Power BI Data Modelling Notes – Hinglish Explanation

# 1. Tables Ki Types – Fact, Dimension, Bridge

Power BI mein data modelling ka pehla step hota hai tables ko samajhna. Har table ka apna ek role hota hai. Ye teen major types hoti hain:

1. 1. FACT TABLE:

- Ye transactional data hota hai.  
- High volume data hota hai, jaise sales, purchases, orders.  
- Isme mostly numbers hote hain jinke upar hum analysis karte hain – jaise Quantity, Sales Amount.  
- Example: Sales Table (OrderID, ProductID, CustomerID, Quantity, SalesAmount)

1. 2. DIMENSION TABLE:

- Reference ya descriptive data hota hai.  
- Jaise Customer ka naam, Product ka category, ya Region ka naam.  
- Slicers, filters, hierarchy banane ke liye use hoti hain.  
- Example: Customer Table, Product Table, Date Table

1. 3. BRIDGE TABLE:

- Jab dono tables ke beech many-to-many relationship hoti hai tab bridge table use hoti hai.  
- Ye linking table hoti hai jo two dimensions ko jodti hai.  
- Example: Employee\_Project Table (EmployeeID, ProjectID)

# 2. Positioning in Model View – Soch Samajh ke Set Karo

Power BI ke model view mein tables ko aise arrange karo ki samajhne mein asaani ho:

- Dimension tables upar rakhni chahiye (Top Position)

- Fact table neeche honi chahiye (Bottom Position)

- Bridge tables center mein ya jahan jodna ho wahan place karo

Ye star schema create karta hai jisme fact table center mein hoti hai aur dimensions uske around – ek tarah ka star shape.

# 3. Relationships – Connection Banane ka Science

Power BI mein tables ke beech relationships banani padti hai taaki visuals sahi kaam karein.

Relationship banate waqt 3 cheezein dhyan mein rakhni chahiye:

1. Primary Key – Foreign Key ka relation ho (jaise CustomerID from Customer to Sales)

2. Cardinality – One-to-Many ya Many-to-One jisme One side unique hoti hai

3. Cross Filter Direction – Single ya Both depending on use case

## Types of Relationships:

- One-to-Many: Most common (e.g. Customer → Sales)

- Many-to-Many: Jab bridge table hoti hai (e.g. Employee\_Project)

- One-to-One: Rare case (unique mapping only)

Relationship banate waqt Model View mein arrow ka direction dekhna zaroori hai.  
Har relationship ka meaning hota hai – woh data ko kaise filter karega.