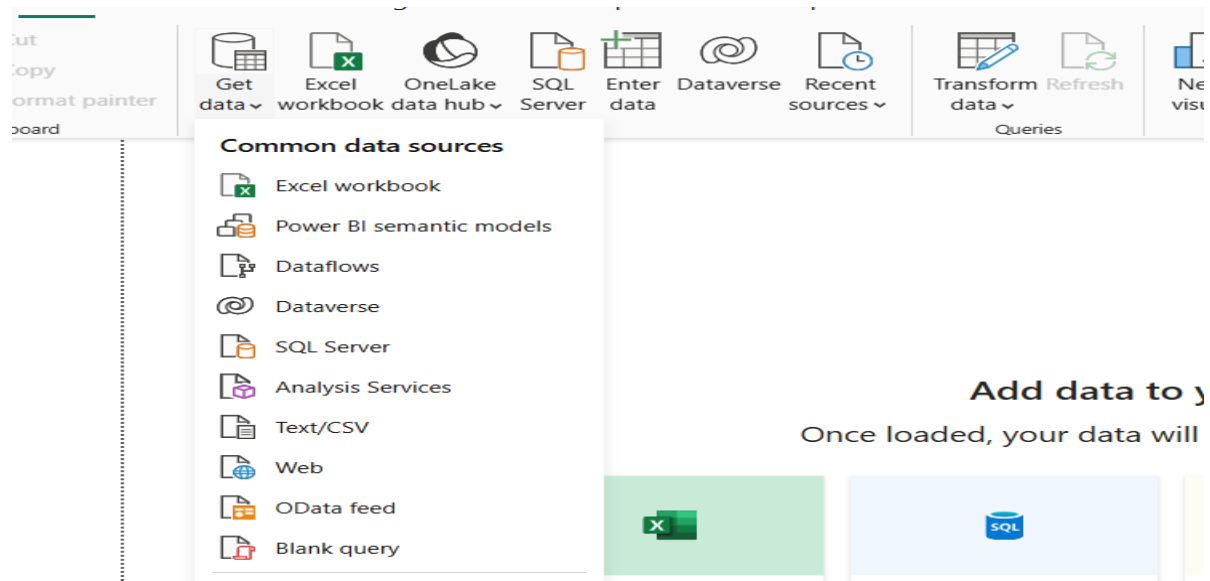


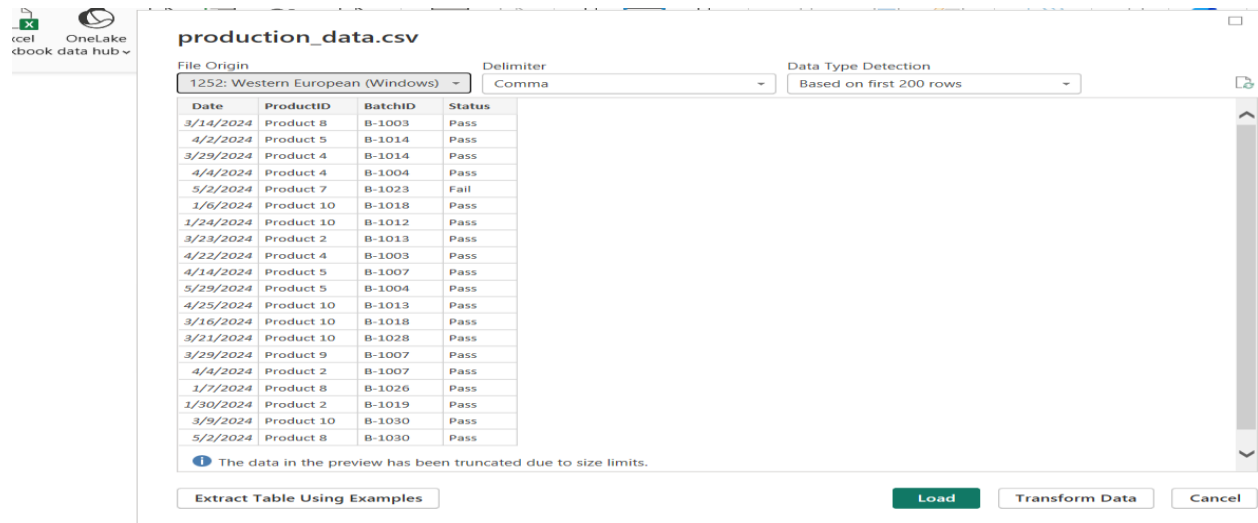
Quality Control Dashboard

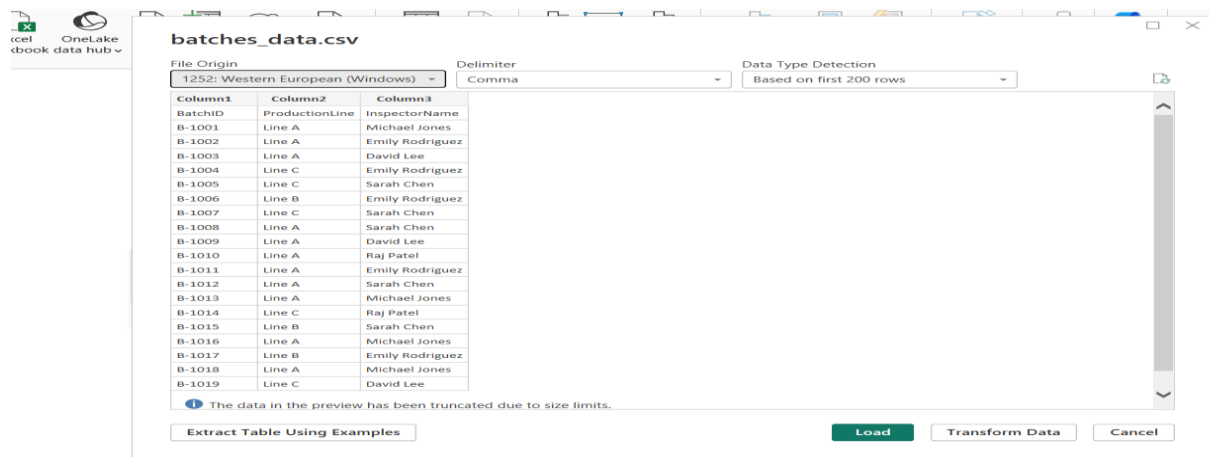
Data Modeling

