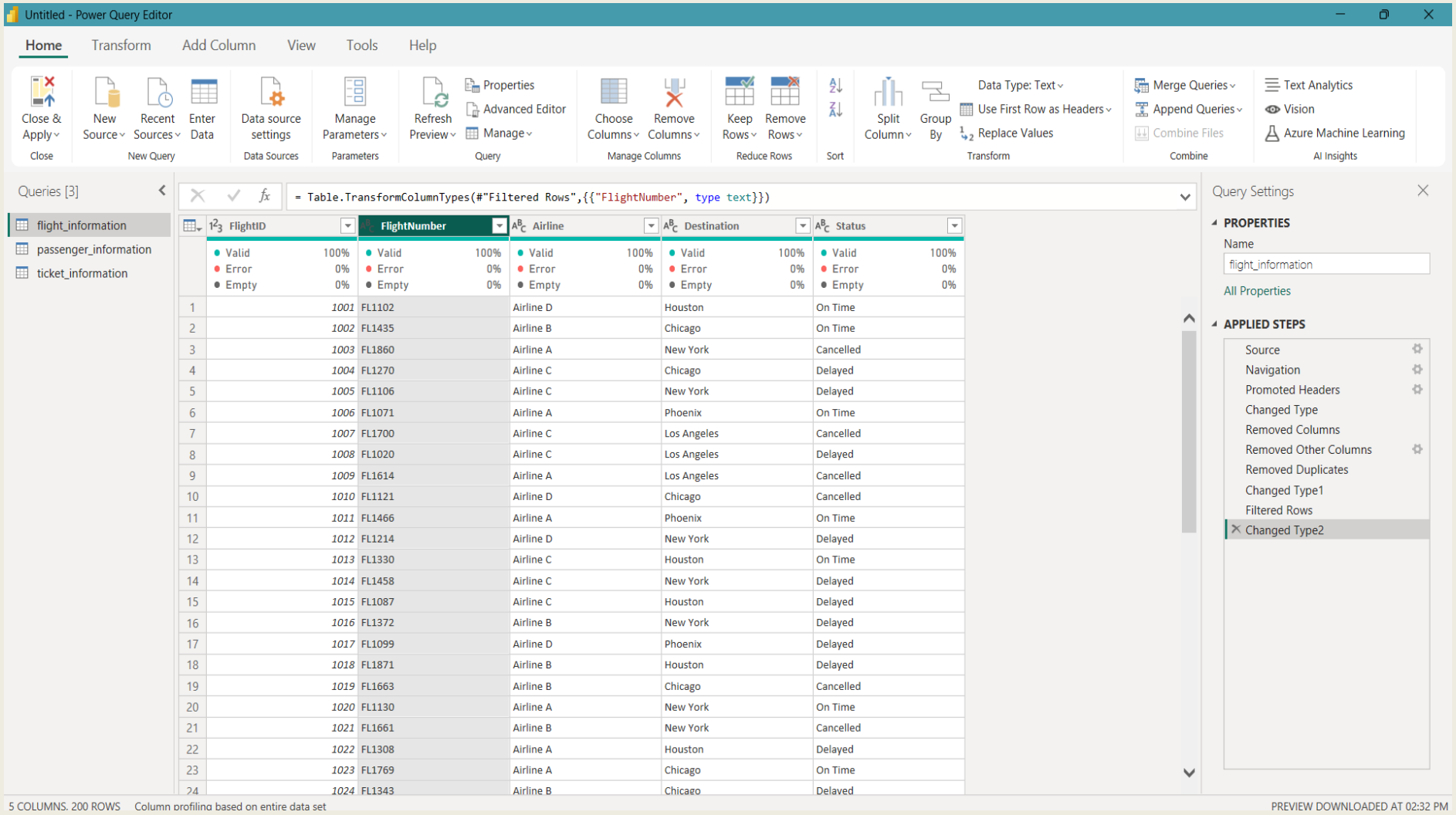
Task 1
Data Preparation and Cleaning

1) Set first row as header
2) Remove unnecessary Columns
3) Remove Duplicates
4) Change Data types
5) Handle missing values (nulls) and format columns

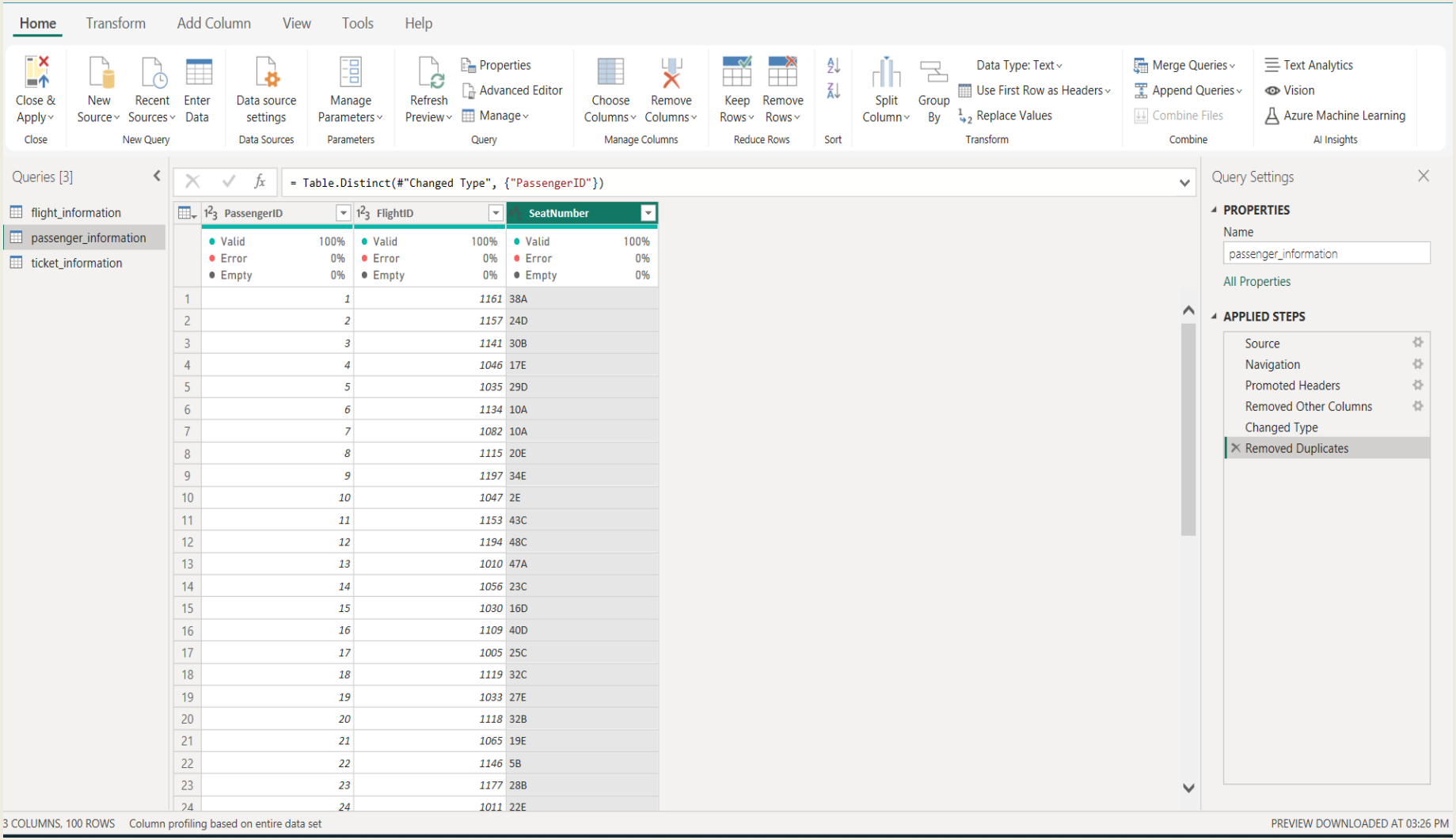
Data cleaning was performed for all three datasets using Power Query Editor.

Flight_Information table cleaned in Power Query – removed duplicates, fixed data types, and removed nulls and ensured only valid rows remain.
Screenshot shows Power Query after cleaning.

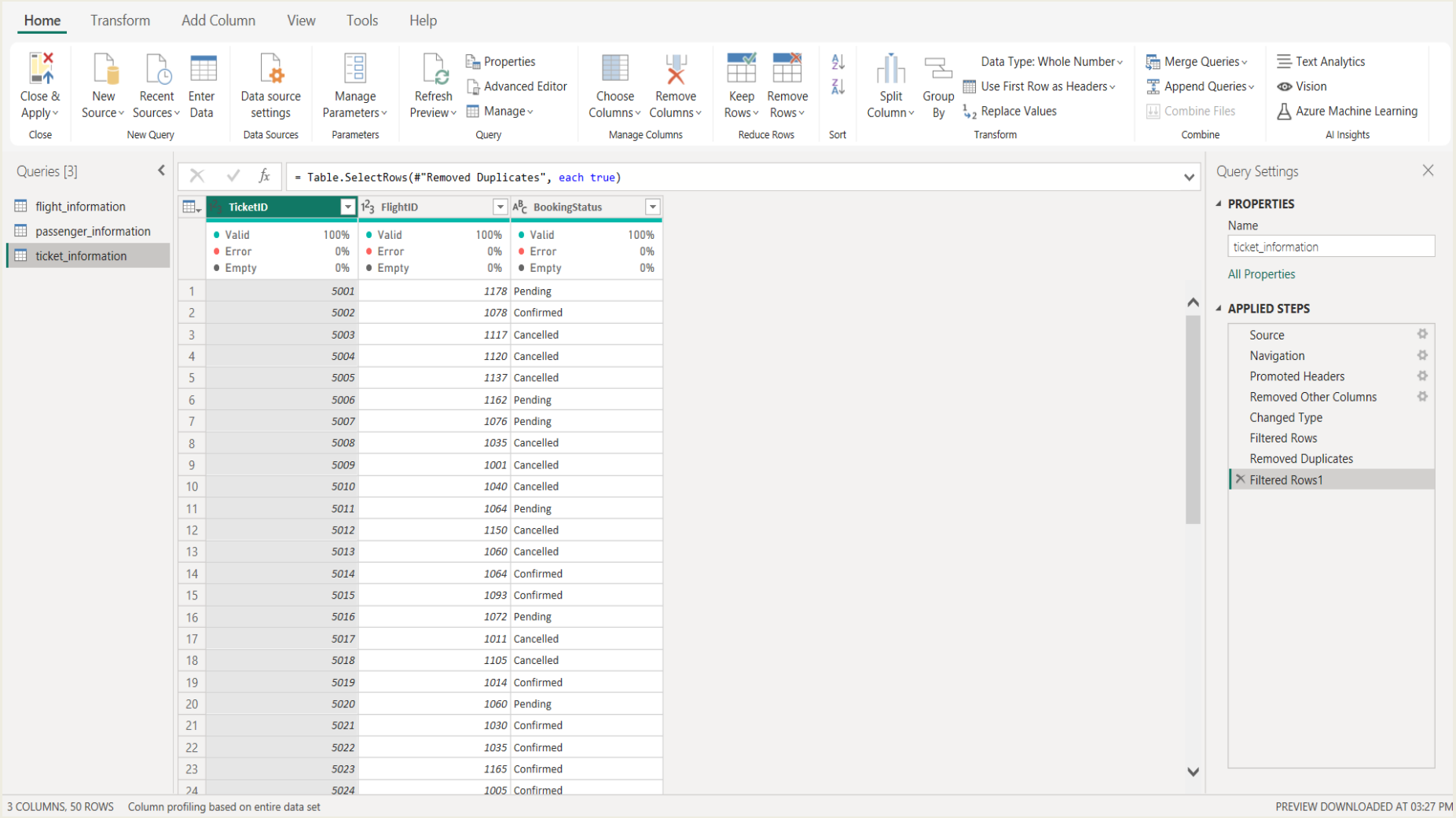


	FlightID	FlightNumber	Airline	Destination	Status
1	1001	FL1102	Airline D	Houston	On Time
2	1002	FL1435	Airline B	Chicago	On Time
3	1003	FL1860	Airline A	New York	Cancelled
4	1004	FL1270	Airline C	Chicago	Delayed
5	1005	FL1106	Airline C	New York	Delayed
6	1006	FL1071	Airline A	Phoenix	On Time
7	1007	FL1700	Airline C	Los Angeles	Cancelled
8	1008	FL1020	Airline C	Los Angeles	Delayed
9	1009	FL1614	Airline A	Los Angeles	Cancelled
10	1010	FL1121	Airline D	Chicago	Cancelled
11	1011	FL1466	Airline A	Phoenix	On Time
12	1012	FL1214	Airline D	New York	Delayed
13	1013	FL1330	Airline C	Houston	On Time
14	1014	FL1458	Airline C	New York	Delayed
15	1015	FL1087	Airline C	Houston	Delayed
16	1016	FL1372	Airline B	New York	Delayed
17	1017	FL1099	Airline D	Phoenix	Delayed
18	1018	FL1871	Airline B	Houston	Delayed
19	1019	FL1663	Airline B	Chicago	Cancelled
20	1020	FL1130	Airline A	New York	On Time
21	1021	FL1661	Airline B	New York	Cancelled
22	1022	FL1308	Airline A	Houston	Delayed
23	1023	FL1769	Airline A	Chicago	On Time
24	1024	FL1343	Airline B	Chicago	Delayed

Passenger_Information table cleaned in Power Query – removed duplicates, fixed data types, and removed nulls and ensured only valid rows remain.
Screenshot shows Power Query after cleaning."



