

JQuery

- ❑ JavaScript library aimed at simplifying some common operations
- ❑ Available for download at jquery.com
- ❑ Allows an easier
 - ❖ access to the various elements in the document
 - ❖ definition of actions to execute in response to specific events
 - ❖ creation of animations
- ❑ **Drawback:** it can slow down the page download (smallest version is about 86KByte)

Format

`$ (selector) .action()`

□ ***selector***

- ❖ Defines the HTML element on which the action should be performed
- ❖ Syntax is similar to CSS

□ ***action***

- ❖ Function (among the standard available ones) to be executed

List of some handled events

bind	keydown	ready
change	keypress	resize
click	keyup	scroll
dblclick	live	select
delegate	load	submit
die	mousedown	toggle
error	mouseup	trigger
focus	mouseenter	triggerhandler
focusin	mouseleave	unbind
focusout	mouseover	undelegate
hover	one	unload

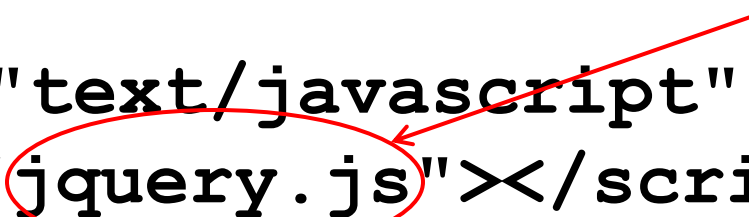
To use the JQuery library

□ Import the library

<head>

```
<script type="text/javascript"
        src="jquery.js"></script>
```

file
containing
the library



.....

□ Insert all calls in:

```
<script type="text/javascript">
$(document).ready(function.....
    /* JQuery code */) </script>
```

so that the whole code can be executed only
when the page is ready

Some examples of selectors

<code>\$ ("p")</code>	all <p> elements in the document
<code>\$ ("p.c")</code>	all <p class=c> elements
<code>\$ ("p#mine")</code>	all <p id=mine> elements
<code>\$ (" #mine")</code>	All elements with id=mine
<code>\$ (" .c")</code>	All elements with class=c
<code>\$ (":input")</code>	All input elements (including buttons)
<code>\$ (":submit")</code>	All elements with type="submit"

Other possible selectors

<code>\$ (" [href= default.htm] ")</code>	All elements with attribute href=default.htm
<code>\$ ("ul li:first")</code>	The first elements of a list
<code>\$ ("ul li:eq(3) ")</code>	The fourth elements of a list
<code>\$ (":visible")</code>	All visible elements
<code>\$ (":header")</code>	All h1, h2, h3, ... elements
<code>\$ ("td, th")</code>	All <th> and <td> elements
<code>\$ (":empty" }</code>	All elements without children

Example

jqhide.htm



□ Hide some text and an image

□ JQuery

```
<script type=text/javascript>
$(document).ready(function() {
    $("button#text").click(function() {
        $("p").hide();
    })
    $("button#pic").click(function() {
        $("img").hide();
    });
});
</script>
```

Corresponding HTML file

```
<body>
<img src=questions.jpg width=300
  height=300> <br>
<button id=pic> Hide image</button>
<br><br><br>
<p> Text to be hidden </p><br>
<button id=text>Hide text</button>
</body>
```


Other possible actions

- ❑ `hide (speed, callback)`
- ❑ `show (speed, callback)`
- ❑ `toggle (speed, callback)`
 - ❖ *speed* : changing rate, either use standard values ("slow", "fast", "normal") or milliseconds (ms)
 - ❖ *callback* function to be called at the end of the change

[jqtoggle.htm](#)



Slide effects

[jqslide.htm](#)



- ❑ `slideDown(speed, callback)`
- ❑ `slideUp(speed, callback)`
- ❑ `slideToggle(speed, callback)`
- ❑ Example

```
<script type="text/javascript">
$(document).ready(function() {
    $(".flip").click(function() {
        $(".panel").slideToggle("slow");
    });
});
</script>
```

Style commands

```
<style type="text/css">
div.panel,p.flip
{ margin:0px; padding:5px; text-
  align:center;width:500;background:
  #e5eecc;border:solid 1px #c3c3c3;
}
div.panel
{ height:120px;display:none;
}
</style>
```

HTML tags

```
<body>
```

```
<div class="panel">
```

```
<p>Element that appear or disappear</p>
```

```
<p>with slide effect</p>
```

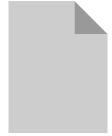
```
</div>
```

```
<p class="flip">Show/Hide</p>
```

```
</body>
```

Opacity effects

jqfade.htm



❑ `fadeIn (speed, callback)`

❑ `fadeOut (speed, callback)`

❑ `fadeTo (speed, opacity, callback)`

❑ Example, to be added to the previous example

```
$ ("button#fade") .click (function () {  
  $ (".panel, .flip") .fadeTo ("slow", 0.25) ; } ) ;
```

