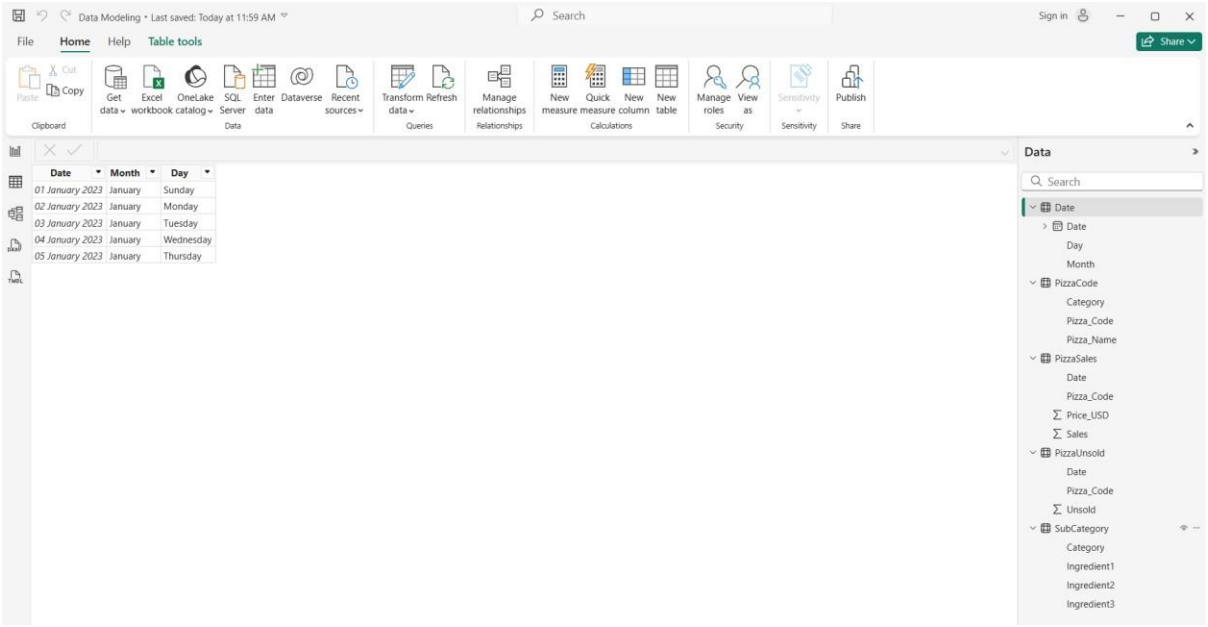
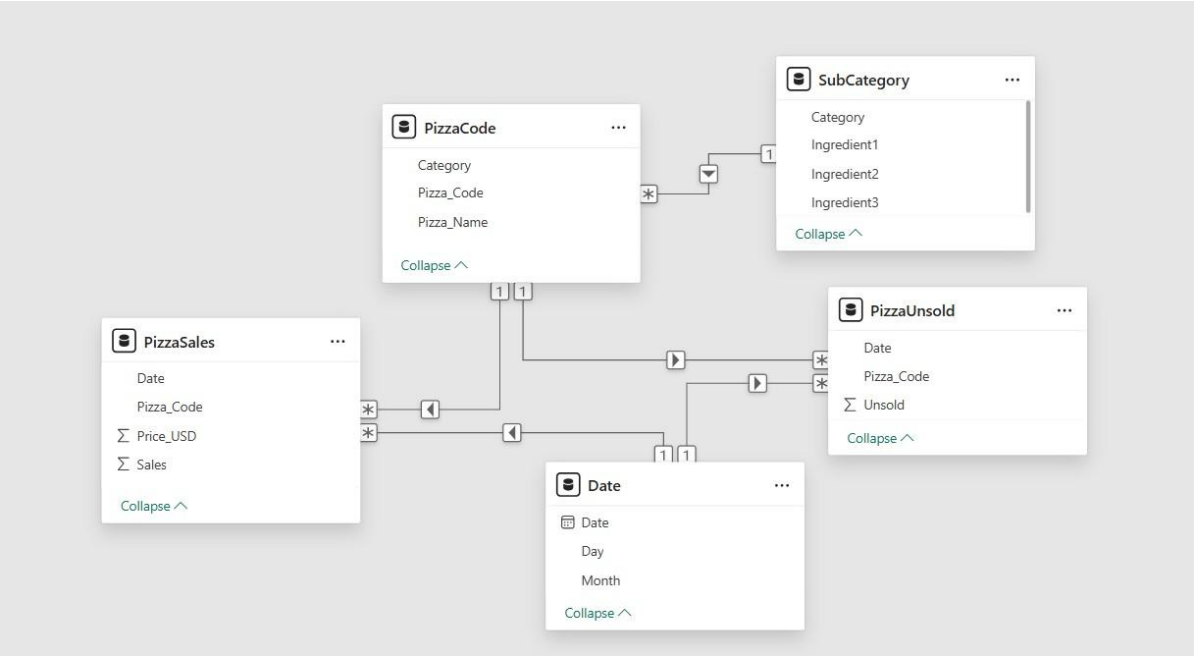
ASSIGNMENT-12