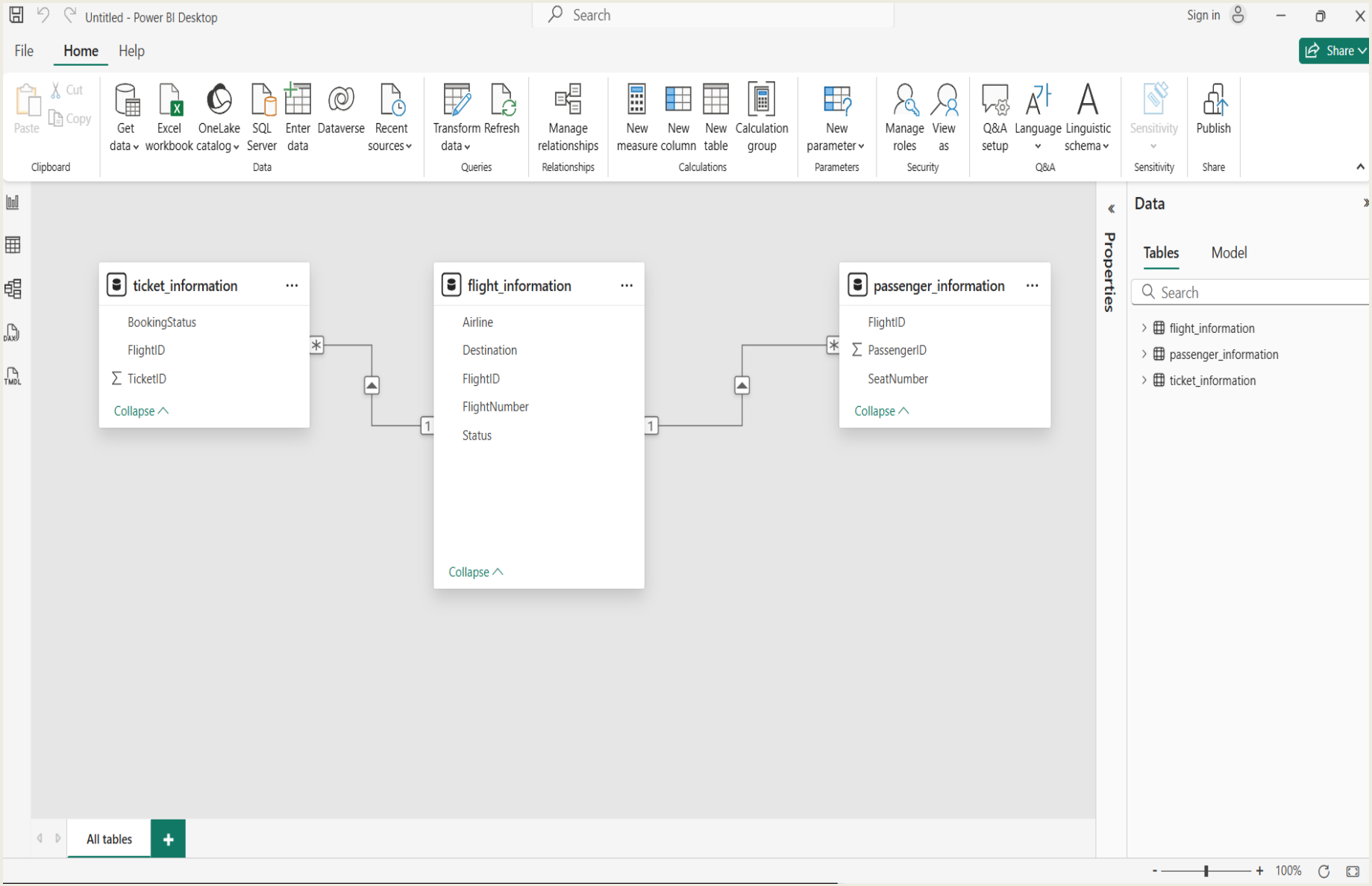
Ticket_Information table cleaned in Power Query – removed duplicates, fixed data types, and removed nulls and ensured only valid rows remain.
Screenshot shows Power Query after cleaning."



Task 2
Data Modeling

- In this task, I created relationships between the three tables using the common column **FlightID**. I connected **flight_information** (main table) with both **ticket_information** and **passenger_information** using one-to-many relationships.
- This model allows Power BI to link flight details with ticket bookings and passenger data for better analysis.

Data Modeling



Task 3
Enhanced Data Insights

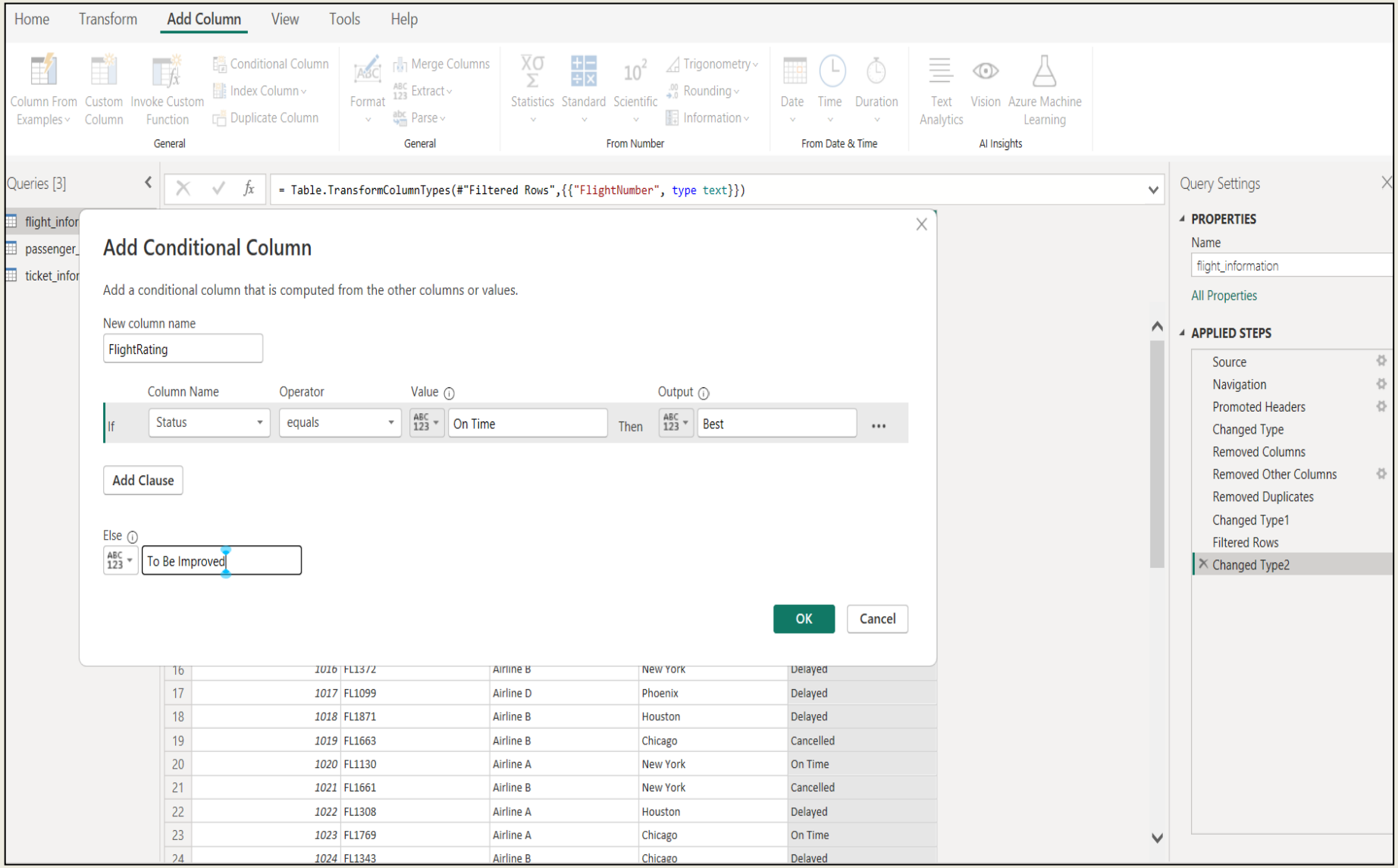
Step-1 Add *Conditional Column*

- In this task, added a conditional column **FlightRating** to classify flights based on their status.
- Flights marked **'On Time'** are categorized as **'Best',** while all others are marked **'To Be Improved'**.

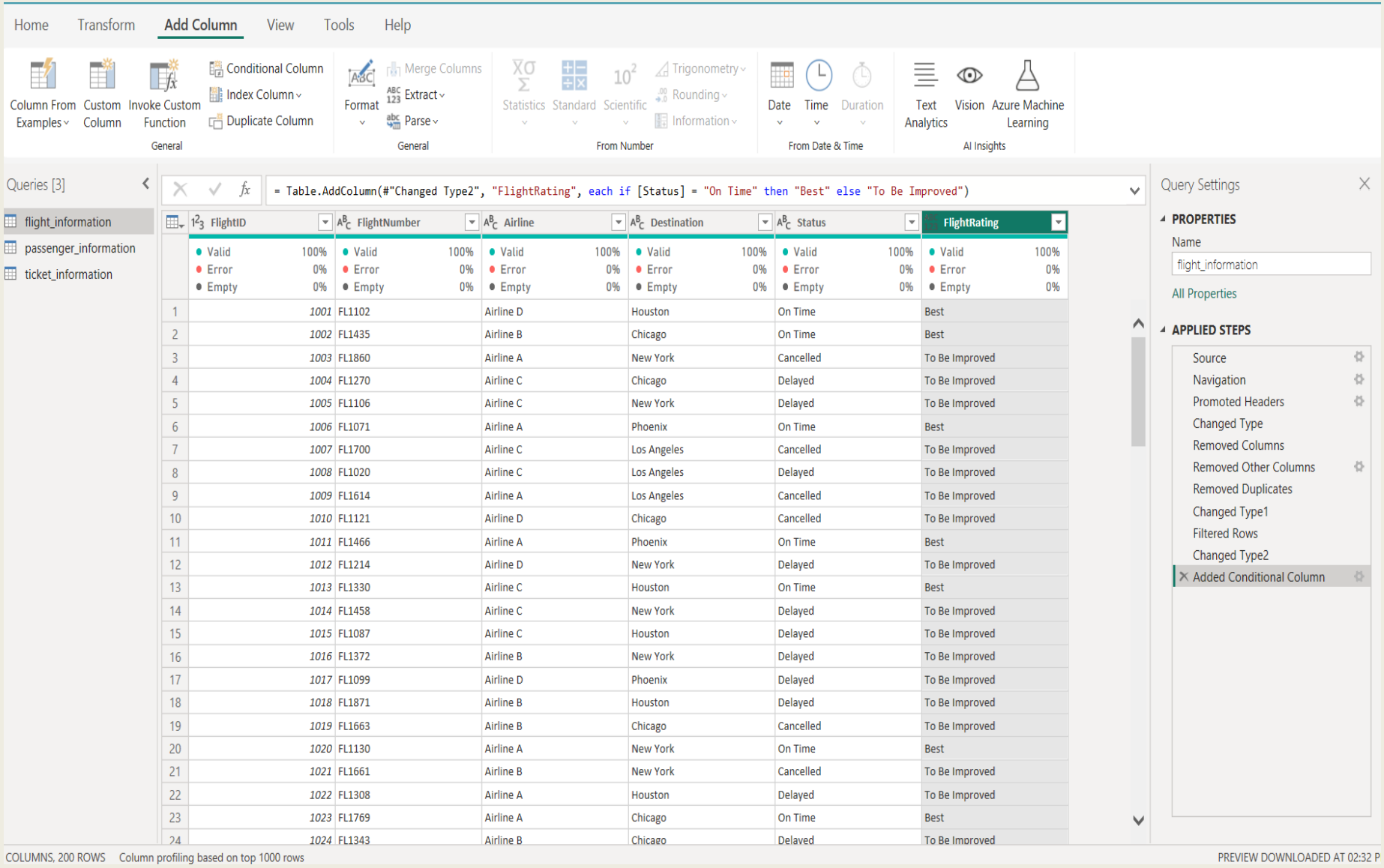
Step-2 Add Column using *Column from Examples*

- In this task, used 'Column From Examples' in Power Query to extract only the numeric part of the **FlightNumber** field (e.g., FL1102 → 1102).

