Lab 1 – JavaScript Basics

Use any JavaScript editor (online/offline) to do the tasks.

There are several online JS editors available. You can work with anyone. A few of them are:

https://repl.it/languages/nodejs

https://www.mycompiler.io/new/nodejs

https://www.jdoodle.com/execute-nodejs-online/

https://ideone.com/

OR

Install **Nodejs** (https://nodejs.org/en/download/) and **Visual Studio Code** (https://code.visualstudio.com/download).

You can check if Nodejs is already installed or not through the command line:

> node -v

It will return the Nodejs version

Task #1

1. Get used to the editor and run the first JS program.
2. Write a biography about yourself and print it on the console.
3. use 'var' to store your biography in variables
4. convert into the object of key-value pairs e.g. {name: 'Some Name', age: 34} and print biography on console (do not print the entire object as it is)
5. find the length of the object as well
6. Check if your age is greater than 20, print “Mature”, otherwise print “Teenager”.
7. Convert the program to multiple student data. For this, you need to convert the JS object to a JSON object and create a JSON array of objects to store different student biography.

Task #2

Get used to the JS loops and let keyword

By listing the first six prime numbers: 2, 3, 5, 7, 11, and 13, we can see that the prime after 11 is 13. You are given a prime Number. Print the prime number after the given prime number.

Task #3

Find the sum of all the multiples of x or y below z.

If we list all the natural numbers below 10 that are multiples of 3 or 5, we get 3, 5, 6, and 9. The sum of these multiples is 23. (3+5+6+9)

Find the sum of all the multiples of x or y below z.

Task #4

Create following functions to perform Mathematical Operations: Math.round()

For Example:

`round()`

`round(4.7)`

`round(4.4)`

`round(4.7, 4.4)` `//leave this method for now`

Task #5

Implement following methods just like `round()` method. These methods would be wrap around Math JS Functions:

- abs
- ceil
- floor

Your task is to try and pass different data types to the above functions and check their outputs.

Example Inputs for abs method:

- "-1"
- -2
- null
- ""
- [9]
- []
- [5,9]
- {}
- "YourName"
- No argument

Example Inputs for ceil & floor method:

- -1.09
- -5
- -0.54
- -0
- 0
- 0.7
- 3
- 1.006

Task #6 – Brain Storming

Think of an idea where you can use var, let and const (all three) in a single useful example. You can take the help of the internet, but do not copy and paste the code.

Submission Guide: Submit to MS teams by 05:30 PM. No late submissions are allowed.