

CMPT 165

INTRODUCTION TO THE INTERNET AND THE WORLD WIDE WEB

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UNIT 4: INTRO TO JAVASCRIPT

TOPICS

1. Programming and Web Pages
2. JavaScript Basics
3. Variables and Functions
4. The jQuery Library
5. Working with jQuery
6. Events and Behaviour
7. Why doesn't my code work?

LIBRARIES IN PROGRAMMING

JavaScript is full-featured all by itself
but there are many tasks for which a lot needs to be
done and are not in the *core* language

COMMON ATTRIBUTE OF PROGRAMMING LANGUAGES

the language itself lets programmers solve problems,
but as the language is used, it becomes clear that
some tasks must be done often

it would be inefficient for every programmer, or even each project/company to solve these problems separately !!!

developers often publish their solutions to frequently-encountered problems in *code libraries* (or just libraries)

LINKING jQuery

immediately upon importing `jquery-3.2.1.js`, the variable `jQuery` will be accessible!

```
<head>
  <meta charset="UTF-8" />
  <title>Page with a style sheet</title>
  <script src="http://cmpt165.csil.sfu.ca/
              js/jquery-3.2.1.js" />
</head>
```

let's take a look at an HTML page linked to `jquery-3.2.1.js` containing an `alert` function call [here](#)

LET'S GET STARTED WITH jQuery

```
setup = function() {  
    all_paragraphs = jQuery('p')  
    all_paragraphs.click(say_hello)  
}  
jquery_doc = jQuery(document)  
jquery_doc.ready(setup)
```

The string "p" given to the *jQuery function* is a selector (or *jQuery selector* to be more specific)

jQuery SELECTORS

designed to work like CSS selectors
because most developers already know
how to use CSS selectors

jQuery SELECTORS VS. CSS SELECTORS

There are some differences between CSS selectors and jQuery selectors but **for now** you can safely assume they are the same

* The differences are mostly that jQuery extends things so you can specify things in jQuery that won't work in CSS, for more details look at [here](#)

After calling the `jQuery` selector, what it gives back is a `jQuery` object

MODIFYING THE PAGE EXAMPLE

```
p_click = function() {
    jQuery('#changeme').html('Somebody clicked me.')
}
h1_hover = function() {
    jQuery('#changeme').html('Mouse <em>over</em> the
    &lt;h1&gt;.')
}
setup = function() {
    jQuery('#changeme').click(p_click)
    jQuery('h1').mouseover(h1_hover)
}
jQuery(document).ready(setup)
```

* To try this code look at [here](#)

EVENTS

An *event* in HTML is triggered by certain things that the user does, or that happens in the browser, lets look at some event categories:

- Mouse Events Category
- Keyboard Events Category
- Browser Events Category
- Document Loading Functions Category

* [here](#) we can see how to attach an event handler in JavaScript code if not using `jQuery` event attaching mechanism

* [here](#) you can find a reference to the *Event Object* descriptions

Any Questions?