BEAVER LIBRARY OF CONGRESS SORTER

Instruction Book with Documentation

Sabin, Andrew Thomas

sabinand@oregonstate.edu, andrew.sabin@protonmail.com

Table of Contents

Please Note

The program is in beta and is subject to drastic changes in how it looks and how it functions. As of writing this I am currently a student are Oregon State University in the Post Baccalaureate Computer Science program. This software was designed to help faculty and students in sorting through excel spreadsheets and reducing frustration when looking for items at the Valley Library.

When using this program or importing the CSV **file do not delete any old spreadsheets** or **edit any of the spreadsheets that are currently being sorted through** by the program. CSV files that are created by the program might lose important data that are in the original spreadsheet so it would be preferable to keep the original copy to double check for necessary information.

Current as of this version TODOs:

Research into Tkinter for Python GUI:

Looking into using Tkinter over PySimpleGUI to save money on a graphical user interface. This will save money on getting an enterprise edition.

Find more issues and errors that might occur

If any issues occur within the error log that show up with spreadsheet sorting or if there are more bad placements, try to analyze the issues and solve them.
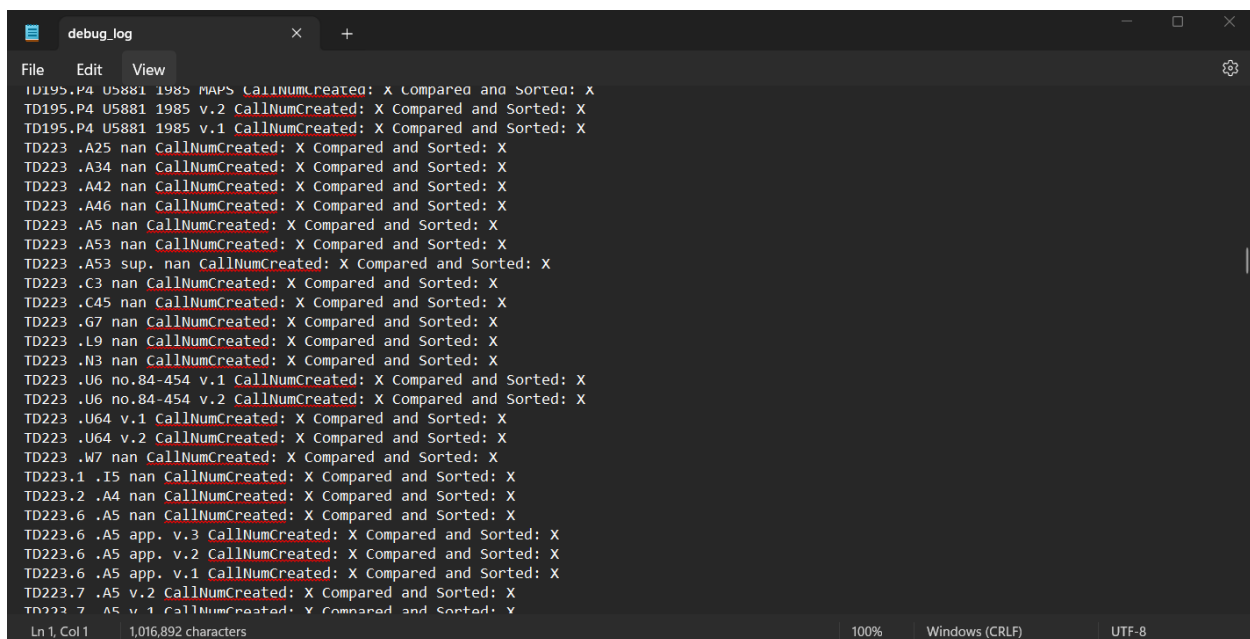
Updates:

Updated the Sorting Algorithm (0.1.2)

To make sure that the algorithm sorts the new call numbers into a faster time frame, the sorting function has been updated to use a modified binary search algorithm. Further documentation for the sorting function is described within the code.

Added a debug_log.txt file (0.1.2)

This .txt file will keep track of all the different values that the program has been able to read in and potentially compare. This will be located in the same file as where the executable program has been placed.

In case the program has crashed, look at the debug log and see which value the last one was placed into the system. If a value is missing the "CallNumCreated: X" value or the "Compared and Sorted: X" value then it might have to do with how the value has been formatted within the spreadsheet. To fix most issues with how the call number has been formatted make sure to add a space in between different value such as the first and second cutter numbers if both have a period before their entry.

Version 0.3.0

Fixed up the code to be much cleaner: using functions instead of grabbing direct values from class objects, updated the insert_space() function to allow multiple spaces within the call number values.

Version 0.5.0

Fixed up code to compare the values where different volumes, parts, numbers, etc. will now be checked for Alphabetical values that have been entered in such as "QC61 .L2 1961 v.1 **pt.9b1**" and "QC61 .L2 1961 v.1 pt.**9b2**". Also fixed up issues where volume numbers were incorrectly sorted, as well as issues where entries without any years were given year values.

Version 0.5.1

- Erroneous sorts will no longer stop the program and will be instead printed out over to a log called "error_log"

Error entry example:

```
ERROR:root:call: TC160 .U74 no.3-271 pt.2 desc:
 with
 call: TC160 .U74 no.3-271 pt.1  desc:
ERROR:root:Traceback (most recent call last):
  File "C:\Users\BeaverTech\Documents\OSU_Library_CSV_Sort\sortClassNumfunctions.py", line 838, in sort_CSVBinary
    mid_comp = all_compare(insertClassNum, mid_ClassNum)
  File "C:\Users\BeaverTech\Documents\OSU_Library_CSV_Sort\sortClassNumfunctions.py", line 651, in all_compare
    desc_comp = description_compare(insertClassNum, listClassNum)
  File "C:\Users\BeaverTech\Documents\OSU_Library_CSV_Sort\sortClassNumfunctions.py", line 460, in description_compare
    insrt_num_pt = int(remove_latter_half(insrt_number_pt.split("-", 1)[1]))
IndexError: list index out of range
```

- Fixed issues with entries that have numbers with a volume or part being missorted by volume or part instead of their number values first.
- Fixed issue where volumes with alphabetical values would be treated as number values

Version 0.5.2

- Changed how the debug_log.txt records values being created and then sorted
    - Now debug_log.txt records:
        - New Call Number object being created
        - New Call Number objects being compared with call number objects from the existing list of call numbers
        - New Call Number objects being placed into the list
- Changed what is being printed into the console
    - Now prints:
        - The current spot in the spreadsheet the program is on
        - The current call number being placed into the list
        - If the item has been placed in the list

Example of the new console output

Version 0.5.3

- Fixed the issue of year of publication not being compared after the author number have been compared.
- Fixed the error where '/' was being inserted within the number values and the comparisons between two call numbers were not being read.

