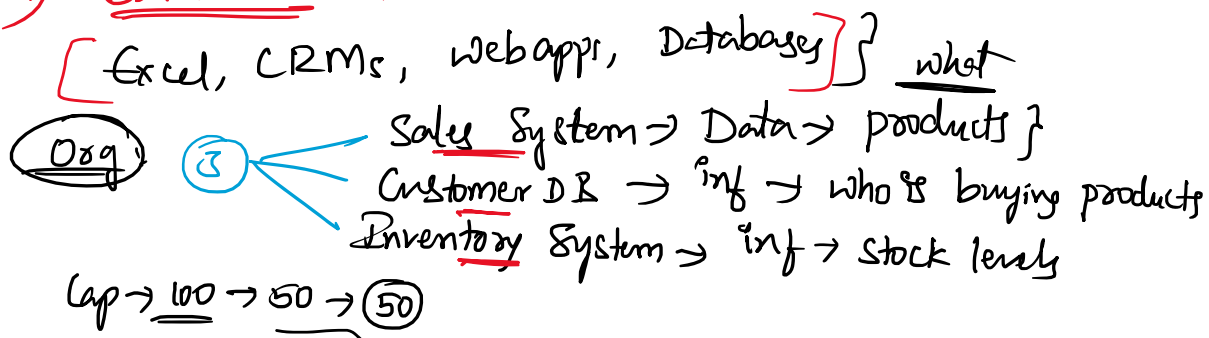
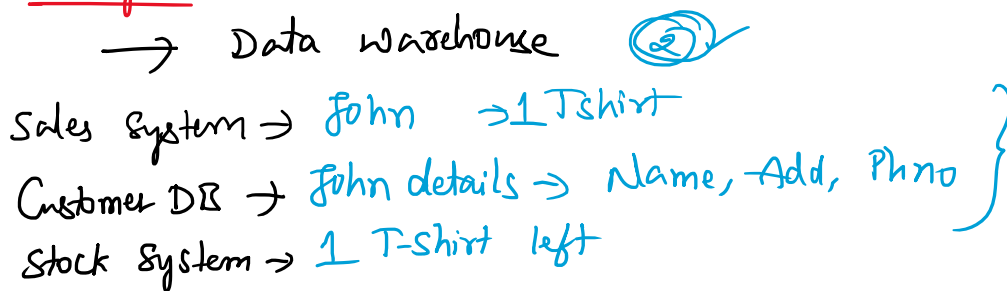


Main Components

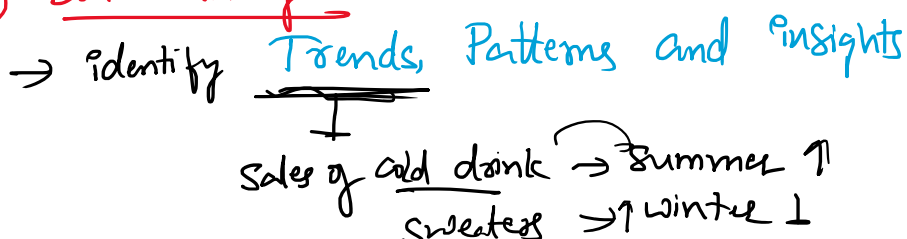
1) Data Collection:



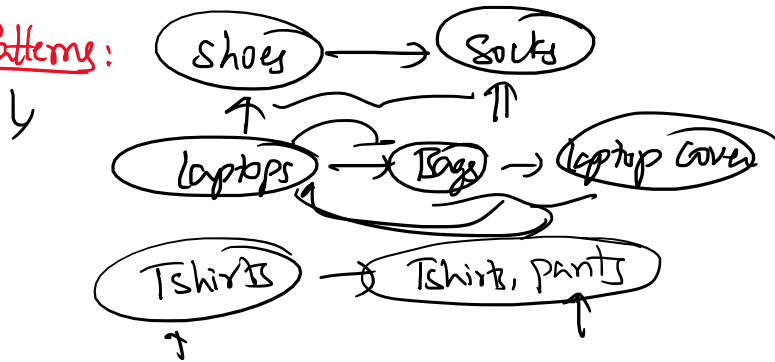
2) Integration



3) Data Analysis



Patterns:

