

Practical 12

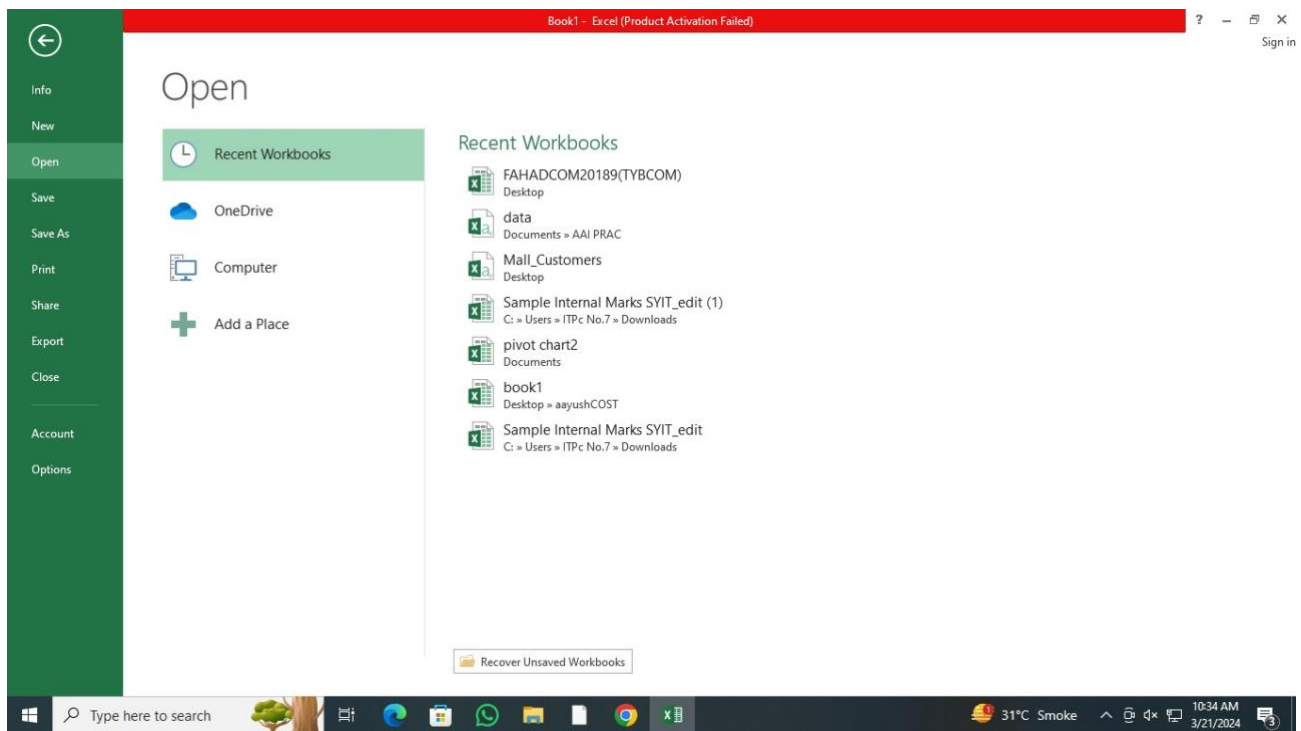
Aim : Data Analysis and Visualization using Advanced Excel

Power View is a feature of Microsoft Excel 2013 that enables **interactive** data exploration, visualization, and presentation encouraging intuitive ad-hoc reporting.

Create a Power View Sheet

Make sure **Power View** add-in is enabled in Excel 2013.

Step 1 – Click on the **File** menu and then Click on **Options**.



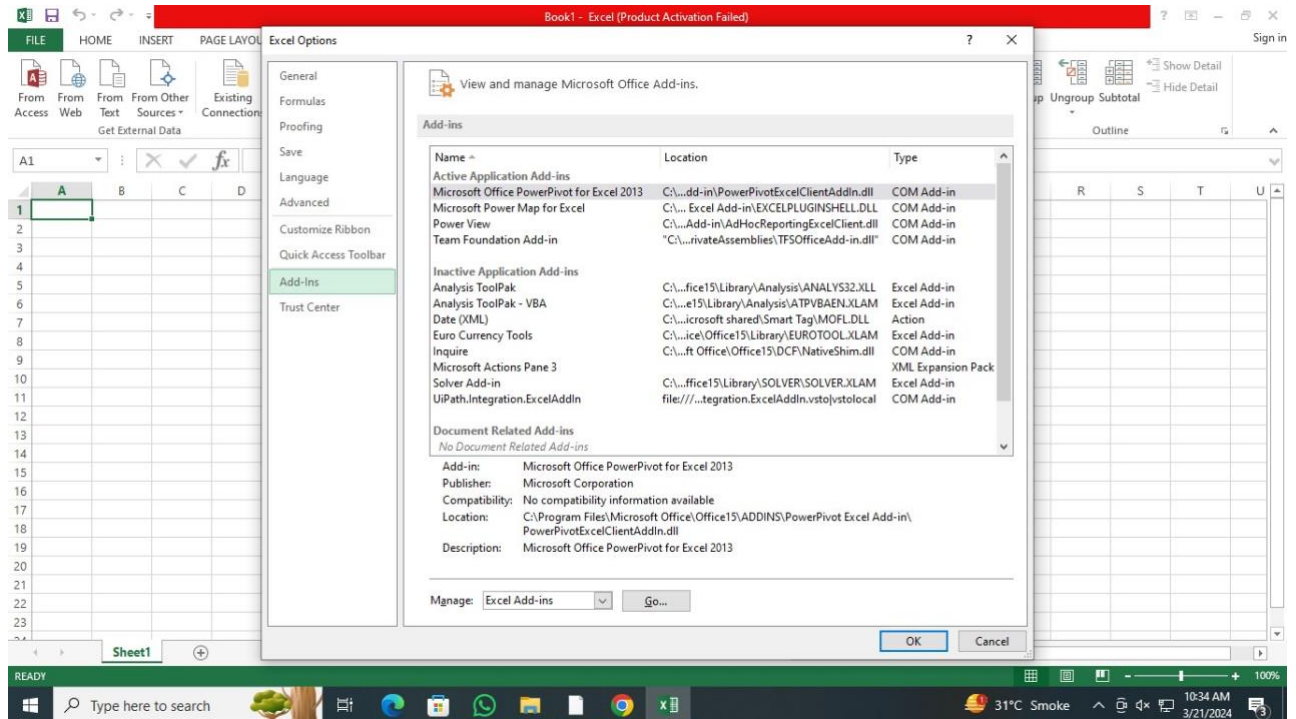
The **Excel Options** window appears.

Step 2 – Click on **Add-Ins**.

Step 3 – In the **Manage** box, click the drop-down arrow and select **Excel Add-ins**.

Step 4 – All the available **Add-ins** will be displayed. If **Power View** Add-in is

enabled, it appears in Active Application Add-ins.



Now, you are ready to create the

Power View sheet. **Step 1** – Click on

the **Data Table**.

Step 2 – Click on **Insert** tab.

Step 3 – Click on **Power View** in **Reports** Group.

