

Consolidate and Summarizing Data from Multiple Worksheets

There are a few methods to summarize data from different worksheets in a workbook. You can use the **Consolidate** command, in the **Data Tools** group on the **Data** tab to consolidate data **by Position** or **by Category**.

The **Consolidate** tool combines values from multiple worksheets and does calculations into one worksheet.

Or you can also consolidate data **by Formula**. It is necessary to understand how to reference cells when building a formula including a cell reference from another worksheet. To reference cells from other worksheets, the worksheet name is used, which works as the worksheet reference, and the cell reference.

When consolidate **by Formula**, you will deal with two options regarding cell references. The data to be consolidated might be:

- a) In different cells on different worksheets, or
- b) In the same cells on different worksheets.

If you are going to reference different cells from many worksheets, it is necessary to reference the cell for each individual worksheet.

If you are going to reference the same cell from many worksheets, it is necessary to reference the first worksheet name, followed by a colon (:), the last worksheet name, and ending with the cell reference.

The colon (:) between the first worksheet name and the last worksheet name instructs **Excel** to include not only these two worksheets but also all the worksheets in between, just as **Excel** does with a range of cells on a worksheet.

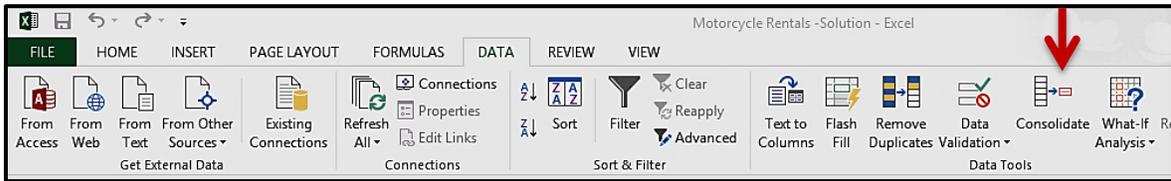
Consolidate Data by Position

1. Do the set-up of all the data to be consolidated on each worksheet.

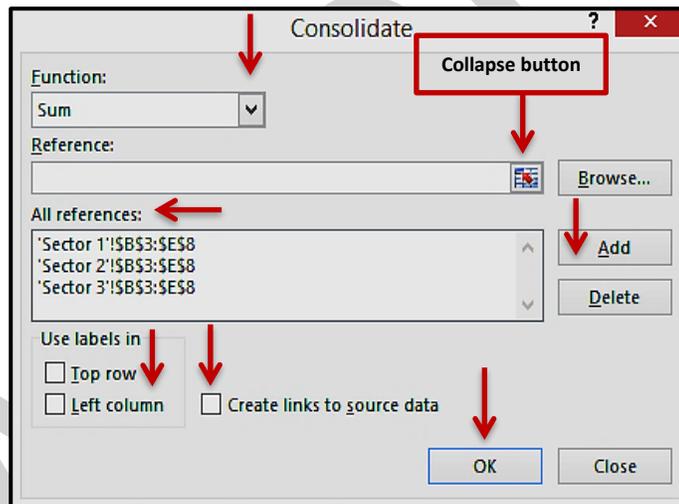
How to set up the data

- Make sure that each range of data is in list format, it means that each column has a label in the first row and contains similar facts, and there are no blank rows or columns within the list.
- Make sure that each range has the same layout in all the worksheets.
- Click the upper-left cell of the area where you want the consolidated data to appear in the summary worksheet.
- Make sure that you have enough cells to the right and below this cell for the consolidated data.

- The **Consolidate** command fills the area as needed.
2. On the **Data** tab, in the **Data Tools** group, click **Consolidate**.



3. In the **Function** box, select the function that you want to use to consolidate the data.
4. Click the **Collapse** button in the **Reference** box; select the range in the first worksheet. Click the **Collapse** button to expand the **Consolidate Dialog** box and click the **Add** button to add it to the "All reference" section.