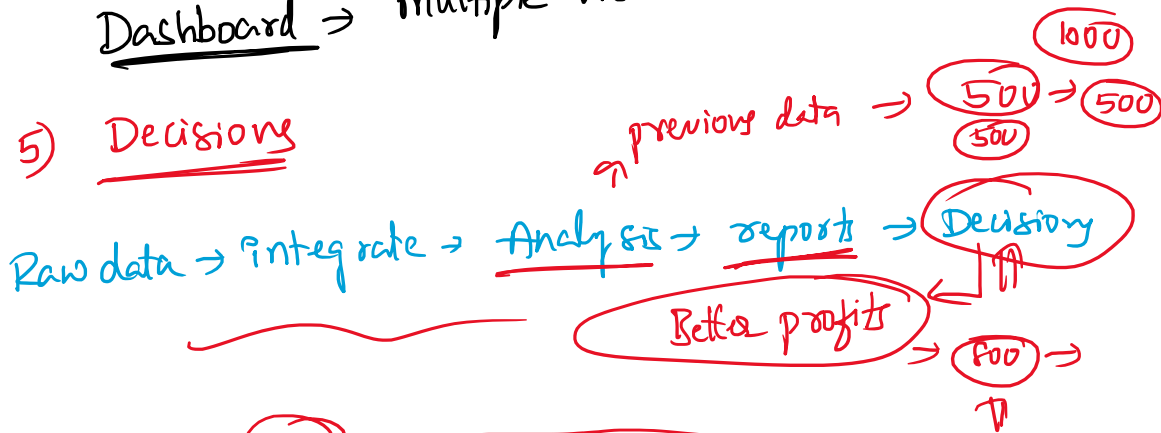


Insights → Conclusions

4) Reporting

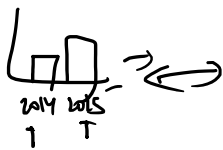
Dashboard → multiple visualisations

5) Decisions



Types of (BI)

Power BI



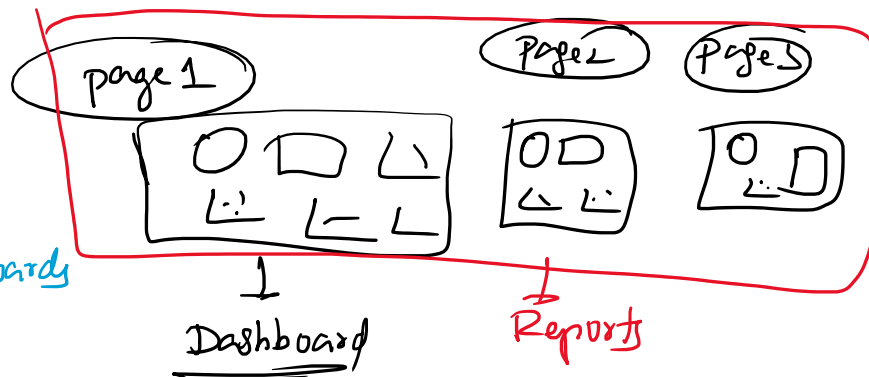
- BI Tool
- Microsoft
- visualise data
- create reports
- Share insights ✓
- decisions

→ PowerBI can do

→ Data Visualisations

→ Analysis

→ Reports and Dashboards



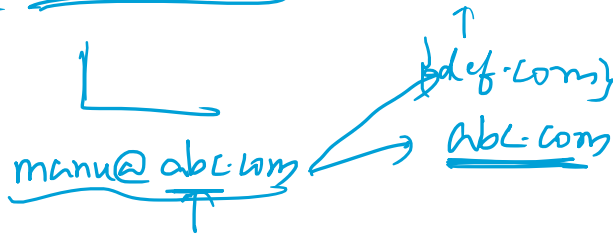
① → Handle Missing value

↳ remove null dropna

↳ Data Transformations → clean, modify, shape
↳ {power query editor}

→ Real Time data :

→ sharing →

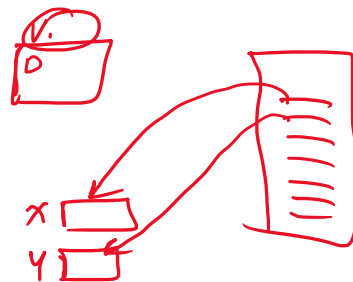
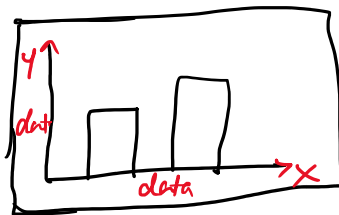


⇒ Components of Power BI

- Power BI Desktop → dashboards, reports
- Power BI service (Online) → share
- Power BI [↑] mobile
- Power BI Gateway → real time data
-

