BI 348 Project 3. 60 Points.

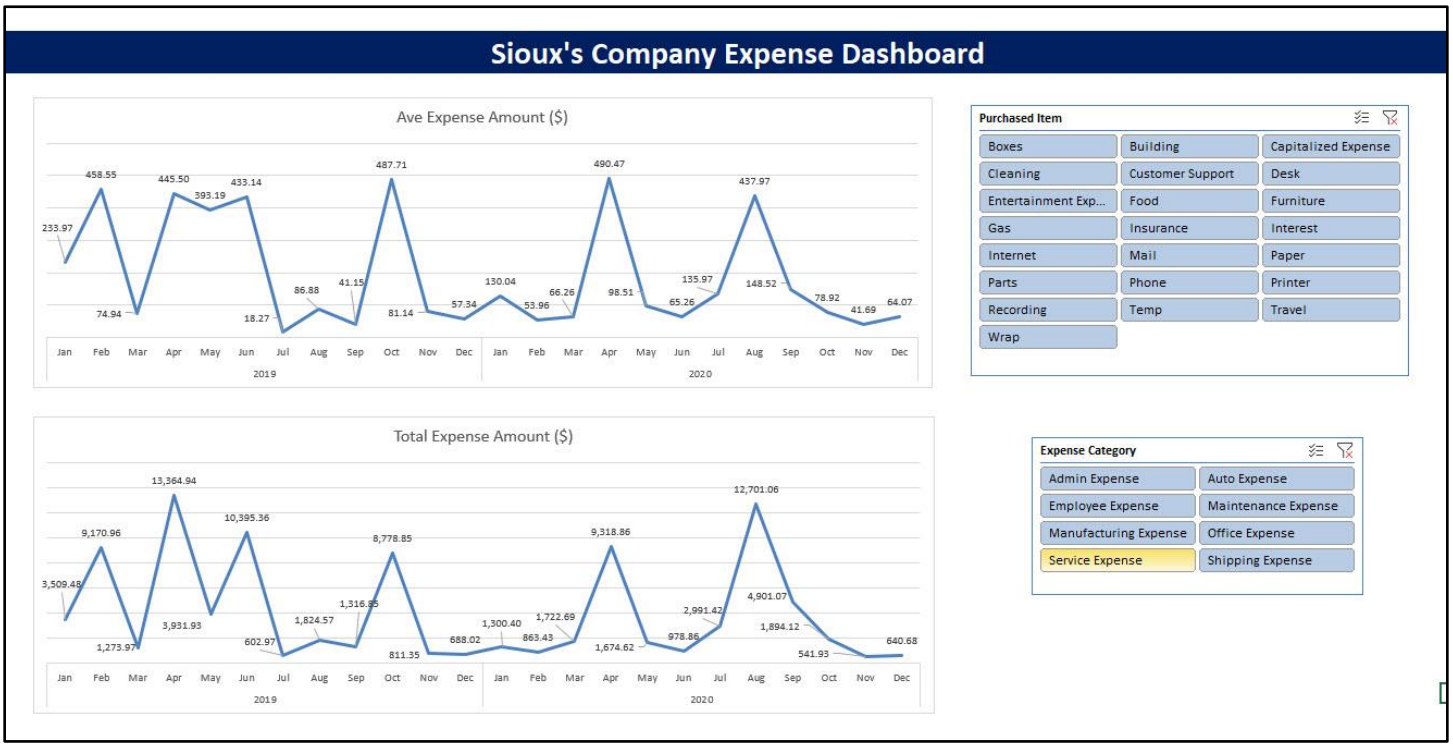
1. Your goal is to append multiple Excel Tables from same workbook into a single proper data set that can be loaded to a Standard PivotTable Cache and then from that cache create a Standard PivotTable and PivotChart for a Dashboard. The whole system must adapt when new Excel Tables are added to the Excel Workbook file.
2. The finished single proper data set should look something like this:

	Date	Expense Category	Purchased Item	VendorID	Invoice Number	Amount
1	1/3/19	Admin Expense	Furniture	7885WDG-CA5337	18831	208.61
2	1/3/19	Maintenance Expense	Capitalized Expense	1XBLBL-ID4830	25782	179.53
3	1/5/19	Employee Expense	Entertainment Expense	147838FZCW-WA358	56718	187.21
4	1/6/19	Shipping Expense	Wrap	999C-WA1204	13278	396.98
5	1/7/19	Service Expense	Interest	44151Q-WA1957	28659	190.67
6	1/8/19	Shipping Expense	Wrap	999C-WA1204	13278	115.57
7	1/9/19	Shipping Expense	Wrap	44151Q-WA1957	28659	110.98
8	1/11/19	Office Expense	Paper	97922PZ-WA6718	38311	383.99
9	1/12/19	Shipping Expense	Wrap	1UONZ-OR2984	98755	395.66
10	1/16/19	Manufacturing Expense	Parts	5258LEKROJV-OR1076	43820	226.02
11	1/19/19	Auto Expense	Gas	91FQMBBZE-WA2019	48477	156.85
12	1/27/19	Auto Expense	Gas	7885WDG-CA5337	18831	266.56
13	1/27/19	Admin Expense	Furniture	50143XGQA-CA3579	100692	142.02
14	1/28/19	Auto Expense	Gas	577EJEFZQE-WA765	29965	251.16
15	1/30/19	Manufacturing Expense	Parts	3M-NV4154	20913	297.67
16	2/1/19	Auto Expense	Capitalized Expense	44151Q-WA1957	30678	416.67
17	2/1/19	Office Expense	Printer	7NG-OR6856	20027	497.38
18	2/2/19	Auto Expense	Capitalized Expense	8192CMQANY-WA8475	102076	281.26
19	2/3/19	Maintenance Expense	Parts	695219WXLYQW-OR10...	74612	508.63
20	2/5/19	Service Expense	Customer Support	97922PZ-WA6718	40330	584.13
21	2/6/19	Maintenance Expense	Parts	32TBZV-CA6021	65613	559.18
22	2/6/19	Shipping Expense	Boxes	32TBZV-CA6021	65613	563.36
23	2/8/19	Shipping Expense	Boxes	781XCLQGF-OR2149	102015	560.51
24	2/11/19	Manufacturing Expense	Capitalized Expense	97922PZ-WA6718	40330	520.93

PROPERTIES
Name
fExpenses
All Properties

APPLIED STEPS
Source
Removed Columns
Expanded Content
Split Column by Delimiter
Changed Type

3. The finished Dashboard should look like this:



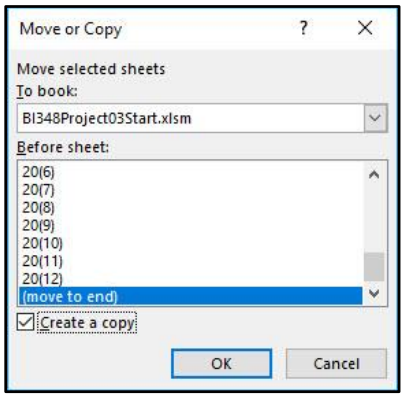
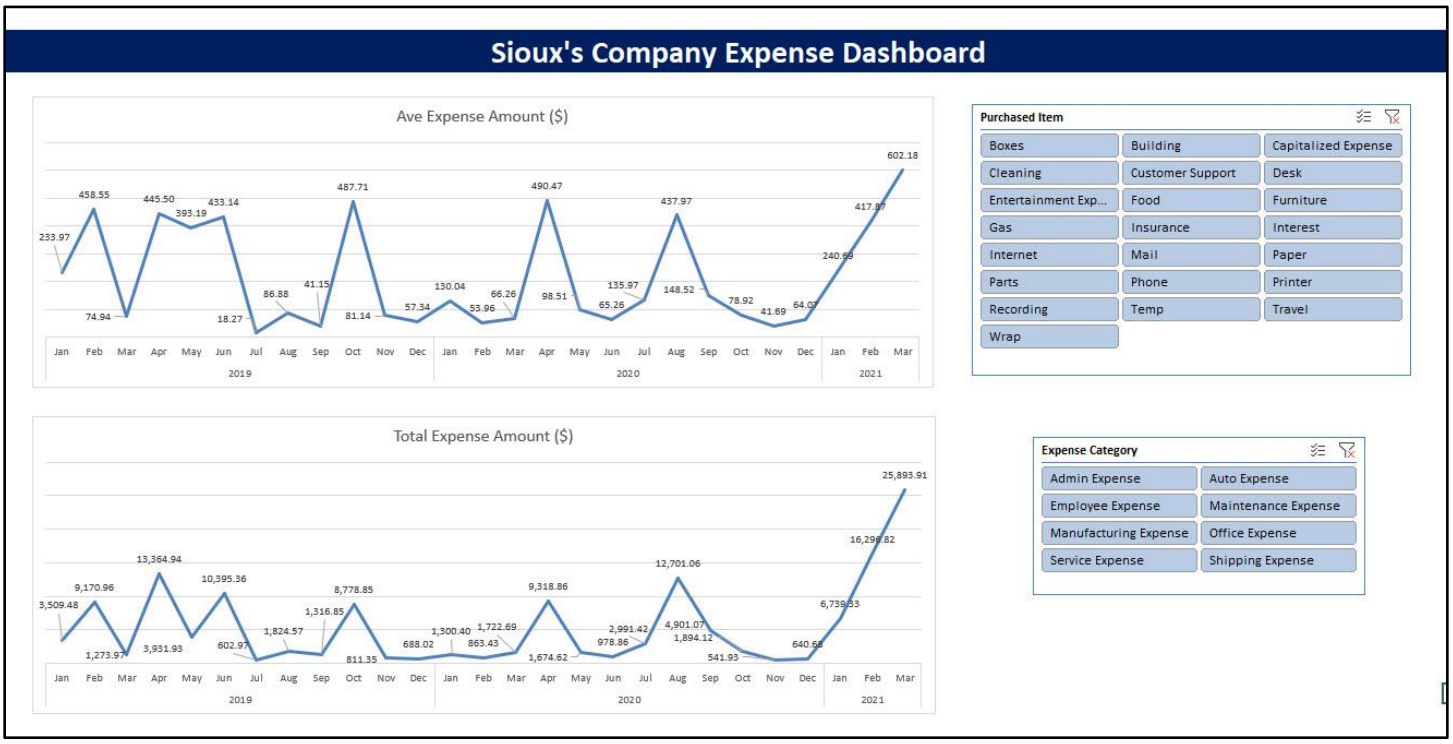
4. Throughout the project, name everything smartly.
5. Open the file named “BI348Project03.xlsm”.