Version 0.6.0

- Added a loading bar to represent how many items have been processed and sorted into the new CSV sheet
  - o Percentage represents how much has been processed so far
  - o ####/#### represents how many values have been processed so far and the amount of rows left to complete the process
  - o ##:## represents the amount of time elapsed with setting the values
  - o ####.## row/s represents the speed at which the rows are being processed at.
- Changed the User Interface with PySimpleGUI to have the appropriate school colors.
- Call numbers with index values, volume index values, number index values, part index values, and series index values will now be placed after call numbers that are lacking those values.

Example of the loading bar that will appear in the console when running the sorting process
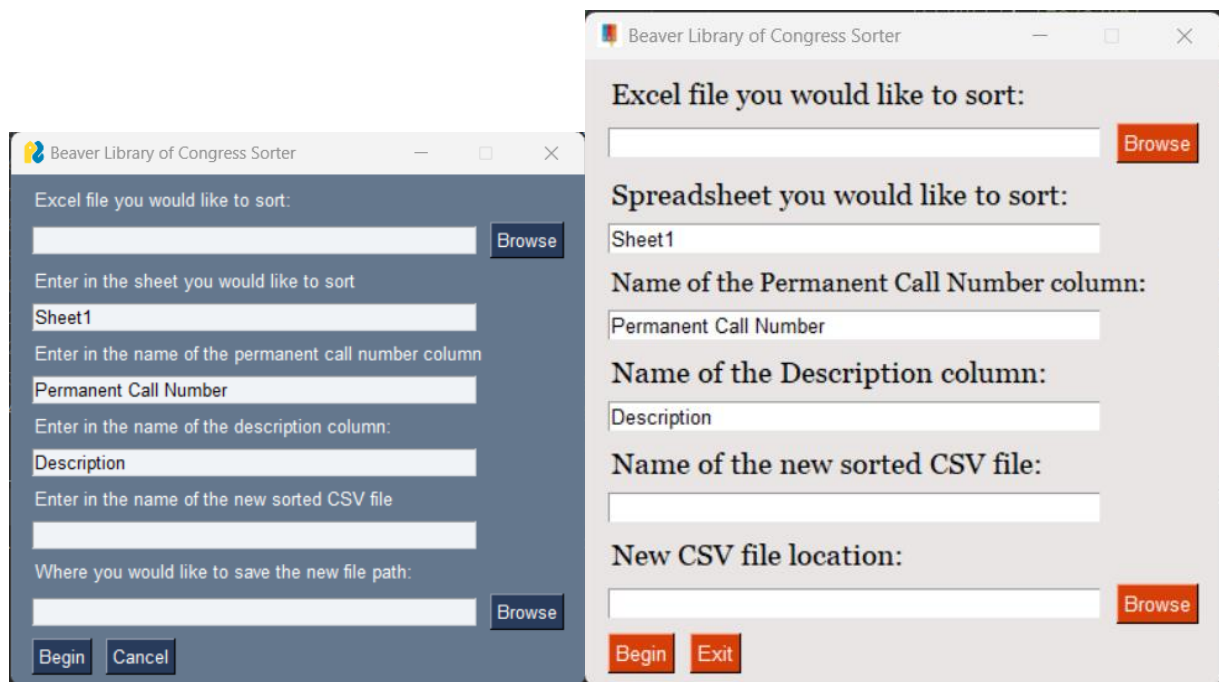
Old Interface (left) compared to the New Interface (right)

Contact Information for Comments or Concerns

If you need to contact me for help, or have any questions related to this program please send an email over to:
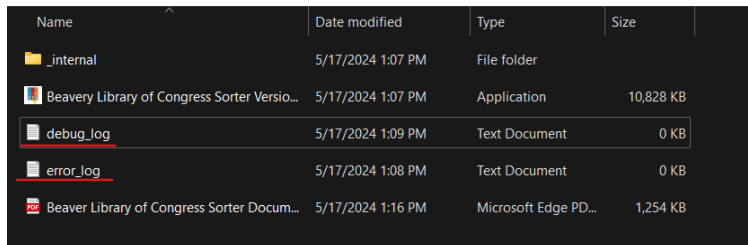
andrew.sabin@protonmail.com or sabinand@oregonstate.edu

I will do my best to respond in a timely manner. You can expect a response in one to three business days depending on how busy I am during the week.

What you should send

Please send the following for sorting or errors with running the program:

- Excel workbook or spreadsheet with the original non-sorted values
- The resulting CSV file that was created
- debug_log and error_log that are located in the executable file location

Name	Date modified	Type	Size
_internal	5/17/2024 1:07 PM	File folder	
Beavery Library of Congress Sorter Versio...	5/17/2024 1:07 PM	Application	10,828 KB
debug_log	5/17/2024 1:09 PM	Text Document	0 KB
error_log	5/17/2024 1:08 PM	Text Document	0 KB
Beaver Library of Congress Sorter Docum...	5/17/2024 1:16 PM	Microsoft Edge PD...	1,254 KB

The debug_log and error_log text files in the file location.

Please Do Not Contact Me For:

- Unrelated technical questions, technical help, or any kind of issues you might be having that are unrelated to the Beaver Library of Congress Sorter.

I will do my best to answer questions if they are related to the Beaver Library of Congress sorter. However, I cannot answer questions related to the hardware of your computer or unrelated software questions.

- Any questions regarding Microsoft Excel, or any programs outside of the Beaver Library of Congress Sorter that use spreadsheets or CSV files.

I understand how much of a headache using Microsoft products can be with how often they change where everything is in the user interface. However, as much as I wish I did, I do not possess the ability to change the Microsoft products in anyway shape or form to make them more useable for you or me.

- Issues regarding data loss with the CSV file.

I have tried to solve this issue with many different attempts with no solutions with losing the data. Instead, try to **keep a copy of the original Excel spreadsheet** that the program has read from so that any missing values can be copied from the spreadsheet onto the new CSV file or spreadsheet that was created from the CSV file.

Layout of the Program

a.) Document or File Path
- Write in the file path manually.
- Click browse to find the .xlsx file

b.) Sheet Name
- Default is set to "Sheet1"

c.) Permanent Call Number Column
- Default is set to "Permanent Call Number"

d.) Description Column
- Default is set to "Description"

e.) **New Sorted CSV Filename** *(optional)*
- Default is set to the name of the excel spreadsheet + name of the spreadsheet + _sorted