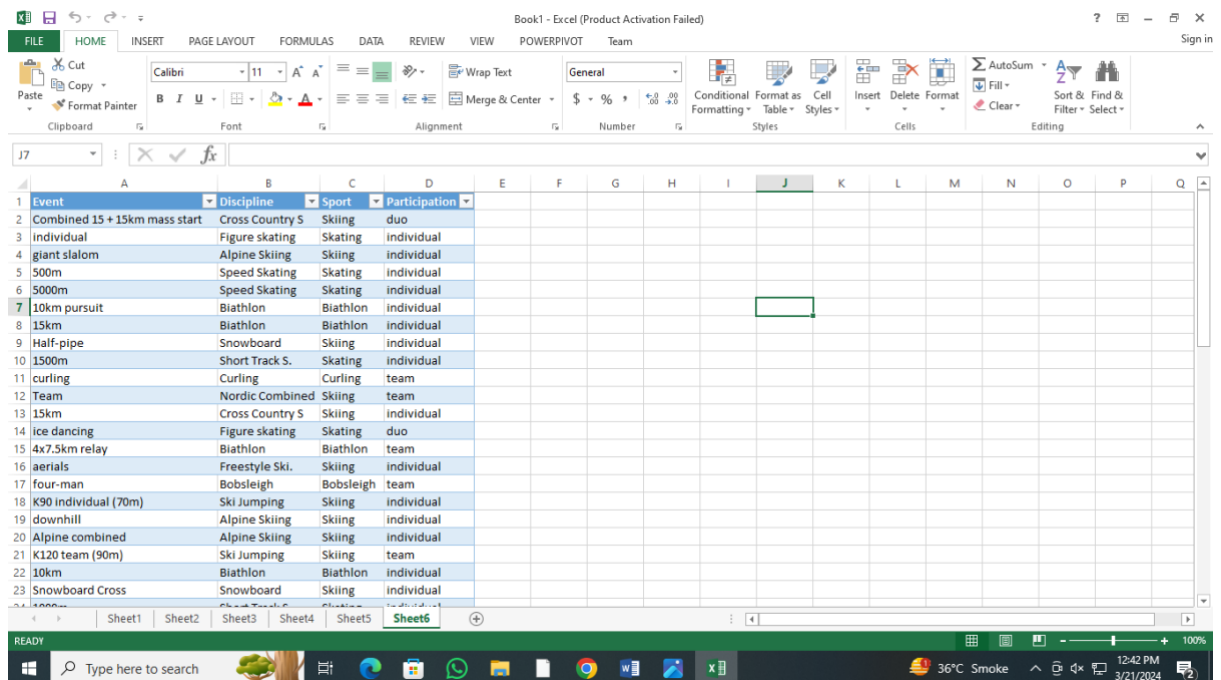
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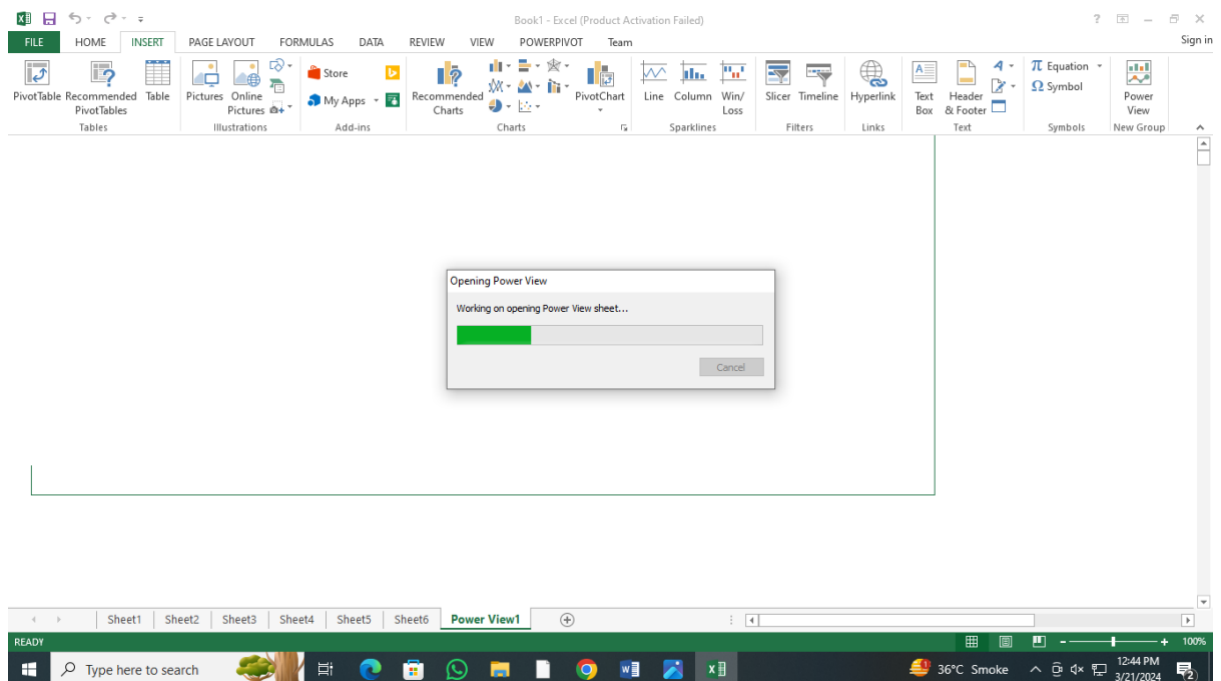
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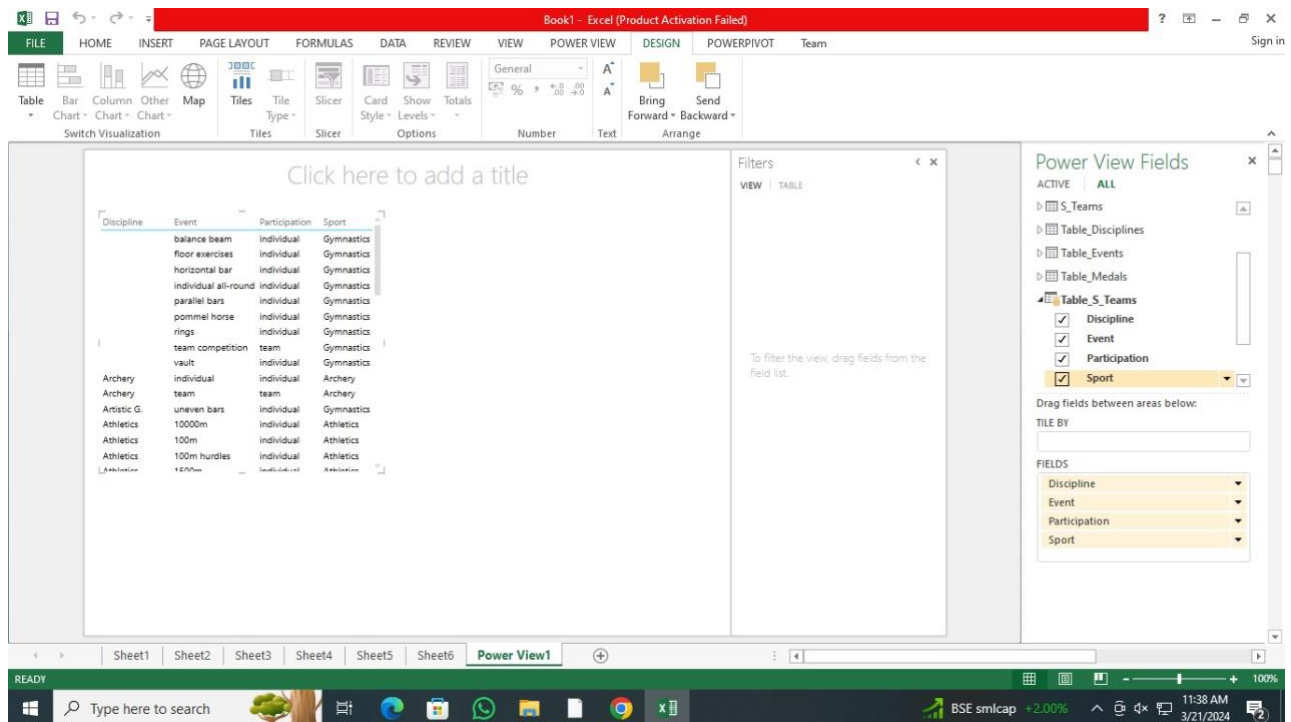


An **Opening Power View** window opens, showing the progress of Working on opening Power Viewsheets.



The **Power View sheet** is created for you and added to your Workbook with the **Power View**. On the Right-side of the **Power View**, you find the **Power View Fields**. Under the **Power View Fields** you will find **Areas**.

In the Ribbon, if you click on **Design tab**, you will find various **Visualization** options.



