



香港中文大學
The Chinese University of Hong Kong

CSCI2720 2023-24 Term 1: Building Web Applications

Lab 2: JavaScript Basics

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Outline

- 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: <https://developer.chrome.com/docs/devtools/>
- 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”.
 - How? See: https://www.w3schools.com/jsref/jsref_splice.asp
- 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?
- Print the array using a *for...of* loop, using **document.write()** and **
**

Task 3. Arrow functions

- A simple arrow function look 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;  
}
```

Task 4. A simple page with scripts

- For most of the case, you use JS with HTML/CSS.
- <https://codepen.io/> is one easy platform for trying and developing:
 - 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 5. 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 maybe useful for your assignments and project
- Please keep your own file safely