f.) **New CSV File Path** *(optional)*
- Enter in the directory path or click to find the desired CSV file path.
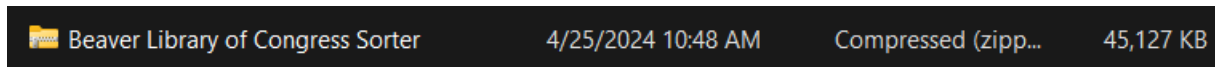
g.) Begin Button
- Begin Sorting of the Spreadsheet
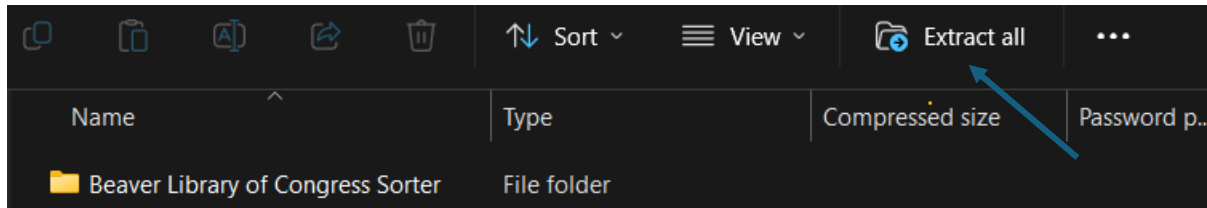
h.) Exit Button
- Exit out of the program
- Also can click on the 'x' button the top right
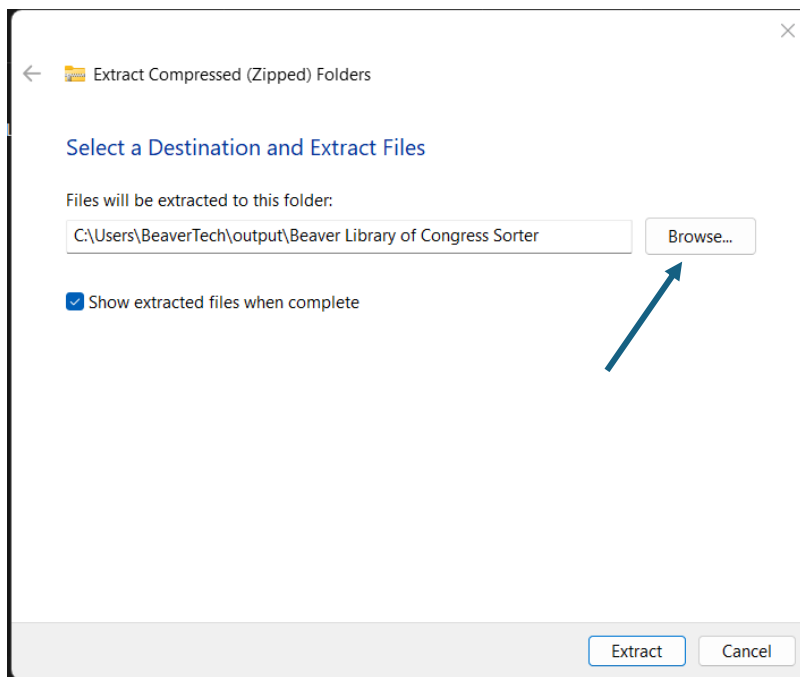
Extracting the Program

Step 1.) Open the folder that contains the .zip after downloading it from your internet browser
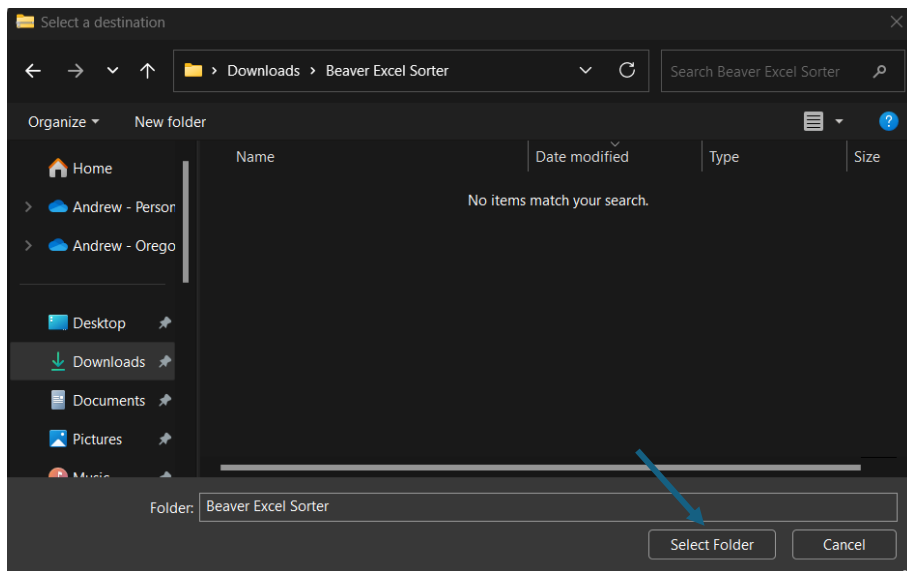

Step 2.) Double click on it to open the zip file

Step 3.) Click on the **Extract all** option

Step 4.) Click **Browse** to Find the Folder you want to save the program in

Step 5.) Click **Select Folder** Once Finding Your Desired Folder

Select a Destination and Extract Files

Files will be extracted to this folder:

C:\Users\BeaverTech\Downloads\Beaver Excel Sorter   Browse...
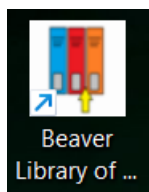
☑ Show extracted files when complete

Extract   Cancel

Step 6.) Click **Extract**

Entering in License Information

With the library of congress sorter, I have used the pysimplegui library to make sure there was a graphics user interface for the user to have and not just have to input everything through console commands. If the program requests a key for registration, there will one located in the extraction folder.

Opening the program

Double click on the program in the extracted folder or shortcut to open the program.

How to Use the Library of Congress Sorter

After double clicking on the program a console window will appear along with the User Interface
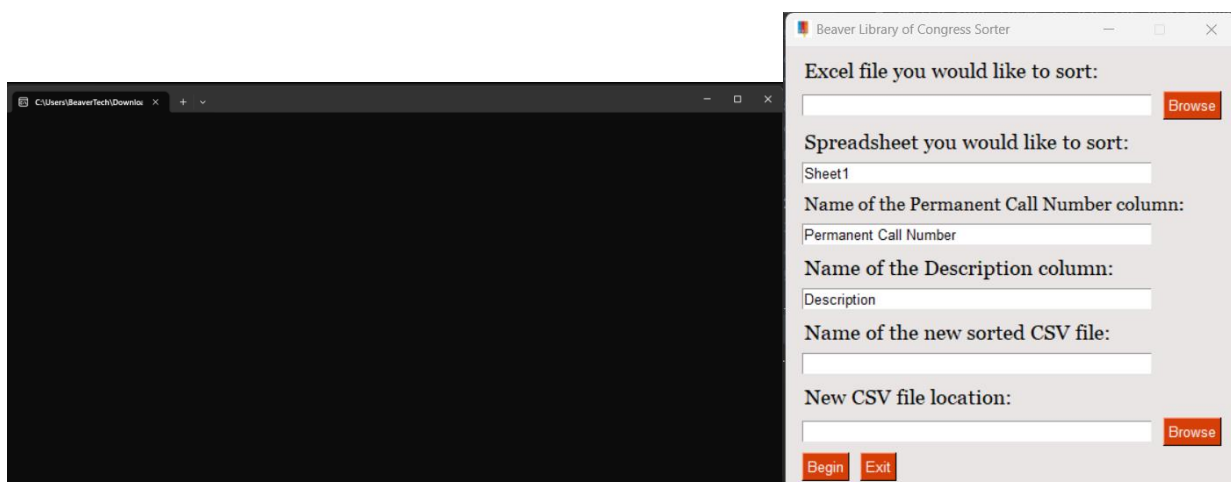

Figure 1.) Console window (left) and the Graphic User Interface (right)

Note: Do not exit out of the console window, it will close out of the program if closed.