Setting up conditional logic

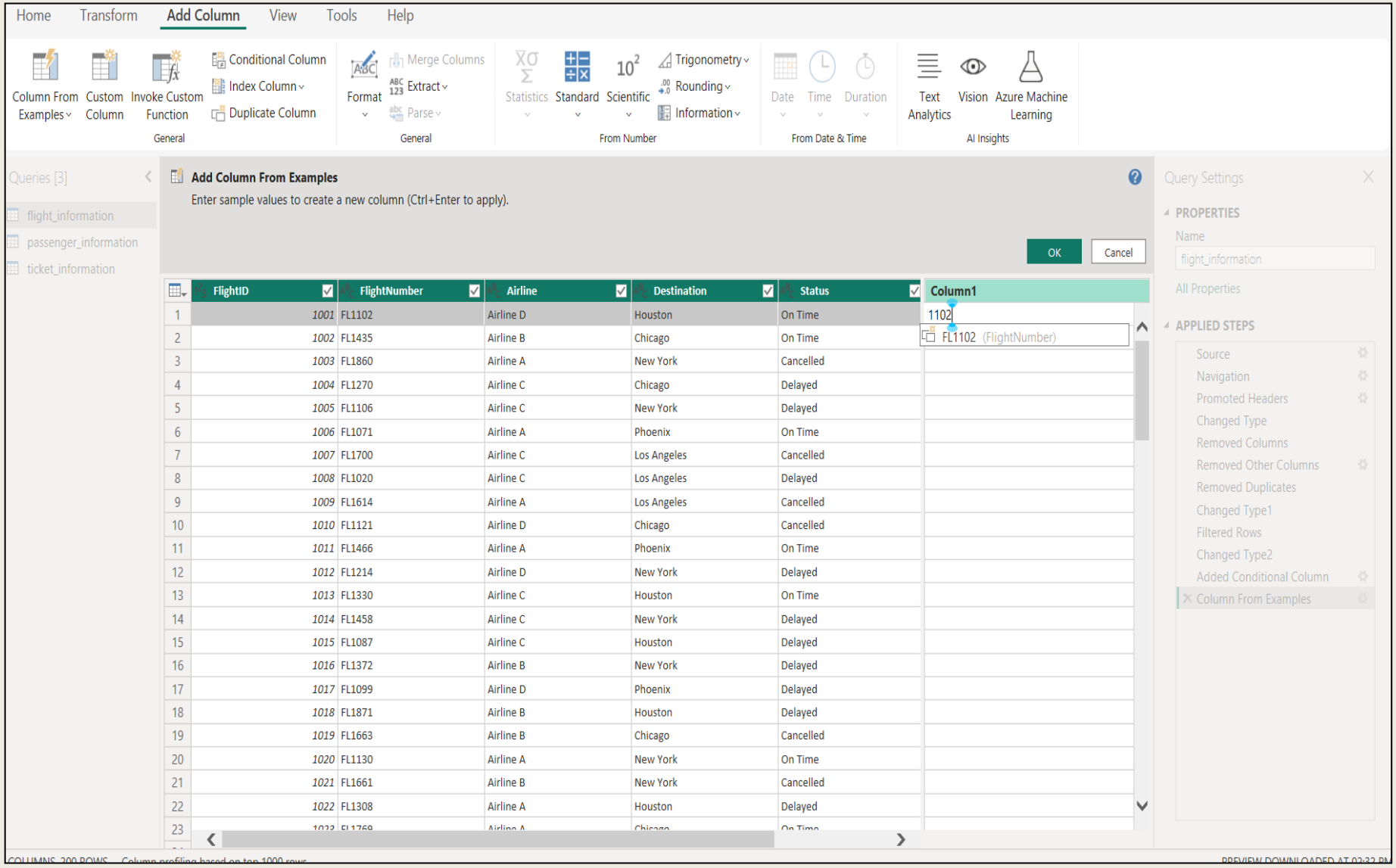


Added Conditional Column – FlightRating

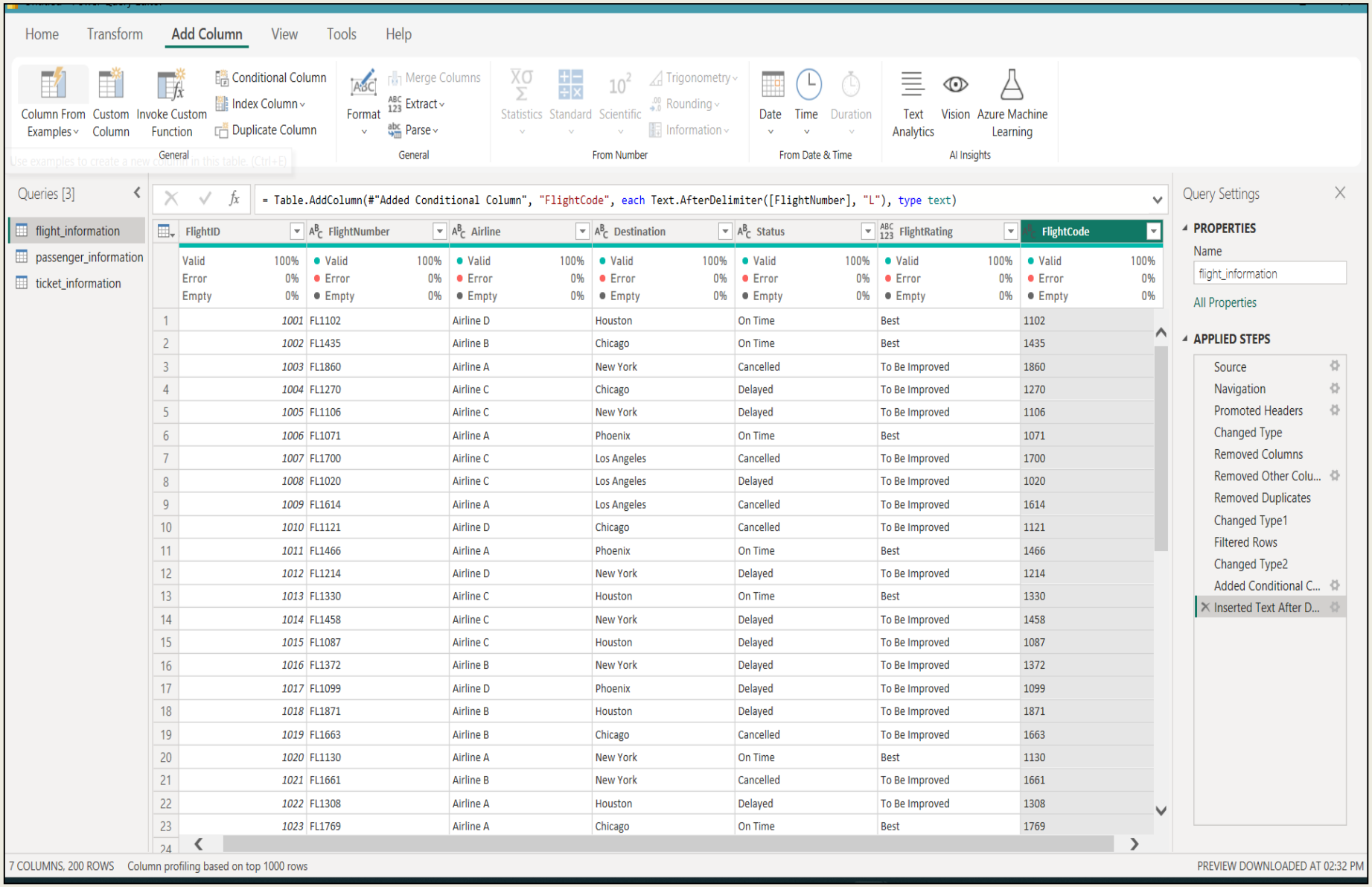


	FlightID	FlightNumber	Airline	Destination	Status	FlightRating
	Valid 100% Error 0% Empty 0%	Valid 100% Error 0% Empty 0%	Valid 100% Error 0% Empty 0%	Valid 100% Error 0% Empty 0%	Valid 100% Error 0% Empty 0%	Valid 100% Error 0% Empty 0%
1	1001	FL1102	Airline D	Houston	On Time	Best
2	1002	FL1435	Airline B	Chicago	On Time	Best
3	1003	FL1860	Airline A	New York	Cancelled	To Be Improved
4	1004	FL1270	Airline C	Chicago	Delayed	To Be Improved
5	1005	FL1106	Airline C	New York	Delayed	To Be Improved
6	1006	FL1071	Airline A	Phoenix	On Time	Best
7	1007	FL1700	Airline C	Los Angeles	Cancelled	To Be Improved
8	1008	FL1020	Airline C	Los Angeles	Delayed	To Be Improved
9	1009	FL1614	Airline A	Los Angeles	Cancelled	To Be Improved
10	1010	FL1121	Airline D	Chicago	Cancelled	To Be Improved
11	1011	FL1466	Airline A	Phoenix	On Time	Best
12	1012	FL1214	Airline D	New York	Delayed	To Be Improved
13	1013	FL1330	Airline C	Houston	On Time	Best
14	1014	FL1458	Airline C	New York	Delayed	To Be Improved
15	1015	FL1087	Airline C	Houston	Delayed	To Be Improved
16	1016	FL1372	Airline B	New York	Delayed	To Be Improved
17	1017	FL1099	Airline D	Phoenix	Delayed	To Be Improved
18	1018	FL1871	Airline B	Houston	Delayed	To Be Improved
19	1019	FL1663	Airline B	Chicago	Cancelled	To Be Improved
20	1020	FL1130	Airline A	New York	On Time	Best
21	1021	FL1661	Airline B	New York	Cancelled	To Be Improved
22	1022	FL1308	Airline A	Houston	Delayed	To Be Improved
23	1023	FL1769	Airline A	Chicago	On Time	Best
24	1024	FL1343	Airline B	Chicago	Delayed	To Be Improved

Logic for Adding Column from Examples



Added Column – FlightCode – using Colum from Examples



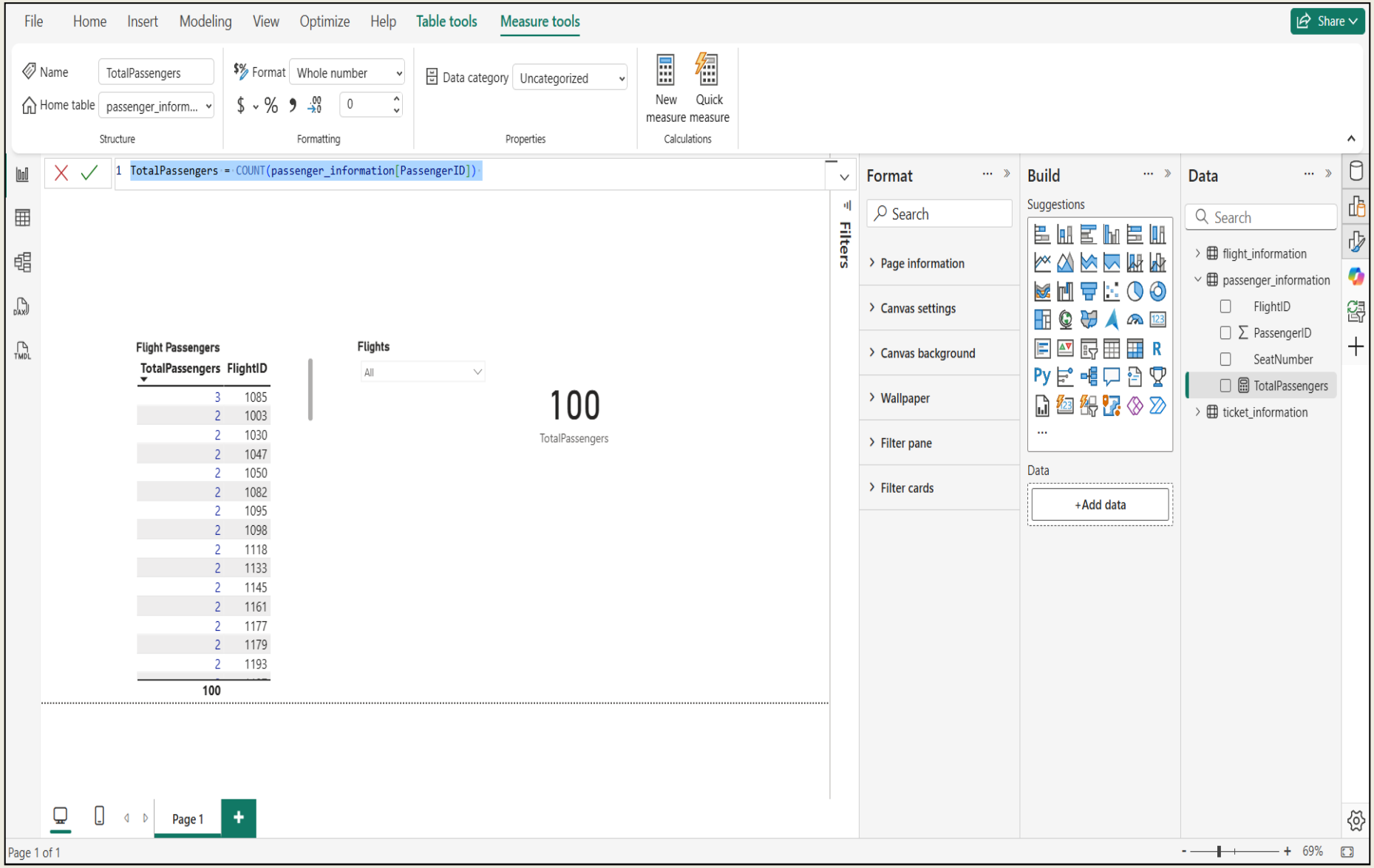
Task 4
Calculations Using DAX

Calculated

- 1) Total passengers for a specific flight .
- 2) Total tickets booked.
- 3) Filtered table showing "Best" flights only