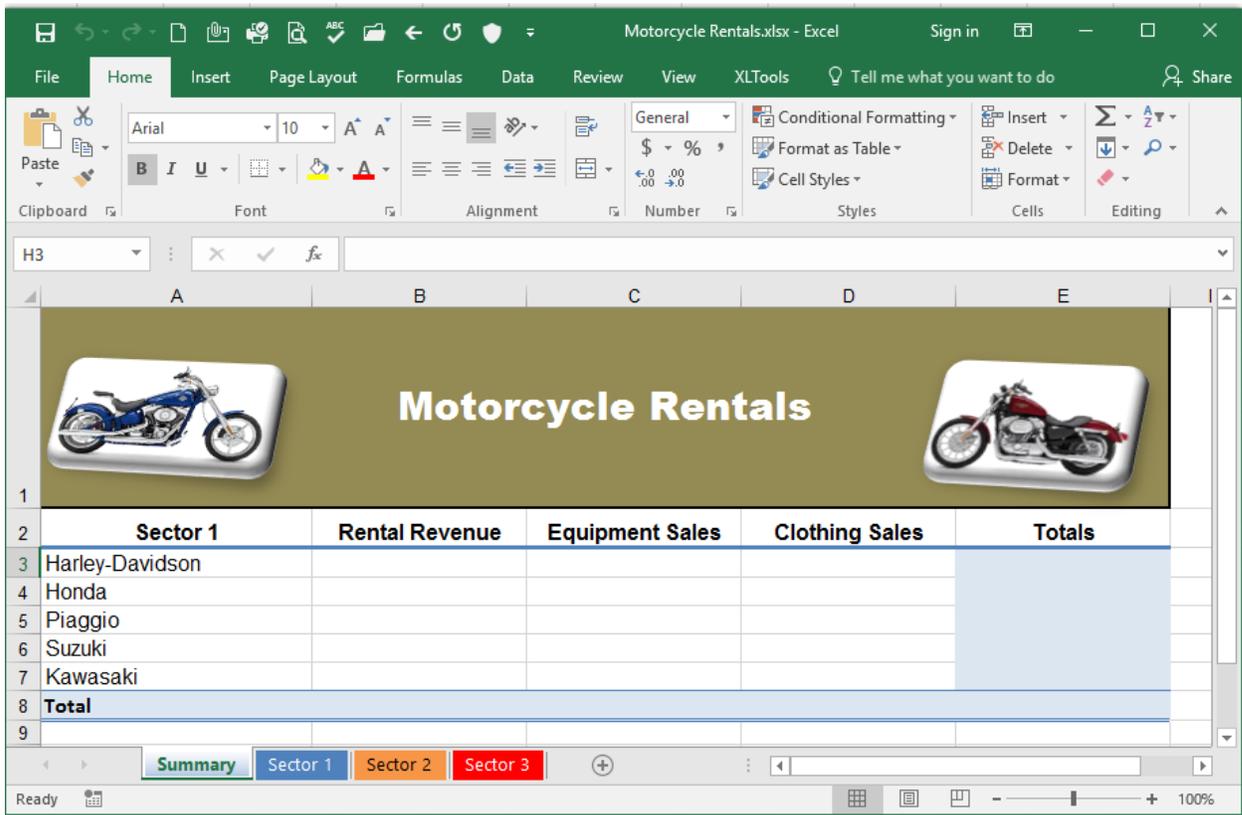


5. Repeat the process in step 4 until you have added all the ranges to consolidate to the **All References** section.
6. Leave the two boxes under **Use labels in** blank.
7. Decide if you want or not, to update automatically when the source data changes. Select the **Create links to source data** check box, if you want update automatically.
8. Click **OK**.