Setting the necessary information to be sorted

Step 1.) Go to the first text box
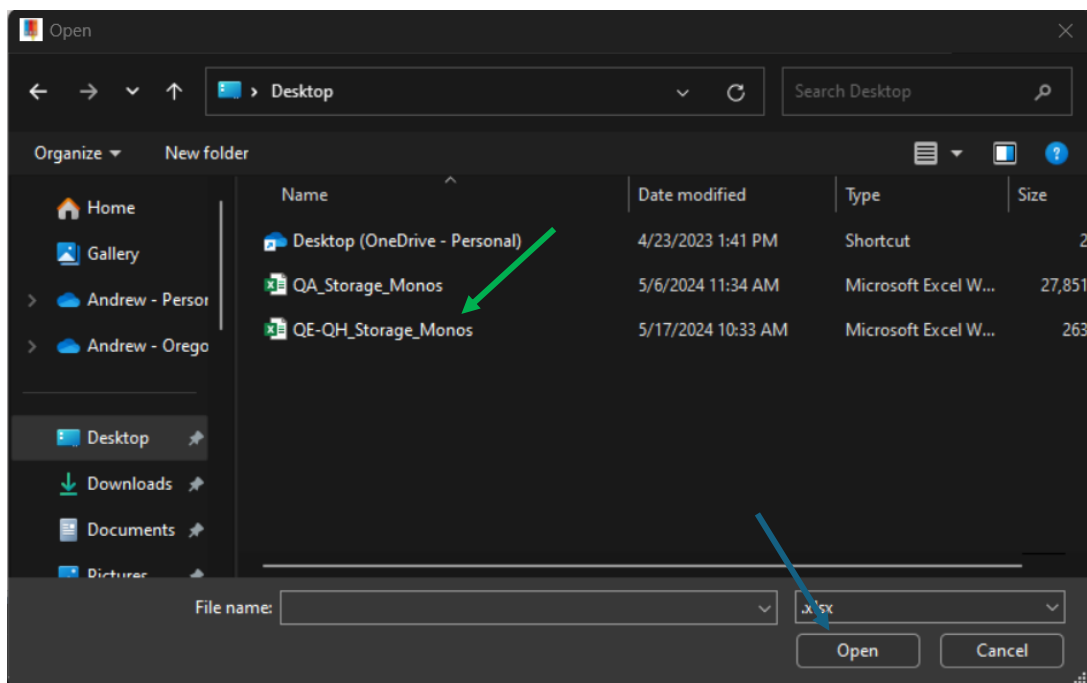
Excel file you would like to sort:

	Browse

Step 1a.) Enter in the path to the file + the name of the file

Excel file you would like to sort:

C:/Users/BeaverTech/Downloads/QE-QH_Storage_Mor	Browse

Step 1b.) Or click the **Browse** button to find the file containing the spreadsheet you would like to sort

Excel file you would like to sort:

	Browse

Step 1c.) Click on the file you want to access and then click **open** on the bottom right

Step 2.) Go to the second text box and type in the spreadsheet you want to Sort

Spreadsheet you would like to sort:

Sheet1

1332	Y	N	Y	QA279 .V34		STC
1333	Y	N	X	QA279.4 .L4		STC
1334	Y	N	X	QA28 .C6		
1335	Y	N	X	QA28 .K6		
1336	Y	N	X	QA28 .M2		
1337	Y	N	X	QA28 .M4		
1338	Y	N	X	QA28 .N5		
1339	Y	N	X	QA28 .N51		
1340	Y	N	X	QA28 .P7		v.2
1341	Y	N	X	QA28 .P7		v.1

Sheet1 | iBarcodes | +

Ready — Accessibility: Investigate

Figure 2.) On the bottom of the opened excel file sheet should be the name of the Spreadsheet

Step 3.) Go down to the next text entry box and type in the name of the Permanent Call Number column as it has been set in the excel spreadsheet.

Name of the Permanent Call Number column:

Permanent Call Number

	A	B	C	D	E	F	G
1	On Shelf Y/	Leatherbound Y/N	Storage sticker removed /covered Y/N/X	Permanent Call Number	Description	Initial	Barcode
1490	Y	N	X	QA3 .C3	ser.2 v.9	CH	120140303468
1491	Y	N	X	QA3 .C3	ser.2 v.8	CH	120140303450
1492	Y	N	X	QA3 .C3	ser.2 v.7	CH	120140303443
1493	Y	N	X	QA3 .C3	ser.2 v.6	CH	120140303435
1494	Y	N	X	QA3 .C3	ser.2 v.5	CH	120140303427
1495	Y	N	X	QA3 .C3	ser.2 v.4	CH	120140303419
1496	Y	N	X	QA3 .C3	ser.2 v.3	CH	120140303401
1497	Y	N	X	QA3 .C3	ser.2 v.2	CH	120140303393
1498	Y	N	X	QA3 .C3	ser.2 v.1	CH	120140303385
1499	Y	N	X	QA3 .C3	ser.1 v.12 + index	CH	120140303377
1500	Y	N	X	QA3 .C3	ser.1 v.11	CH	120140303369

Permanent Call Number Name

Description Column Name

Figure 3.) Following the Columns set in by Alma, the Permanent Call Number column will contain the Library of Congress Call Number Details and Description will contain extra

Step 4.) Go to the next text entry box and enter in the Description Column Name as it has been set in the spreadsheet, see figure 3.

Name of the Description column:

Description

Step 5.) Go to the next text entry box and enter in the desired name CSV file name. (Optional)

