Workshop 1 – Setting up Nodejs

This workshop is worth 2.5%
You must demonstrate your completed workshop to your tutor in your lab to receive the marks.

In this workshop you will set up your Node.js environment through your favourite IDE and run some sample projects.

Task 1 – Using Node and NPM

Using your own laptop:

- Follow the lecture slides and install Node.js

Using a lab Desktop:

- Node.js and NPM is already installed on the lab computers.

When Node.js is installed create your week 1 folder and open that folder in your IDE. (Visual Studio Code) In your terminal or command prompt, initialise your Node.js project with npm init. This will generate a package.json file.

Call your project helloworld. After setting the initial package, create an index.js file and write to the console log outputting “Hello World, Node.js!”

Task 2 – Working with Arrays

Create and indexed array of 5 numbers
Output the array to the console.

Add a number to the end of the array (push)
Output the array to the console

Add a number to the beginning of the array (unshift)
Output the array to the console

Add an item after the 3rd item in the array (splice)
Output the array to the console

Remove the last number from the array (pop)

Output the array to the console

Remove the 2nd number from the array (splice)
Output the array to the console

Edit the 5th element in the array to have a value of 100
Output the array to the console

Sort the array in ascending order (smallest to biggest) (sort)
Output the array to the console

Task 3 – Working with JSON

Create a javascript object with a key of people and a value that is an array of 3 objects each with a firstname and lastname.

Output the object to the console

Convert that object to a JSON string (stingify)
Output the string to the console.

Convert the JSON string back into a javascript object (parse)
Output the object to the console.

Task 4 – NPM packages

Let's play around with some other npm packages.

https://www.npmjs.com/package/array-add-num

Follow the installation and usage documentation and use this package in your index.js file.

Output the sum of numbers in the following array [5,4,3,8]

Output should look like "Sum of Array is ??"

Output to the console the value of the array-add-num dependency that you see in your package.json file.

Task 5 – Arrow Functions

Convert the following declarative function to a function expression and then convert the function expression to use arrow syntax. Demonstrate each version in use by outputting a result to the console log for each function.

```
function multiplyNums(x, y, z){

        return “new number is “ + x * y * z;
}
```