

Windows Mac

Clemenson Imaging analyzes expense reports from field representatives as well as patient and image data. To complete the worksheets, you format data as a table and build an advanced filter. You import a comma-separated text file (.csv) and use the *Subtotal* command. Finally, you display data in a *PivotTable*.

[Student Learning Outcomes 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7, 4.8]

File Needed: **Clemenson-04.xlsx** (Available from the Start File link.), **ClemensonText-04.csv** and **ClemensonWord-04.docx** (Available from the Resources link.)

Completed Project File Names: **[your name]-Clemenson-04.xlsx** and **[your initials] Excel 4-3Word.docx**

Skills Covered:

- Format data as an Excel table.
- Build an *Advanced Filter*.
- Apply conditional formatting to filtered results.
- Sort data by multiple columns.
- Import a comma-separated text file.
- Use the *Subtotal* command.
- Export data via the *Clipboard*.
- Create a *PivotTable*.



This image appears when a project instruction has changed to accommodate an update to **Microsoft 365 Apps**. If the instruction does not match your version of Office, try using the alternate instruction instead.

IMPORTANT: If you are a Canadian user, be sure to verify that your browser and Microsoft Office use the same country settings. See [here](#) for a Help topic on how to change your settings.

1. Open the **Clemenson-04.xlsx** start file. Click the **Enable Editing** button. The file will be renamed automatically to include your name. Change the project file name if directed to do so by your instructor.

NOTE: If group titles are not visible on your *Ribbon* in *Excel for Mac*, click the **Excel** menu and select **Preferences** to open the *Excel Preferences* dialog box. Click the **View** button and check the **Group Titles** check box under *In Ribbon, Show*. Close the *Excel Preferences* dialog box.

2. Copy the **Past&Projected** sheet, place the copy before the **Criteria** sheet, and name the copied sheet **Adv Filter**.
3. Create and format an Excel table.
 - a. Select cells **A4:E60** on the **Adv Filter** sheet.
 - b. Click the **Table** button [*Insert* tab, *Tables* group].
 - c. In the *Create Table* window, verify that **My table has headers** is selected and click **OK**.
4. Apply a table style.
 - a. Click cell **A5** in the table.
 - b. Click the **More** arrow [*Table* tab, *Table Styles* group].

- c. Select **White, Table Style Medium 15**.
5. Create an output range for an *Advanced Filter*.
- a. Select cells **A4:E4** and copy and paste them to cell **G4**.
 - b. Type **Extract Range** in cell **G3** and set the font to **Cambria 16 pt**.
 - c. Adjust column widths for columns **G:K** to show the labels.
 - d. Adjust row **4** to a height of **33.75 (45 pixels)**.
6. Create an *Advanced Filter*.
- a. Click the **Criteria** sheet tab.
 - b. Type **>12/31/18** in cell **A3** to find records after 2018.
 - c. Type **mri** in cell **B3**.
 - d. Type **>12/31/19** in cell **A4**, to find records after 2019.
 - e. Type **ct scan** in cell **B4**. This criteria will find records dated 2019 or later for MRIs *and* records for CT scans dated 2020 or later (Figure 4-94).

	A	B	C	D	E
1	Criteria Range				
2	Month	Image	Patients	Total Hours	# of Employees
3	>12/31/18	mri			
4	>12/31/19	ct scan			

Figure 4-94 Criteria

- for Advanced Filter
- f. Click cell **A5** on the **Adv Filter** sheet.
 - g. Click the **Advanced** button [*Data* tab, *Sort & Filter* group].
 - h. Select the **Copy to another location** radio button.
 - i. Verify that the **List range** is cells **\$A\$4:\$E\$60**. If the range is incorrect, click and drag to select the range including the header row.
 - j. Click the **Criteria range** box and select cells **A2:B4** on the **Criteria** sheet.
 - k. Click the **Copy to** box and select cells **G4:K4** on the **Adv Filter** sheet.
 - l. Click **OK** in the *Advanced Filter* dialog box.
7. Sort data in the output range.
- a. Select cell **G5** and click the **Sort** button [*Data* tab, *Sort & Filter* group].
 - b. Click the **Sort by** arrow and choose **Image** for the first level.
 - c. Verify that the **Sort On** selection is **Values** and the **Order** is **A to Z**.
 - d. Click **Add Level** (the **+** button) and choose **Month** as the **Then by** selection.
 - e. Verify or select **Values** and **Oldest to Newest** for the second level.
 - f. Click **OK**.
8. Apply conditional formatting and borders.
- a. Select the cells with values in column **I**.
 - b. Click the **Conditional Formatting** button [*Home* tab, *Styles* group].
 - c. Choose **Highlight Cells Rules** and **Greater Than**.
 - d. Type **750** and choose **Green Fill with Dark Green Text**.
 - e. Click **OK**.
 - f. Select the extract range starting at cell **G5** and apply **All Borders** (Figure 4-95). (Your results may be different from Figure 4-95 depending on the current date.)

