

Exploring Data with PivotTables

CREATING YOUR FIRST PIVOTTABLE



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Course Agenda



PivotTables: What are they and why use them?

Managing and modifying PivotTables

Adding grouping, filtering, and slicing

Exploring other Excel capabilities



In This Module

What are PivotTables and when should you use them?

PivotTables vs. Tables

Creating PivotTables

Multiple data sources



PivotTable

A PivotTable is a powerful tool to calculate, summarize, and analyze data that lets you see comparisons, patterns, and trends in your data.

<https://support.office.com/en-us/article/create-a-pivottable-to-analyze-worksheet-data-a9a84538-bfe9-40a9-a8e9-f99134456576>



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What Do PivotTables Do?



Summarise the data, e.g. sales by department, store, or state



Analyze the data, e.g. drill into department, sales by category



Options to display the values and to calculate new values, e.g. profit



PivotTable Structure

Filter

Columns

Totals

Rows

Values

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1															
2	Airline	JetBlue Airways													
3															
4	No of flight arrivals	Month of year													
5	Airport Name		1	2	3	4	5	6	7	8	9	10	11	12	Grand Total
6	Aguadilla, PR: Rafael Hernandez		197	157	178	169	250	266	279	257	165	122	137	216	2,393
7	Albany, NY: Albany International		124	112	124	120	124	120	124	124	120	124	120	124	1,460
8	Albuquerque, NM: Albuquerque Internatio		38	38	51	50	54	60	62	62	49	55	46	50	615
9	Anchorage, AK: Ted Stevens Anchorage International					26	108	124	110	40					408
10	Atlanta, GA: Hartsfield-Jackson Atlanta Int		438	382	565	575	600	578	594	449	430	439	414	389	5,853
11	Austin, TX: Austin - Bergstrom Internation:		371	336	416	360	372	378	403	434	358	364	354	362	4,508
12	Baltimore, MD: Baltimore/Washington Int		410	352	417	406	420	397	359	441	485	508	484	449	5,128
13	Boston, MA: Logan International		8,392	7,627	9,189	8,997	9,067	8,635	8,973	8,797	8,193	8,655	8,321	8,157	103,003
14	Bozeman, MT: Bozeman Yellowstone Inter		9	8	9	8		6	8					6	54
15	Buffalo, NY: Buffalo Niagara International		662	568	754	737	806	778	813	883	836	866	833	808	9,344
16	Burbank, CA: Bob Hope		120	108	119	116	120	105	102	62	108	108	108	112	1,288
17	Burlington, VT: Burlington International		203	176	186	180	185	180	186	186	217	225	178	182	2,284
18	Charleston, SC: Charleston AFB/Internatio		363	352	438	441	560	516	517	558	477	493	392	387	5,494
19	Charlotte Amalie, VI: Cyril E King		93	113	155	143	128	121	124	128	125	91	90	93	1,404
20	Charlotte, NC: Charlotte Douglas Internati		238	219	264	258	258	260	275	244	228	260	243	229	2,976
21	Chicago, IL: Chicago O'Hare International		391	338	405	386	460	470	514	522	442	431	361	358	5,078
22	Christiansted, VI: Henry E. Rohlsen		38	28	31	30	31	30	31	62	60	56	60	62	519
23	Cleveland, OH: Cleveland-Hopkins Interna		232	184	234	226	257	241	244	248	232	240	228	237	2,803
24	Dallas/Fort Worth, TX: Dallas/Fort Worth I		103	88	105	103	116	110	116	116	110	115	106	90	1,278
25															

https://www.transtats.bts.gov/OT_Delay/ot_delaycause1.asp?display=data&pn=1



Demo



PivotTable examples



When Should PivotTables Be Used?



Data is already related

Often the data already exists in a
“neat” tabular format

Multiple tables that can be linked
by a common element or “key”



Analyze and manipulate

Sophisticated analysis
Present the same data using
different views or “dimensions”

PivotTables vs. Tables

PivotTable

“Multi-dimensional” reporting requirements

E.g. Comparing sales of products

- By category per store
- By store per category
- By product range per region
- By salesperson per brand

“Slicing and dicing the data”

Multiple data sources

Tables

“Flat” reporting requirement

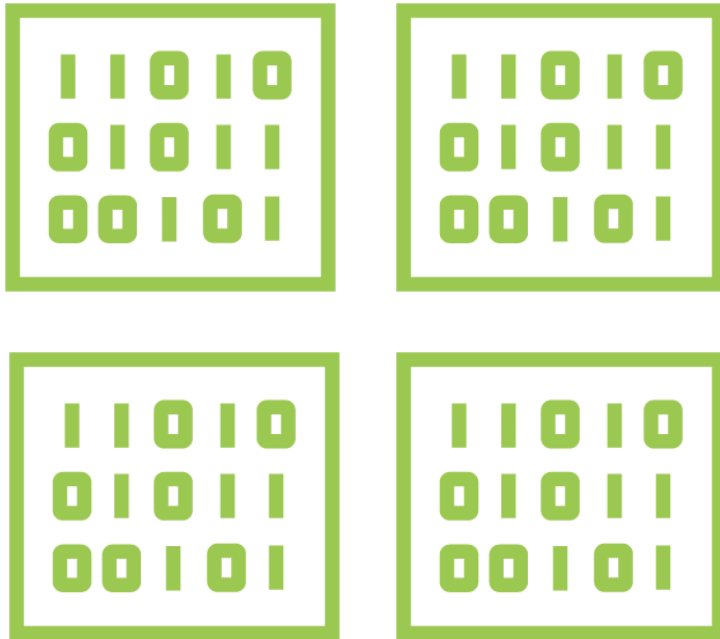
Analysis requirements are often less complex

- Total sales across all products
- Top 10 products

Displaying Tables with Excel



PivotTables with Multiple Sources



The data must be loaded to the Data Model

- aka Power Pivot

Data sources can include

- Text files
- Excel workbooks
- Websites
- Microsoft Access
- SQL Server
- Other databases

Multiple tables from the same source are automatically added to the Data Model



Demo



Create a PivotTable



Demo



PivotTables from multiple sources

Power Pivot



Module Summary



What PivotTables are and when to use them

PivotTables vs. Tables

Creating PivotTables

PivotTables with multiple sources

