Power BI Data Analytics Projects Documentation

Dataset - https://codebasics.io/resources/resume-project-data-analytics

Problem Statements

1. Working preference of people between work from home and work from office.
2. Sick Leave percentage
3.

Data Cleaning:

1. Import Data from Excel and Transform Data.
2. Filter out the “Attendance Key” query and then create a duplicate of Excel and rename it as a “Template” query.
3. In Template, select only “Apr 2022” Sheet and delete all columns except “Data”.
4. Expand April data by clicking on “Table”.
5. Remove “Change Type” step.
6. Select the first row and make it a header by clicking on “Use First Row as Header”, then rename the first two columns as “Employee Code” and “Name” respectively.
7. Remove the “Change Type” step.
8. Select the first row again and remove it by clicking “Remove First Rows”.
9. Unpivot all other columns except the Employee Code and Name column by selecting the “Unpivot Other Columns” in the “Transform” tab.
10. Rename the “Attribute” and “Value” columns to “Date” and “Attendance” respectively.
11. Change the data type of the Date column to “Date” and the Attendance column to “Text”.
12. Remove all Errors and Numeric values in data using the “Remove Error” on the Date column.
13. Create a function that will help repeat all data-cleaning steps on other sheets. In the “Home” tab select “New Parameter”. In the dialogue box rename the function i.e. ”Worksheet” then select “Type” as per data i.e. “Text” then enter the current sheet name in “Current Value” i.e. “Apr 2022”.
14. Go back to the Template query, find the step called “Filtered Rows” towards the beginning where you filtered down to a single worksheet, and click the gear icon next to the step to edit it, then edit the step so it uses the value returned by the parameter to filter by instead of the hard-coded value you entered earlier.
15. Right-click on the Template query and select “Create Function” called “GetData”.

16. Go to “Add Column” tab and select “Invoke Custom Function” enter the name and select the function as “GetData”.
17. In the “Other Queries” group select “Attendance Key” query and remove all columns except “Items” and “GetData” then expand the data in Table.
18. Expand the GetData column.
19. Rename the “Item” column to “Sheet-name”.
20. Rename the Attendance Key query in the Other Queries group to “Final Data”.
21. In the Home tab select “Close and Load”.

Data Modeling:

1. Select “Table View” and create a new column in the Final Data table as WFHCount to find the total days employees worked from home using the formula: WFHCount = SWITCH(TRUE(), 'Final Data'[Attendance]="WFH", 1, 'Final Data'[Attendance]="HWFH", 0.5, 0)
2. Create a new column in the Final Data table as “SLCount” to find the total days employees took sick leave and use the formula: SLCount = SWITCH(TRUE(), 'Final Data'[Attendance]="SL", 1, 'Final Data'[Attendance]="HSL", 0.5, 0)
3. Create a new column in the Final Data table as “MLCount” to find the total days employees took menstrual leave and use the formula: MLCount = SWITCH(TRUE(), 'Final Data'[Attendance]="ML", 1, 'Final Data'[Attendance]="HML", 0.5, 0)
4. Create a new column in the Final Data table as “PLCount” to find the total days employees took paid leave and use the formula: PLCount = SWITCH(TRUE(), 'Final Data'[Attendance]="PL", 1, 'Final Data'[Attendance]="HPL", 0.5, 0)
5. Create a new column in the Final Data table as “LWPCount” to find the total days employees took leave without pay and use the formula: LWPCount = SWITCH(TRUE(), 'Final Data'[Attendance]="LWP", 1, 'Final Data'[Attendance]="HLWP", 0.5, 0)
6. Create a new column in the Final Data table as “FFLCount” to find the total days employees took floating festival leave and use the formula: FFLCount = SWITCH(TRUE(), 'Final Data'[Attendance]="FFL", 1, 'Final Data'[Attendance]="HFFL", 0.5, 0)
7. Change the data type of the Date column from text to date.
8. Create a new column in the Final Data table as “Month” and use the formula: Month = STARTOFMONTH('Final Data'[Date]), change the date format to “mmmm”
9. Create the “Measures Table” by selecting “Create a new Table” in the Home tab.
10. In the Measures Table create a “New Measure” called Total Work Days and use the

formula: Total Work Days = COUNT('Final Data'[Attendance])-CALCULATE(COUNT('Final Data'[Attendance]),'Final Data'[Attendance] in {"WO","HO"})

11. To find the total days when employees either partially or fully worked from home, create a Measure called “WFH Days” and use the formula: WFH Days = SUM('Final Data'[WFHCount])
12. To find the Percentage of WFH Days from Total Work Days, create a Measure called “WFH Days %” and use the formula: WFH Days % = DIVIDE([WFH Days],[Total Work Days],0)
13. To find the total days when employees worked from the office, create a Measure called “WFO Days” and use the formula: WFO Days = CALCULATE(COUNT('Final Data'[Attendance]),'Final Data'[Attendance] in {"P"})
14. To find the Percentage of WFO Days from Total Work Days, create a Measure called “WFO Days %” and use the formula: WFO Days % = DIVIDE([WFO Days],[Total Work Days],0)
15. To find the total days when employees took either partial or full day sick leave, create a Measure called “SL Days” and use the formula: SL Days = SUM('Final Data'[SLCount])
16. To find the Percentage of SL Days from Total Work Days, create a Measure called “SL Days %” and use the formula: SL Days % = DIVIDE([SL Days],[Total Work Days],0)
17. To find the total days when employees took either partial or full day menstrual leave, create a Measure called “ML Days” and use the formula: ML Days = SUM('Final Data'[MLCount])
18. To find the Percentage of ML Days from Total Work Days, create a Measure called “ML Days %” and use the formula: ML Days % = DIVIDE([ML Days],[Total Work Days],0)
19. To find the total days when employees took either partial or full day paid leave, create a Measure called “PL Days” and use the formula: PL Days = SUM('Final Data'[PLCount])
20. To find the Percentage of PL Days from Total Work Days, create a Measure called “PL Days %” and use the formula: PL Days % = DIVIDE([PL Days],[Total Work Days],0)
21. To find the total days when employees took either partial or full day leave without pay, create a Measure called “LWP Days” and use the formula: LWP Days = SUM('Final Data'[SLCount])
22. To find the Percentage of LWP Days from Total Work Days, create a Measure called “LWP Days %” and use the formula: LWP Days % = DIVIDE([LWP Days],[Total Work Days],0)

23. To find the total days when employees took either partial or full day floating festival leave, create a Measure called “FFL Days” and use the formula: FFL Days = SUM('Final Data'[FFLCount])
24. To find the Percentage of SL Days from Total Work Days, create a Measure called “FFL Days %” and use the formula: FFL Days % = DIVIDE([FFL Days],[Total Work Days],0)

Data Visualization:

1. Stacked Area Chart to represent total percentage of employees working from office.
2. Stacked Area Chart to represent total percentage of employees working from home.
3. Clustered Bar Chart to display the employees with highest attendance while working from office.
4. Clustered Bar Chart to display the employees with highest attendance while working from home.
5. Card to represent the percentages of different types of leaves taken by employees.
6. Slicer for creating month wise filters.