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Program 2:- Building dash board.

- Analysis of revenue in Sales dataset:
 - i Create a choropleth map (fill the map) to Spot the Special trends to show the State which has the highest revenue.
 - ii Create a bin of size 10 for the age measure to Create a new dimension to show the revenue.
 - iii Create a donut chart view to Show the percentage of revenue per region by Creating zero access in the calculated field.
 - iv Create a butterfly chart by reversing the bar chart to Compare female & male revenue based on product category.

Solution:

- i Step 1:- Upload the revenue dataset
- ii Step 2:- In the power query editor as part of transformation remove the unnecessary columns
- Question 1:- Create a choropleth map (fill the map) to Spot the Special trends to show the State which has the highest revenue.
- Step 1:- Select the "Map" visualization from the

what they face opposite directions from the center

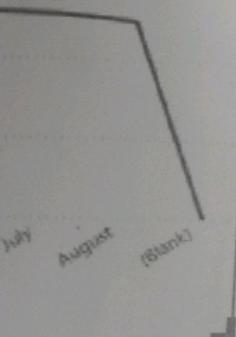
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Visualizations pane . (Filled map)

Step : Set up the map :

- Drag the State field to the "Location" field.
 - Drag the revenue field to the "size" or "values"
- Step 3:- Customize : In the "Format" pane, adjust settings such as color, size, & tooltips to enhance readability. You can use color gradients to indicate different revenue levels, helping to spot trends.

- Question 2 : Create a line chart to show the revenue based on the month of the year.

Step 1 :- Add a line chart : Select the "Linechart" visualization pane .

Step 2 :- Configure the chart

- Drag the month field to the "Axis" field Well.
- Drag the revenue field to the "Values" field Well.

Step 3:- Format :- In the "format" pane . you can Customize the line colour, axis, & other aspects to clearly present the revenue trend throughout the year.

- Question 3 :- Create a bin of size 10 for the age measure to Create a new dimension to show the revenue .

so that they face opposite directions from the center

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Step 1: Create Bins for age

- Go to the "Data" view & Selected the age field.
- In the "Group" window, select "Bin" & Set the bin size to 10.

Step 2: Add to Visualization

- Create a new visualization (e.g. bar chart or column chart) Here we used Stacked column chart
- Drag the new age bins field to the "X Axis" & the revenue field to the "Y axis".

Question 4:- Create a donut chart view to show the percentage of revenue per region by creating zero access in the calculated field.**Step 1:- Add a Donut chart : Select the "Donut chart" visualization from the visualizations pane.****Step 2:- Set up the Chart**

- Drag the region field to the "Region" field well.
- Drag the revenue field to the "Values" field well.

Step 3:- Create Zero Access.

- Go to the "formula" pane, Select "Detail labels" & Set the "Label position" to "Inside" to create a zero access effect.
- Adjust the "Detail" & Percentage settings as needed.

so that they face opposite directions from the center

Question 5: Create a butterfly chart by reversing the bar chart to compare female & male revenue based on product category. 8/14/24 M2

Step1: Create a new measure

$$\text{TotalRevenue} = \text{sum}(\text{SalesTable}[\text{Revenue}])$$

Method-1: By using stacked column chart

Method 2:

Step1 :

Add Two Bar charts:

Create two separate bar charts from the "visualizations" pane.

Step2 :

Configure the first Bar chart (e.g. Female Revenue):

Drag product category to the "Axis" field.

Drag TotalRevenue to the "values" field.

Apply a filter:

In the "filters" pane, add a filter to only show Female revenue

Reversing the bars:

To create the butterfly effect, you need to reverse one of the bar charts. This involves adjusting the direction of bars so that they face opposite directions from the center.

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Reverse the bars:

For one of the charts, you will need to use a calculated column \textcircled{a} measure to make the bars extend in opposite direction.

Add titles & labels:

- * Add clear titles and labels to each chart to indicate what data they represent (e.g. Female revenue)
- * Customize the charts appearance to enhance readability.

Question 6: Create a calculated field to show the average revenue per state & display profitable & non-profitable states

Step 1: Creating a new measure

* Go to Modeling tab & select "New Measure".

* Create the Avg Revenue Measure.

* Enter the following DAX formula:

AverageRevenueperState =

AVERAGEX

VALUES (SaleTable [State]),

(CALCULATE (SUM (SaleTable [Revenue])))

)

Step 2: Create a Calculated Column to categorize States.