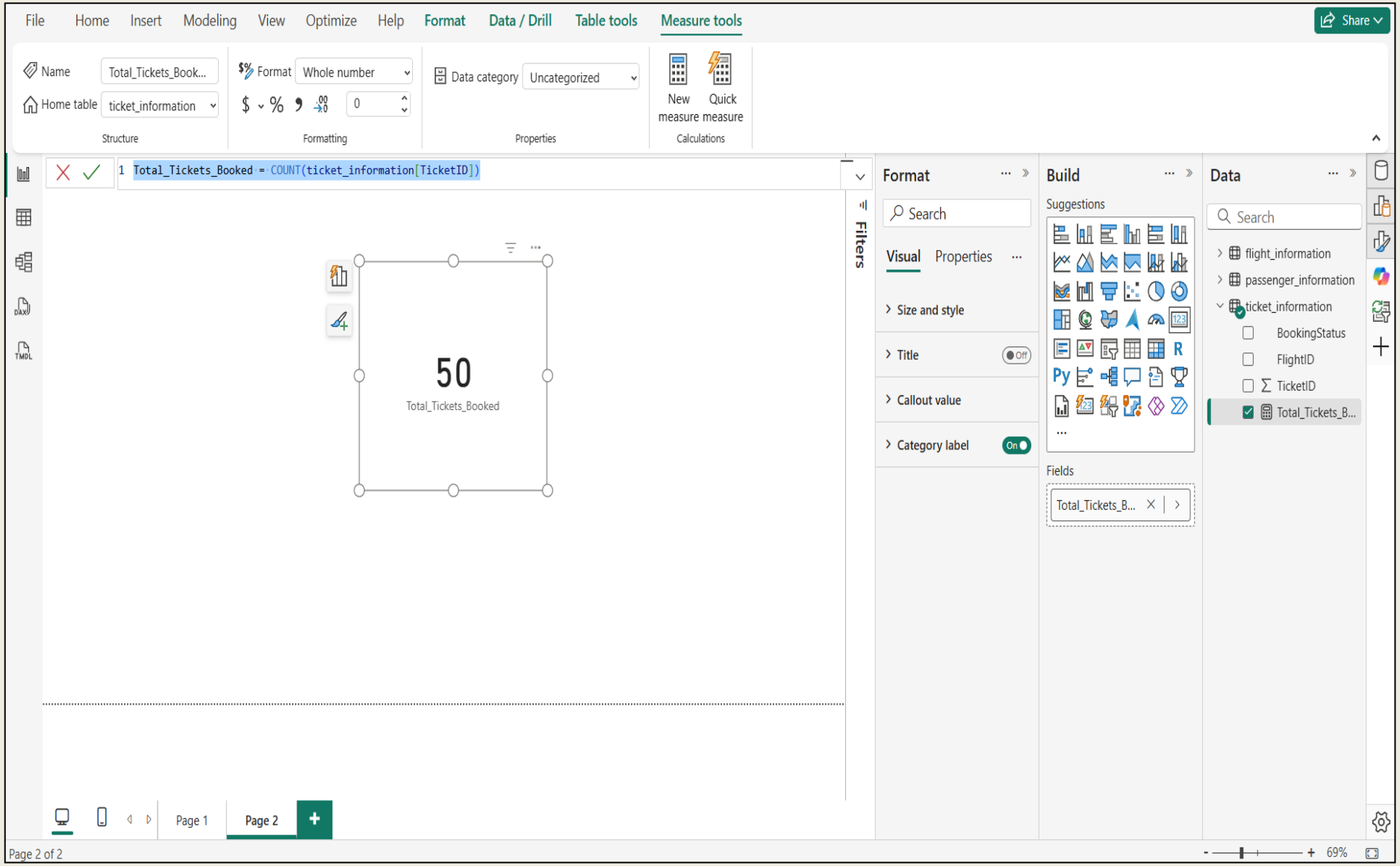
Create measure to calculate

(Total passengers for a specific flight)



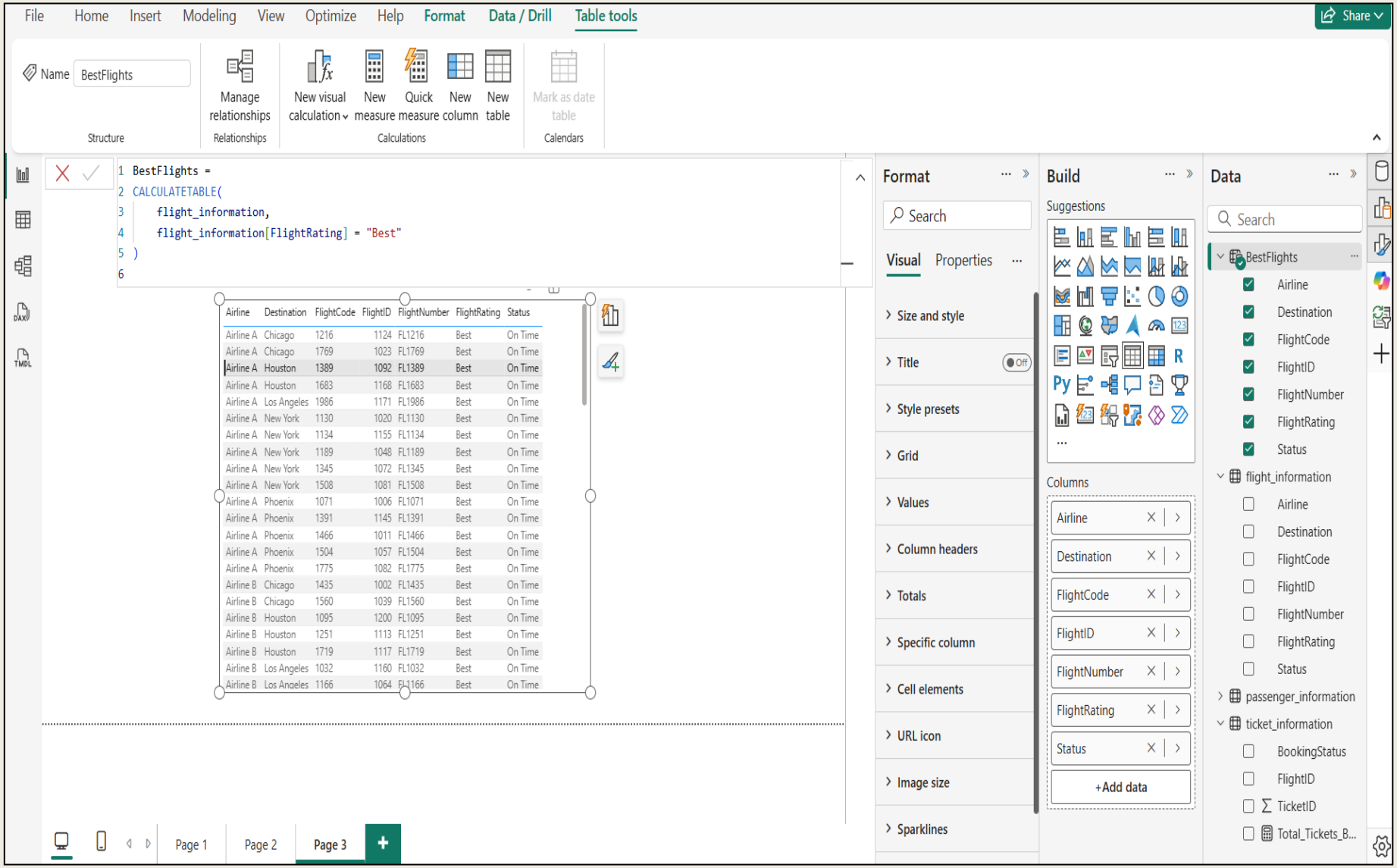
Create measure to calculate

(Total tickets booked)



Create measure to calculate

(Filtered table showing "Best" flights only)



Task 5
Visualization and Interactive Feature

Created Visuals for

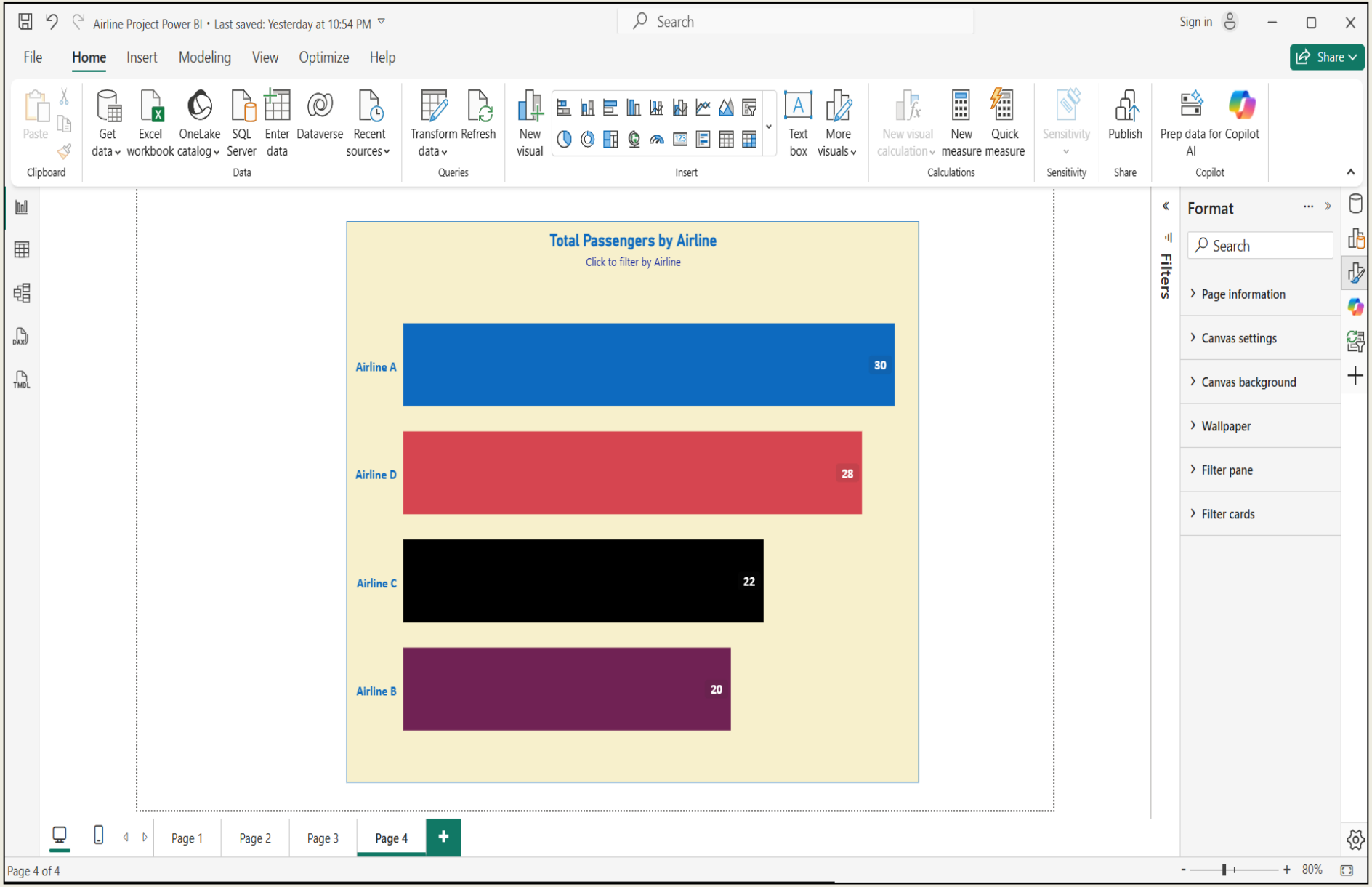
- 1) Passenger count by airline
- 2) Ticket booking statuses.
- 3) Flights by airline and destination.