Extract Range				
Month	Image	Patients	Total Hours	# of Employees
Apr 2020	CT Scan	500	2400	3
Aug 2020	CT Scan	750	2400	3
Dec 2020	CT Scan	500	1800	4
Apr 2021	CT Scan	750	2400	2
Aug 2021	CT Scan	500	2400	3
Jan 2019	MRI	500	2400	3
May 2019	MRI	750	3000	5
Sep 2019	MRI	750	1800	4
Jan 2020	MRI	750	3000	3
May 2020	MRI	750	2400	2
Sep 2020	MRI	750	2400	4
Jan 2021	MRI	1000	1800	3
May 2021	MRI	750	3000	4

Figure 4-95 Advanced Filter results

- g. Press **FN+command+Left arrow** or **FN+Ctrl+Left arrow**.
- 9. Import a comma-separated values text file.
 - a. Click the **Expense Info** sheet tab.
 - b. Select cell **A4**.
 - c. Click the **From Text** button [*Data tab, Get External Data group*].
 - d. Find and select the **ClemensonText-04.csv** file downloaded from the **Resources** link in the *Import Data* window.
 - e. Click **Get Data**.
 - f. Verify that **Delimited** is selected in the *Text Import Wizard*.
 - g. Click **Next**.
 - h. Uncheck **Tab** if necessary, and check **Comma** as the *Delimiter*.
 - i. Click the **Finish** button.
 - j. Verify that **Existing sheet** is selected in the *Import Data* window.
 - k. Verify that cell **A4** displays as the destination in the *Import Data* window
 - l. Click **OK** to import the text data (Figure 4-96).

A5					
	A	B	C	D	E
1	Clemenson Imaging				
2	Expense Report Information				
3					
4	Last Name	First Name	Date	Amount	
5	Allen	Mary Jo	1/1/2016	450	
6	Gabrys	Elizabeth	1/1/2016	555	
7	Bashir	Atef	1/1/2016	635	
8	Gomez	Paola	1/1/2016	845	
9	McAllister	Lex	1/1/2016	925	
10	Allen	Mary Jo	2/1/2016	750	
11	Gabrys	Elizabeth	2/1/2016	635	
12	Bashir	Atef	2/1/2016	575	

Figure 4-96 CSV file imported into the worksheet

- m. Insert a row above row **3** in the worksheet.
- n. Select the labels in row **4** and center align them.
- o. Format the dates in column **C** with the **Short Date** format.
- p. Select columns **A:D** and size each column to **12.14 (90 pixels)** wide. Deselect the columns.
- 10. Use the *Subtotal* command.
 - a. Click cell **A5**.
 - b. Click the **Sort A to Z** button [*Data tab, Sort & Filter group*] to sort by last name.
 - c. Click the **Subtotal** button [*Data tab, Outline group*].
 - d. Verify or choose **Last Name** for the **At each change in** box.
 - e. Click the **Use function** arrow and choose **Average**.
 - f. Verify or choose the **Amount** box in the *Add subtotal to* area.

- g. Click **OK**.
 - h. Format the values in column **D** as **Currency** with zero decimal places.
11. Collapse outline groups.
- a. Click the collapse symbol (–) for Allen in row **8**.
 - b. Click the collapse symbol (–) for McAllister (Figure 4-97).

	A	B	C	D
	Last Name	First Name	Date	Amount
8	Allen Average			\$692
9	Bashir	Atef	1/1/2016	\$635
10	Bashir	Atef	2/1/2016	\$575
11	Bashir	Atef	3/1/2016	\$655
12	Bashir	Atef	4/1/2016	\$655
13	Bashir	Atef	5/1/2016	\$655
14	Bashir	Atef	6/1/2016	\$655
15	Bashir Average			\$638
16	Gabrys	Elizabeth	1/1/2016	\$555
17	Gabrys	Elizabeth	2/1/2016	\$635
18	Gabrys	Elizabeth	3/1/2016	\$765
19	Gabrys	Elizabeth	4/1/2016	\$765
20	Gabrys	Elizabeth	5/1/2016	\$765
21	Gabrys	Elizabeth	6/1/2016	\$765
22	Gabrys Average			\$708
23	Gomez	Paola	1/1/2016	\$845
24	Gomez	Paola	2/1/2016	\$435
25	Gomez	Paola	3/1/2016	\$535
26	Gomez	Paola	4/1/2016	\$535
27	Gomez	Paola	5/1/2016	\$535
28	Gomez	Paola	6/1/2016	\$535
29	Gomez Average			\$570
30	McAllister Average			\$586
31	Grand Average			\$633