Next, create a calculated column to classify states as Profitable \textcircled{a} non-profitable based on the average revenue

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Enter the following DAX formula to create a column that categorizes states as profitable or non-profitable:

Profitability Status =

IF (SalesTable[AverageRevenuePerState] > 1000,
"Profitable",
"Non-Profitable")

To show the total revenue

Step 1: Select the card in the visualization pane

2: Drag the Revenue field into the field well

To add filter or slicer

Method 1) Select Slicer from the visual pane
2) Drag the Country field into the field well.

Question 7: Build a dash board.

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Program 10: Analysis of GDP dataset:

- i) visualize the country data given in the dataset with respect to latitude & longitude along with country name using symbol maps

Step1: Bring Latitude in Row

Bring longitude in column.

Step2: Bring Country in colour marks pane

Bring any year-measured value to label after that you will be able to see ~~the~~ shown.

- ii) Create a bar graph to compare GDP of Belgium 2006-2016

Step1: Get measured Name to filter pane then select in years mentioned

2006-2016. Get country to filter & select Belgium

Step2: Drag Measured Name & Country into column

Step3: Drag Measured value to Row you see off.

- iii) Using pie chart, visualize the GDP of India, Nepal,

Romania, South Asia, Singapore by the year 2010.

Step1: Get country to filter pane & selected India, Nepal, Romania, South Asia, Singapore. Get measured Name to filter & Select 2010.

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Step 1: Important Step:

Select caption of chart on pic & Drag country in colour frame

Finally sum @ avg @ anything of your choice to angle frame, for avg add AVG([Avg]) from measured value

iv) Visualize the countries Bhutan & Costa Rica competing in terms of GDP.

Step 1: Filter country and measure name like Bhutan, Costa Rica and 2016, 2017, 2018 as year

Step 2: Add country and measure names in column
Measure values in Row

Step 3: For better view add measure names to color frame in Marks pane

v) Create a scatter plot @ card view of GDP of Mexico, Algeria, Fiji, Estonia from 2004 to 2006

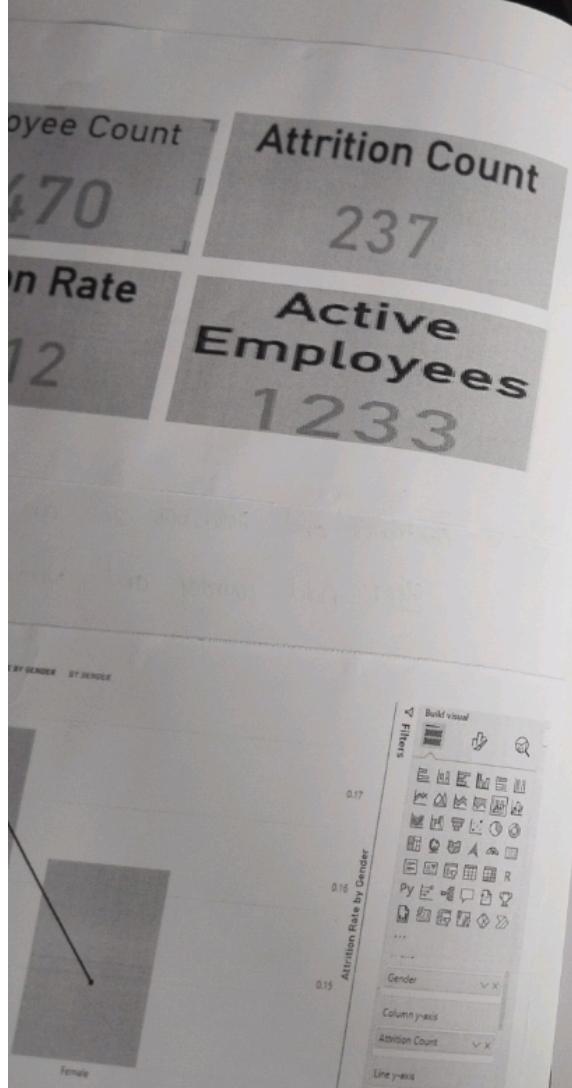
Step 1: Add country in filter as per requirements

Step 2: Add measured name in column and add any measured values of years 2004, 2005, 2006.