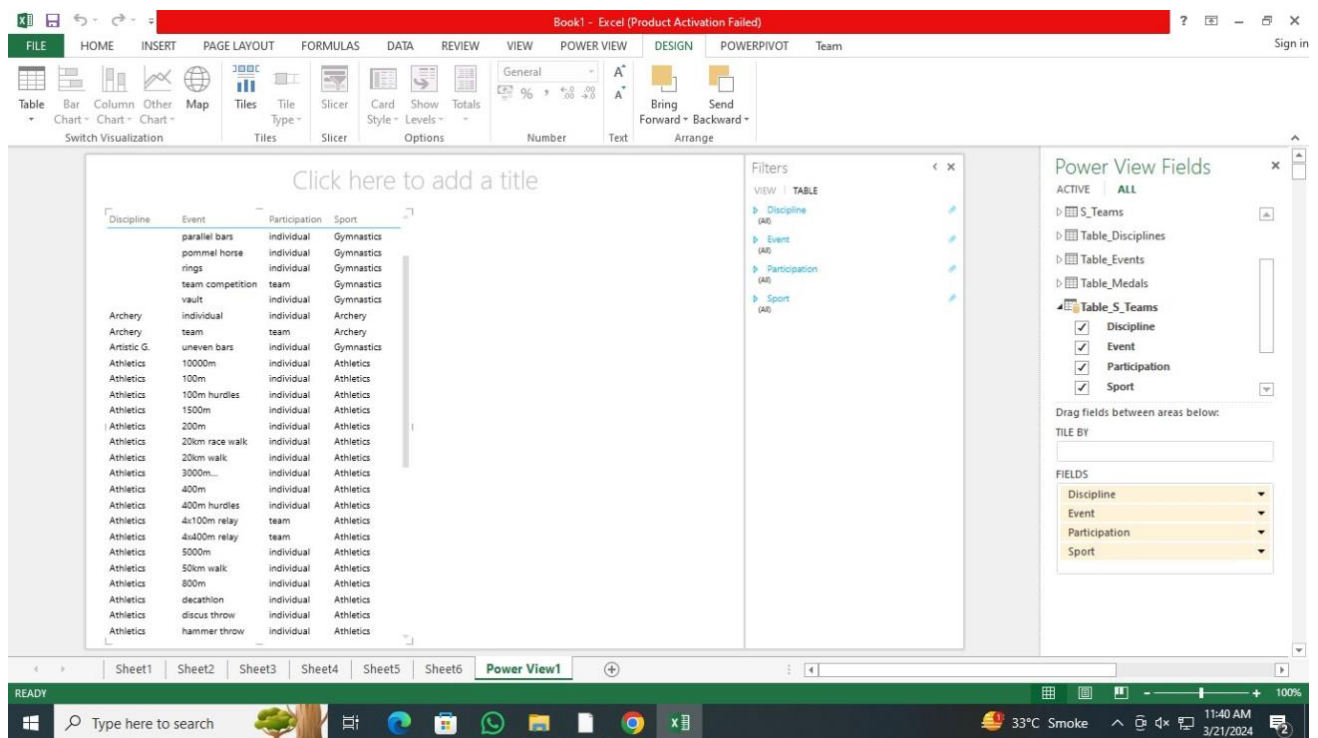
Create Charts and other Visualizations

For every visualization you want to create, you start on a Power View sheet by creating a table, which you then easily convert to other visualizations, to find one that best illustrates your Data.

Step 1 – Under the **Power View Fields**, select the fields you want to visualize.

Step 2 – By default, the **Table** View will be displayed. As you move across the Table, on the top-right corner, you find two symbols – Filters and Pop out.

Step 3 – Click on the **Filters** symbol. The filters will be displayed on the right side. **Filters** has two tabs. View tab to filter all visualizations in this **View** and **Table** tab to filter the specific values in this table only.



Visualization – Matrix

A **Matrix** is made up of rows and columns like a **Table**. However, a Matrix has the following capabilities that a Table does not have –

- ❓ Display data without repeating values.
- ❓ Display totals and subtotals by row and column.
- ❓ With a hierarchy, you can drill up/drill down.

Collapse and Expand the Display

Step 1 – Click on the **DESIGN** tab.

Step 2 – Click on **Table** in the **Switch Visualization** Group.

Step 3 – Click on **Matrix**.

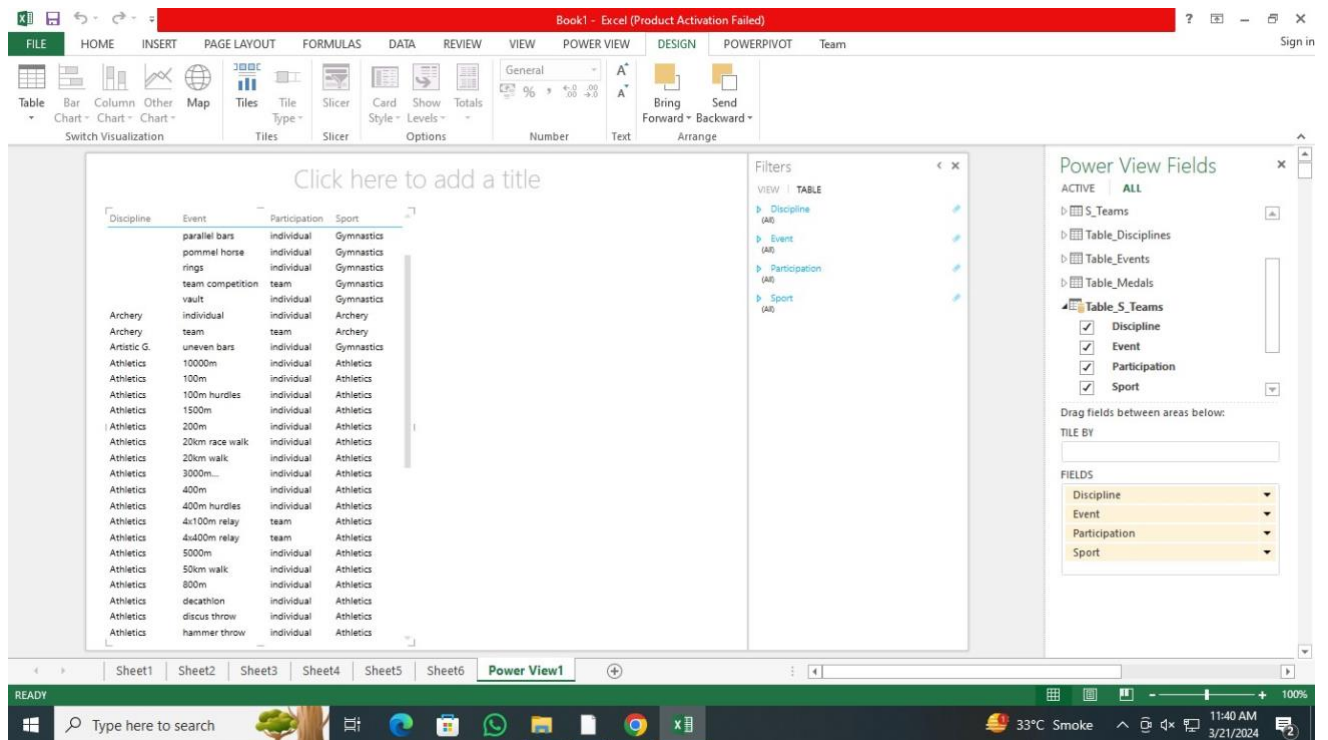
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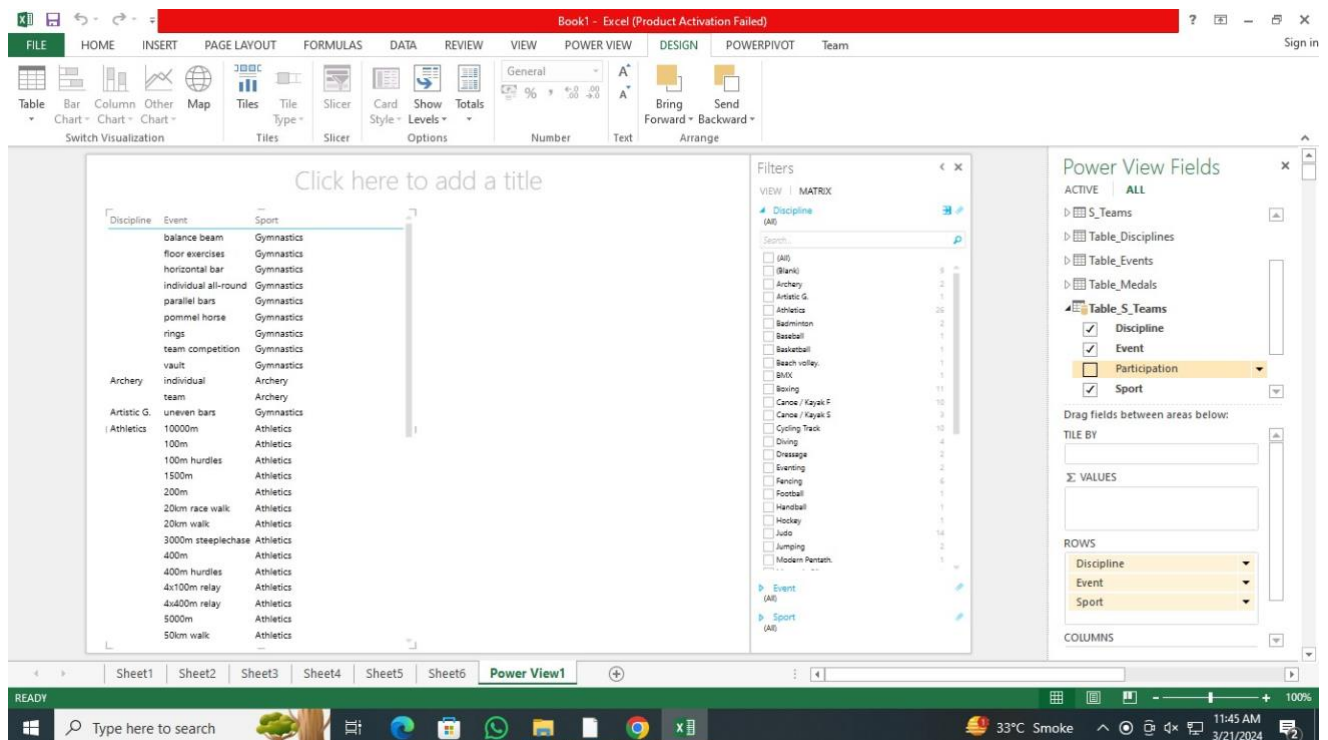
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The Matrix Visualization appears.