⇒ Why use Power BI

- User friendly
- Affordable
- Real Time
- Cloud → sources



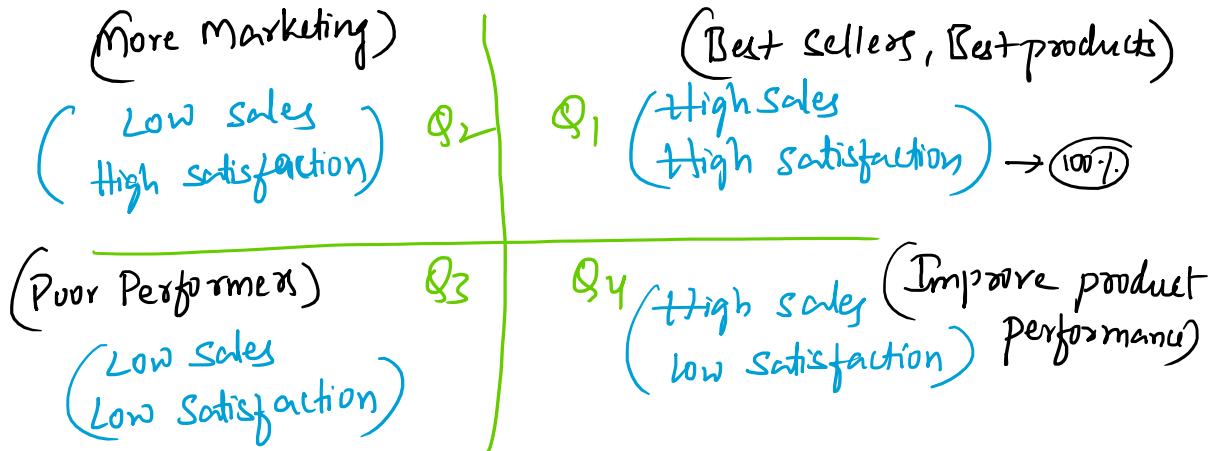
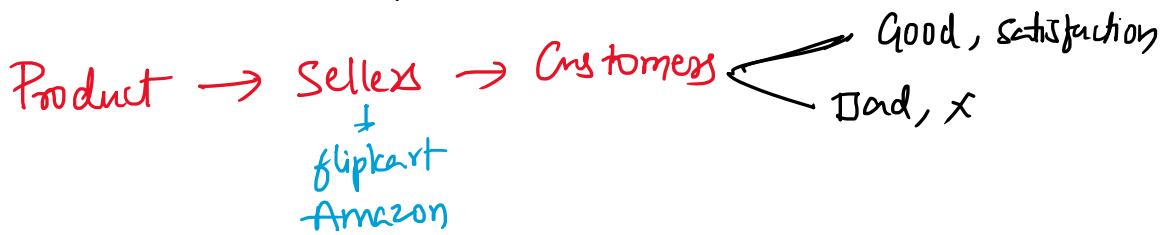
How does Power BI works

- Connect to data
- Transform [clean, modify] and Load
- Create visuals
- Reports
- Publish and share

→ Quadrant Report

↳ Graph → 4 sections (quadrants)

↳ Graph → 4 segments (quadrants)



Comparison Table: Power BI vs. Tableau vs. Qlik Sense vs. Google Data Studio				
Feature	Power BI	Tableau	Qlik Sense	Google Data Studio
Developer	Microsoft	Salesforce	Qlik	Google
Ease of Use	Very user-friendly (Excel-like)	User-friendly, more visual	Moderate (needs learning)	Very easy and intuitive
Data Integration	Excellent with Microsoft tools	Wide range of connectors	Very strong in associative modeling	Good, especially for Google products
Visualization Quality	High-quality, customizable	Excellent, highly polished	Good, slightly technical	Basic to moderate
Price	Free basic version, Pro is affordable	Expensive	Mid to high pricing	Free
Performance with Big Data	Good (with optimized data models)	Excellent	Very good	Moderate
Sharing & Collaboration	Easy via Power BI Service	Good via Tableau Server/Cloud	Good, Qlik Cloud	Easy through Google Workspace
Mobile Support	Excellent (Power BI Mobile app)	Very good	Good	Good
Best For	Businesses using Microsoft ecosystem	Advanced data visualization needs	Complex data sets, models, guided analytics	Simple reports, Marketers, Google ecosystem tools
Learning Curve	Low to moderate	Moderate	Moderate to steep	Very low

→ Power BI Desktop Overview

- free desktop App
- create, transform, visualize
- reports and dashboards
- publish → Power BI service online

Key features :-

1) ETL → Extract
→ Transform → clean, → load

1) ETL → Extract
→ Transform → clean,
→ load }
→ load
→ Transform }

2) Data Modeling → relationships

3) Data Visualisation → Reports, dashboards

4) Power Query Editor →

5) Publish and share

6) Decisions

Power BI workflow

1) Data Collection (Get data) → load

2) Data Transformation → Power query editor ✓

3) Data Modeling → create/manage relationships }
→ DAX ✓ }

4) Data Visualisation → Dashboards and reports

5) Drill down, Filter

6) Publish (Desktop to service)

7) Share →

8) view report, Take the decisions //

⇒ Connect mysql database to Power BI }
↓
visualisation }