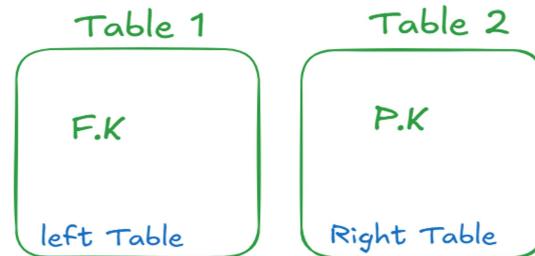
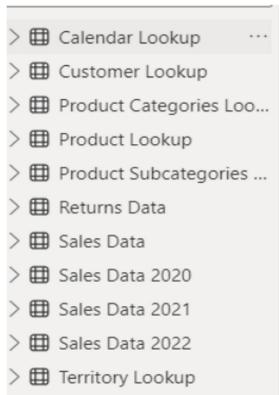


Power BI - Data Modelling - p1 - Lecture 9

- Returns Data
- Territory Lookup

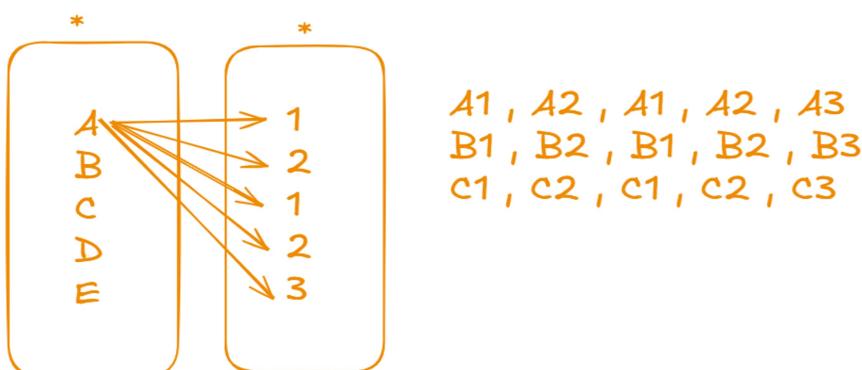
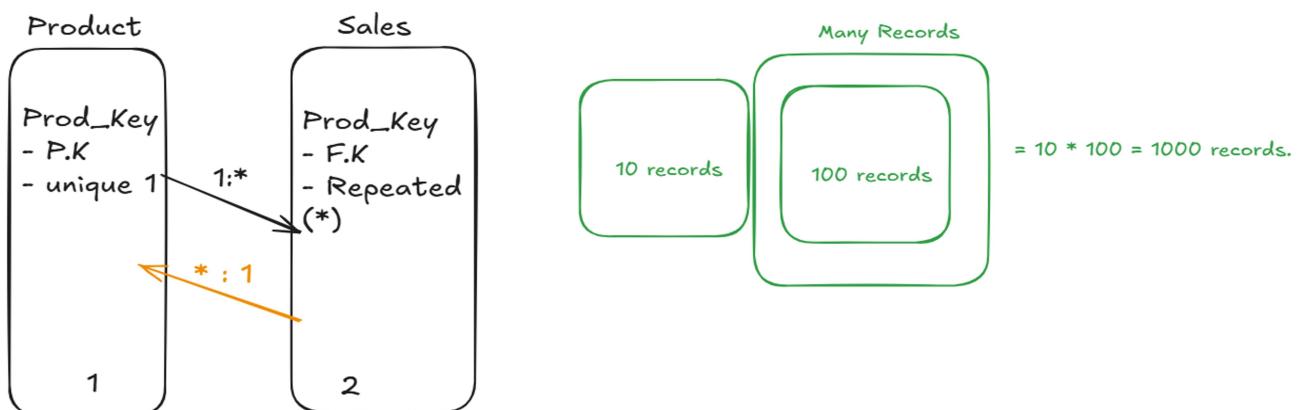


```
SELECT Column1, Column2 FROM table1
JOIN table2
ON table1.fk = table2.pk;
```

*:1

```
SELECT Column1, Column2 FROM table2
JOIN table1
ON table1.fk = table2.pk;
```

1:*



CREATING A DATA MODEL

In this section we'll cover foundational data modeling topics like normalization, fact and dimension tables, primary and foreign keys, relationship cardinality and filter flow

TOPICS WE'LL COVER:

1. Data Modeling 101
2. Facts & Dimensions
3. Cardinality
4. Common Schemas
5. Normalization
6. Primary & Foreign Keys
7. Filter Flow
8. Hierarchies

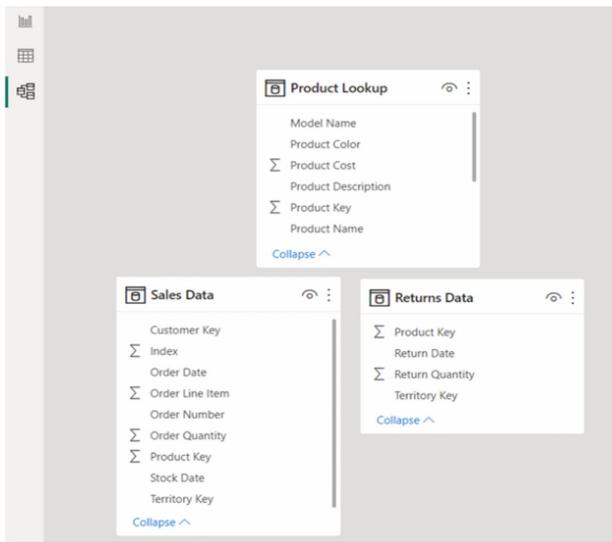
$$\begin{array}{c} 2 \\ \text{—} \\ 2 \end{array} = 4 \text{ possibilities of Cardinality.}$$