4-12 Hands-on Exercise

Consolidate Data by Position

1. Open the **Chapter 4** folder, and then open the **Motorcycle Rentals** file.



2. Make sure that **Summary** is the active tab; then select cell **B3**.
3. On the **Data** tab, in the **Data Tools** group, click **Consolidate**.
4. In the **Function** box, select the **Sum** function if it is not selected.
5. Click the collapse button in the **Reference** box; and select the range of cells **B3:E8** in the **Sector 1** worksheet. Then click the collapse button again.
6. Click the **Add** button to add it to the “**All reference**” section.
7. Repeat the same process in step **5** and **6** to add the ranges for the **Sector 2** and **Sector 3** worksheets.
8. Leave the two boxes under **Use labels in** blank.
9. Click **OK**.

10. See picture below. Save and Close the file.

	Sector 1	Rental Revenue	Equipment Sales	Clothing Sales	Totals
3	Harley-Davidson	\$ 10,538.00	\$ 460.00	\$ 1,565.00	\$ 12,563.00
4	Honda	5,450.00	389.00	471.00	\$ 6,310.00
5	Piaggio	5,202.50	156.00	275.00	\$ 5,633.50
6	Suzuki	7,446.00	575.00	520.00	\$ 8,541.00
7	Kawasaki	12,078.75	350.00	265.00	\$ 12,693.75
8	Total	\$ 40,715.25	\$ 1,930.00	\$ 3,096.00	\$ 45,741.25

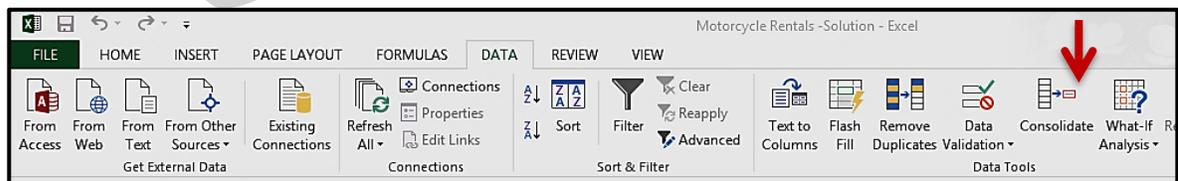
Consolidate Data by Category

1. Do the set-up of all the data to be consolidated on each worksheet.

How to set up the data

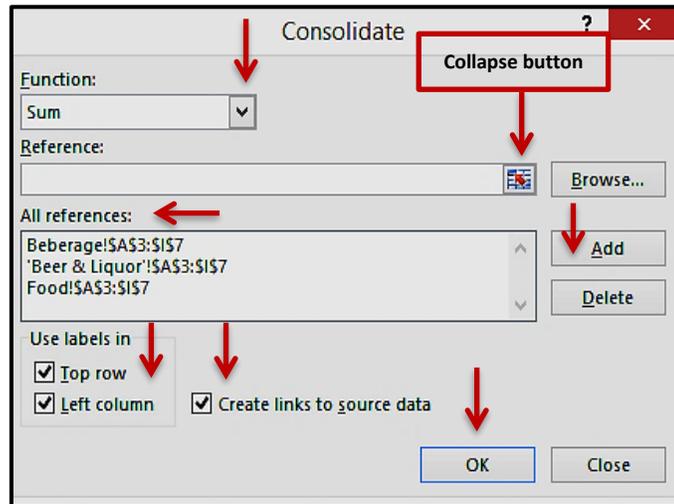
- Make sure that each range of data is in list format, it means that each column has a label in the first row and contains similar facts, and there are no blank rows or columns within the list.
- Make sure all the labels either for columns or rows in the ranges that you want to consolidate have the same spelling and capitalization.
- Click the upper-left cell of the area where you want the consolidated data to appear in the summary worksheet.
- Make sure that you have enough cells to the right and below this cell for the consolidated data. The **Consolidate** command fills the area as needed.

2. On the **Data** tab, in the **Data Tools** group, click **Consolidate**.



3. In the **Function** box, select the function that you want to use to consolidate the data.

4. Click the **Collapse** button in the **Reference** box; select the range in the first worksheet.
5. Click the **Collapse** button to expand the **Consolidate Dialog** box and click the **Add** button to add it to the “**All reference**” section.