17/11/21 (W)

programm 11.: Analysis of HR Dataset:

- i) Create KPI to show employee count, attrition count, attrition rate, active employees and average.
 - ii) Create a treemap chart to show the attrition rate based on gender category.
 - iii) Create a pie chart to show the attrition % based on Dept. - Drag dept into colours and change automatic to pie. Entire view, Drag attrition count to angle. Label attrition count, change to %, add total also, edit label.
 - iv) Create a bar chart to display the no. of employees by Age group
 - v) Create a highlight table to show the job satisfaction rating for each job role based on employee count.
 - vi) Create a horizontal bar chart to show attrition count for each education field wise attrition.
 - vii) Create multiple donut chart to show the Attrition Rate by Gender for different Age group.
- > i) Step 1: Create a new measure
 $\text{Employee count} = \text{COUNT}(\text{HR}[EmployeeNo.])$



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Step 2: Choose KPI card in the visualization and drag and drop the Employee Count.

Step 3: Create a new measure

Attrition count = COUNTROWS(FILTER({[HR].[HR].[Attrition]}
= "yes"))

Step 4: Choose KPI card in the visualization and drag and drop the Attrition Count. Format your visual or your style.

Step 5: Create a New Measure

Attrition rate = DIVIDE([Attrition Count], [Employee Count], 0)*100

Step 6: Choose KPI Card in the visualization & drag and drop Attrition rate

Step 7: To find active employees create a new measure

Active Employees = [Employee Count] - [Attrition Count]

Step 8: choose KPI card in the visualization & drag and drop the Active Employees.

ii) Create a lollipop chart

> Power BI does not have a native lollipop chart, so you will simulate it using a line & stacked column chart

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(iii) Drag dept into colours and change automatic topic.

Entire view, drag attrition count to angle, Label attrition count, change to percentage, add total slice, education. + from the visualization pane on the right select the piechart visual icon. This will add a blank piechart to your report canvas.

Setup the pie chart:

* Drag the dept field to the Legend area.

* Drag the attrition count measure to the values area.

Configure Data Labels and Formatting:

* click on pie chart to select it

* open the Format pane

Change data label settings:

* go to data labels section in the format pane

* Toggle Data labels to On

* In the Data label settings change Label style to %. This

will show the percentage of each dept's attrition relative to total.

Format the pie

Finalize your visualization:

Ensure your pie chart looks as expected with percentages representing the attrition rate for each dept.

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iv) Create a bar chart to display the no. of employees by age groups

Step1: right click Age & choose new group & set bin size as 5

Step2: choose any bar chart drag and drop new age bin and employee count

v) Create a matrix visual from the visualizations pane

* Drag the Job role field to rows.

* Drag the Job satisfaction Rating field to columns

* Drag the Employee count measure to values

vi) Create a horizontal bar chart to show the attrition count for each Education field Education field wise

Attrition - drag education field to rows, sum attrition count to cols;

Step1: Horizontal bar chart. It's called the clustered Bar chart

(Stacked Bar chart in visualization pane)

choose stacked bar chart & set y axis in education field & x axis in attrition count.

vii) ~~Create donut chart~~

i) select the Donut chart from the visualization pane

ii) create separate Donut charts for different age groups

iii) drag the Gender field to legend

iv) Drag the Attrition Rate measures to values

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program 12: Analysis of Amazon prime Data set:

i) Create a donut chart to show the percentage of movie and TV shows

* From the visualization pane, select Donut chart.

* Drag the "Type" field to the legend section

* Drag any suitable column to values, then set the aggregation to count.

* Use filters to filter only movies & TV shows. This will show the percentage of movies vs TV shows

ii) Create a area chart to shows by release year & type

Steps to Create area chart

* Choose Area chart from visualization pane.

* Drag the 'Release year' field to the Area section

* Drag the 'Type' field to legend.

* Drag the 'Title' to values & set the aggregation to count

* You'll now see an area chart with movies & TV shows distributed over the years.

Steps to Create Horizontal Bar chart:

* From the visualization pane, select Bar chart and

adjust it to display horizontally.

* Drag the 'Genre' column to the Area section

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* Drag title to values, and set the aggregation to count.

* In the filters pane, filter the TOPN to display the Top 10 Genres by the count of content

* From the visualizations pane, select Bar chart and adjust it to display horizontally

v) Create a map to display total shows by country.

Steps to create map:

* choose Filled map from the visualizations pane

* write a new measure to count shows id

count shows id = COUNT(amazon_prime_titles[release year])

* Drag the Country field to the Location section.

* check the count shows measure in the data pane.

* This will show a world map representing the total no. shows produced in each country

v) Create a text sheet to show the description of any movie/movies.

* Ensure your dataset has a description column for each movie/TV show

* Choose Table from the visual and check the title & description columns.

* you can add slicer to search by title to get the description.

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*you can add filters to search by title to get the description

vii) Build an interactive Dashboard.