AA,AAA,BB,CC,DD,EE,FF,GG,H,HH)
  5. Esborrar AAA. Resultat ( AA,BB,CC,DD,EE,FF,GG,H,HH)
  6. Esborrar H. Resultat ( AA,BB,CC,DD,EE,FF,GG,HH)