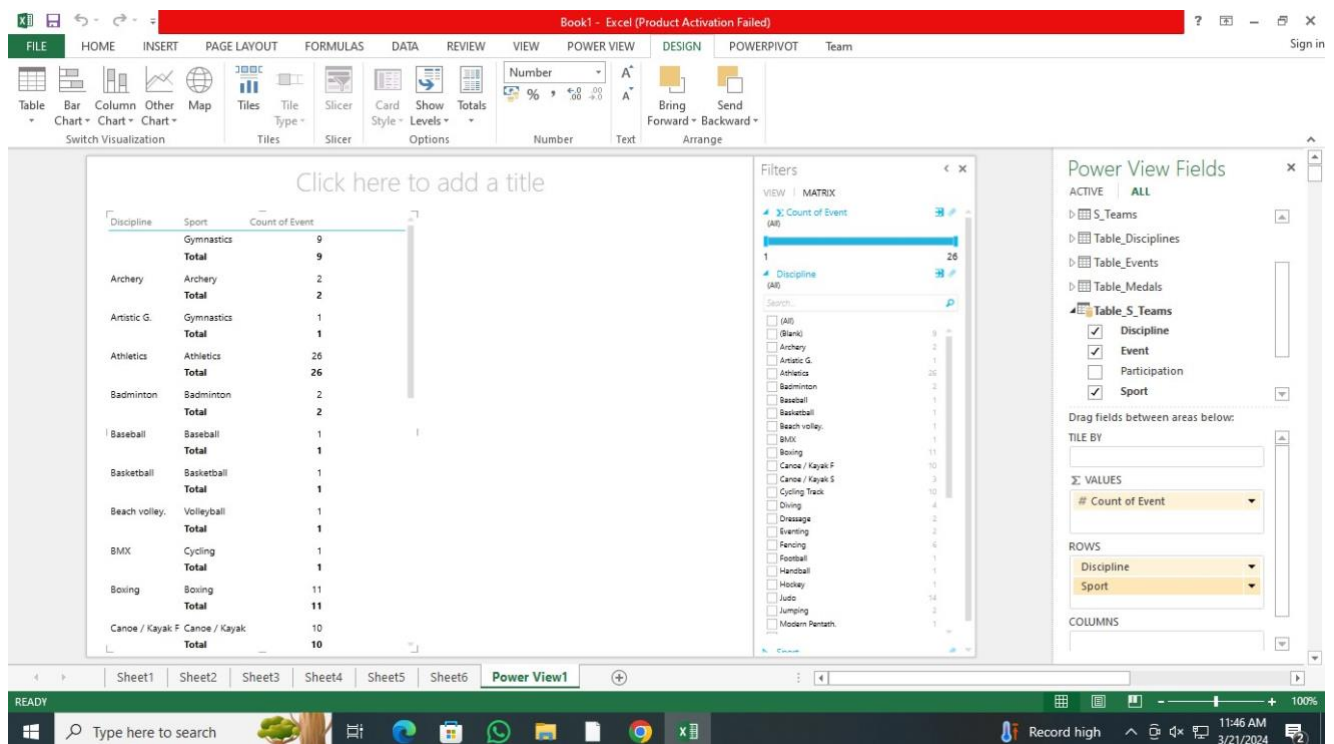
Visualization – Card

You can convert a **Table** to a series of **Cards** that display the data from **each row** in the table laid out in a **Card format**, like an **index Card**.

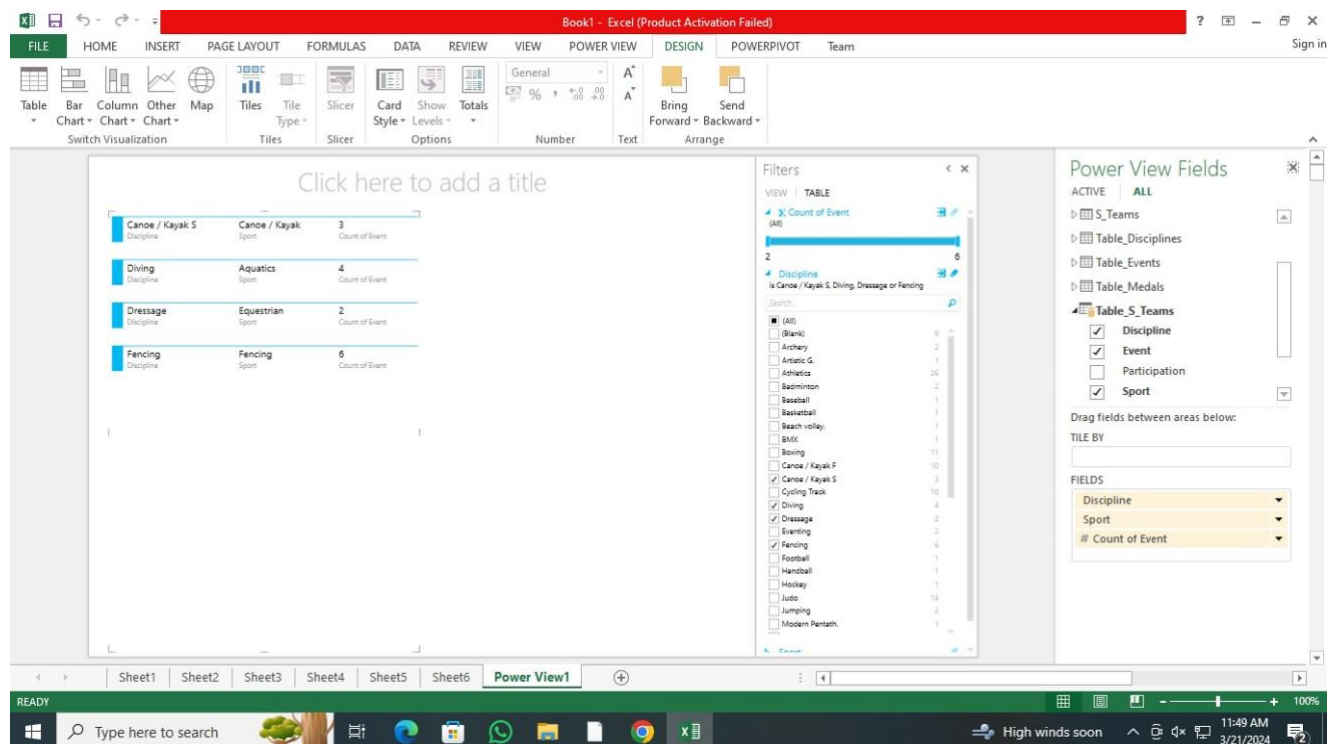
Step 1 – Click on the **DESIGN** tab.

Step 2 – Click on **Table** in the **Switch Visualization** Group.

Step 3 – Click on **Card**.



The **Card Visualization** appears.



Visualization – Charts

In **Power View**, you have a number of Chart options: Pie, Column, Bar, Line, Scatter, and Bubble. You can use several design options in a chart such as showing and hiding labels, legends, and titles.

Charts are interactive. If you click on a Value in one Chart –

- ❓ The **Value** in that chart is highlighted.
- ❓ All the Tables, Matrices, and Tiles in the report are filtered to that Value.
- ❓ That **Value** in all the other Charts in the report is highlighted.

The charts are interactive in a presentation setting also.