1:1 , 1:* , *:1 , *:*

GOALS FOR THIS SECTION:

- Understand the basic principles of data modeling, including normalization, fact & dimension tables and common schemas.
- Create table relationships using primary and foreign keys, and discuss different types of relationship cardinality
- Configure report filters and trace filter context as it flows between related tables in the model
- Explore data modeling options like hierarchies, data categories and hidden fields

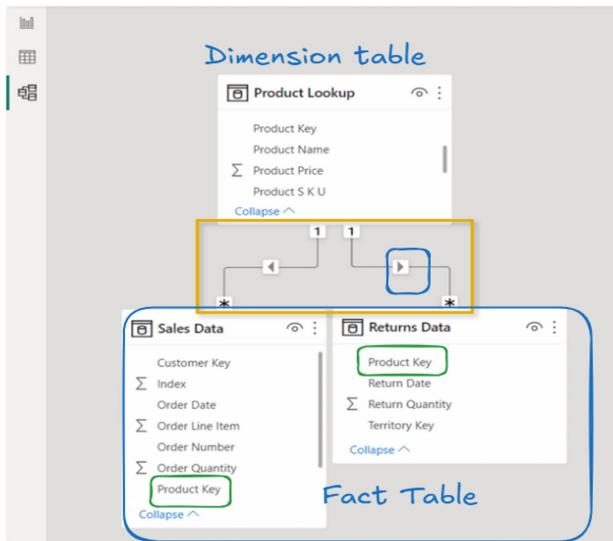
WHAT IS A DATA MODEL?



This IS NOT a data model 😞

- This is a collection of independent tables, which share no connections or relationships
- If you tried to visualize Orders and Returns by Product, this is what you'd get

ProductName	OrderQuantity	ReturnQuantity
All-Purpose Bike Stand	84,174	1,828
AWC Logo Cap	84,174	1,828
Bike Wash - Dissolver	84,174	1,828
Cable Lock	84,174	1,828
Chain	84,174	1,828
Classic Vest, L	84,174	1,828
Classic Vest, M	84,174	1,828
Classic Vest, S	84,174	1,828
Fender Set - Mountain	84,174	1,828
Total	84,174	1,828

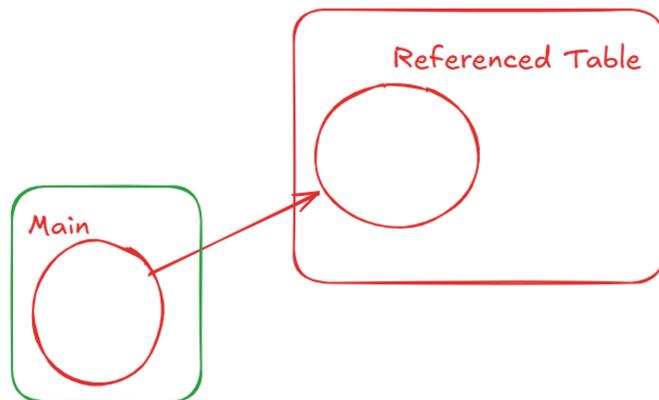


This IS a data model! 😊

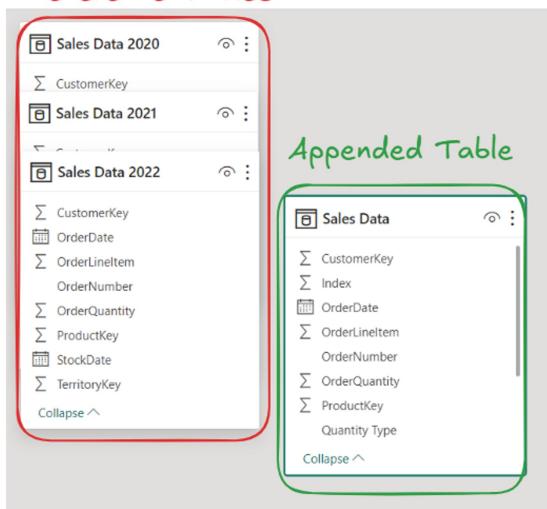
- The tables are connected via relationships, based on a common field (Product Key)
- Now Sales and Returns data can be filtered using fields from the Product Lookup table!

Filter Flow - Downstream.
Cardinality - 1 : *

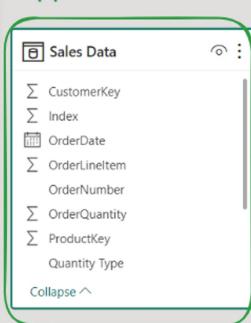
ProductName	OrderQuantity	ReturnQuantity
All-Purpose Bike Stand	234	8
AWC Logo Cap	4,151	46
Bike Wash - Dissolver	1,706	25
Classic Vest, L	182	4
Classic Vest, M	182	7
Classic Vest, S	157	8
Fender Set - Mountain	3,960	54
Half-Finger Gloves, L	840	18
Half-Finger Gloves, M	918	16
Total	84,174	1,828



Reference Tables



Appended Table



Dimension Table