- Import the data into Power BI

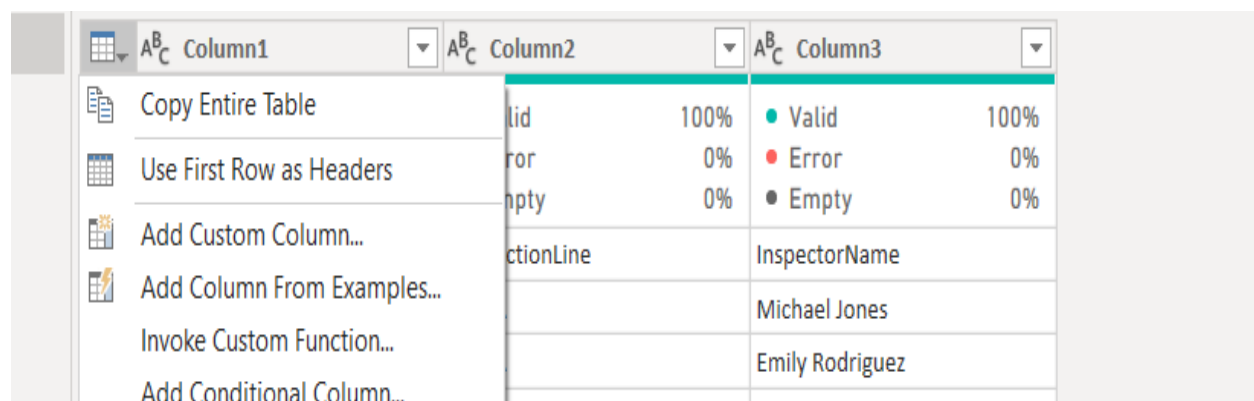
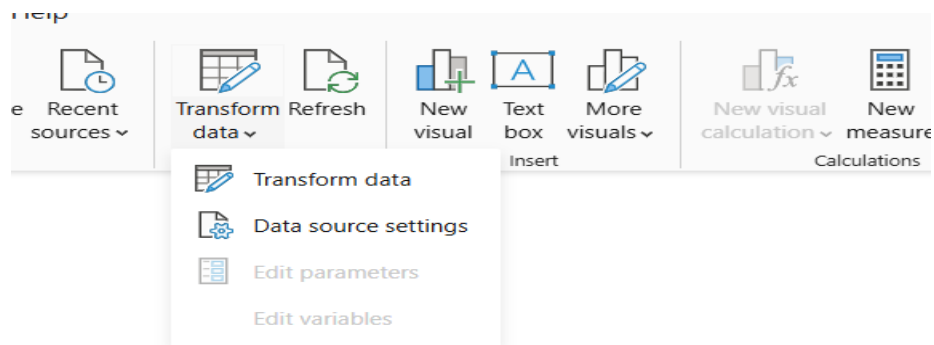


- Click text/csv

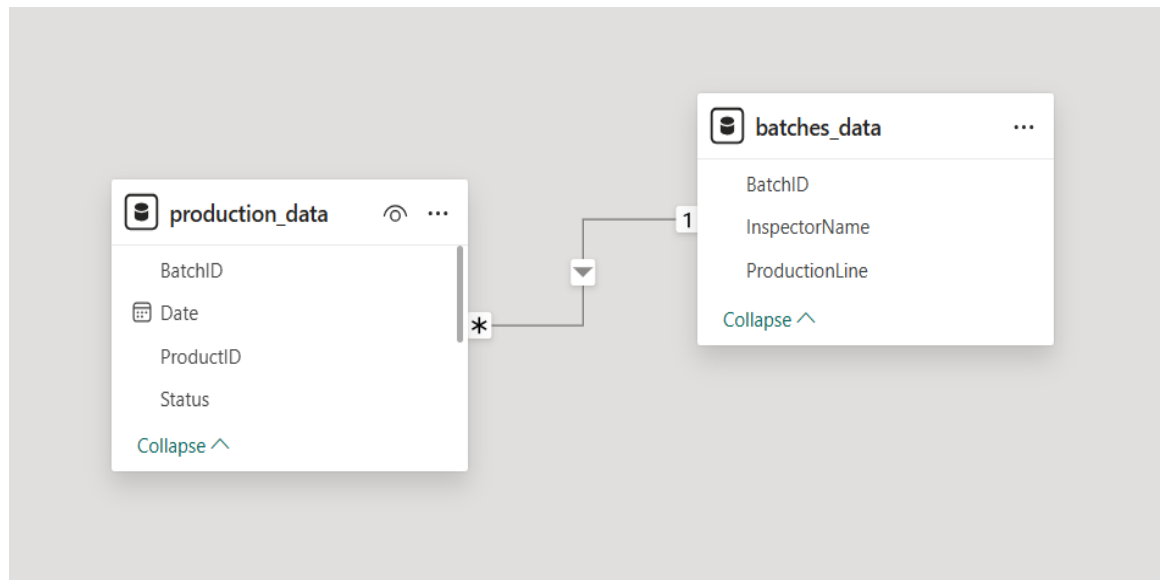




- Load the data into power bi in this table there is no column names and insert into power query and add the heading



- relationships between the tables.



