

Java Script Basics (Topic 1)

- Basic operation
 - To run codes in browser: Right click browser-click inspect-click on console.
 - Holding shift key and right click can open PowerShell window. Type in node .\demo.js. It will print the result of codes.
- Notes on codes
 - console.log() means print()
 - Using key word "let" can change variable. Key word "const" can be used for unchangeable variables.
 - und means undefined. it use to define a variable that you don't know in that moment.
 - "null" is used to define that variable doesn't exist.
 - \${} can be put any statement in it. For example, 'Hello \${x+3}' will print results together.
 - Function declaration:
 - Function twiceA(a) {} You can give a function a name and you can set up how it's going to be evaluated and you can add some variables to a function. For example, function twice(a,b,c,d,e). You can put the print on top of the function or anywhere else except in parentheses.
 - Function expression:
 - const twiceB = function twiceB(a){} The difference between functions is that you can't put print on top of the function because the program needs to set twiceB to be const before it sets the function.
 - When you print just print function name, like console.log(twiceB), it will print undefined because it just print the definition of function. Therefore, you will need to pull a () in (twiceB) to give a variable for it.
 - Function expressions are very similar to function statements, and the syntax is basically the same. The main difference is that the function expression can create an anonymous function by omitting the function name.
 - Math.random:
 - The function returns a floating point pseudo-random number in the range from 0 to less than 1, that is, up from 0 (inclusive) but not including 1 (excluding 1), which you can then scale to the desired range. Realize the initial seed selection to random number generation algorithm; It cannot be selected or reset by the user. Also can pick up some variables from function when we need.
 - Arrow function
 - Arrow function expressions have a much cleaner syntax than function expressions and don't have their own this,arguments,super, or new.target.
 - The arrow function expression is more useful where anonymous functions are needed, and it cannot be used as a constructor.
 - arrow function also can use to regular statement.
 - Array: MDN Web Dccs
 - A data structure consisting of a collection of elements of the same type, allocated a contiguous block of memory for storage. The index of an element can be used to calculate the corresponding storage address of the element. The simplest type of data structure is a one-dimensional array.

- `array.length` can be used to help us see what the length of array is, and it can also be used in strings
- `array[#]` can give us a number for the exact location from array.
- When we have a very long array, we can set several variables in the function, and we can also use rest as the ending, so that we can print out all the numbers
`Math.max()` can be used to find maximum from array
- `Math.max(...array)`: If we need to find the maximum value this way, we need to put three decimal points in parentheses to get the program running. When writing a Max function, we can use the for loop to add the number of index we are looking for.
- `()`.`toString` can be used to make any variables to become string.
- Function
 - A function can be inside of another function. We can use a value name as a function caller and assign a parameter value to it. It can be used to call outside of function. If we want to call function that is inside of function, we give a parameter value to function caller that we just created. It will call inside of function.
 - If we want to create not function. we need to create a function first. It will deny other function if we use it. So, we use example about odd or even checker. we create not function for deny another function. Then, we create even function to check it is even or not. We create another function for odd checker. We just do like `not(is_even)`. It we return any else except even.