

## WEEK 5 CHALLENGE

### 1. What is Relationship cardinality? Explain in details?

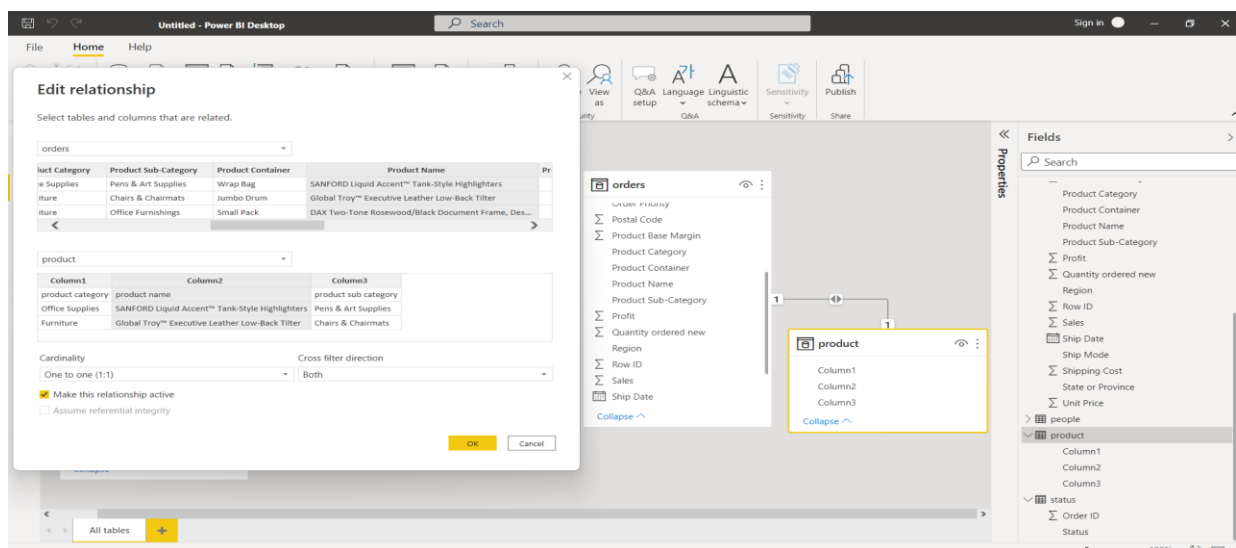
ANS:

- The relationship cardinality means having unique or multiple instances per value for the joining field between two tables.
- Cardinality defined by the relationship and it refers to the relationship between two tables.

#### Types of Cardinality :

##### ➤ one-to-one relationships:

- An uncommon type of relationship cardinality
- Both sides of the columns need to have unique values
- The most accurate name would be “zero- or-one”-to-“zero-or-one” relationship
- The following figure shows one- to-one relationships