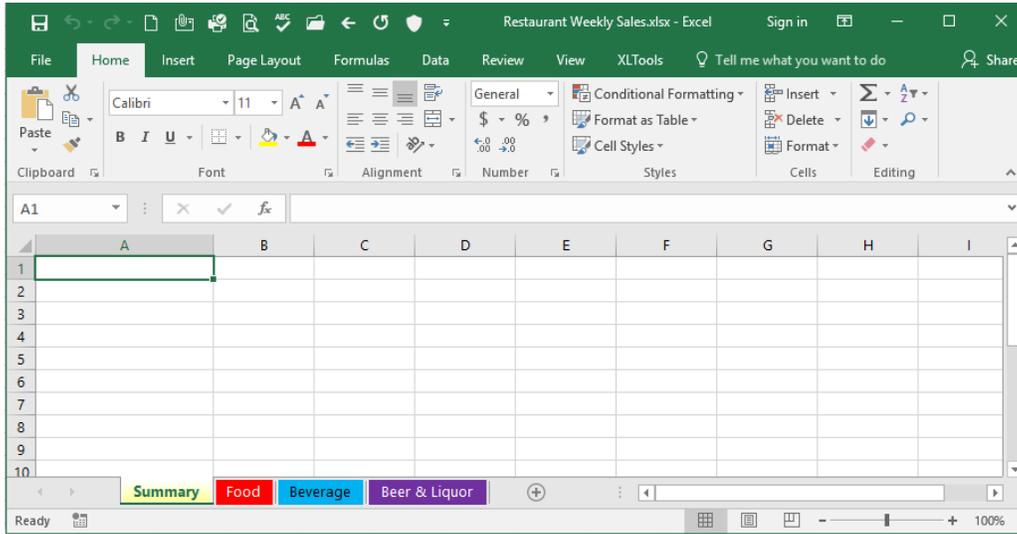
6. Repeat the process in step 4 until you have added all the ranges to consolidate to the all references section.
7. Select the two check boxes under **Use labels in**. It indicates where the labels are in the source ranges. The top row, the left column, or both.
8. Decide if you want or not to update automatically when the source data change.
9. Select the **Create links to source data** check box, if you want to update automatically.
10. Click **OK**.
11. **Excel** consolidates the data and the **Expand** and **Collapse** buttons will appear on the left of the row headings.
12. To see the details of a category, click an **Expand** button.
13. To hide the details of an expanded category, click the **Collapse** button.

Note: You can name each range that you want to consolidate, and type the name range in the **Reference** box instead of using the collapse button.