Added interactive features for

- 1) Destination and Airline.
- 2) Quick views.
- 3) Airline-specific pages.

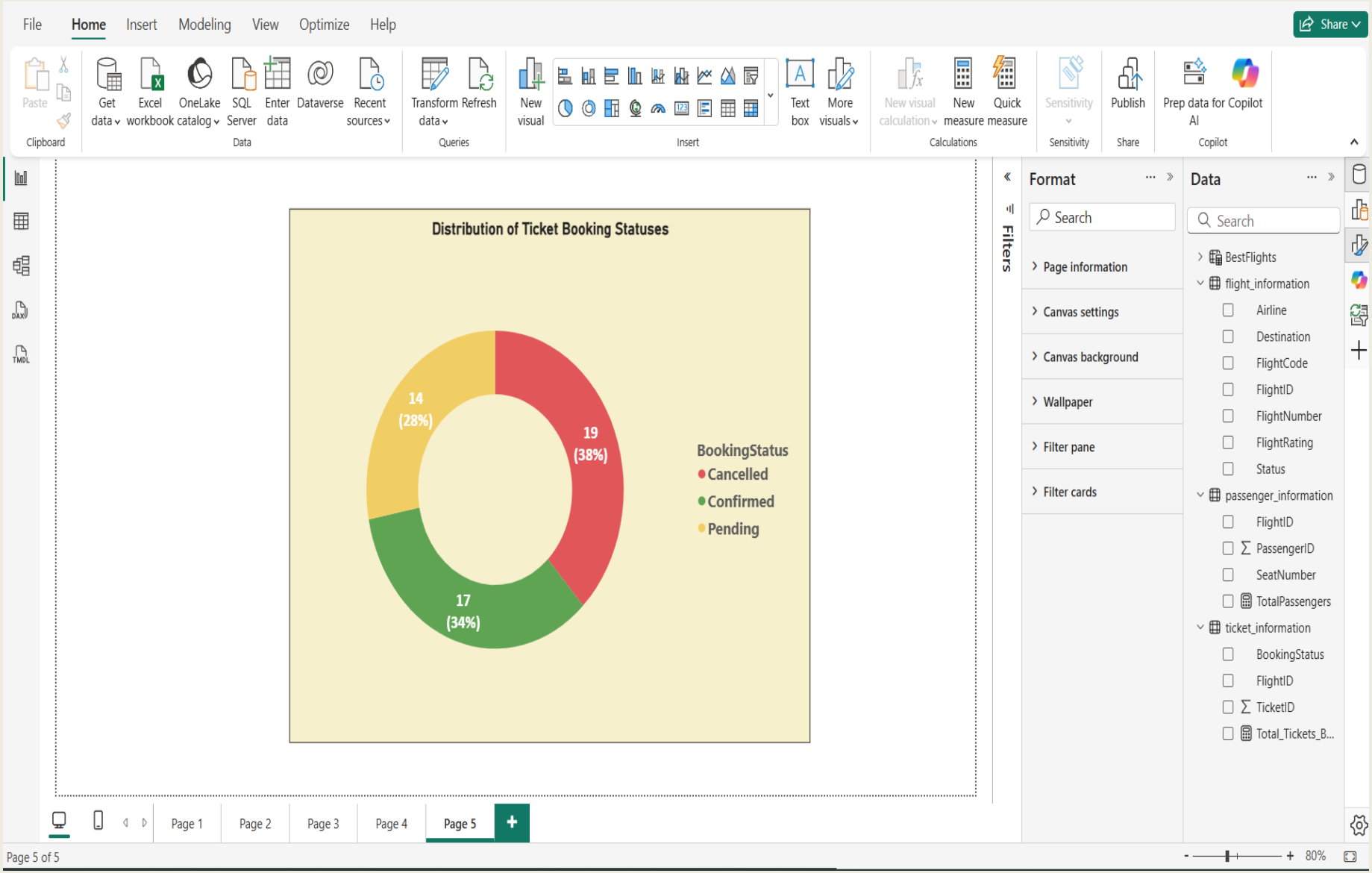
Create Visuals (Bar chart)

(Passenger counts by Airlines)



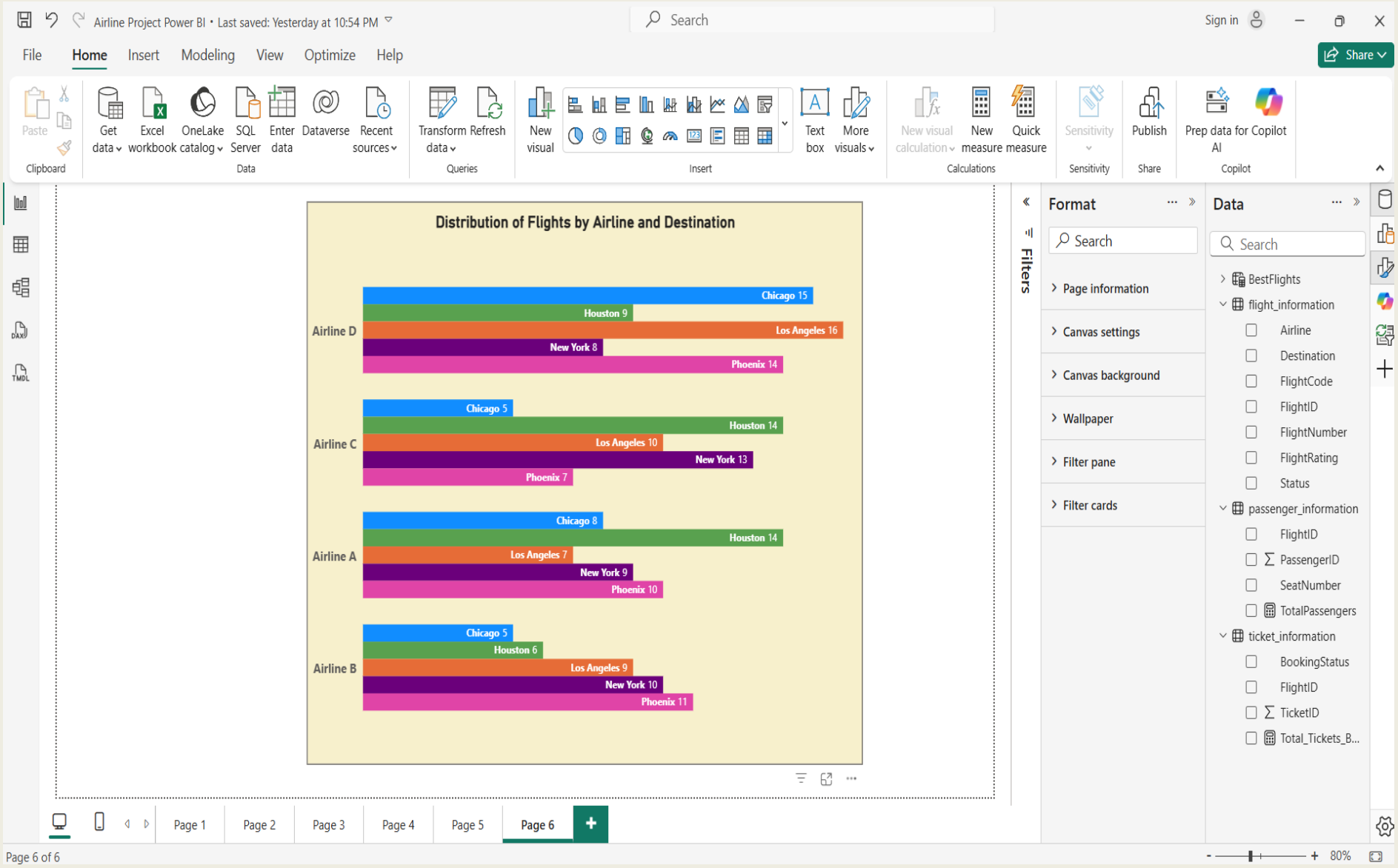
Create Visuals (Donut Chart)

(Ticket booking status)



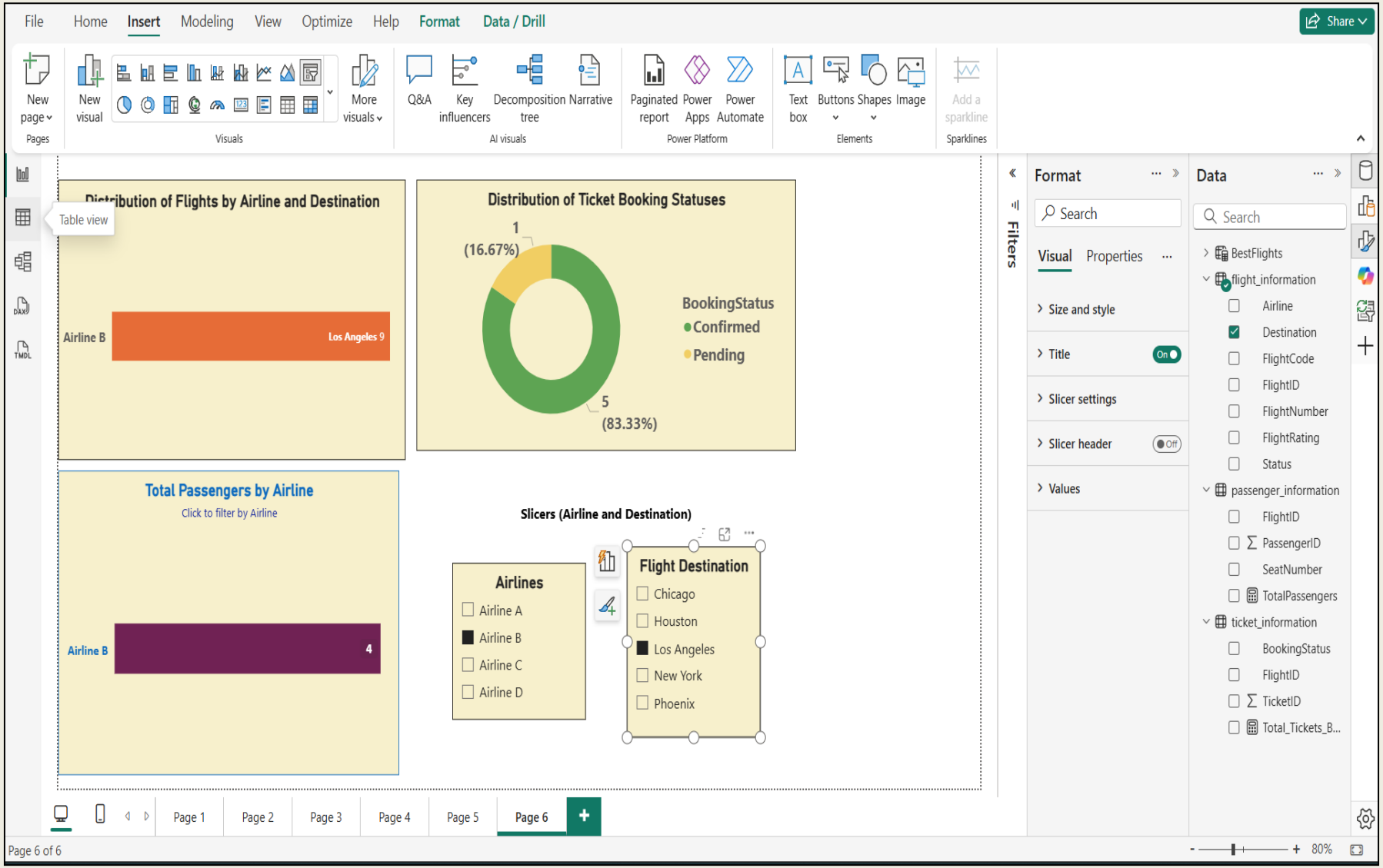
Create Visuals (Clustered Bar Chart)

(Flights by Airline and Destination)