DAX Measures

- Create a measure for the Overall Defect Rate as a percentage.

table: production_data | \$ % 0 Auto

Structure	Formatting	Properties	New measure Calculations	Quick measure Calculations
<pre> 1 Overall Defect Rate % = 2 DIVIDE (3 COUNTROWS (FILTER ('production_data', 'production_data'[Status]= "Fail")), 4 COUNTROWS ('production_data'), 5 0 6) * 100 7 </pre>				
Date	ProductID	BatchID	Status	

- Create a measure to count the number of Defective Items.

table: production_data | \$ % 0

Structure	Formatting	Properties	New measure Calculations	Quick measure Calculations
<pre> 1 Defective Item = COUNTROWS(FILTER('production_data','production_data'[status]="Fail")) </pre>				
Date	ProductID	BatchID	Status	
Thursday, March 14, 2024	Product 8	B-1003	Pass	

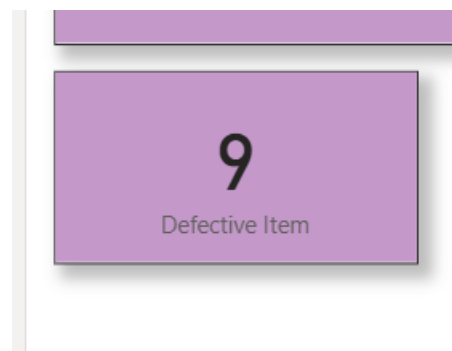
- Create a measure to calculate the Daily Defect Rate

Structure	Formatting	Properties	measure measure
<pre> 1 Daily Defect Rate % = 2 DIVIDE (3 COUNTROWS (FILTER ('production_data', 'production_data'[Status] = "Fail")), 4 COUNTROWS ('production_data'), 5 0 6) * 100 7 </pre>			Calculations

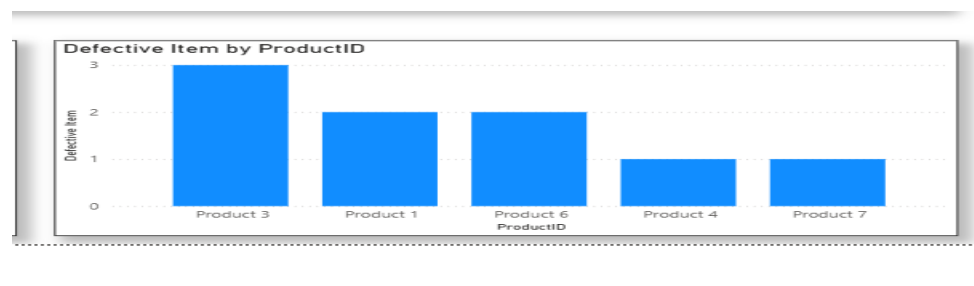
Date ▼ ProductID ▼ BatchID ▼ Status ▼

1. Visualizations:

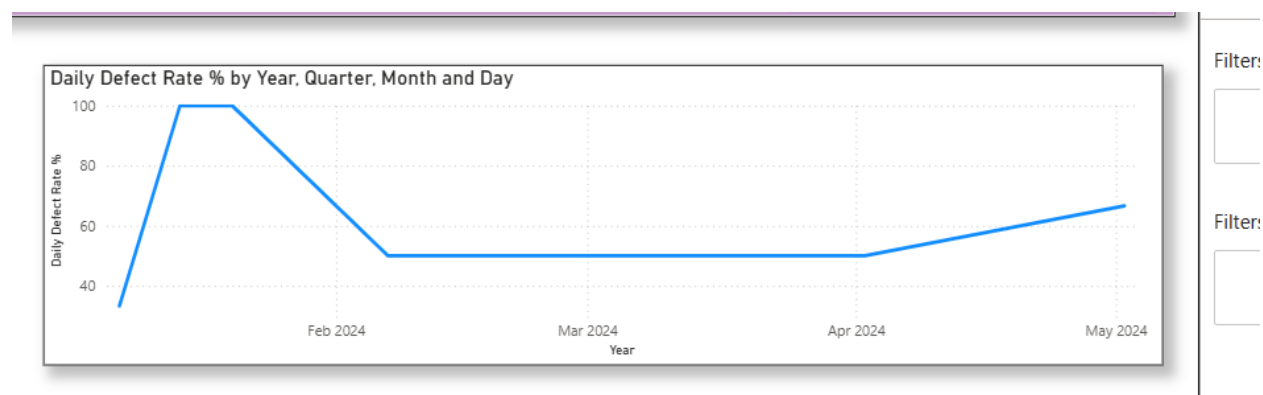
- Use a Card visual for the overall defect rate.



