

Lab 2

JavaScript Basics

CSCI2720 Building Web Applications

Agenda

- Using the console
 - Simple arithmetic
 - Arrays
 - Arrow functions
- A simple page with scripts
- Events

Using the console

- For consistency, we will use Google Chrome for our development use
- Learn to start the console in Developer Tools
 - Windows: *Ctrl+Shift+J*
 - Mac: *Command+Option+J*
 - Check this out:
<https://developers.google.com/web/tools/chrome-devtools/shortcuts>
- To test JS code, you can run directly in this console, or output debug messages with **console.log(...)**

Task 1.

Simple
arithmetic

- Try this code in the console

```
{  
  let x = prompt("What is your age?");  
  let y = new Date().getFullYear();  
  let z = y - x;  
  alert("I guess you were born in "+z);  
}
```

- Can you make this program better by judging about the date too?

- You may find this useful:

https://www.w3schools.com/js/js_dates.asp

Task 2.

Arrays

- Given this array:
`let a = ["red", "pink", "green"];`
- Using `.splice()`, delete "pink" and add "orange" and "yellow"
- Ask the user for one extra color name and store it at the end of the array
- How can you sort the array and store results in another variable `b`?
- Print the array using a `for...of` loop, using `document.write()` and `
`

Task 3.

Arrow functions

- A simple arrow function looks like this:
`let hello = () => alert("Hello!");`
- Convert the following function `check()` into an arrow function of one line:

```
function check(year) {  
  if (year>3)  
    return true;  
  else  
    return false;  
}
```
- Consider this array:
`let student = [1,4,3,5,2,1,4,3];`
- How can your new function be used with the array function `.filter()` to output only qualifying elements?

Task 4.

A simple page with scripts

- For most of the case, you use JS with HTML/CSS
- codepen.io is one easy platform for trying and development
 - You may try using plain files and `<script>` too
- Now, create a new codepen and set up a simple HTML page containing:
 - `h3`
 - `p`
 - `input type=text`
 - `button type=button`

Task 4.

A simple
page with
scripts

- Give a good **id** for each HTML element
 - Style them in the CSS section
- In the JS section, see if you can obtain the element using `document.getElementById()` or `document.querySelector()`
 - Try that by outputting `.innerHTML` of the selected element to console
 - Codepen console can be found in the link at the page bottom
 - After editing some code, the page (and script) can be reloaded if you click in the preview area



Task 4. Events

- Still using the same page, set up this *event*:
 1. If the user clicks on the button
 2. Copy the contents from the input box
 3. To the paragraph
 4. Then change the paragraph background color to yellow



Submission

- No submission is needed for labs
- What you have done for this lab may be useful for your assignment(s)
- **Please keep your own file safely**