POWER BI

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BI – Business Intelligence Microsoft Power BI

- Salesforce – Tableau
- Google --- GDS (google data studio)
- Zoho Reports
- AWS qucksight
- Qlikveiw / Qilksense

❖ Extract Transform Load [ETL]

1. Extract
2. Extract from data sources
3. Excel, SQL, Cloud – AWS, Microsoft Azure, google Cloude, web.

❖ Transform

- Cleaning your data / preparing your data Accordance client needs.

❖ Load

- Data visualizations
- Power BI, Tableau etc.
- 3 variants of Power BI →
  1. Power BI Desktop
  2. Power Service (clouds Based BI)
  3. Power BI Mobile

- There are Three Views / What are the 3 view used in power BI

1. Report View
2. Data View
3. Model View / Relation View

a) Report View
→ We build visuals inside the report view

b) Data View
→ We can see the data inside the data view

c) Model View / Relationship View
→ We connect multiple tables together via forming a relationship between those tables.

❖ Page Navigation

→ Page navigation is used to navigated one page to another.

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Cards

- We used cards to display the information and that can also be called as KPI [key Performing Indicator]

DIM [Dimension – Master table]

- The key / column present inside my dim table is called as the primary key

- Fact table
  - The key / column present inside my fact table is called as the foregin key (the values are repeatative)

- We only create the Dim / Dimension / master tables for the descriptive / string / textual columns.

- Fact table can consist of multiple foreign key columns

- Dim tables it should contain one primary columns

- Fact table and multiple dimension tables connected to each other via relationships this is called star schema data modelling.

- ***Snowfloke schema.

Dim date ---- we get all the dates that all approx 365 days in a calendar year,

Which we cannot get all the dates in a transaction tables / fact tables, because here there are only transaction date are present.

The coding inside the power query editor is called as the M code.

Code inside power bi desktop DAX code / expression / query

Data Analysis Expression (DAX)

- Two business logic
  - Measures columns
  - Calculated columns

- As per google, measure and calculated columns both use Dax expression the difference is the context of evaluation a measure is evaluated in the context of the cell evaluated in report or in a Dax query where as a calculated column in computed at the low level within the table it belongs to.

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- you need to know these functions
  - Sum
  - Average
  - Min
  - Max
  - Count
  - Countrows
  - Calculate
  - Filter

❖ New / Calculative Measure

→ the measure is not added in the structure of the data. But we can use them only for the data visualization purpose.

Power BI desktop.
Power BI service ----- (this cloud based)

❖ What is the different between calculated columns and calculated measures?

- Filter context

- Calculative measure

1. It does not get added in the structure of the data.
2. We only use measures for the visualization purpose.
3. We can refer the measures in any table when those tables are inter connected to each other via relationships. (data modelling)
4. It does not acquire much memory where as we require a large memory to store the calculated columns.

- Calculative Columns

1. It does get added in structure of the data
2. It does not understand the aggregation (sum, min, etc).
3. It does not understand the filter context

4. It consumes very high memory compare to measures.

❖ All Function

→ All function removes the filter context applied inside the expression of calculated function.

❖ Drill Through

→ In drill though we drill for a specific data point from a summary page to a respective detail page information.

❖ Drill Down

→ We see the information according the hierarchy data [drill down feature is a process of navigation from higher level of information to the lower level of information]

❖ Time Intelligence Function

→ Time Intelligence functions in data analysis help you perform calculations based on time periods, such as days, months, quarters, or years. They allow you to analyze data trends over time, make comparisons between different time periods, and calculate cumulative totals.

- YTD – (year till date)
- QTD – (Quarter till date)
- MTD – (Month till date)

❖ There are three filters available in power bi

1. Visual level filter
2. Report level filter
3. Page level filter

1) Visual level filter

→ the filter when we applied this visual level filters. > The changes are only applicable for the respective visual.

2) Report level filter

→ the filter when we applied to report level filter. The changes are only applicable for the respective report

3) Page level filter

→ the filters when we applied to page level filters > the changes are only . applicable for the respective page.

❖ Synch slicers.

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❖ Iterator

→ When we want to create a measure on the row wise calculation of more than one column. That time we need to use a iterator function

❖ Filter

→ when we want to compare in the filter expression with measure any columns we need to use specially a filter DAX function.

❖ Import Mode

→
- In import mode the data gets directly inside the power bi desktop and the performance is much faster than direct query mode.
- We cannot do any structural changes inside the data table and column to it.

❖ Direct Query mode

→
- In direct query made only the metdata gets loaded inside the power bi the original data remains inside the source only.
- The size of the data is huge we can go with this.
- Yes the data structure control we cannot have
- We only report view and modelling view

❖ Row level security

→
- when we too see data according to the row level . i.e hierarchy level for example when a HR manager logins he can see all the details in the dashboard of HR departments employees
- Similar when IT manager logins he can see the details of the employees of his department
- But the both manager cannot see the data of their own
- But the general manager which this two manager of IT and HR comes under he can see all the details of the both manager.