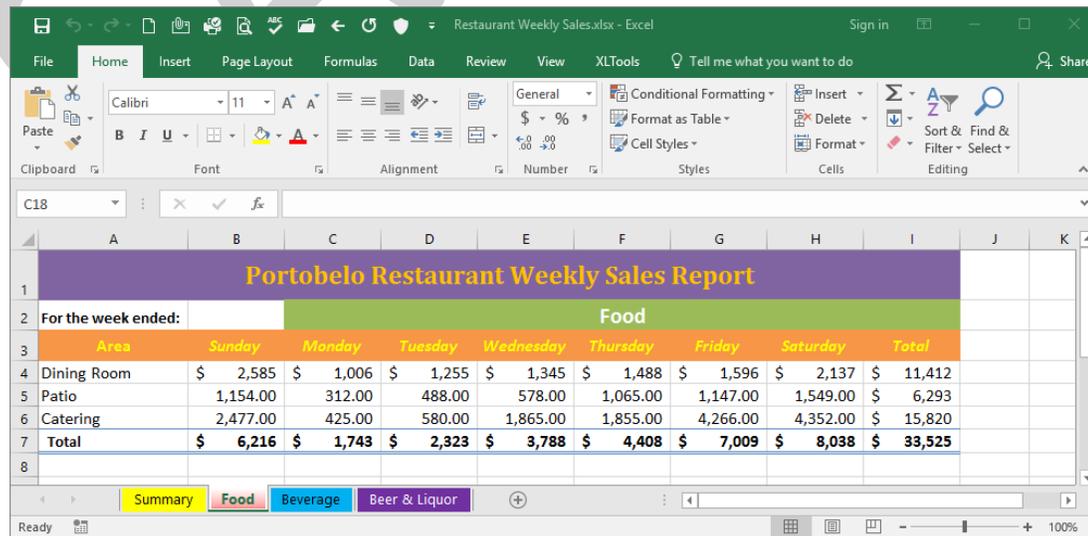
4-13 Hands-on Exercise

Consolidate Data by Category

1. Open the **Chapter 4** folder, and then open the **Restaurant Weekly Sales** file.



2. Make sure that **Summary** is the active tab; then select cell **A1**.
3. On the **Data** tab, in the **Data Tools** group, click **Consolidate**.
4. In the **Function** box, select the **Sum** function if it is not selected.
5. Click the **Collapse** button in the **Reference** box.
6. Select the range of cells **A3:I7** in the **Food** worksheet.



7. Click the **Collapse** button to expand the **Consolidate Dialog** box.
8. Click the **Add** button to add it to the “**All reference**” section.
9. Repeat the same process in step **5** and **6** to add the range for the **Beverage** and **Beer & Liquor** worksheets.

Area	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Total
Dining Room	\$ 341	\$ 88	\$ 195	\$ 229	\$ 214	\$ 198	\$ 235	\$ 1,500
Patio	244.00	49.00	88.00	97.00	96.00	84.00	128.00	\$ 786
Catering	652.00	148.00	156.00	314.00	247.00	394.00	405.00	\$ 2,316
Total	\$ 1,237	\$ 285	\$ 439	\$ 640	\$ 557	\$ 676	\$ 768	\$ 4,602

Area	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Total
Dining Room	\$ 1,577	\$ 175	\$ 269	\$ 492	\$ 323	\$ 224	\$ 485	\$ 3,545
Patio	652.00	56.00	96.00	78.00	184.00	168.00	227.00	\$ 1,461
Catering	984.00	44.00	87.00	344.00	411.00	884.00	745.00	\$ 3,499
Total	\$ 3,213	\$ 275	\$ 452	\$ 914	\$ 918	\$ 1,276	\$ 1,457	\$ 8,505

10. Select the two check boxes under **Use labels in**.
11. Select the **Create links to source data** check box.
12. Click **OK**.
13. Click the **Expand** button to see the details of the **Patio** category.

14. See picture below.

	A	B	C	D	E	F	G	H	I	J
1			Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Total
5		Dining Room	\$ 4,503	\$ 1,269	\$ 1,719	\$ 2,066	\$ 2,025	\$ 2,018	\$ 2,857	\$ 16,457
6		Restaurant Weekly Sales	244.00	49.00	88.00	97.00	96.00	84.00	128.00	\$ 786
7		Restaurant Weekly Sales	652.00	56.00	96.00	78.00	184.00	168.00	227.00	\$ 1,461
8		Restaurant Weekly Sales	1,154.00	312.00	488.00	578.00	1,065.00	1,147.00	1,549.00	\$ 6,293
9		Patio	2,050.00	417.00	672.00	753.00	1,345.00	1,399.00	1,904.00	\$ 8,540
13		Catering	4,113.00	617.00	823.00	2,523.00	2,513.00	5,544.00	5,502.00	\$ 21,635
17		Total	\$ 10,666	\$ 2,303	\$ 3,214	\$ 5,342	\$ 5,883	\$ 8,961	\$ 10,263	\$ 46,632
18										

Worksheet tabs: Summary, Food, Beverage, Beer & Liquor

15. Save and Close the file.

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