DATA MODELLING:



STEPS:

- We have the pizza data in excel file, we need get the data into powerbi.
- Go to home tab,navigate to get data from excel file and choose pizza data file.
- Load the data into powerbi by checking the data types and removing null columns.
- Next step is to establish relationships.
- Navigate to the model view to establish relationship between the tables using common columns.



From Table	Column	To Table	Column	Cardinality	Purpose
PizzaCode	Pizza_Code	**PizzaSales**	Pizza_Code	1 → *	Connects sales transactions to pizza details.
PizzaCode	Pizza_Code	**PizzaUnsold**	Pizza_Code	1 → *	Links unsold counts to pizza details.
PizzaCode	Category	**SubCategory**	Category	1 → 1	Enriches each pizza category with ingredient info.
Date	Date	**PizzaSales**	Date	1 → *	Enables time-based analysis of sales.
Date	Date	**PizzaUnsold**	Date	1 → *	Enables time-

					based analysis of unsold pizzas.

Date	Sum of Sales	Sum of Unsold
01 January 2023	413	89
02 January 2023	327	89
03 January 2023	412	89
04 January 2023	197	89
05 January 2023	213	89
Total	**1562**	**89**

Date	Sum of Unsold	Sum of Sales
01 January 2023	21	1562
03 January 2023	40	1562
04 January 2023	28	1562
Total	**89**	**1562**

Year	Quarter	Month	Day	Sum of Sales	Sum of Unsold
2023	Qtr 1	January	1	413	21
2023	Qtr 1	January	2	327	
2023	Qtr 1	January	3	412	40
2023	Qtr 1	January	4	197	28
2023	Qtr 1	January	5	213	
Total				**1562**	**89**

STEPS AND INSIGHTS:

- Sales comes from PizzaSales fact table.
- Unsold comes from PizzaUnsold fact table.
- Because you have a Date relationship between both tables through the Date dimension, each day shows:
  Sales from PizzaSales + Unsold from PizzaUnsold.
- Total: Simple column total (1562 sales, 89 unsold).

- Here the base table appears to be PizzaUnsold**,** with a relationship to PizzaSales.
- Because of the one-to-many relationships and how the visual is set up, **Sales** repeats the total 1562 for every row.
- Why? For each unsold date, DAX sums all PizzaSales rows (not just matching those unsold rows) because the filter context only comes from PizzaUnsold's Date, and the cross-filter direction may be single.
- The visual therefore displays total sales for the entire period on each row, and totals just re-add to 1562.

- Uses the Date dimension's hierarchy (Year → Quarter → Month → Day).
- Because the Date table is a true *common dimension*, the filter context applies properly to both PizzaSales and PizzaUnsold.
- Result: Correct daily breakdown (Sales and Unsold vary) and accurate grand totals.

Why Totals Differ Between Visuals

- **Filter Context**: In the top-left and bottom visuals, the Date dimension drives filters on both fact tables. In the top-right visual, the Unsold table is driving the visual and the Sales measure is not being filtered correctly, so the total sales repeats for each unsold date.
- **Relationship Direction**: If the cross-filter between PizzaUnsold → PizzaSales is single, Sales isn't restricted to that date context. Power BI then calculates the grand total for each row.

How to Fix or Control This

1. **Use the Date Dimension** in all visuals as the row/column source.
    - Drag Year/Month/Day from Date table, not from PizzaSales or PizzaUnsold.
2. **Check Relationship Direction**
    - In Model view, ensure Date → PizzaSales and Date → PizzaUnsold are *single* (one-to-many) and both fact tables filter from Date.