

SLOW MOVEMENTS OF ELEMENTS

With JavaScript we can not only move the elements instantly, we can also move element slowly from one place to another. The one way to move an element slowly is to move it by small amount many times, with moves separated by small amounts of time. Such slow movement of elements is accomplished by using two window methods available in JavaScript: `setTimeout` and `setInterval`.

The `setTimeout` method has two parameters -- first one is string of JavaScript code to be executed and second parameter is number of mseconds of delay before executing the given script.

The `setInterval` method has two forms. One takes two parameter with first specifying the script code to be executed and second specifying the interval in mseconds between executions. The second form takes variable number of parameters. First one is the name of the function to be called, the second is the interval in mseconds between the calls to the function and remaining parameter are used as actual parameters to the function being called.

In the following example, image is moved slowly from position(50,100) to a new position (700,100). The move is accomplished by using the `setTimeout` method to call a move function every msecond until the final position is reached. Example includes separate html file and JavaScript file.

Initial position of the element is set with `initImage()` function. The `onload` attribute of the body element is used to call this function.

The `moveImage()` function is used to move the image. It moves the image 1 pixel towards the final position and then calls itself with the new coordinates using the `setTimeout`.

```
/* moveImage.js JavaScript to move image*/
```

```
var dom, x, y, finalx = 700;
```

```
function initImage() {  
    dom = document.getElementById('image').style;
```

```
/* Get the current position of the image */
```

```
    var x = parseInt(dom.left);  
    var y = parseInt(dom.top);
```

```

    /* Call the function that moves it */
    moveImage(x, y);
  }
// A function to move the text from its original
// position to (x, finaly)

function moveImage(x, y) {

  /* If the x coordinates are not equal, move
  x toward finalx */

  if (x != finalx)
    x++;

  if ((x != finalx) ) {

    dom.left = x + "px";
    dom.top = y + "px";

  /* Recursive call, after a 1-millisecond delay */

    setTimeout("moveImage(" + x + "," + y + ")", 1);
  }

}

<?xml version = "1.0" encoding = "utf-8"?>
<!DOCTYPE html PUBLIC "-//w3c//DTD XHTML 1.1//EN"
"http://www.w3.org/TR/xhtml11/DTD/xhtml11.dtd">

<!-- Illustrates a moving image from one position to another
  Uses the JavaScript from file moveimage.js
  -->
<html xmlns = "http://www.w3.org/1999/xhtml">
  <head>
    <title> Moving Image </title>
    <script type = "text/javascript" src = "moveimage.js">
    </script>
  </head>

```

```
<body onload = "initImage()">
  <p>
    <span id = 'image' style = "position: absolute; left: 50px; top: 100px">
      <img src = "smiley.gif" />
    </span>
  </p>
</body>
</html>
```

Source : <http://elearningatria.files.wordpress.com/2013/10/cse-vii-programming-the-web-10cs73-notes.pdf>