6. There are 24 Worksheets with tables of monthly expenses data. Each table is a Proper Data Set.
7. The names of the Worksheets are: 19(1), 19(2), 19(3), 19(4), 19(5), 19(6), 19(7), 19(8), 19(9), 19(10), 19(11), 19(12), 20(1), 20(2), 20(3), 20(4), 20(5), 20(6), 20(7), 20(8), 20(9), 20(10), 20(11), 20(12).
8. Each Expense Table looks something like this table on the sheet named "19(5)":

Date	Expense Category - Purchased Item	VendorID	Invoice Number	Amount
05/02/2019	Auto Expense-Capitalized Expense	50143XGQA-CA3579	108768	293.11
05/04/2019	Shipping Expense-Boxes	1DX-ID9772	98583	320.86
05/13/2019	Service Expense-Customer Support	1UONZ-OR2984	106831	302.24
05/18/2019	Employee Expense-Food	1DX-ID9772	98583	502.24
05/21/2019	Office Expense-Printer	9AFGIQVA-WA7765	76150	469.2
05/26/2019	Admin Expense-Phone	91FQMBBZE-WA2019	56553	351.71
05/26/2019	Auto Expense-Capitalized Expense	97922PZ-WA6718	46387	574.88
05/29/2019	Admin Expense-Phone	190245N-CA8497	70653	561.58
05/30/2019	Admin Expense-Phone	1UONZ-OR2984	106831	276.25
05/31/2019	Office Expense-Printer	242XZR-ID4349	27883	279.86

9. Each monthly expenses data Proper Data Set must be converted to an Excel Table using the Excel Table feature and given the proper name. The convention for properly naming each table is: "ExYYYYMMM", so for example the monthly expenses data table for Dec, 2019 should have the name "Ex2019Dec".
10. You must check each of the 24 Worksheets to make sure that each Proper Data Set has been converted to an Excel table and has been given the proper name. Most of the tables in the Excel Workbook file have already been converted to an Excel Table and has been given a proper name. If a table has not been converted to an Excel table and properly named, you must do that. If any of the Excel Table names that already exist in the Excel Workbook do not have a table name that follows the name proper naming convention, you must change the name. Hint: The keyboard to quickly move to the next Worksheet is Ctrl + PageDown or Ctrl + PageUp.
11. Your first goal is to take all 24 Proper Data Sets and append them into a single Proper Data Set that you can load to a PivotTable Cache.
12. Notes about creating the query:
    a. There are no Defined Names or Filtered Ranges or Print Ranges in this workbook, so you do not need to worry about filter those objects out during your query.
    b. You do not need the Excel Worksheet Names as part of the final query.
13. When you create the Power Query query to accomplish the append, during one of the steps you will have to split the original "Expense Category – Item Purchased" column. When you split this column, the Applied Steps list will have two new steps. First, delete the step named "Changed Type", then edit the M Code in the formula bar for the Splitter.SplitTextByDelimiter Power Query Function so that the two new columns that were created from the split have the names "Expense Category" and "Item Purchased".
14. Load to final appended Proper Data Set to the PivotTable Cache on the Worksheet named "Build Dashboard".
15. Build a PivotTable for Total Expense Amount for each month in each year.
16. Build a new PivotTable for Average Amount for each month in each year.
17. Add Two Slicers for the columns "Expense Category" and "Item Purchased" so that they control both PivotTables.
18. Create a Line Chart for the Total Expense Amount for each month in each year.
19. After you create a Line Chart for the Total Expense Amount for each month in each year, save that chart as a Template.
20. Use the Line Chart Template you just created to plot the Average Amount for each month in each year.
21. Move the two Line Charts and two Slicers to the Worksheet named "Dashboard".

22. Open the file named “BI348Project03NewExpenseSheets.xlsx”. There are three Worksheets in this Workbook named 21(1), 21(2) and 21(3). Using the Copy Worksheet Command in Excel, copy these sheets from the file “BI348Project03NewExpenseSheets.xlsx” and paste them into the file named “BI348Project03Start.xlsm”.
23. To copy and paste Excel Worksheets from one Workbook file to another, follow these steps:
    a. Select all the sheets you want to copy.
    b. Right-click the selected sheets and click on the command “Move or Copy…”.
    c. Then in the Move or Copy dialog box, complete it as it appears in the following picture:



24. Convert the three new expenses tables to Excel Tables and name them smartly.
25. Refresh your Dashboard.
26. The finished Dashboard should look something like this: