

## CSU4400 Internet Applications

Prof. Donal O'Mahony

### Laboratory 1 – Simple Javascript & Promises

The objective of this laboratory session is to get students started writing simple Javascript programs in both Node.JS and Browser environments. The 2<sup>nd</sup> part of the exercise will involve the simple use of the “promise” construct.

#### Part 1 – Using the Tools in Server (Node.js) and Client (Google Chrome) Environments

1. Fire up the preferred Javascript Editor – Microsoft VS-Code. Write a simple program that counts down from 25 to 0 – printing out the countdown clock as it goes using console.log ( 25..20..15 etc)
2. Run the program standalone using Node. Js – bring up a windows console and run “node”
3. Use the Debug feature of VS-Code to set a breakpoint in your code and stop and inspect some variables
4. Using your working Node.js code as a template – write a 2<sup>nd</sup> program to do the same thing by targeting running in a web browser. Save the code in a .html file with Javascript enclosed in <script> tags
5. Using Google Chrome Developers tools – load the page into the browser – invoke...More Tools...Developer Tools
6. Inspect the code – set a breakpoint in the Chrome Debugger; inspect a few variables
7. Modify the browser code so that it writes the result (35..30..15 )to the webpage via the DOM

#### Part 2 – Experimenting with Promises

1. Modify the code you produced in part 1 to introduce a space of 5 seconds in between the countdown digits (25..  
<wait for 5 seconds>..20..  
<wait for 5 seconds> - start this a console.log and move to a Browser Compatible version
2. Modify the above code – browser version – so that when the countdown reaches 0 – the user is prompted “Do you want to go again” – use the built-in ‘confirm’ function to prompt for this

#### Final Act:

In future exercises, you will need to access Cloud Computing resources and the Amazon Web Services (AWS) console. We finance this usage with donations of credit from Amazon under their Educate program. Students should register (WITH their @tcd.ie email address) as students of Trinity College Dublin.

This can be done by clicking “Join AWS Educate” on <https://awseducate.com>

Join as a “Student” and “University of Dublin, Trinity College”

Enter your @tcd.ie email address – you will be sent an email verification

As a student of an AWSEdulate registered institution (TCD is), you should be awarded an extra amount of credit annually until your graduation date.

Note that the credit you are given should be used carefully – TCD have no control over this credit and if you use it all up, you will need to appeal to AWS to give you more

Please attempt this registration before you leave the lab.