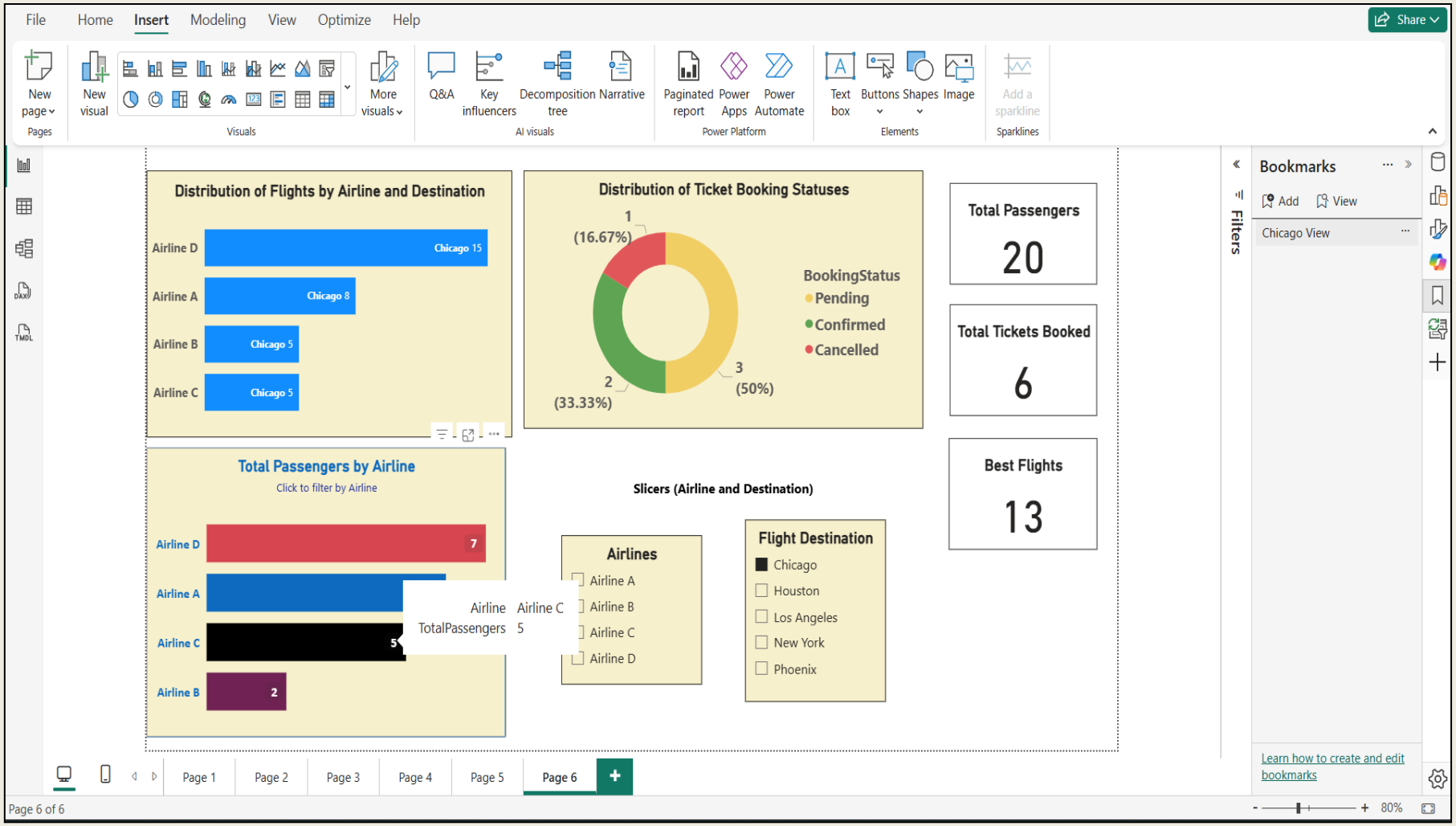
Added Slicer as interactive feature

(Destination and Airline- shown filtered data on visuals)



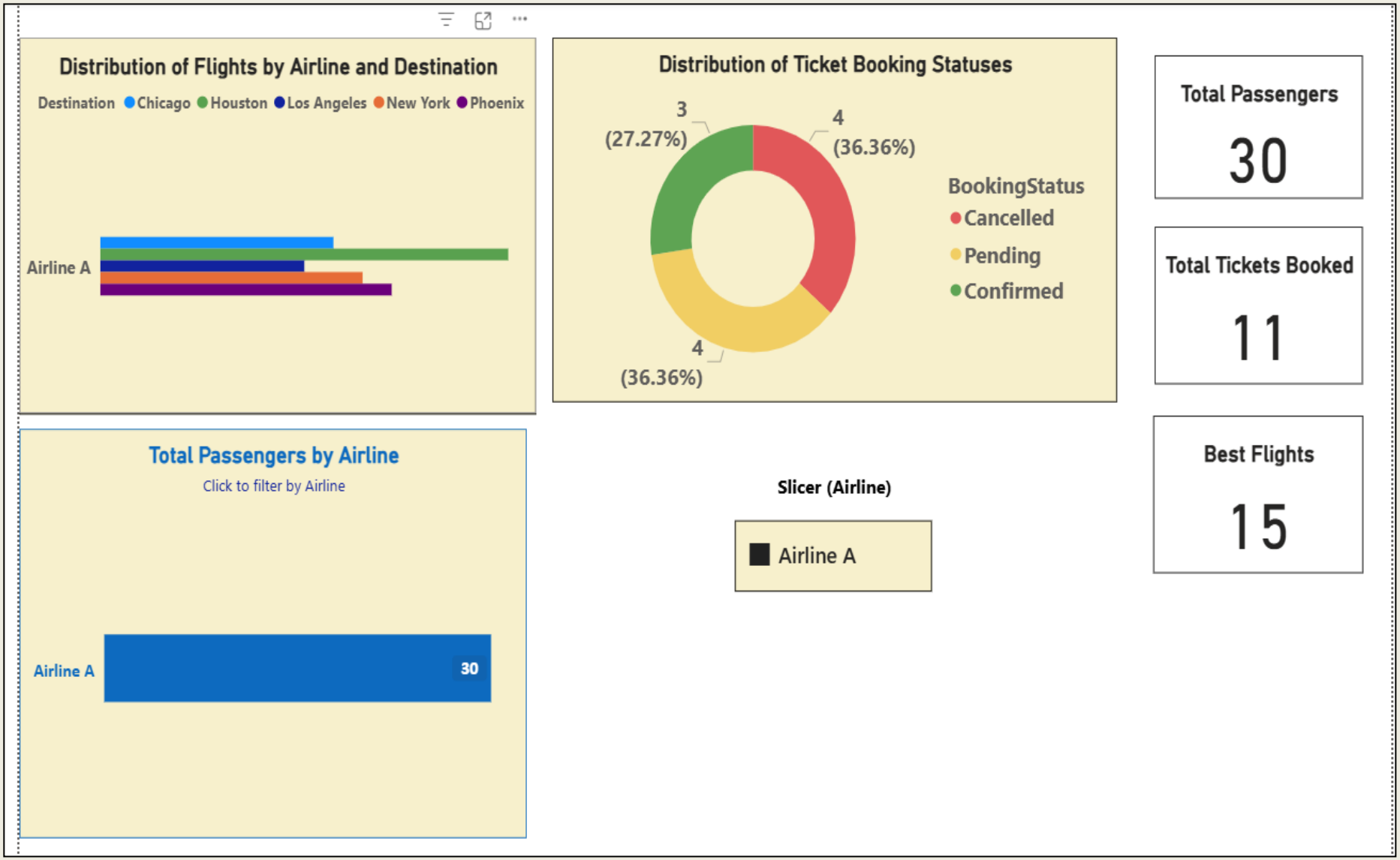
Added Bookmark, Cards and Tooltip for Quick View

(Quick views - shown filtered data on visuals)



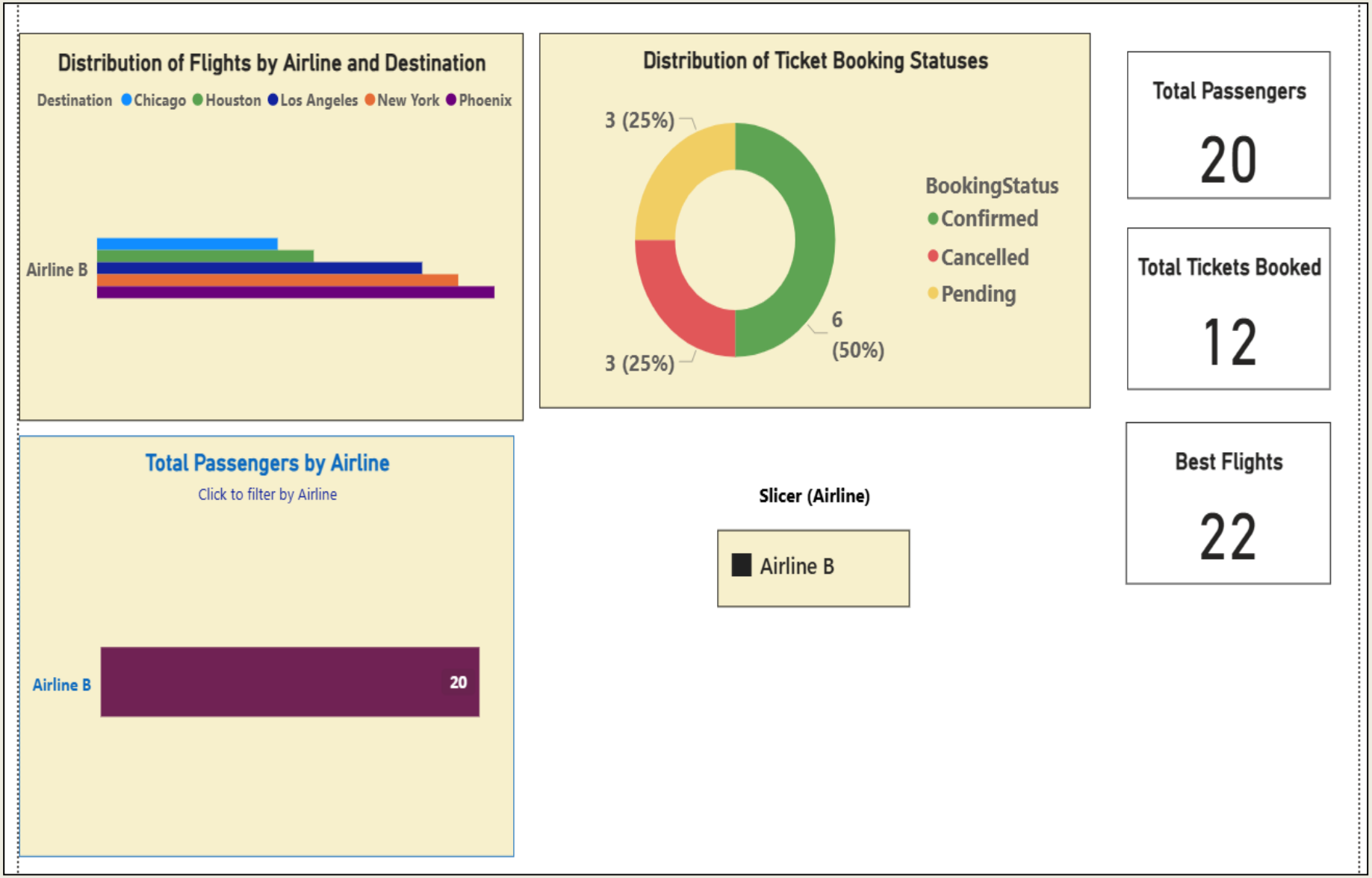
Added Airline Pages

(Airline A – View Page)



