**REQUIREMENTS + POTENTIAL ADD-ONS**

* Compares cells in a specific column to see if they are the same. But reports the outcome as rows, so technically it’s checking rows in a column) (m rows = undetermined x n columns = 1)
* Should work with more than 2 duplicates (see the bottom of <https://stackoverflow.com/questions/39747132/google-script-to-find-duplicates-in-google-spreadsheet-which-occurs-more-than-2> for ideas)
* Find a way of identifying where each link’s corresponding duplicate is.
* First test with one tab/date, then with an entire spreadsheet regardless of dates/tabs
* Find a way to include a shortcut to the script. Maybe on the menu bar

**QUESTIONS**

* What if there are two courses with the same moodle link but different professors/terms/sections/etc.? Maybe after you’ve identified rows with duplicate links, you can check for similar professors/terms/sections/etc. Within those duplicate rows.
* How to convert the cells in the column to become an array? Does google app scripting have a tool/function to convert cells into an array
* how to retrieve data from a google spreadsheet column (see <https://stackoverflow.com/questions/11610045/fetch-data-from-google-spreadsheet> for more information
* Once you identify duplicates, how will you “flag” them? Maybe highlight, provide the row number, delete (if they have non-unique professors/terms/sections/etc.)

**POSSIBLE STRUCTURES**

* Binary search? Requires me to take column as an array and sort. This is slower than Linear search . Might be smart to use the array.join() when converting the entire row from an array to a string.

**FUNCTIONS**

1. Searches through a given column and clones then uses that search to find a duplicate in the clone.
2. Change the color of the duplicates cell

**RESOURCES**

This API is useful for:

* Managing the worksheets in a Google Sheets file
* Consuming the rows of a worksheet
* Managing cells in a worksheet by position

<https://developers.google.com/sheets/api/v3/#spreadsheets_api_urls_visibilities_and_projections>

*stack flow library for Google App scripting*

* <https://stackoverflow.com/questions/tagged/google-apps-script>
* https://stackoverflow.com/questions/29681550/finding-duplicates-including-format-with-script-grammar

**WHAT I LEARNED SO FAR**

A way of connecting the script to a given spreadsheet?

var currentSheet = SpreadsheetApp.getActiveSheet();

var data = currentSheet.getDataRange().getValues();

The javaScript Array join() method

* Was used in tutorial to check if a previous index in an array was a duplicate after a second iteration.
* It joins the elements of an array into a string, and returns the string.
* if(row.join() == newData[j].join()){ // this basically makes each row into a string and compares to others instead of checking 1 by 1. USE WHEN TRYING TO CHECK FOR OTHER DUPLICATES WITHIN THE DUPLICATES
* Was able to successfully identify the duplicates. It can detect more than 2 duplicates. What I did was search through the list and ask if any of the indexes are similar to one another and from there assign a color to the duplicates while leaving the non-duplicates alone.
* Some things to note: This function so far only works for one specific column that I set and only in one tab.
* **Next steps:** Give easy access to anyone using the spreadsheet by making a menu button that calls the function.