Figure 4-97 Subtotals added and outline

collapsed for two groups

12. Create a *PivotTable*.
- a. Click the **Past&Projected** sheet tab.
 - b. Select cells **A4:E60**.
 - c. Click the **PivotTable** button [*Insert* tab, *Tables* group]. Verify that **New worksheet** is selected and click **OK**.
 - d. Drag the **Image** field to *Rows* in the *PivotTable Builder*.
 - e. Drag the **# of Employees**, the **Total Hours**, and the **Patients** fields to *Values* in the *PivotTable Builder* (Figure 4-98).

	A	B	C	D	E	F	G
1							
2							
3	Row Labels	Sum of # of Employees	Sum of Total Hours	Sum of Patients			
4	Angiography	43	35400	11250			
5	CT Scan	44	30000	9250			
6	MRI	49	35400	11250			
7	Ultrasonography	50	36600	12250			
8	Grand Total	186	137400	44000			
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							

Figure 4-98 PivotTable Builder

- f. Rename the sheet **PivotTable**.
 - g. Close the **PivotTable Builder**.
13. Format a *PivotTable*.
- a. Click cell **C4**.
 - b. Click the **Field Settings** button [*PivotTable Analyze* tab, *Active Field* group].
 - c. Click **Number...**
 - d. Choose **Number** as the *Category*.
 - e. Select the **Use 1000 Separator (,)** box and set zero decimal places.
 - f. Click **OK** to close each dialog box.
 - g. Apply the same number format for the “Sum of Patients” field.

- h. Expand the *Styles* gallery [*PivotTable Design* tab, *PivotTable Styles* group].
- i. Select **Dark Gray, Pivot Style Dark 9** [*PivotTable Design* tab, *PivotTable Styles* group].
- j. Select the **Banded Rows** box [*PivotTable Design* tab, *PivotTable Styles Options* group].
- k. Select the **Banded Columns** box [*PivotTable Design* tab, *PivotTable Styles Options* group].

	A	B	C	D
1				
2				
3	Row Labels	Sum of # of	Sum of Total Hours	Sum of Patients
4	Angiography	43	35,400	11,250
5	CT Scan	44	30,000	9,250
6	MRI	49	35,400	11,250
7	Ultrasonography	50	36,600	12,250
8	Grand Total	186	137,400	44,000

(Figure 4-99).
Figure 4-99 *PivotTable* with new settings

14. Create and format a *PivotChart*.

- a. Click the **PivotChart** button [*PivotTable Analyze* tab, *Tools* group] to insert a *PivotChart*.
- b. Right-click the chart object and point to **Change Chart Type**, then **Column**.
- c. Scroll down to **2-D Bar** section in the list, and click **Stacked Bar**.
- d. Position the chart object so that its top-left corner is at cell **A12**.
- e. Drag the bottom-right selection handle to reach cell **J30**.
- f. Expand the *Styles* gallery [*PivotChart Design* tab, *Chart Styles* group] and choose **Style 8**.
- g. Click the **Change Colors** button [*PivotChart Design* tab, *Chart Styles* group].
- h. Select **Monochromatic Palette 1** in the *Monochromatic* group.
- i. Deselect the **# of Employees** box in the *PivotChart Fields* pane (Figure 4-100).

