**PLANNING A COMPLEX ALGORITHM**

**DESIGN THE ROUTINE**

CHECK PREREQUISITES

Define the problem

*We want to add tabular data in html generated table objects*

Information the routine will hide

*All previously calculated routines will remain the same and work in the background. Country colour values will be hidden in classes and arrays.*

Inputs to the routine

*-*

Outputs from the routine

*Shows all data in a structured and styled table with headers.*

Pre-conditions

*All Data is calculated and inputted. The Information is already set up into their appropriate divs, and all DIVs are targetable by either class or id. New Table functions are added to TabularData.js*

Post-conditions

*A table is Generated with all data and appropriate headers.*

Name the Routine

*Dynamic Table Generation*

Decide how to test the routine

*If the routine runs correctly, we should be able to see a visual table being produced in each section. This is a visual check.*

Research functionality available in standard libraries

*The majority of this assignment is working with HTML DOM, which is readily available within JS Libraries. I will have to Learn how to dynamically generate table elements*

Think about error handling

*Generally, with this dynamic generation Physical errors are able to be identified and fixed as data will not return on the page. Otherwise all errors will be caught by the console. Also some elements will not change if an error occurs halfway through the function execution.*

Think about efficiency

*Looping will be used to generate the majority of the data. This approach will avoid the Hard Coding of every single result.*

Research algorithms & data types

*Dom Elements have a different syntax of assigning variables and attributes than regular html. Assigning them to a variable then using functions to assign these attributes seems to be the simplest way of doing it.*

**WRITE PSEUDOCODE**

1. Think about the data
2. Check the pseudocode
3. Try ideas in pseudocode

**CODE THE ROUTINE**

1. Write the declaration
2. Turn pseudocode into comments
3. Fill in code below comments
4. Check if code can be factored

**CHECK THE CODE**

1. Mentally check for errors
2. Step through in Debugger
3. Test the code
4. Remove errors in the code
5. Clean up