

jQuery

Web Programming Project / Meija
Lohiniva, OAMK 2022





Question 1: jQuery

- ❓ Have you heard about jQuery?
- 👋 Hand up if you have

jQuery – What?

- You don't have to write all the code yourself, there are libraries available, which one can utilize.
- In JavaScript, for years, the most popular library was jQuery.
 - Nowadays frameworks like React, AngularJS, and Vue.js have superseded jQuery.
- jQuery simplifies coding;
 - Querying elements and manipulating them is much easier.
 - Has cool effects and animations which are easy to use.
 - Cross-browser and CSS3 –compliant.
 - Is open source and has tons off add-ins and extras.



*No point
reinventing the
wheel!*



jQuery – Why?

- *Easy to learn*
- *Easy to extend*
- *Lightweight*
- *Active developer community*
- *CSS-like syntax*
- *Encapsulated*
- *Popular: Used by Microsoft, Google, Netflix...*



jQuery – Why?

Because this was pretty bad.

```
<a href="/something" id="myLink"
  onclick="doSomething()">Click Me</a>
```

This was a little better.

```
if (el.addEventListener){ // Mozilla
  el.addEventListener('click', doSomething, false);
} else if (el.attachEvent){ // IE
  el.attachEvent('onclick', doSomething);
}
```

What a relief.

```
$("#myLink").click(doSomething);
```

```
1 var d = document.getElementsByClassName("goodbye");
2 var i;
3 for (i = 0; i < d.length; i++) {
4   d[i].className = d[i].className + " selected";
5 }
```

Because this wasn't much fun.

```
function doAjax() {
  var xmlhttp;
  if (window.XMLHttpRequest) {
    xmlhttp=new XMLHttpRequest();
  } else { // Support older version of IE
    xmlhttp=new ActiveXObject("Microsoft.XMLHTTP");
  }
  xmlhttp.onreadystatechange=function() {
    if (xmlhttp.readyState==4 && xmlhttp.status==200) {
      document.getElementById("theDiv").innerHTML=xmlhttp.responseText;
    }
  }
  xmlhttp.open("GET","shiny.html",true); xmlhttp.send();
}
```

But this is cake.

```
$("#theDiv").load("shiny.html");
```

```
1 $(".goodbye").addClass( "selected" );
```



But Isn't jQuery Dying?

- The popularity of using jQuery on new projects has dropped in recent years.
 - Nature of web development has changed → the need for JavaScript has changed.
 - New JS Frameworks published all the time.
 - New features have been added to native JavaScript.
- jQuery is still good for small projects.
- Maintenance for old jQuery pages is still needed.
 - Important to be able to read jQuery and update it.
- Wordpress, Bootstrap, AngularJS use jQuery.

jQuery is used by
77.3% of all the
websites
(<https://w3techs.com/>)



Setting up

- In order to use jQuery JavaScript library, we need to include it in our HTML –page.
- There are two ways to do this:
 1. Using a CDN (Content delivery network)
 - Preferred way: no need to download files
 2. Using a local file
- Go to <https://jquery.com/download/> to choose the version you'd like.

To have jQuery intellisense in VSCode:
`npm i --save @types/jquery`

..and you're done!



Selectors in jQuery

- jQuery looks a bit different, most of the lines begin with a \$ - sign.

Selecting Elements by ID

```
1 | $( "#myId" ); // Note IDs must be unique per page.
```

Selecting Elements by Class Name

```
1 | $( ".myClass" );
```

Selecting Elements by Attribute

```
1 | $( "input[name='first_name']" ); // Beware, this can be very slow in older browsers
```

Selecting Elements by Compound CSS Selector

```
1 | $( "#contents ul.people li" );
```



Selectors in jQuery

- jQuery offers pseudo-selectors for more complicated queries

Pseudo-Selectors

```
1  $( "a.external:first" );
2  $( "tr:odd" );
3
4  // Select all input-like elements in a form (more on this below).
5  $( "#myForm :input" );
6  $( "div:visible" );
7
8  // All except the first three divs.
9  $( "div:gt(2)" );
10
11 // All currently animated divs.
12 $( "div:animated" );
```



Editing Content

- Editing the contents of an element.

```
$('#heading1').html("Changed inner HTML");
```

- Adding classes

```
$('#heading1').addClass("green");
```

New Elements in jQuery

- Creating new elements

```
// Create a new p element with an HTML string.  
$("<p>Lorem ipsum dolor sit amet</p>");
```

- Adding newly created elements in the DOM

```
// Add created element into DOM  
let myNewPElement = $("<p>Lorem ipsum dolor sit amet</p>");  
myNewPElement.appendTo("body");  
// This will remove the previously added element  
myNewPElement.insertAfter("#heading1");  
// This will clone the element  
myNewPElement.clone().insertAfter("#heading1");
```



Events in jQuery

- Adding events

```
$('#heading1').on("click", function() {  
    myNewPElement.html($('#heading1').html() + " was clicked.");  
});
```



Learning Resources

- jQuery has an extensive interactive learning platform with videos and slides available
- You can try it out at: try.jquery.com
- Complete jQuery documentation can be found at: api.jquery.com



Other jQuery projects

- jQuery for Mobile:
Query Mobile is a HTML5-based user interface system designed to make responsive web sites and apps that are accessible on all smartphone, tablet and desktop devices.
- jQuery UI
Query UI is a curated set of user interface interactions, effects, widgets, and themes built on top of the jQuery JavaScript Library. Whether you're building highly interactive web applications, or you just need to add a date picker to a form control, jQuery UI is the perfect choice.





Group Work

1. Go to your breakout room.
2. Book a weekly meeting with the teacher.
3. Continue working on the project.

Teacher will visit groups.

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