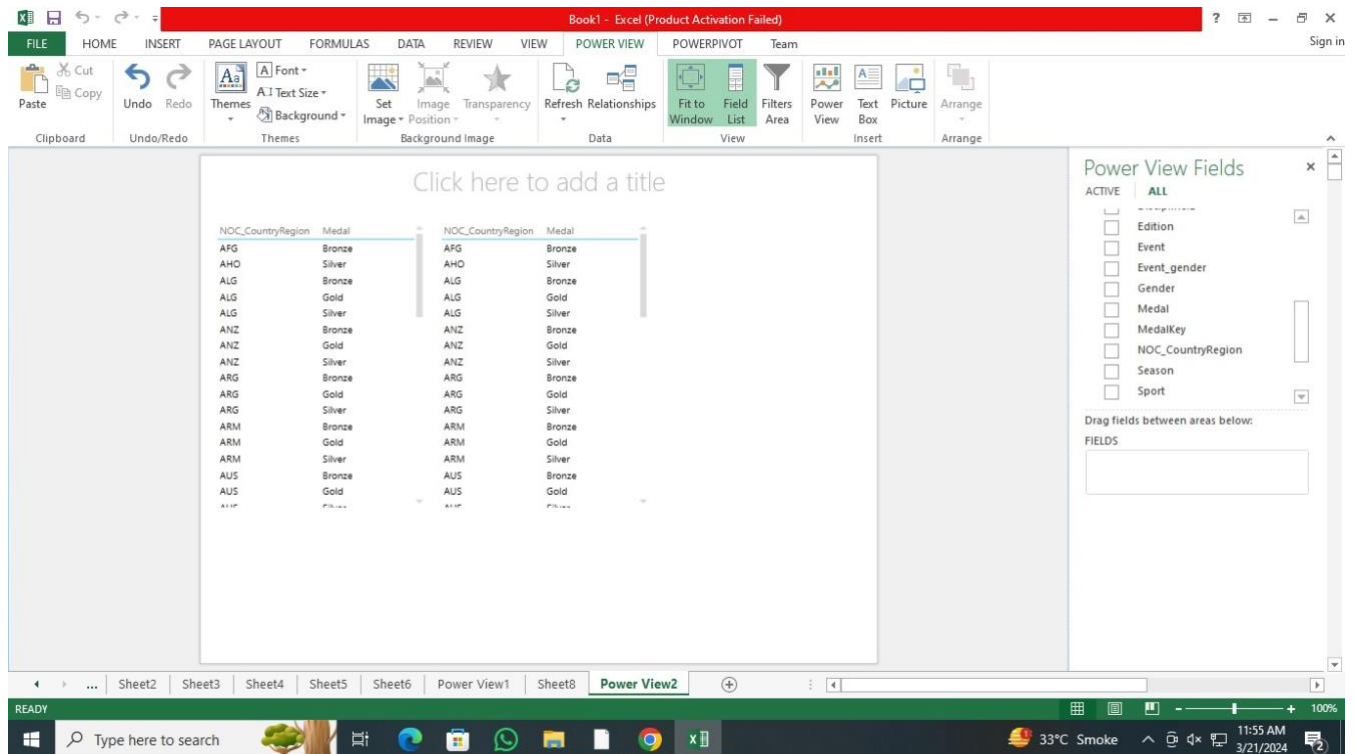
Step 1 – Create a **Table Visualization** from **Medals** data.

You can use Line, Bar and Column Charts for comparing data points in one or more data series. In these Charts, the x-axis displays one field and the y-axis displays another, making it easy to see the relationship between the two values for all the items in the Chart.

Line Charts distribute category data evenly along a horizontal (category) axis, and all numerical value data along a vertical (value) axis.

Step 2 – Create a Table Visualization for two Columns, **NOC_CountryRegion** and **Countof Medal**.

Step 3 – Create the same Table Visualization below.



Step 4 – Click on the **Table Visualization** below.

Step 5 – Click on **Other Chart** in the **Switch Visualization** group.

Step 6 – Click on **Line**.

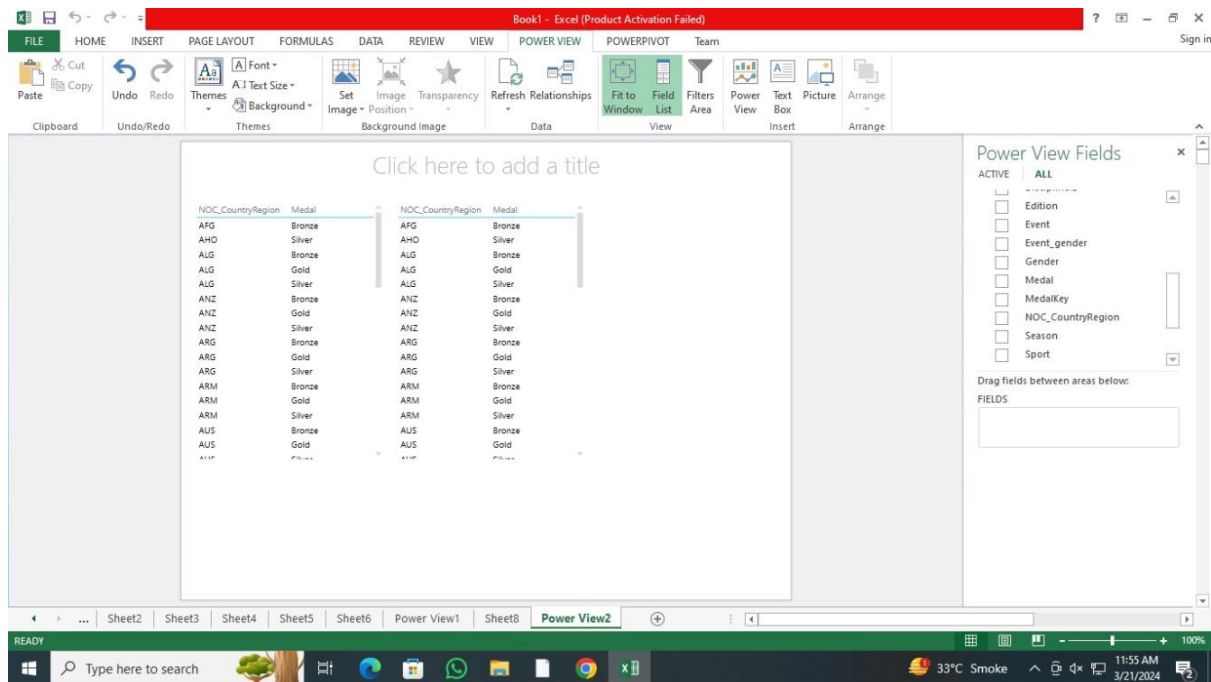
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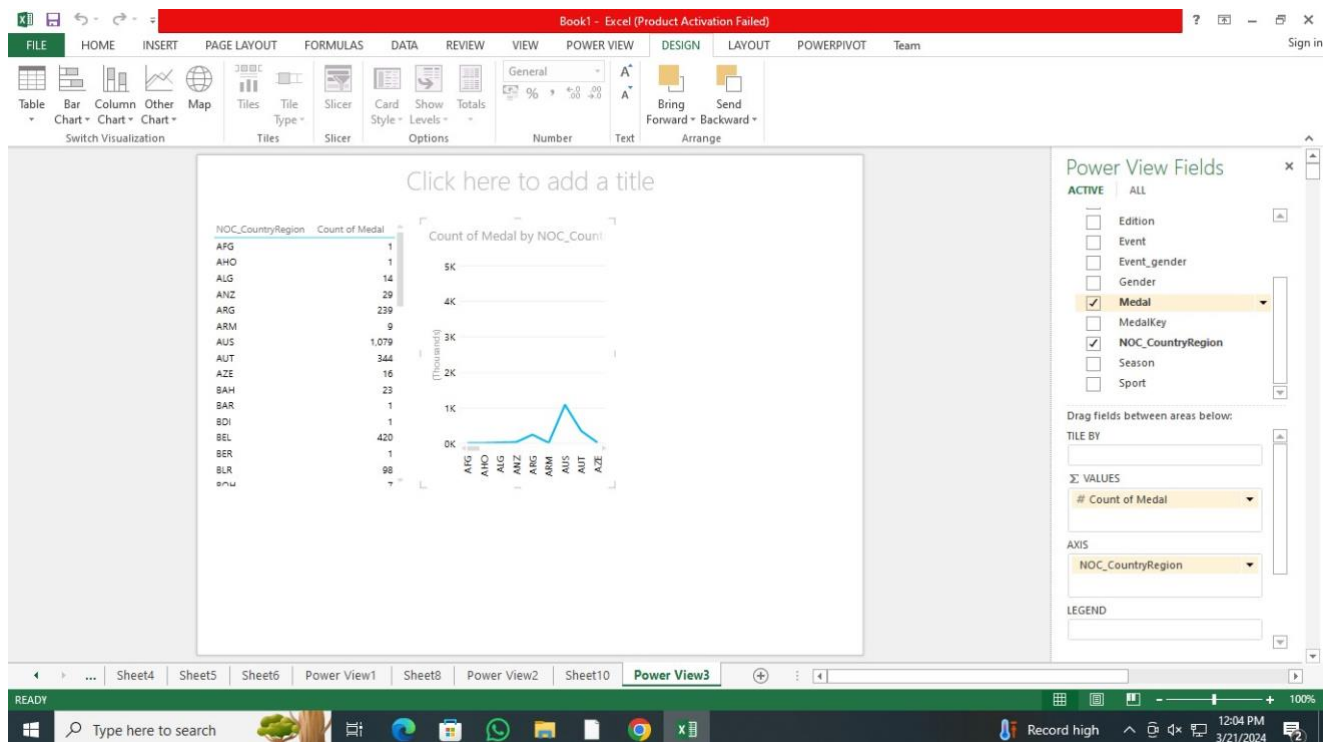
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The Table Visualization converts into Line Chart Visualization.

