**Day 1 Lab Assignments**

* Alert the sum of 2 numbers, and pass the sum as an argument to alert function (slef-invoking function).
* Try arrow function:
* With Array.filter() function, to return the odd numbers from an array.
* With array.forech() to print the even values.
* With array.map() to print the square of each element.
* “An arrow function does not create its own this context, unlike the normal literal function.” – Explain with demo.
* Try for…in, for…of and .foreach() with an array.
* What’re the differences between for…in, for…of and .foreach().
* Try spread operator with any array of your implementation.
* Create a student class that contains: name, University, faculty, and final grade.
* print student data in the console using template literals in this format:

{Std\_name} is a student in faculty of {fac\_name} in university {Uni\_name}

And his final grad is {grad}.

* Make a set that holds student names.
* Try to add repeated names, will the set accept it?
* Print the set values using spread operator and using for…of.
* Make a page that displays a tip for user every 3 seconds, as the following:
* Create a generator that has an array of 10 tips, and loops on the array and each time returns the next tip.
* Make a button that loop on the generator and display all tips [Using for…of]
* Make another button that uses setInterval (with arrow function) to display a tip every 3 seconds from the generator.[use next()].
* Search for at least 3 new features in ES.next (not explained in the lecture) and explain them using a demo

**Bonus:**

* Make a Map and use the key as the day name (Saturday, Sunday,…..), and the values is a Tip of each day, and on page load make a function that loops on gets the day name of the current day, and loops on the generator to (use: for … of) to get the tip of the current day (for example: on Saturday displays the Saturday’s tip, and so on), and alert it.
* Search for other new ESS6, 7, 8 features that weren’t explained in the lecture.

(Useful resources: <https://www.cronj.com/blog/javascript-es7-es8-new-features>)

* Create new custom object Queue, its constructor takes maxSize, and has InQueue, DeQueue.
* You’ll need to define local variable toq (private) to define the last place used in the queue, and another local variable as array that will hold the elements.
* Create privileged method (getCurrentSize) that returns the current size of the queue.
* Create internal function “getQueueElements” that prints queue elements, and returns the size of queue, and create public function “viewQueue” to call it.
* Create new public method “returnQueue” that returns “getQueueElements” inner function as function expression (literal). The inner function should return an array of elements.
* Create an object from queue, and use inQueue and dequeuer functions to add some elements
* Then use returnQueue() function that will return a reference to function, and put it in a variable. Then call that variable (which refers to function), and call it, to return the array of elements.
* Can the inner literal function access the array local variable of the outer function? Why?
* What’s closure?
* Use prototype to add new function to queue “isEmpty()” that return Boolean.
* Implement linked list using ES6 [create class node, and Class linkedList, to simulate linked list].

**<Script>document.write(“Thank YOU”) </Script>**