.....

```
<button id=fade>Fade</button>
```

Animations

□ `animate({params} , [duration] , [easing] , [callback])`

- ❖ *params* style parameters to animate, this states the final values after the animation
- ❖ *duration* ms or "fast", "normal", "slow"
- ❖ *easing* function that states how the variation should progress, two standard values are available:
 - linear and swing
- ❖ *callback* callback function

Example

jghello.htm



- Modify dimensions and opacity

```
<script>
$( "#go" ).click( function() {
    $( "#block" ).animate({
        width: "70%",
        opacity: 0.4,
        marginLeft: "13mm",
        fontSize: "3em",
        borderWidth: "10px"
    }, 1500 );
});
```

```
<html>
<head>
<style>
div {background-color:#bca; width:100px;
      border:1px solid green;}
</style>
<script src="jquery.js"
  type="text/javascript"> </script>
<script>.....</script>
</head>
<body>
  <button id="go">&raquo; Run</button>

<div id="block">Hello!</div>
```


Example with relative movements

[jqmove.htm](#)



```
<script>
$( "#right" ).click(function() {
    $( ".block" ).animate({ "left": "+=50px" },
        "slow" );
});

$( "#left" ).click(function() {
    $( ".block" ).animate({ "left": "-=50px" },
        "swing" );
});

</script>
```

```
<html><head>
  <style>
div {position:absolute;
      background-color:#abc;
      left:50px;width:90px;height:90px;
      margin:5px;}
</style>
<script src="jquery.js"></script>
<script>.....</script>
</head>
<body>
  <button id="left">&laquo;</button>
  <button id="right">&raquo;</button>
<div class="block"></div>
```

Sequence of animations

jqblock.htm



```
<script type="text/javascript">
$(document).ready(function() {
    $("button").click(function() {
        $("div").animate({height:300,width:300},
                           "slow");
        $("div").animate({width:100}, "slow");
        $("div").animate({height:100}, "slow");
        $("div").animate({width:300,height:300},
                           "slow");
        $("div").animate({width:100,height:100},
                           "slow");
    });
});
</script>
```

```
<html>
<head>
<script type="text/javascript"
  src="jquery.js"></script>
<script type="text/javascript"> .....</script>
</head>
<body>
<button>Start Animation</button>
<br /><br />
<div
  style="background:#98bf21;height:100px;width:100px;
  position:relative">
</div>
</body>
</html>
```

Changing HTML content

❑ **html** (*string*)

- ❖ Replace the content of the selected HTML element

❑ **append** (*string*)

- ❖ Append the string to the content of the selected HTML element

❑ **prepend** (*string*)

- ❖ Add the string before the content of the selected HTML element

❑ **after** (*string*)

- ❖ Add the string after (outside) the selected HTML element

❑ **before** (*string*)

- ❖ Add the string before (outside) the selected HTML element

Example of text manipulation

jqtext.htm



```
<script type="text/javascript">
$(document).ready(function() {
    $("#after").click(function() {
        $("#div").after("Effect named
after<br>"); })
    $("#prepend").click(function() {
        $("#div").prepend("Effect named
prepend<br>"); })
    $("#html").click(function() {
        $("#div").html("New text<br>"); })
});
</script>
```

```
<html>
<head>
<script type="text/javascript"
  src="jquery.js"></script>
<script type="text/javascript">.....</script>
</head>
<body>
<div
  style="background:#98bf21;height:300px;width:300px;
  position:relative">
Testo di partenza
</div>
<button id=after> AFTER</button>
<button id=prepend> PREPEND </button>
<button id=html> HTML </button>
</body>
</html>
```

Manipulating CSS

❑ `css({css attributes})`

❖ Assign new values to the listed CSS attributes

❑ `css(attribute[, value])`

❖ With *attribute* only, it returns the attribute value

❖ With both parameters, assign the value to the attribute

❑ `height(value) width(value)`

❖ Change the height or width of the selected element

Example with CSS

[jqcss.htm](#)



```
<script type="text/javascript">
$(document).ready(function() {
    $("#para").click(function() {
        if($("#p").css("background-color")=="rgb(255, 255, 0)")
            $("#p").css("background-color","rgb(0, 255, 0)")
        else
            $("#p").css("background-color","rgb(255, 255, 0)");
    })
    $("#mag").click(function() {
        $("#div").height("+=100");
        $("#div").width("+=100");
    })
    $("#shr").click(function() {
        $("#div").height("-=100");
        $("#div").width("-=100");
    })
});
</script>
```

```
<html>
<head>
<script type="text/javascript"
  src="jquery.js"></script>
<script type="text/javascript"> .....</script>
</head>
<body>
<div
  style="background:#98bf21;height:300px;width:300px;
    position:relative">
<p>Text where we want to change background</p>
</div>
<button id=para> CHANGE</button><br>
<button id=mag> MAGNIFY</button>
<button id=shr> SHRINK </button>
</body>
</html>
```