



Lab 4: JavaScript & Promises

Introduction

The objective of this laboratory session is to get students started writing simple JavaScript programs in both Node.JS and Browser environments. The 2nd 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. Open the preferred JavaScript Editor – Microsoft VS-Code. Write a simple JavaScript 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 2nd 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.