**PLANNING A COMPLEX ALGORITHM**

**DESIGN THE ROUTINE**

CHECK PREREQUISITES

Define the problem

*Add blank lines between elements*

Information the routine will hide

*What sort of blank line?*

Inputs to the routine

*None! ?number of blank lines?*

Outputs from the routine

*none*

Pre-conditions

*Document.body exists*

Post-conditions

*There are new blank line elements at the end of the document.body*

Name the Routine

*makeNewLine*

Decide how to test the routine

*Element blank element 2nd element is down a line*

Research functionality available in standard libraries

[*https://www.w3schools.com/tags/tag\_br.asp*](https://www.w3schools.com/tags/tag_br.asp)[*https://developer.mozilla.org/en/docs/Web/HTML/Element/br*](https://developer.mozilla.org/en/docs/Web/HTML/Element/br)

Think about error handling

*none*

Think about efficiency

*Need two elements*

Research algorithms & data types

*document.createElement* [*https://www.w3schools.com/jsref/met\_document\_createelement.asp*](https://www.w3schools.com/jsref/met_document_createelement.asp)

*document.body.appendChild*

**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