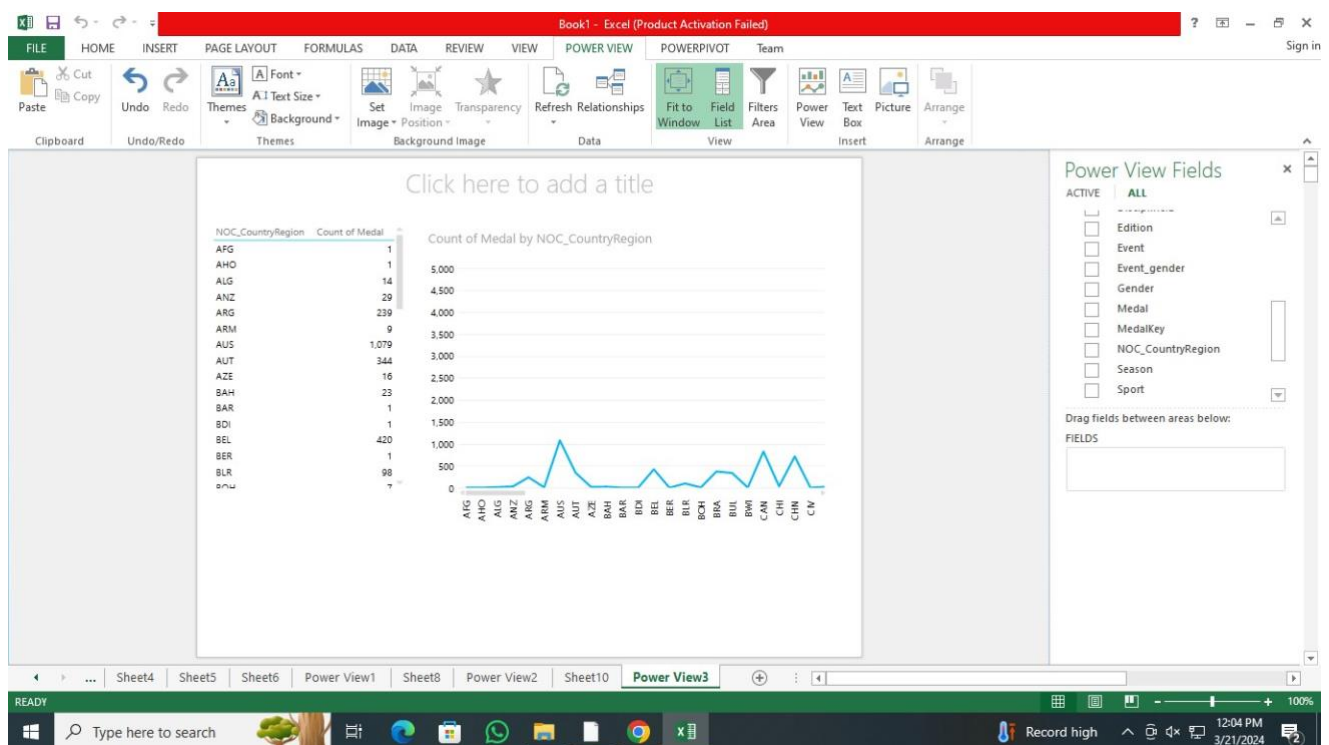


In a **Bar Chart**, categories are organized along the vertical axis and values along the horizontal axis. In **Power View**, there are three subtypes of the **Bar Chart**: **Stacked**, **100%stacked**, and **Clustered**.

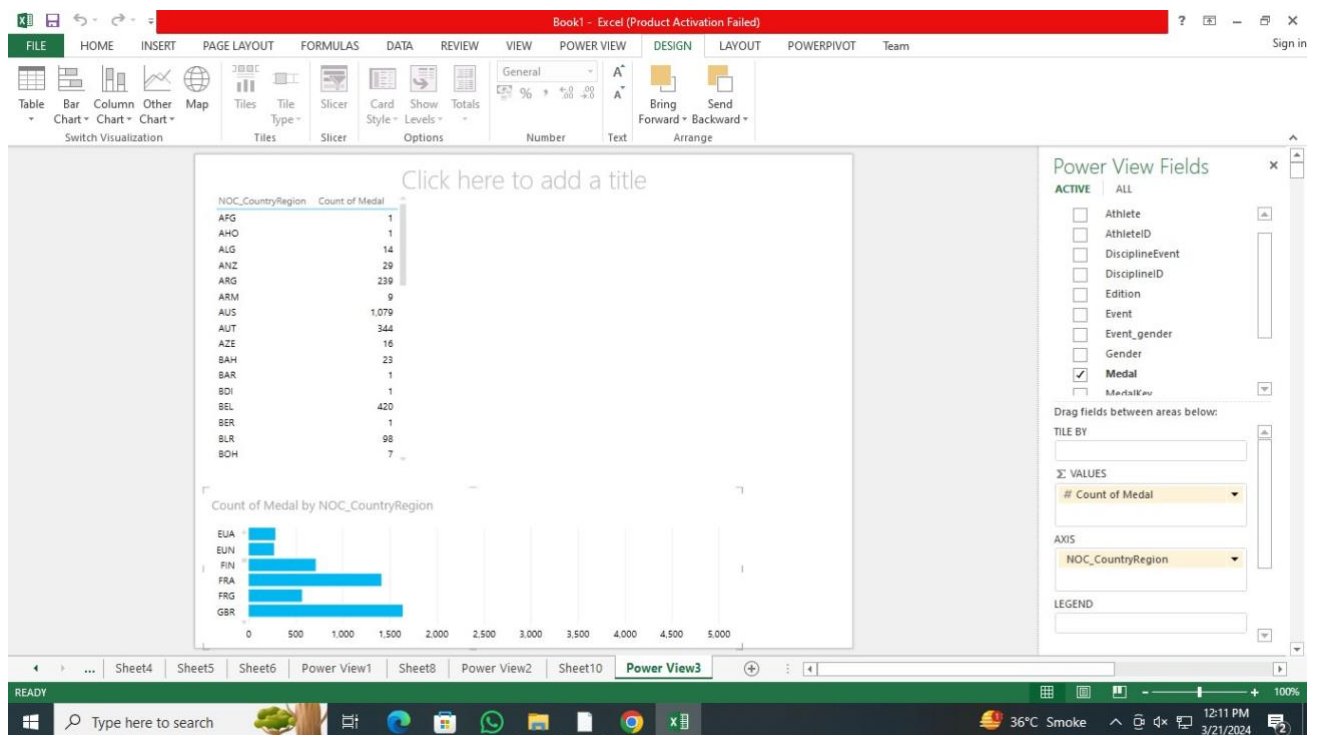
Step 7 – Click on the **Line Chart Visualization**.

Step 8 – Click on **Bar Chart** in the **Switch Visualization** Group.

