

Resource Metadata

Level	Undergraduate
Duration	1 practical (approx. 2 hours)
Software Required	Microsoft Excel

Learning Outcome

Practical 15 equips students with essential skills in database management and analysis using Microsoft Excel. Students learn to organize, sort, filter, summarize, and analyze data through hands-on use of core Excel tools like **sorting, AutoFilter, Advanced Filter, PivotTables, and subtotals**. These competencies are foundational for anyone working with structured data in business, research, or administrative contexts, enabling efficient information management and insightful data-driven decision-making.

Practical 15 : Database PIVOTTABLE

A database allows you to store and organize information efficiently. With Microsoft Excel, you can Find, Delete, and Extract information from a dataset. Excel also provides powerful database functions and tools like PivotTables for analysis.

1. Enter the Following Data in a New Worksheet:

Name	Employee No	Dept	Sex	Basic	Bonus	Gross
Paula	125	B	M	2000	100	2100
George	127	A	M	2500	150	2650
Franky	129	A	M	2200	50	2250
Rita	123	C	F	1800	200	2000
Christina	130	A	F	2900	180	3080
Billy	133	C	M	4000	500	4500
Janet	135	F	F	5000	700	5700

2. Sorting the Database:

- Click any cell in the database.
- Go to Data > Sort.
- In the Sort By box, select Name.
- Ensure the Ascending option is selected.
- Click OK.

3. Finding Information from the Database:

- Click any cell in the database.

- Go to Data > Filter > AutoFilter.
- Click the dropdown arrow in the Dept column header (C1).
- Select A.
- Only employees from Department A will be displayed.
- To remove the filter: Go to Data > Filter > AutoFilter again.

4. Working with Multiple Criteria:

- Select cells C1 and G1.
- Use the Copy tool on the Standard Toolbar.
- Paste into cell A15.
- In cell A16, type **A** and in B16 type **>2500**.
- Click any cell in the database.
- Go to Data > Filter > Advanced Filter.
- In the Criteria Range, select cells A15:B16.
- Under Action, choose Copy to another location.
- In the Copy to field, select cell A18.
- Click OK.

5. Using the Pivot Table:

- Click any cell in the database.
- Go to Data > PivotTable and PivotChart Report.
- Choose Microsoft Excel List or Database and click Next.
- Select the data range A1:G8, click Next.
- Click Layout.
- Drag the Dept field into the Row Area.
- Drag the Basic field into the Data Area.
- Click OK.
- Choose a location (e.g., cell A23) and click Finish.

6. Adding Subtotals in the Database

- Click any cell in the database.
- Go to Data > Subtotals.
- In the Sort By box, choose Dept and click OK.
- In the Subtotals dialog:
 - - Under 'At each change in', select Dept.
 - - Use function: Sum
 - - Add subtotal to: Gross
- Click OK.

7. Save your work