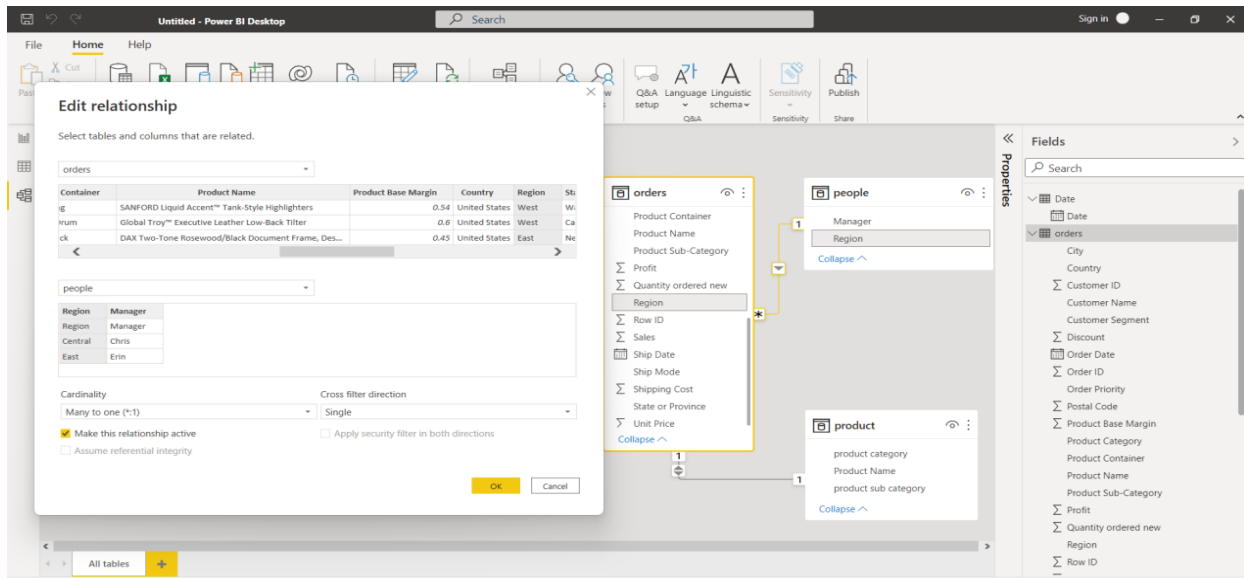


##### ➤ One-to-many relationships:

- Most common type of relationship cardinality
  - (i) One side column ☐ unique values
  - (ii) Other side ☐ values can contain duplicates

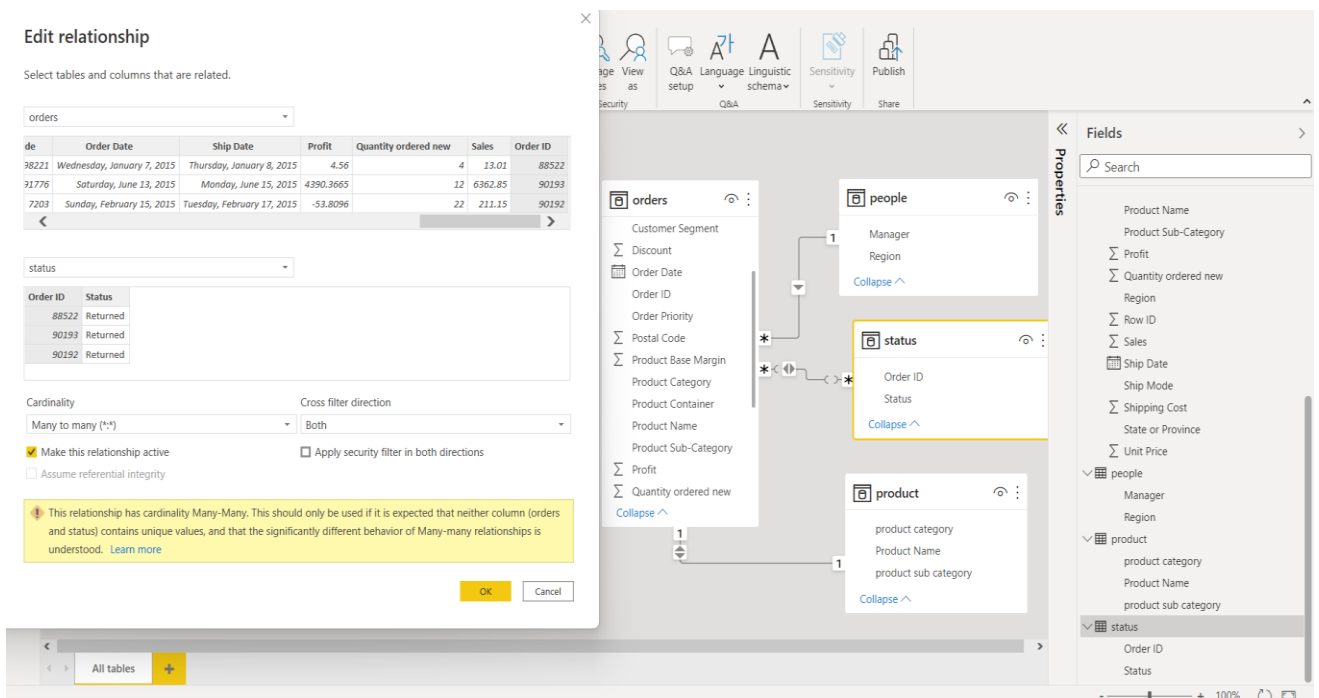
(iii) One-to-many & many-one relations are the same type of relationship

- The following figure shows one- to-many relationships



## ➤ Many-to-many relationships:

- On both sides of the relationship the columns can have duplicates
- The following figure shows one- to-many relationships