- Create a Clustered Bar Chart showing the top 5 products by defect count. Use a filter to show only the top 5.



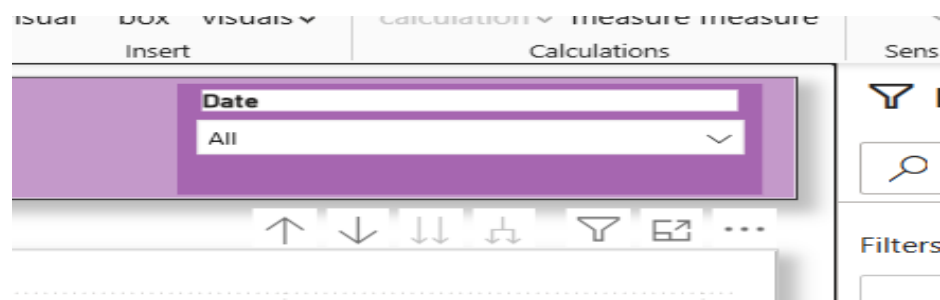
- Create a Line Chart to display the trend of the daily defect rate over time



- Use a Table or Matrix visual to show defect counts by ProductionLine and InspectorName.

ProductionLine	David Lee	Emily Rodriguez	Raj Patel	Total
Line A	1	1		2
Line B			2	2
Line C	1	2	2	5
Total	2	3	4	9

- Add a slicer for Date to allow the user to filter all visuals by a specific time period.



- Overall Defective Items: The large card in the top left shows a total of 9 defective items. This is the aggregate number for the entire period and all products.
- Daily Defect Rate %: The line graph in the top middle section, "Daily Defect Rate % by Year, Quarter, Month and Day," tracks the defect rate over time.
 - The rate started high in February, peaking at around 90% before dropping significantly to below 40% in March.
 - The rate remained relatively stable and low through March and April.
 - There was a notable uptick in the defect rate in May, rising to just over 60%. This recent increase is a key area for concern and further investigation.
- Defective Items by Product ID: The bar chart on the bottom right, "Defective Item by ProductID," shows which products have the most defects.
 - Product 3 has the highest number of defects, with 3 defective items.
 - Product 1 and Product 6 each have 2 defects.
 - Product 4 and Product 7 each have 1 defect.
- Defective Items by Production Line and Employee: The table on the bottom left breaks down the defects by production line and the employee responsible.
 - Line A had a total of 2 defective items. David Lee was responsible for 1, and Raj Patel was responsible for 1.
 - Line B had a total of 5 defective items. Emily Rodriguez was responsible for 2, and Raj Patel was responsible for 3.
 - Line C had a total of 2 defective items. David Lee was responsible for 1, and Emily Rodriguez was responsible for 1.
 - Overall, Raj Patel and Emily Rodriguez each had 4 defective items, while David Lee had 2.

Key Takeaway

The most critical insight is the recent increase in the daily defect rate in May 2024. This suggests a new or recurring issue in the production process that needs immediate attention. The dashboard also highlights that Product 3 and Production Line B are contributing the most to the defective items, with Raj Patel and Emily Rodriguez being associated with a higher number of defects compared to David Lee.