Note: This step is optional, and if no name is set the CSV file name will be set to the name of the excel file name set in step 1 with the selected sheet name set in step 2 and sorted at the end.
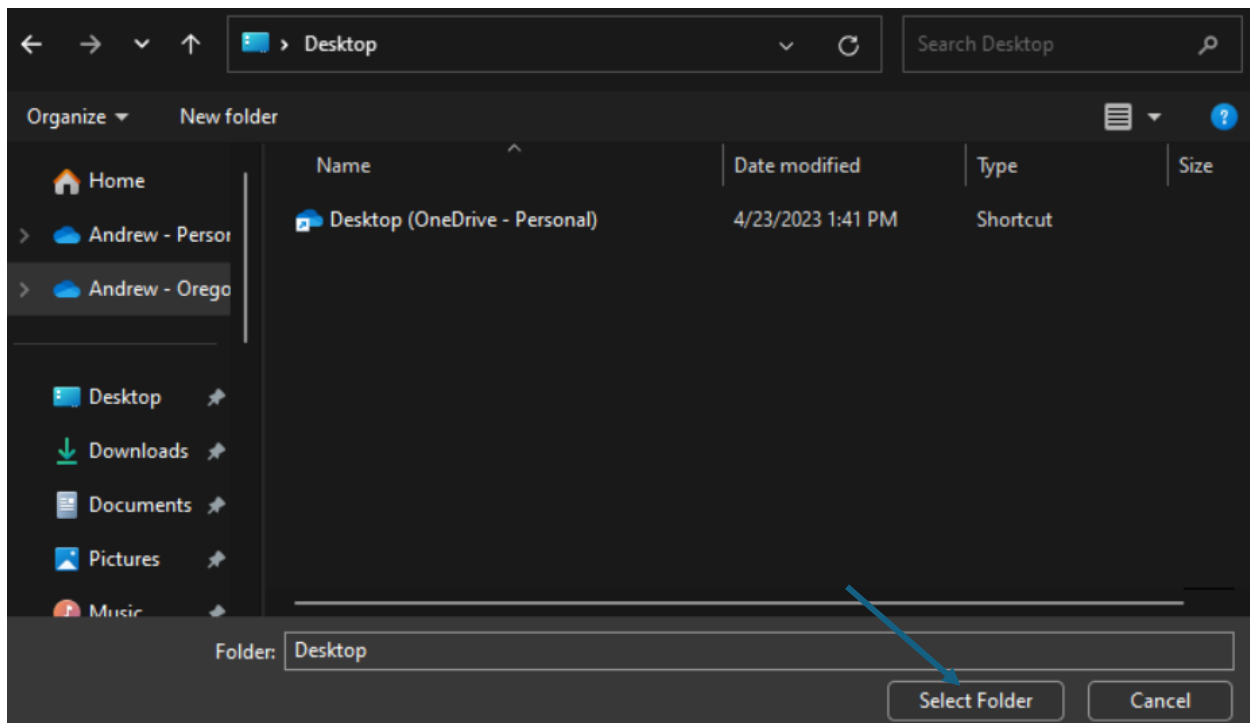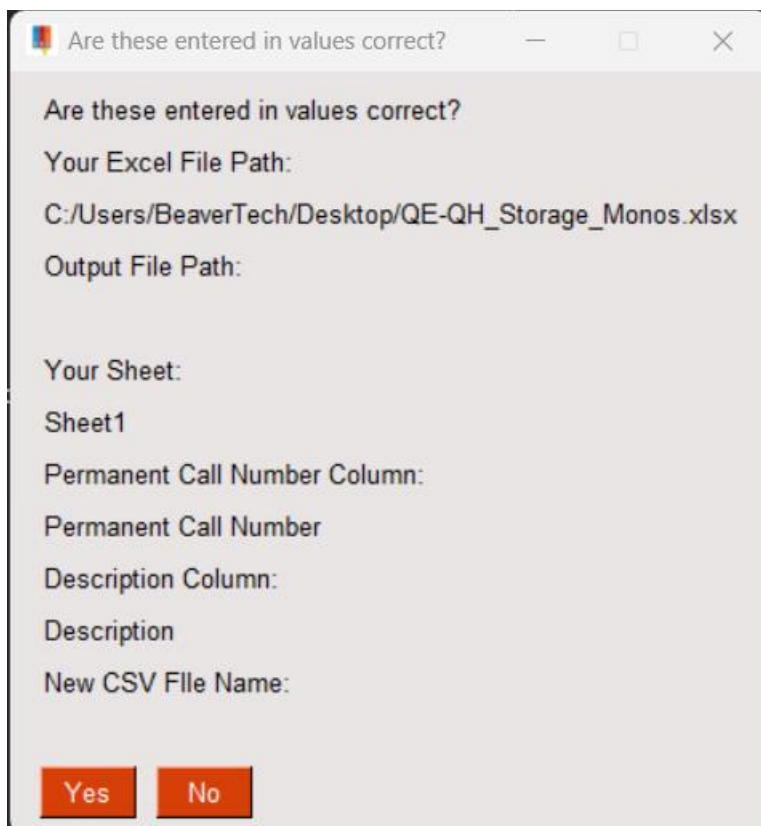
Name of the new sorted CSV file:

Step 6.) Go to the next text entry box for the next CSV file name.(Optional)

New CSV file location:

Browse

Step 6a.) Enter in the file path for the directory you would like save the CSV file in.

New CSV file location:

Browse

Step6b.) Or click on the **Browse** button to find the directory you would like to save the file in.

Step 6c.) Click **Select Folder** to set the File Directory

Step 7.) Click **Begin**

Step 8.) Review all of the information Put Into the Program with the next pop-up window

Step 9.) If all of the information has been entered in correctly, then click **Yes**.

Step 10.) Please wait for the program to sort through the list.

Note: **Do Not Touch** the User Interface. You may minimize the console.
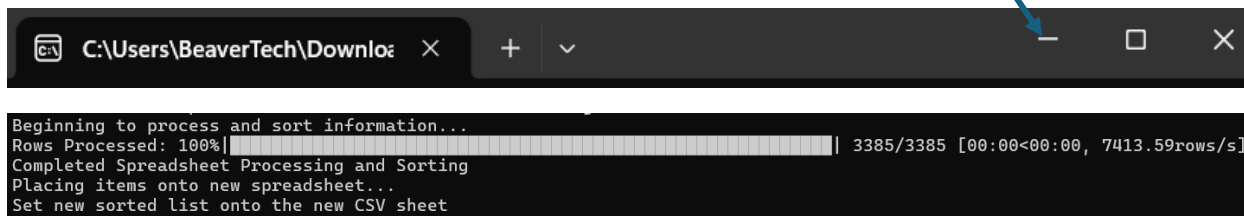

Figure 4.) The console logs will contain the information about the rows being processed, where the percentage and bars represent how far along it is with sorting the necessary information. The time represents the amount of time it has been taking to complete the sort. The ####.##rows/s represents how fast the program is able to sort through the excel list (rows per second).