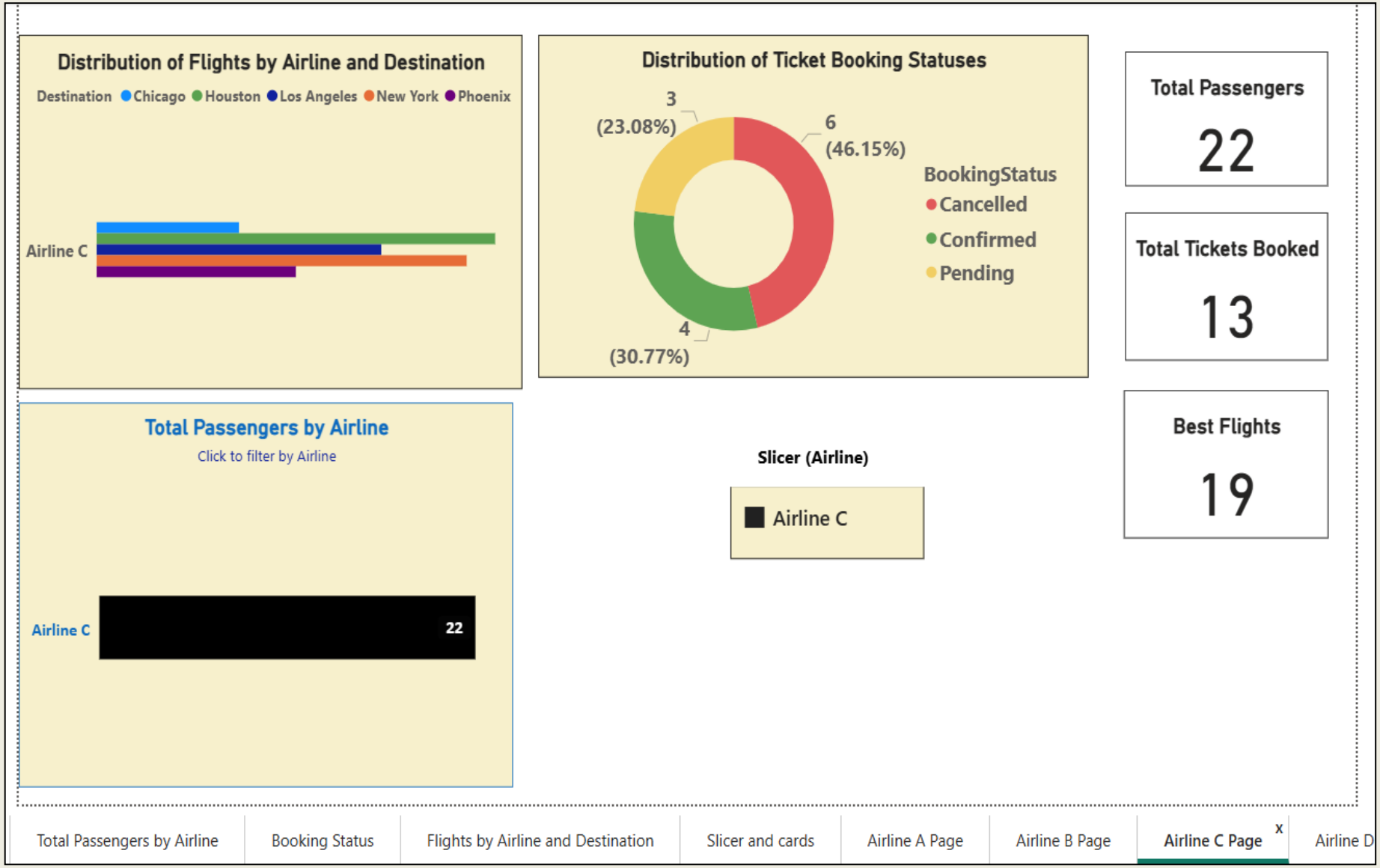
Added Airline Pages

(Airline B – View Page)



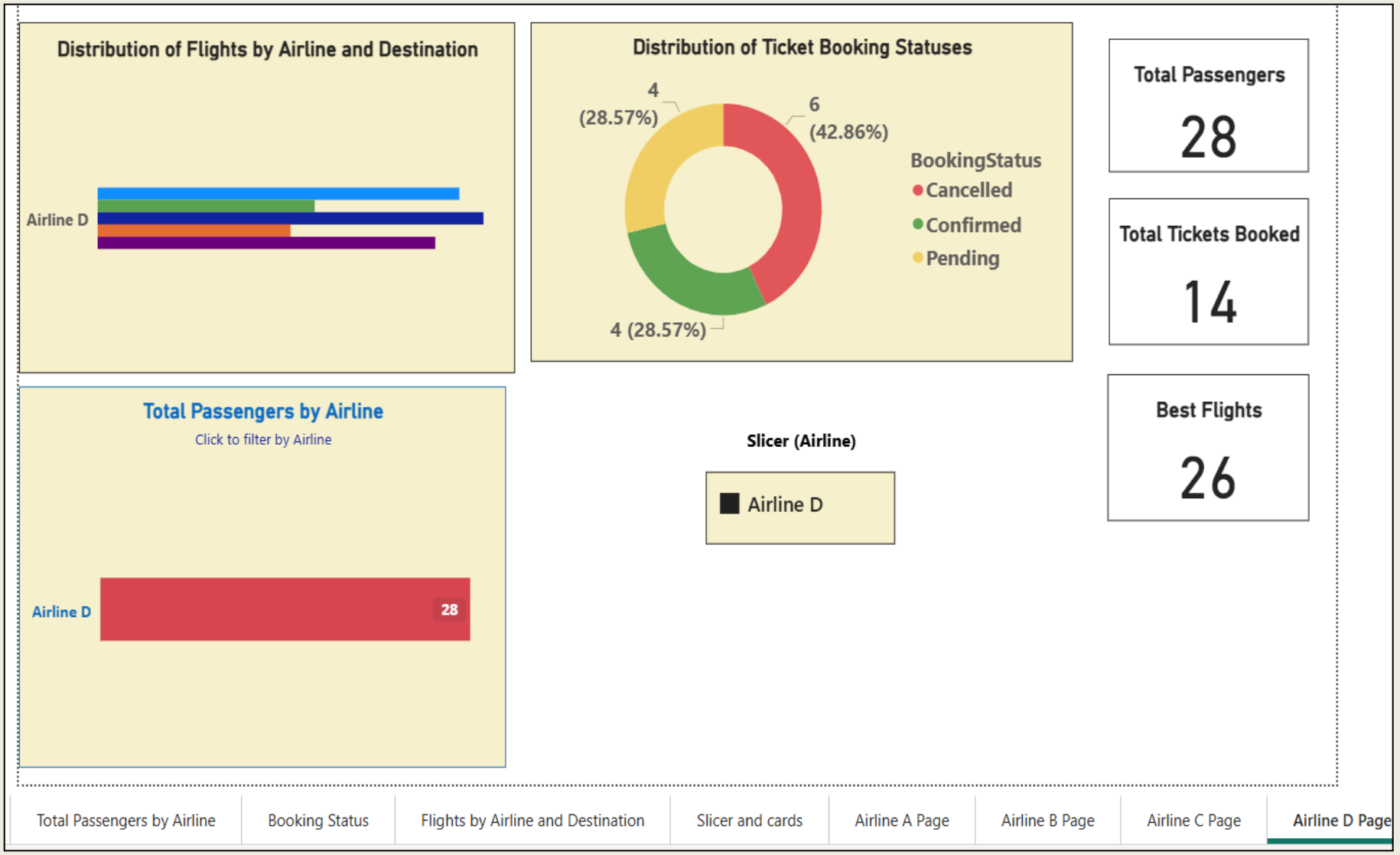
Added Airline Pages

(Airline C – View Page)

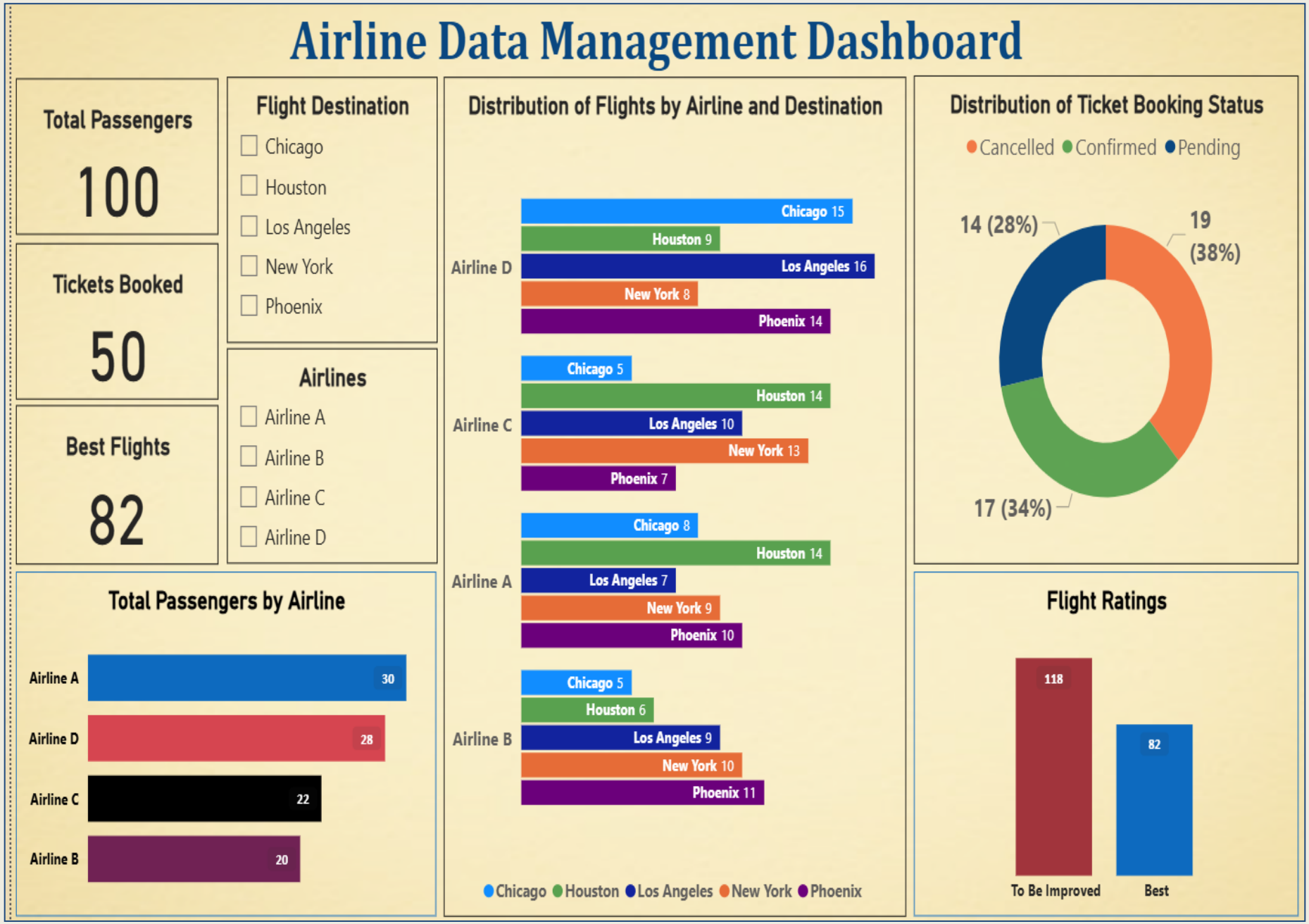


Added Airline Pages

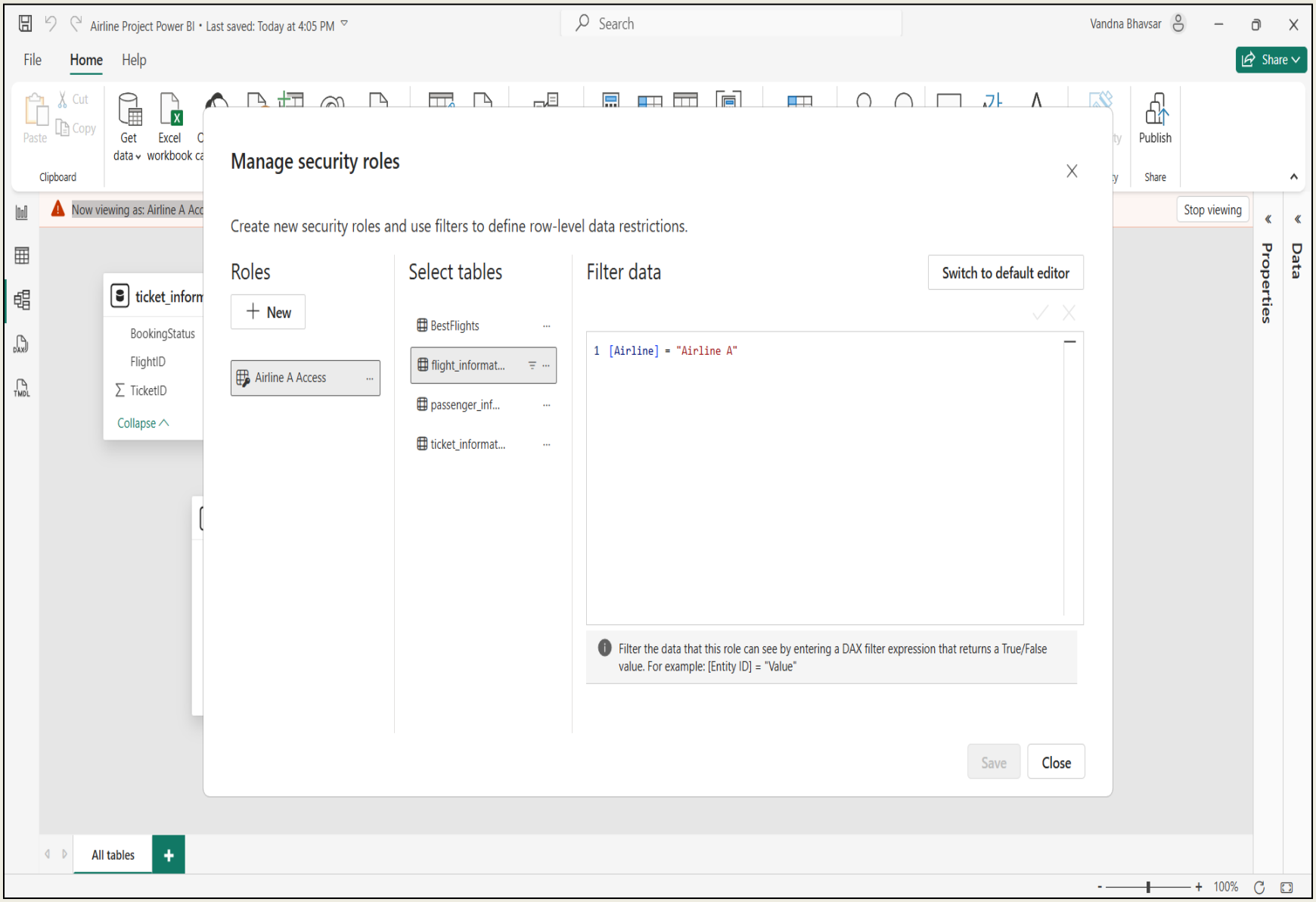
(Airline D – View Page)



