



DATA ANALYSIS WITH EXCEL

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COURSE OVERVIEW

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TROUBLE SHOOT FORMULAS

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CHARTS AND TABLES

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LOOKUP FUNCTIONS

TRACE PRECEDENCE AND DEPENDENCE

- Trace Precedents and Trace Dependents allow users to visually trace the relationships between cells in a worksheet.
- These features are useful for understanding complex formulas by helping the user identify precedents (cells that affect the value of the current cell), and dependents (cells that are affected by the value of the current cell).

TRACE PRECEDENCE

Steps to Trace Precedence

- Trace precedents by navigating to the "Formulas" tab under "Formula Auditing" group, click on the "Trace Precedents" button
- Trace Precedents displays arrows that indicate which cells are referenced by the formula in the active cell.
- Click on the cell containing the formula for which you want to trace the precedents. This will make it the active cell.

VIEW DEPENDENCE

Steps to Trace Precedence

- View Dependents: Excel will display arrows pointing from the active cell to the cells that contain formulas referencing it. You can follow these arrows to trace the relationship between the active cell and its dependents.
- These steps allow users to easily visualize the relationships between cells in worksheets, making it easier to understand complex formulas and troubleshoot errors

WATCH WINDOW

Steps to Trace Precedence

- The Watch Window, helps you keep an eye on important cells or ranges of cells without having to constantly navigate through your worksheet.
- This can help users track changes and monitor the impact of edits or updates in real-time.

WATCH WINDOW

How to use a watch window

- Navigate to the "Formulas" tab in the "Formula Auditing" tab, click on the "Watch Window" button.
- Select the cell or range of cells that you want to monitor by either typing the cell reference manually or by selecting the cell/range directly from your worksheet.
- Click "Add" to add the selected cell/range to the Watch Window
- Once you've added cells to the Watch Window, you'll see them listed in the pane along with their current values.
- Excel automatically updates the values displayed in the Watch Window whenever there is a change in the monitored cells.
- To close the Watch Window pane, simply click on the "X" button in the top-right corner of the pane.

TYPES OF CHARTS

- **Column Chart** represents data using vertical bars. Suitable for comparing values across different categories.
- **Bar charts** are similar to column charts but with horizontal bars. Useful for comparing values within categories.
- Line charts display data points connected by straight lines. Ideal for showing trends or changes over time. Useful for illustrating continuous data series, such as stock prices or temperature changes.
- **The Pie Chart** represents data as a circle divided into slices, with each slice representing a proportion of the whole. Suitable for showing parts of a whole or comparing percentages of a total.

TYPES OF CHARTS

- **Area Charts** are similar to line charts, but the area below the lines is filled with color. Useful for visualizing cumulative data and showing the magnitude of change over time and emphasizes the total value across categories.
- **The Scatter Plot** represents data points as individual dots on a two-dimensional graph. Useful for showing relationships between two variables as each dot represents a single data point, making it ideal for identifying correlations or patterns.
- **The histogram** displays the distribution of data in a continuous range by dividing it into intervals (bins). Useful for visualizing frequency distributions and identifying patterns or outliers in data.

PIVOT TABLES

- A Pivot Table is a powerful data analysis tool used to summarize, analyze, and present large datasets in a compact, tabular format.
- It allows users to reorganize and aggregate data from multiple perspectives, enabling them to gain insights, identify trends, and make data-driven decisions.
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HOW TO CREATE A PIVOT TABLE

- Ensure that your dataset is well-organized by removing any blank rows or columns and ensure that there are no merged cells within the dataset.
- Click anywhere within your dataset to select it and insert a table
- Navigate to the "Insert" tab in Excel's ribbon.
- In the "Create PivotTable" dialog box, ensure that the "Select a table or range" option is selected.
- Choose whether you want to place the Pivot Table in a new worksheet or an existing worksheet

HOW TO CREATE A PIVOT TABLE

- To further customize your Pivot Table, format the cells, by applying styles, and adding calculated fields or calculated items.
- Right-click within the Pivot Table to access various options for customizing its appearance and behavior
- Once your Pivot Table is created, you can explore and analyze your data by interacting with it, filtering, sorting, drilling down, or expanding/collapsing data categories as needed.