Step 11.) Once the program completes it's sorting you will get a pop-up window that will alert you.
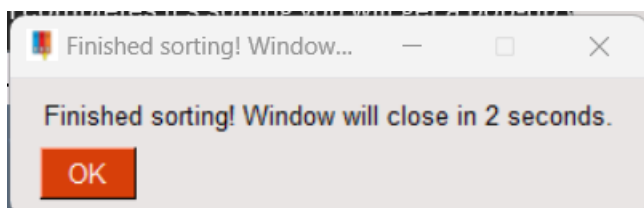
Step 12.) Once you are finished with the program you can click **Cancel** on the bottom left or The **"X"** on the top right
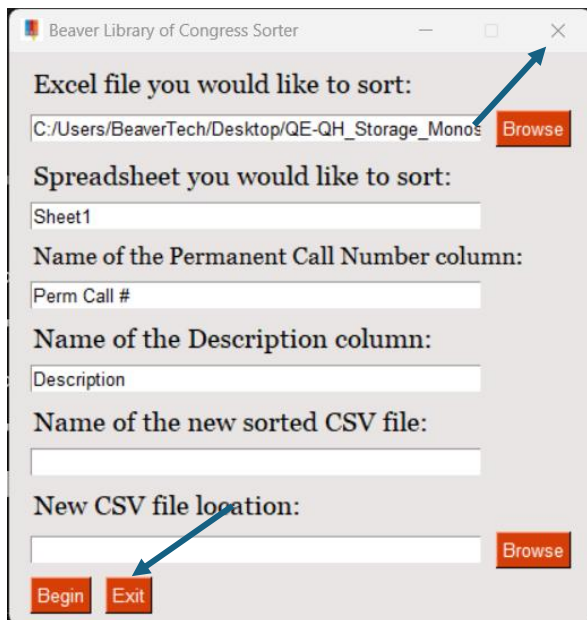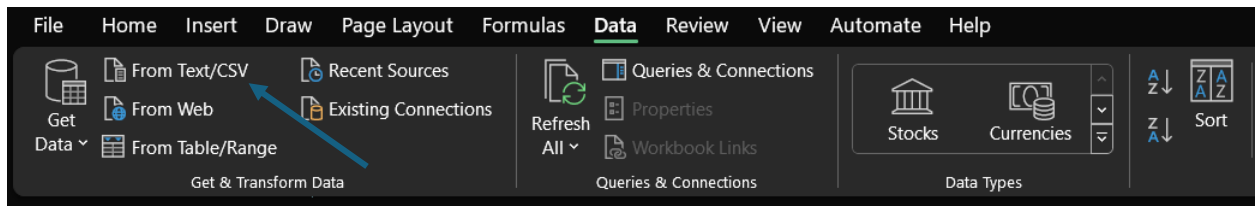
Adding the CSV file to the Excel Document
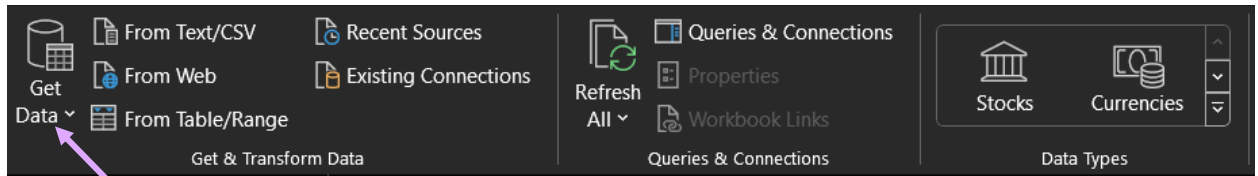
Step 1.) Open the Excel File

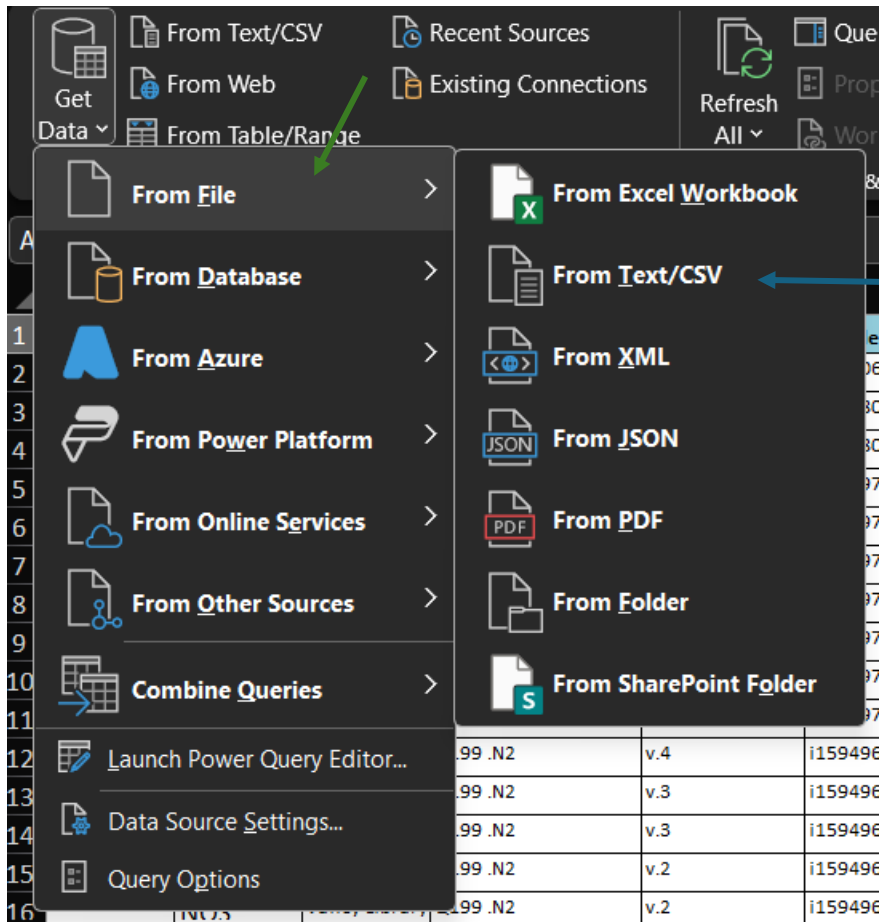Step 2.) Click on the **Data Tab**
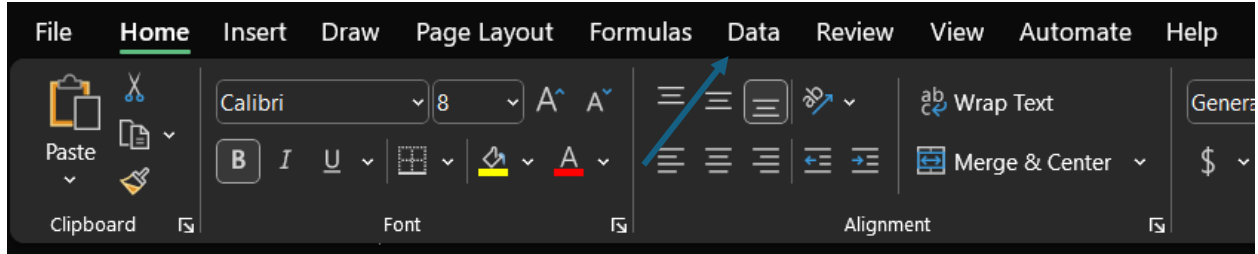
Step 3.) Go to the **Get & Transform Data** area and **click on the From Text/CSV**