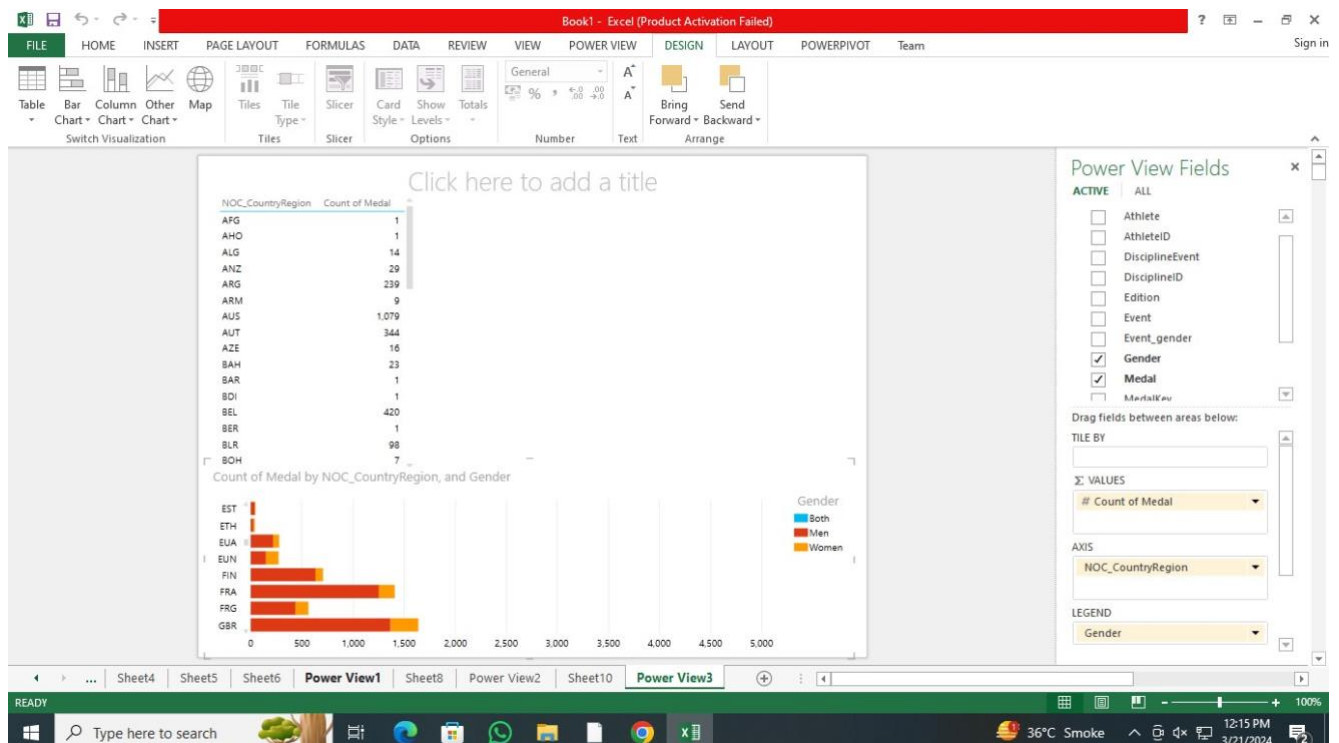
Step 9 – Click on the **Stacked Bar** option.



The **Line Chart Visualization** converts into **Stacked Bar Chart Visualization**.

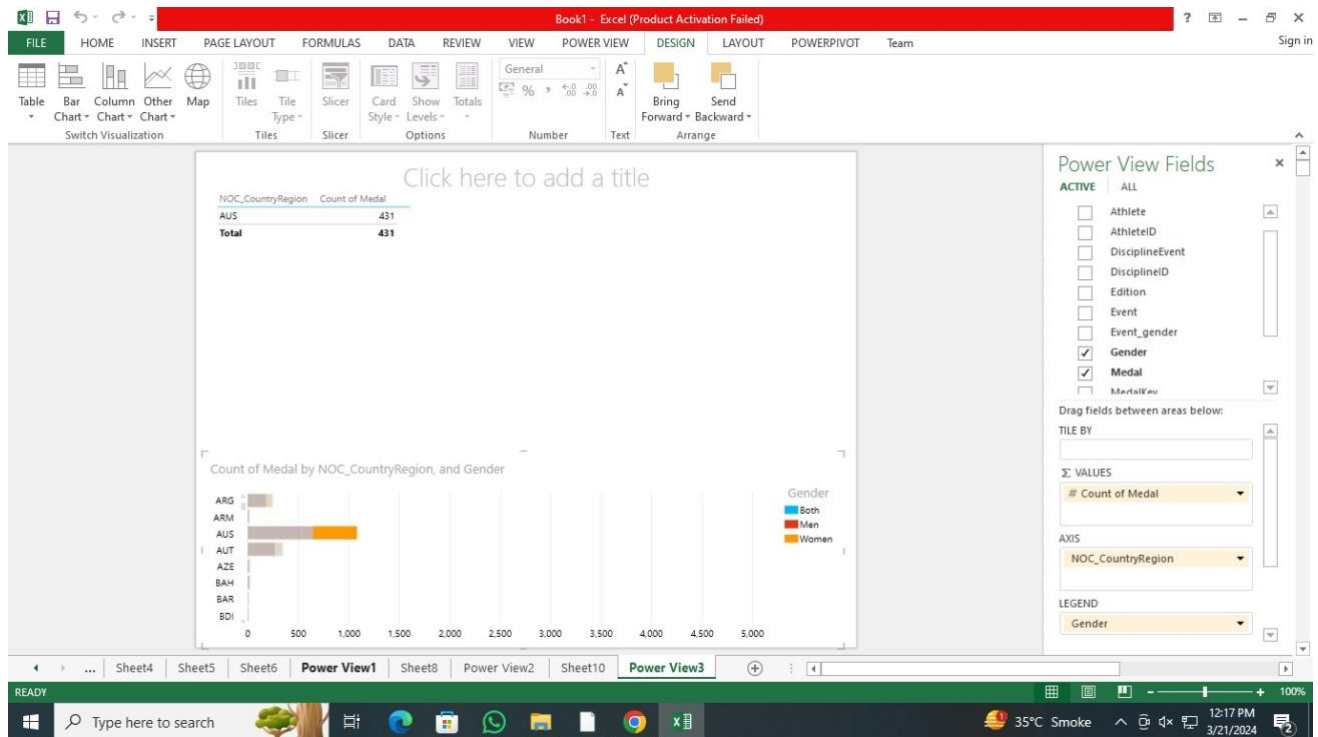


Step 10 – In the Power View Fields, in the Medals Table, select the Field Gender also.



Step 11 – Click on one of the bars. That portion of the bar is highlighted. Only the row containing the

Data specific to the selected bar is displayed in the table above.



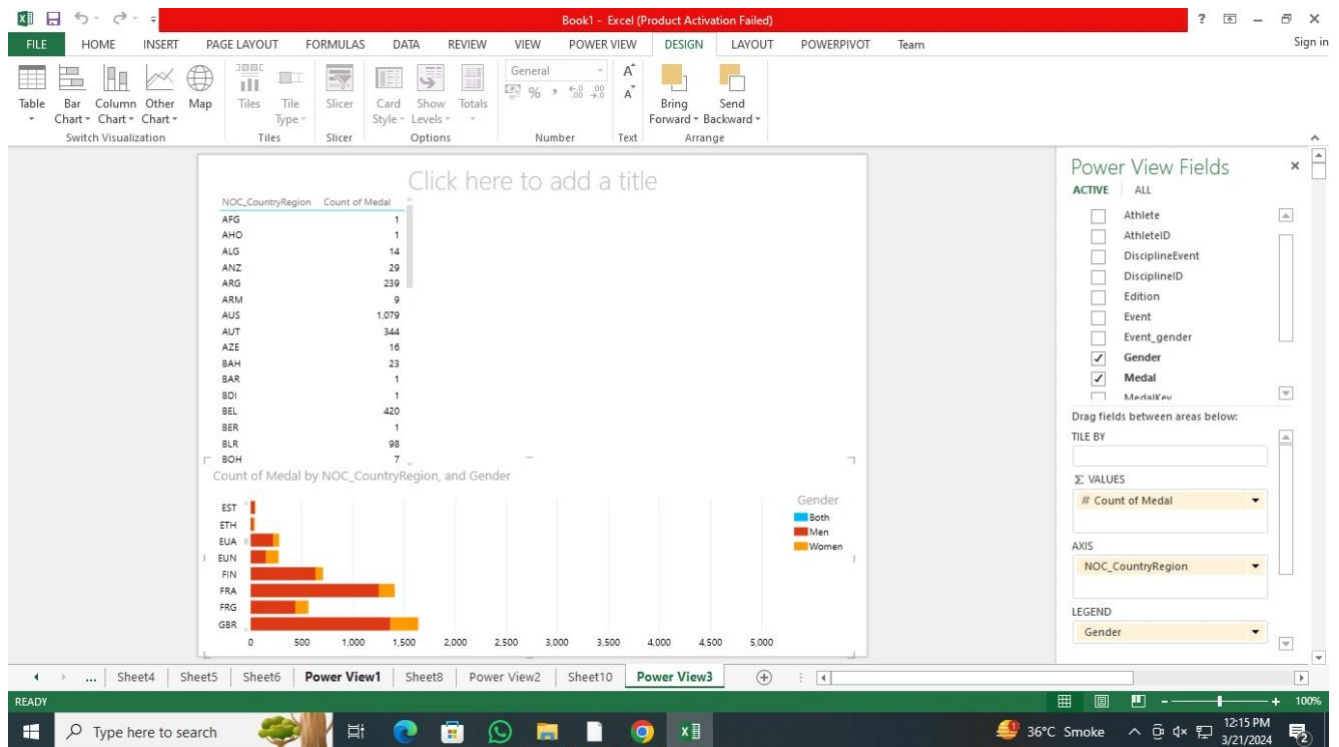
You can use the column charts for showing data changes over a period of time or for illustrating comparison among different items. In a Column Chart, the categories are along the horizontal axis and values are along the vertical axis.