## 2. What is filter flow? Explain with an example of filter flow?

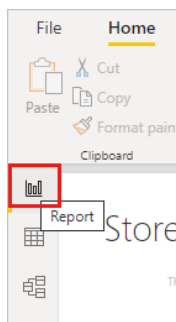
**ANS:**

### Filter flow:

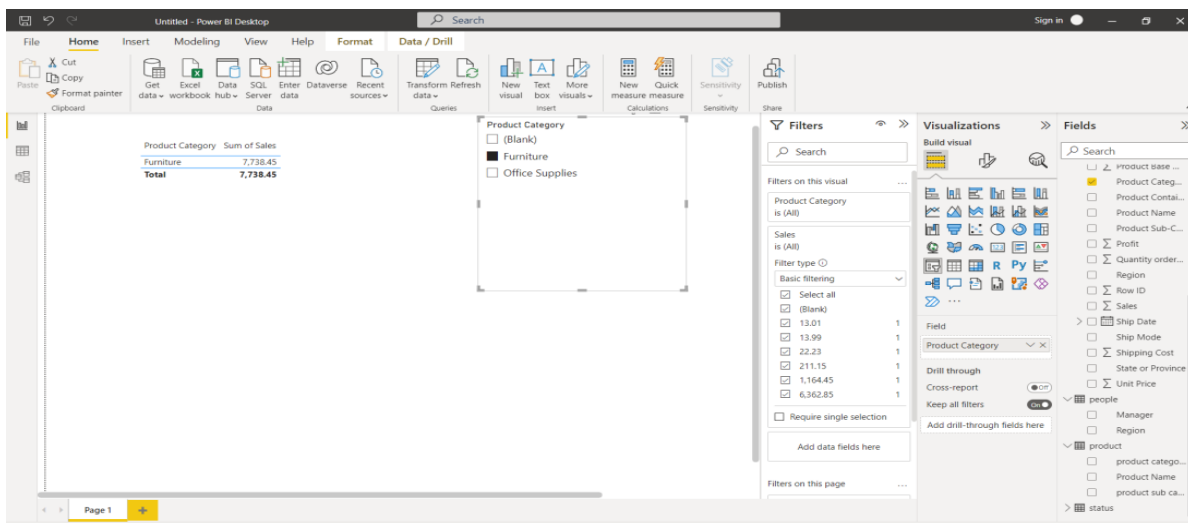
- Data filter will be flown from lookup table to Data table
- The filter context will be passed to all related data tables
- Filter cannot be applied against the direction.

### Example

- Open the power bi desktop and load the data.
- Then go to power bi desktop views & click on report view.
- The following figure shows the report view icon.



- Drag the data on to the data pane .
- After that filter the data using filter which is in “visualizations”.
- **The final output as shown in the below figure.**



### 3. Explain Many to Many Relationships with an example?

**ANS:**

For example, two tables might have had a column labeled Country. The values of Country weren't unique in either table, though. To join such tables, you had to create a workaround. One workaround might be to introduce extra tables with the needed unique values. With relationships with a many-to-many cardinality, you can join such tables directly, if you use a relationship with a cardinality of many-to-many.

#### Example:

The following figure is the example for many-to-many relationships

**Edit relationship**

Select tables and columns that are related.

orders

de	Order Date	Ship Date	Profit	Quantity ordered new	Sales	Order ID
98221	Wednesday, January 7, 2015	Thursday, January 8, 2015	4.56	4	13.01	88522
71776	Saturday, June 13, 2015	Monday, June 15, 2015	4390.3665	12	6362.85	90193
7203	Sunday, February 15, 2015	Tuesday, February 17, 2015	-53.8096	22	211.15	90192

status

Order ID	Status
88522	Returned
90193	Returned
90192	Returned

Cardinality: Many to many (\*:\*)

Cross filter direction: Both

☒ Make this relationship active

☐ Apply security filter in both directions

☐ Assume referential integrity

This relationship has cardinality Many-Many. This should only be used if it is expected that neither column (orders and status) contains unique values, and that the significantly different behavior of Many-many relationships is understood. [Learn more](#)

OK Cancel

The background shows a data model with the following tables and columns:

- orders**: Customer Segment, Discount, Order Date, Order ID, Order Priority, Postal Code, Product Base Margin, Product Category, Product Container, Product Name, Product Sub-Category, Profit, Quantity ordered new.
- people**: Manager, Region.
- status**: Order ID, Status.
- product**: product category, Product Name, product sub category.

Relationships:

- orders (1) to people (1)
- orders (\*) to status (\*)
- status (1) to product (1)

Fields list:

- Product Name
- Product Sub-Category
- Profit
- Quantity ordered new
- Region
- Row ID
- Sales
- Ship Date
- Ship Mode
- Shipping Cost
- State or Province
- Unit Price
- people: Manager, Region
- product: product category, Product Name, product sub category
- status: Order ID, Status