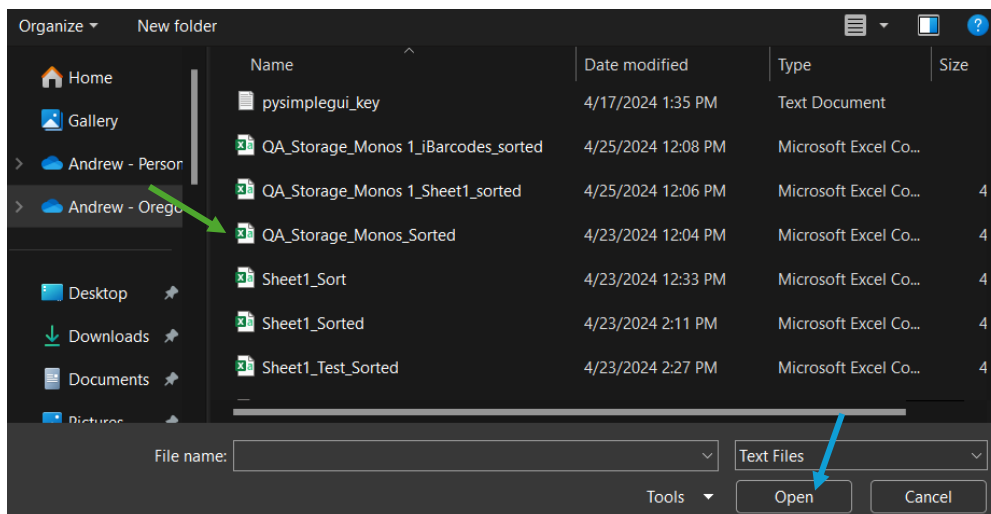Step 3a.) You can also click on **Get Data**

Step 3b.) Move the cursor to the **From File** option

Step 3c.) Click on **From Text/CSV**

Step 4.) Find the newly sorted CSV file and then click **Open**

Step 5.) Review the results and then click **Load** button

The sheet has been set into the Excel Workbook and can be designed to how the user prefers.

Note: Please **Do Not Delete** the original Spreadsheet. As a result of it's creation the CSV document may have lost information from the original spreadsheet. Instead **please keep a copy of both** the **sorted CSV sheet** and **the original spreadsheet** that the CSV document has copied information from.

Changing the Style of the sorted Import style to the Original Sheet's Style

Original Sheet
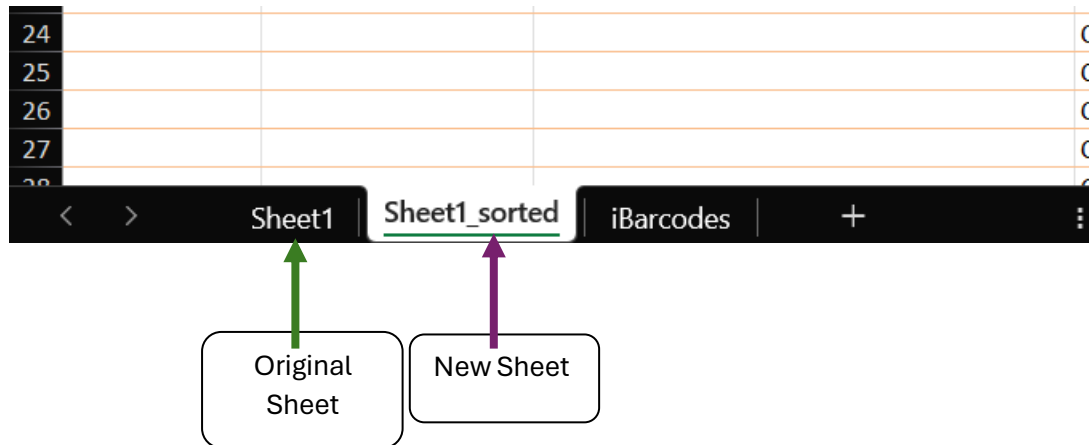
New Sheet

Step 1.) While on the new sorted spreadsheet, go to the Table Design, and in the Table Style Options box click on the Banded Rows options and make sure that it is not checked:
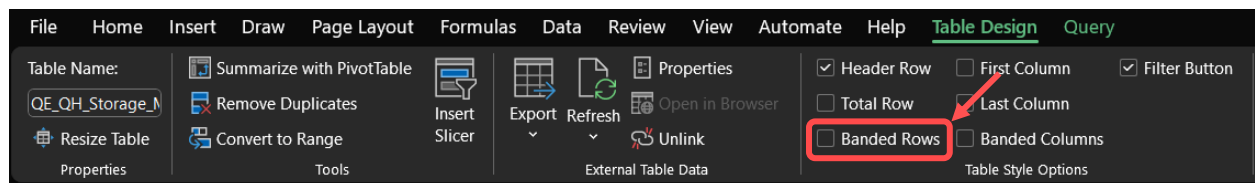
Step 1.) Click the column from the original sheet you want to copy the style over to the new sheet

	A
1	**On shelf Y/N**
2	N
3	N
4	N
5	N
6	N
7	N
8	N
9	N
10	N
11	N
12	N
13	N
14	Y
15	N
16	N
17	N
18	N
19	N
20	N
21	N
22	N
23	N
24	Y
25	Y
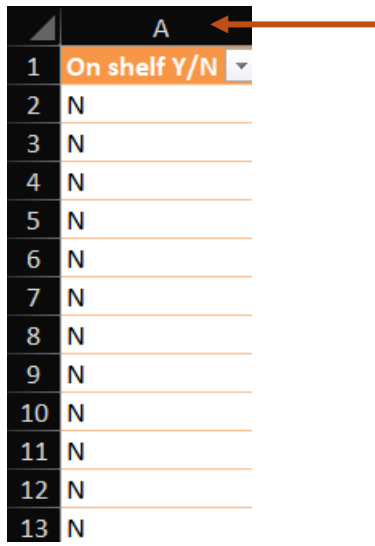
Step 2.) Click on the format painter paint brush icon in the clipboard tool box in the Home tab
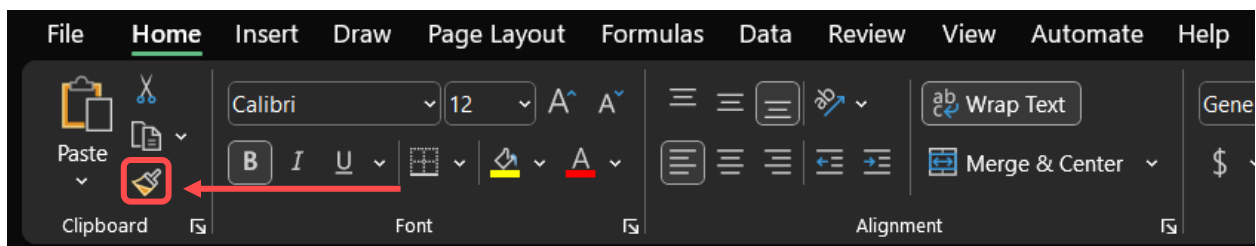
Step 3.) Click on the bottom tab that represents the imported style sheet