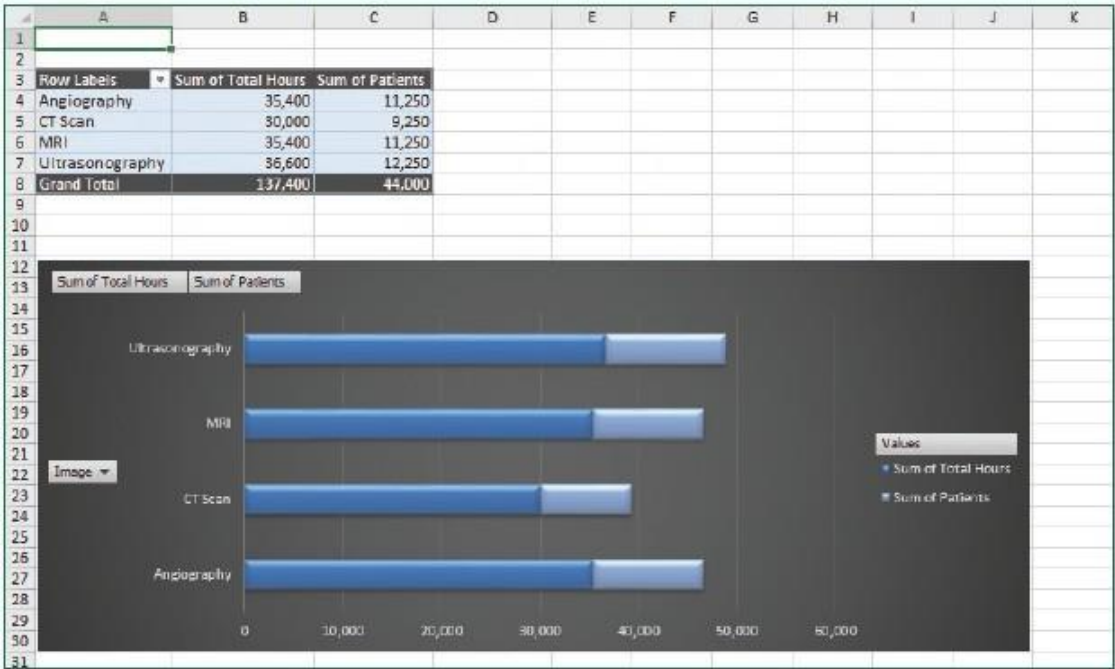


Figure 4-100 *PivotChart* object

- j. Click cell **A1**.

15. Export data using the *Clipboard*.

- a. Click the **Adv Filter** sheet tab.
- b. Starting at cell **G4**, select the cells in the *Extract Range* and click the **Copy** button [*Home* tab, *Clipboard* group].
- c. Open the **ClemensonWord-04** Word document downloaded from the **Resources** link.
- d. Press **fn+Cmd+right arrow** or **fn+Ctrl+right arrow** to position the insertion point.
- e. Click the arrow with the **Paste** button [*Home* tab, *Clipboard* group] and choose **Paste Special**.
- f. Select **Microsoft Excel Worksheet Object** in the *Paste Special* dialog box.
- g. Select the **Paste link** radio button in the *Paste Special* dialog box and click **OK**. (The Excel data in your document may be different from the figure.)
- h. Click the **Center** button [*Home* tab, *Paragraph* group].

i. Save the Word document as [your initials] Excel 4-3Word in your usual folder (Figure 4-101). You will **not** be uploading this file to SIMnet.

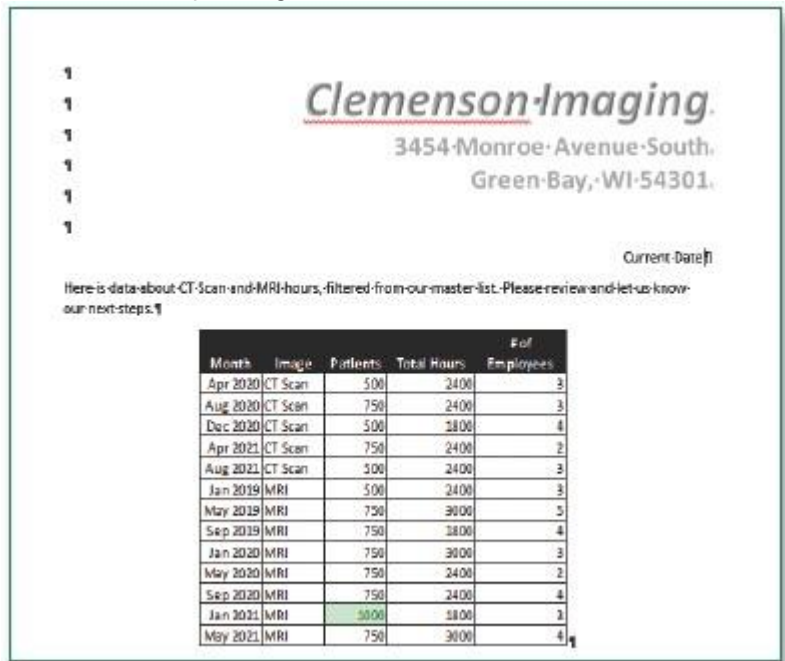


Figure 4-101 Word document

with pasted Excel object

j. Close Word.

- 16. Save and close the **Clemenson-04** Excel workbook.
- 17. Upload and save the **Clemenson-04** Excel workbook.
- 18. Submit project for grading.