## Creating a dashboard in Excel 2021

Creating a dashboard in Excel 2021 involves several steps to organize, analyze, and visualize your data. Here’s a step-by-step guide to build a dashboard:

**Step 1: Organize Your Data**

Before creating a dashboard, ensure your data is well-organized:

1. Place your data in a structured table (using Excel's **Insert > Table**).
2. Label your columns clearly.
3. Clean your data by removing duplicates and handling missing values.

**Step 2: Design the Layout**

Plan how you want your dashboard to appear. Typical sections include:

* Key metrics or summary section.
* Graphs/charts section.
* Filters or slicers for interactivity.

**Step 3: Insert Pivot Tables**

Pivot tables allow you to summarize and analyze large datasets easily.

1. Select your data.
2. Go to **Insert > Pivot Table**.
3. Place the pivot table on a new worksheet.
4. Drag fields to the Rows, Columns, Values, and Filters sections to organize your data.

**Step 4: Create Visualizations (Charts & Graphs)**

To visualize your data, use Excel charts:

1. Select data or pivot table summary.
2. Go to **Insert > Charts** and choose from a variety of charts (e.g., Line, Bar, Pie, etc.).
3. Customize the charts with **Chart Design** options (title, labels, legends).

**Step 5: Add Slicers for Interactivity**

Slicers allow users to filter data dynamically:

1. Click on the pivot table.
2. Go to **PivotTable Analyze > Insert Slicer**.
3. Select fields you want to filter.
4. Position slicers on your dashboard for easy access.

**Step 6: Use Conditional Formatting**

Highlight important trends or metrics using conditional formatting:

1. Select the range of cells or data.
2. Go to **Home > Conditional Formatting**.
3. Set rules like color scales, data bars, or custom formulas to highlight key values.

**Step 7: Create Summary Tables**

Use Excel functions (SUM, AVERAGE, etc.) to create summary tables or KPI boxes:

1. Calculate total, averages, or key metrics using formulas.
2. Place them prominently at the top or in key sections of the dashboard.

**Step 8: Design and Customize the Dashboard**

Improve the appearance of your dashboard:

1. Use **Shapes** (from the **Insert** tab) to create borders or highlight areas.
2. Add headers and labels for clarity.
3. Use color themes that make the data easy to interpret.

**Step 9: Link Sheets (if needed)**

If your data is spread across multiple sheets, create links between them:

1. Use **cell referencing** to pull data from other sheets.
2. Use formulas like **VLOOKUP**, **INDEX**, or **MATCH** to connect datasets.

**Step 10: Test and Share the Dashboard**

Before sharing, test the functionality:

1. Check the interactivity of slicers and pivot tables.
2. Ensure that all charts update correctly when data changes.
3. Share the Excel file or export it as a PDF to present your dashboard.

**Example Scenario: Sales Performance Dashboard**

You have a dataset of monthly sales, divided by region, product, and sales reps. The goal is to create a dashboard that tracks total sales, regional performance, top products, and sales rep performance.

**Step-by-Step Example:**

**1. Prepare Your Data**

Sample data table format:

| **Date** | **Region** | **Product** | **Sales Rep** | **Units Sold** | **Revenue** |
| --- | --- | --- | --- | --- | --- |
| 01/01/2024 | North | Product A | John Doe | 200 | 15000 |
| 01/01/2024 | South | Product B | Jane Smith | 180 | 12000 |
| 01/01/2024 | East | Product C | Alex Taylor | 220 | 20000 |
| ... | ... | ... | ... | ... | ... |

**2. Insert a Pivot Table**

1. Select the entire data table.
2. Go to **Insert > Pivot Table**.
3. Create a pivot table on a new worksheet to analyze total sales and revenue:
   * **Rows:** Region
   * **Values:** Sum of Revenue, Sum of Units Sold
   * **Filters:** Sales Rep, Product (optional for later use with slicers)

This creates a table summarizing sales per region.

**3. Add Visualizations**

Create key charts to visualize data trends.

**a. Total Sales by Region (Bar Chart)**

1. Select the pivot table summary of sales by region.
2. Go to **Insert > Bar Chart** (choose a simple 2D bar chart).
3. Customize:
   * Add chart title: "Total Sales by Region"
   * Right-click on bars > Format Data Series > Change colors (optional).

**b. Sales Trends Over Time (Line Chart)**

1. Create another pivot table:
   * **Rows:** Date (group by Month or Year)
   * **Values:** Sum of Revenue
2. Select this data and insert a **Line Chart** to show sales trends over time.
3. Customize the chart title to: "Monthly Sales Trend".

**c. Top Products by Revenue (Pie Chart)**

1. Insert another pivot table:
   * **Rows:** Product
   * **Values:** Sum of Revenue
2. Select the pivot data and insert a **Pie Chart** to display product performance.
3. Customize title: "Top Products by Revenue".

**4. Add Slicers for Interactivity**

Slicers allow users to filter data easily:

1. Select the pivot table.
2. Go to **PivotTable Analyze > Insert Slicer**.
3. Choose fields like **Region**, **Product**, or **Sales Rep** to filter the dashboard interactively.
4. Position the slicers on your dashboard for easy access.

**5. Create KPI Summary Boxes**

Use formulas to create summary metrics at the top:

1. Create a **Total Revenue** cell using =SUM(Revenue Column).
2. Calculate **Average Sales per Rep** using =AVERAGE(Revenue Column).
3. Display the **Top Performing Region** using a formula like =INDEX(Region Column, MATCH(MAX(Sum of Revenue), Revenue Column, 0)).

**6. Design and Layout**

1. Create a clean layout by aligning your charts and slicers neatly.
2. Add **titles** and **labels** to each section for clarity.
3. Use **shapes** from **Insert > Shapes** to draw boxes around KPI summaries, charts, and slicers to group them.

**Final Dashboard Layout:**

* **Top Section (KPIs):**
  + Total Sales, Average Revenue per Rep, Top Performing Region (using formula summaries)
* **Middle Section (Charts):**
  + Bar Chart: Total Sales by Region
  + Line Chart: Monthly Sales Trend
  + Pie Chart: Top Products by Revenue
* **Right Section (Slicers):**
  + Region Slicer
  + Product Slicer
  + Sales Rep Slicer

