**Node.js - Lab 1 - Running Node**

We install Node using the double click installer from [nodejs.org](http://nodejs.org/), or using a package manager like brew, apt-get or aptitude.

## Installation

First install Node. If you have node already you can skip this step. Type node –version into a console to find out if you have it.

If not, go on and install it.

### **Option 1 - install from the website**

Visit [nodejs.org](http://nodejs.org/) and download the installer for your platform.

### **Option 2 - install via brew (OSX only)**

If you're on a Macintosh, you can install via brew. Substitute brew for aptitude, or another package manager if you prefer a different flavour of Linux.

brew install nodejs

You may need to restart your console.

Verify node is working by typing node –version into a console. If you see a version number you have succeeded. You can type any JavaScript here.

## The Node console

You can open up a NodeJS console from the command line with the node command, like so:

node

If all is well you should drop into a console where you can type arbitrary JavaScript commands. You can do maths, create functions, assign variables, everything you can do with JavaScript.

## Exercise - Node Console

Let's try out the Node console and execute a command. Drop into the node console by typing node. Now try the following:

1. Add 10 + 10.
2. Use console.log('hello world') to output hello world.
3. Find out how many seconds there are in a year. How many seconds there are in a century. I don't know the answer to this.

## Running a program

You can also run saved programs using the node command. Node files have a .js (JavaScript) suffix, like this: program.js.

We can execute our JavaScript program using node like this:

node program.js

## Exercise - Executing a program

You can make Node output to the terminal using console.log(). Create a file called app.js and add a line that uses console.log() to tell Node write "Hello World" to the console.

Run your program from the console using the node command.

You should see hello world.

## Further exercise

You can find the current time using:

new Date();

Create a node program that tells you the current time and date.

You can get a date object for a specific date using:

new Date(2022,11,25);

You can subtract one date object from another to get the number of milliseconds between them.

dateOne - dateTwo;

Make a timeTillChristmas program that tells you how many seconds there are until Christmas.

Optionally make it tell you how many days there are.