Original Sheet

New Sheet
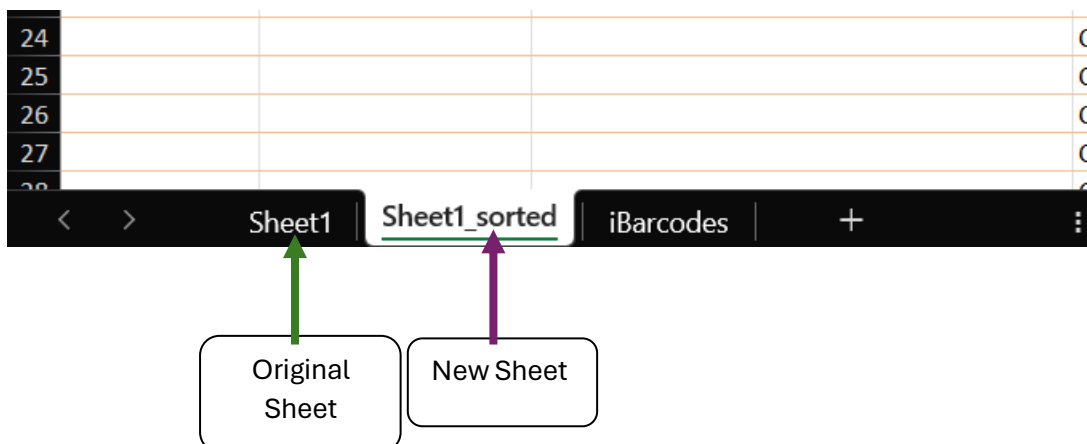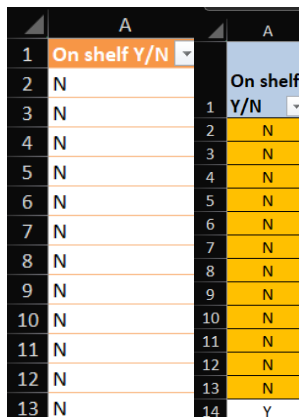
Step 4.) Click on the Column top of the column you want to edit

If everything has been followed correctly the change should be reflected on the right, where the original is on the right:

Figure 5.) Original on the left, copied over style on the right.

Note: Everything that was stylized based on different entries, in this case N values being highlighted, will follow over to the next values.

Step 6.) Repeat with each column until the original style has been replicated.

Top spreadsheet:

On shelf Y/N	Leatherbound Y/N	Storage sticker removed/covered Y/N/X	Perm Call #	Description	Initials	Barcode	Title (Norm
N	N	X	QE1 . F52 v.3 no.1-7/8	v.3 no.1-2	JHW	120000178174	vertebrate
N	N	X	QE1 . F52 v.3 no.1-7/8	v.3 no.3-4	JHW	120000178182	vertebrate
N	N	X	QE1 . F52 v.3 no.1-7/8	v.3 no.5-6	JHW	120000178190	vertebrate
N	N	X	QE1 . F52 v.3 no.1-7/8	v.3 no.7/8	JHW	120146771171	vertebrate
N	N	X	QE1 .A6		JHW	120002846265	what is ge
N	N	X	QE1 .B66	no.1	JHW	120001756820	host biblio
N	N	X	QE1 .B66	no.4	JHW	120001756853	host biblio
N	N	X	QE1 .B66	no.7	JHW	120001756879	host biblio
N	N	X	QE1 .E32		JHW	120000178158	fiftieth ann
N	N	X	QE1 .F52	v.1-2	JHW	120000178166	host biblio
N	N	X	QE1 .F52	v.4-6	JHW	120011814429	host biblio
N	N	X	QE1 .G92 1951-65		JHW	120000180204	comprehe
Y	N	pulled	QE1 .I6 1929		JHW	120140419314	guide book
N	N	X	QE1 .J5	no.2-6 [Incomplete]	JHW	120011795750	host biblio
N	N	X	QE1 .J5	no.11	JHW	120011795743	host biblio
N	N	X	QE1 .J5	no.9-13	JHW	120011807118	host biblio
N	N	X	QE1 .J5	no.14-16	JHW	120011795735	host biblio
N	N	X	QE1 .J5	no.17-18	JHW	120011795727	host biblio
N	N	X	QE1 .J5	no.19	JHW	120011795719	host biblio
N	N	X	QE1 .J5	no.20	JHW	120011795701	host biblio
N	N	X	QE1 .J5	no.21	JHW	120011187008	host biblio
N	N	X	QE1 .J5	no.22	JHW	120003164437	host biblio
			QE3 .A4		KT	120000180287	geology fr
			QE3 .G4		KT	120000180295	geology 18

Bottom spreadsheet:

On shelf Y/N	Leatherbound Y/N	Storage sticker removed/covered Y/N/X	Perm Call #	Description	Initials	Barcode	Title (Normalized)
N	N	X	QE1 . F52 v.3 no.1-7/8	v.3 no.1-2	JHW	120000178174	vertebrate fauna of the selma formation of alabama
N	N	X	QE1 . F52 v.3 no.1-7/8	v.3 no.3-4	JHW	120000178182	vertebrate fauna of the selma formation of alabama
N	N	X	QE1 . F52 v.3 no.1-7/8	v.3 no.5-6	JHW	120000178190	vertebrate fauna of the selma formation of alabama
N	N	X	QE1 . F52 v.3 no.1-7/8	v.3 no.7/8	JHW	120146771171	vertebrate fauna of the selma formation of alabama
N	N	X	QE1 .A6		JHW	120002846265	what is geology
N	N	X	QE1 .B66	no.1	JHW	120001756820	host bibliographic record for boundwith item barcode 120001756820
N	N	X	QE1 .B66	no.4	JHW	120001756853	host bibliographic record for boundwith item barcode 120001756853
N	N	X	QE1 .B66	no.7	JHW	120001756879	host bibliographic record for boundwith item barcode 120001756879
N	N	X	QE1 .E32		JHW	120000178158	fiftieth anniversary volume 1905 1955
N	N	X	QE1 .F52	v.1-2	JHW	120000178166	host bibliographic record for boundwith item barcode 120000178166
N	N	X	QE1 .F52	v.4-6	JHW	120011814429	host bibliographic record for boundwith item barcode 120011814429
N	N	X	QE1 .G92 1951-65		JHW	120000180204	comprehensive index of the publications of the gulf coast association of geological societies 1951 1965
Y	N	pulled	QE1 .I6 1929		JHW	120140419314	guide book xv session south africa 1929
N	N	X	QE1 .J5	no.2-6 [Incomplete]	JHW	120011795750	host bibliographic record for boundwith item barcode 120011795750
N	N	X	QE1 .J5	no.11	JHW	120011795743	host bibliographic record for boundwith item barcode 120011795743
N	N	X	QE1 .J5	no.9-13	JHW	120011807118	host bibliographic record for boundwith item barcode 120011807118
N	N	X	QE1 .J5	no.14-16	JHW	120011795735	host bibliographic record for boundwith item barcode 120011795735
N	N	X	QE1 .J5	no.17-18	JHW	120011795727	host bibliographic record for boundwith item barcode 120011795727
N	N	X	QE1 .J5	no.19	JHW	120011795719	host bibliographic record for boundwith item barcode 120011795719
N	N	X	QE1 .J5	no.20	JHW	120011795701	host bibliographic record for boundwith item barcode 120011795701
N	N	X	QE1 .J5	no.21	JHW	120011187008	host bibliographic record for boundwith item barcode 120011187008
N	N	X	QE1 .J5	no.22	JHW	120003164437	host bibliographic record for boundwith item barcode 120003164437
			QE3 .A4		KT	120000180287	geology from original sources organized collateral readings for students in general geology

Figure 6.) Top is the original spreadsheet not stylized, Bottom is the new stylized spreadsheet.