In Power View, there are three **Column Chart** subtypes: **Stacked**, **100% stacked**, and **Clustered**.

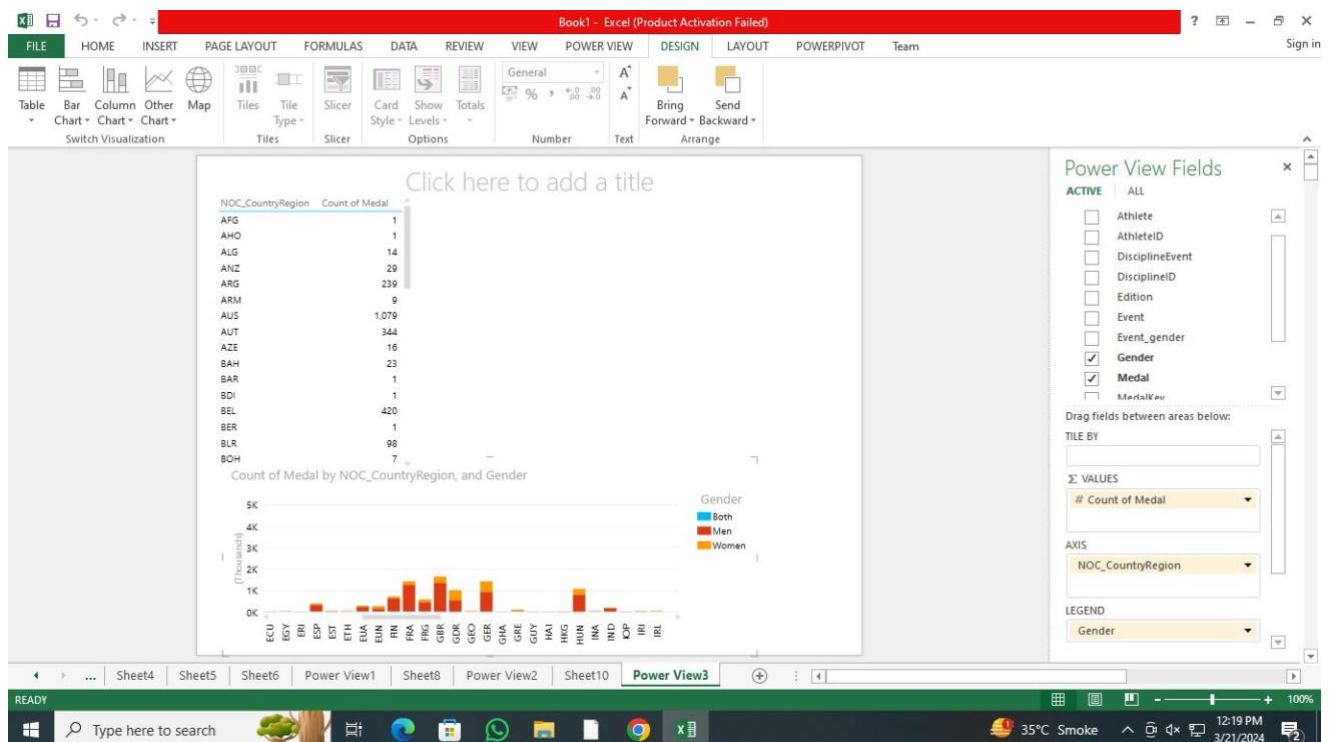
Step 12 – Click on the **Stacked Bar Chart Visualization**.

Step 13 – Click on Column Chart in the **Switch Visualization** group.

Step 14 – Click on **Stacked Column**.



The **Stacked Bar Chart** Visualization converts into **Stacked Column Chart** Visualization.

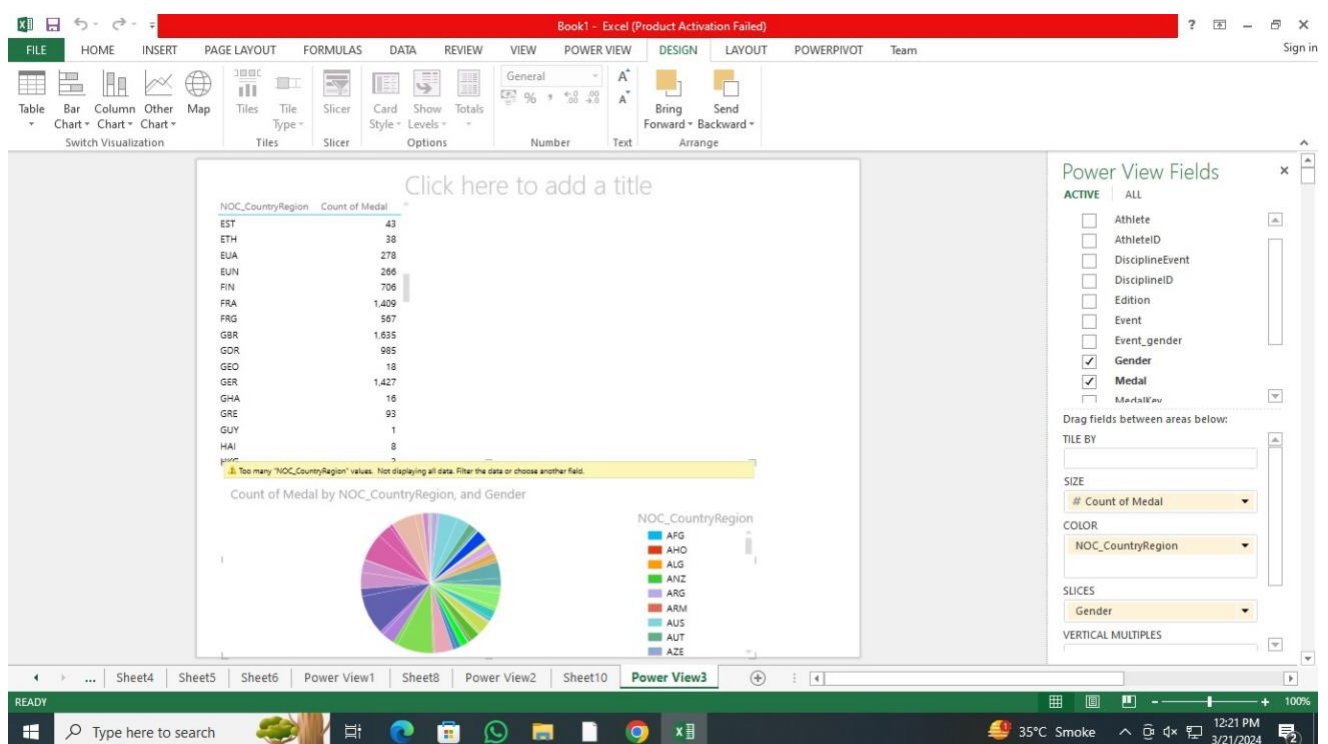


You can have simple **Pie Chart Visualizations** in Power View.

Step 1 – Click on the **Table Visualization** as shown below.

Step 2 – Click on **Other Chart** in the **Switch Visualization** group.

Step 3 – Click on **Pie** as shown in the image given below.



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