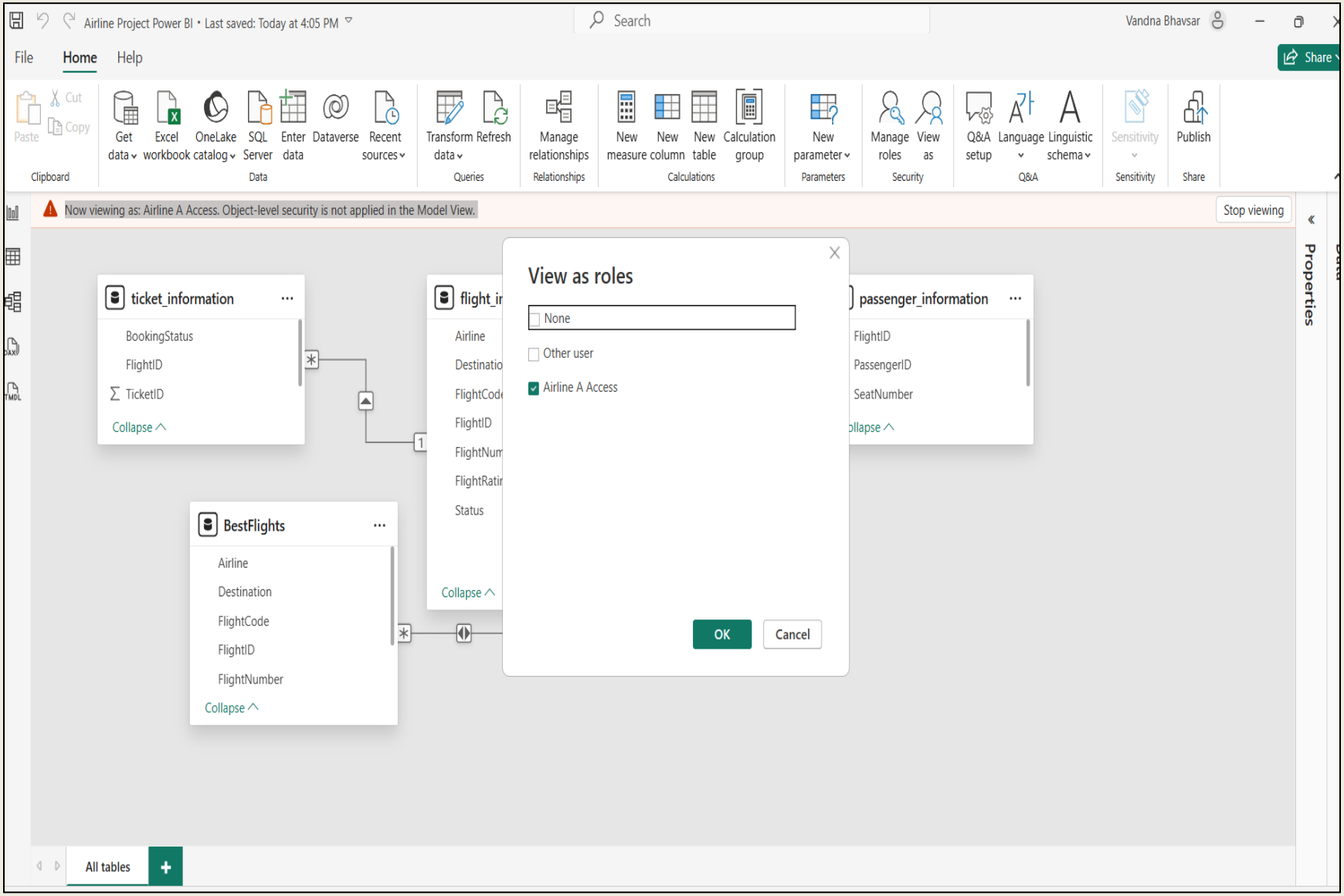
Final Dashboard



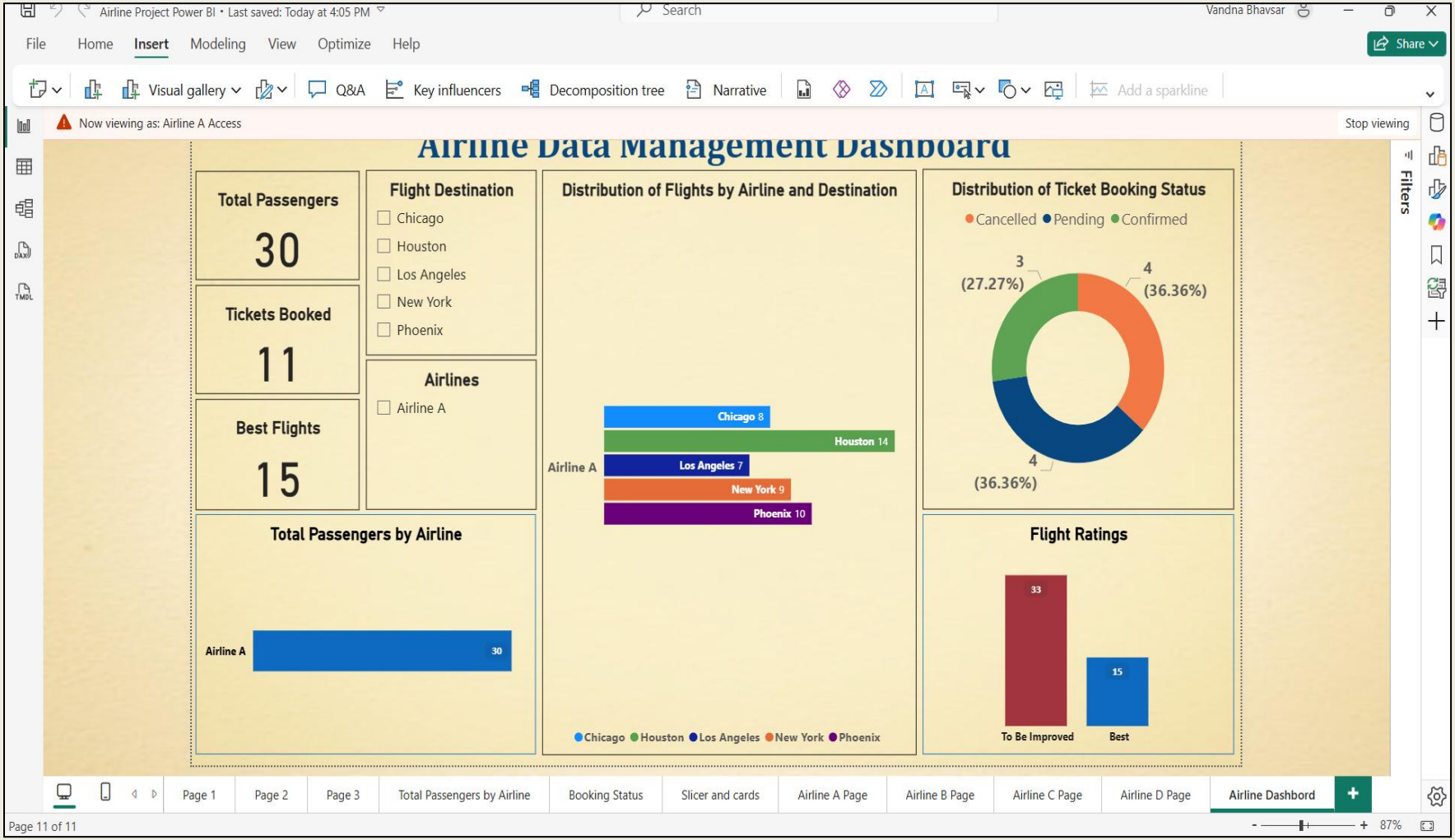
Created Airline A Access ***RLS*** on Power BI Desktop



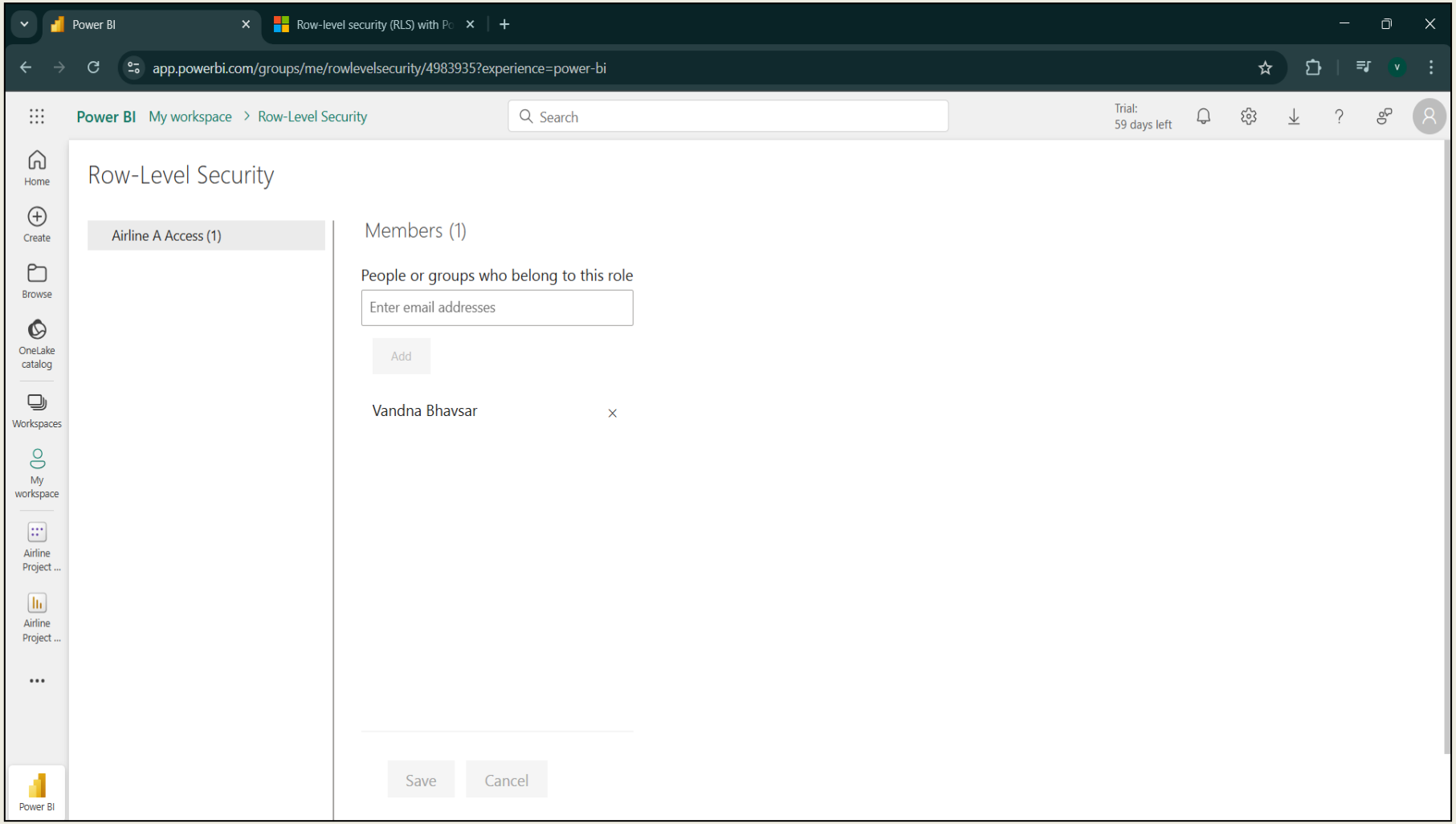
Applying view as roles - Airline A Access - RLS on Power BI Desktop



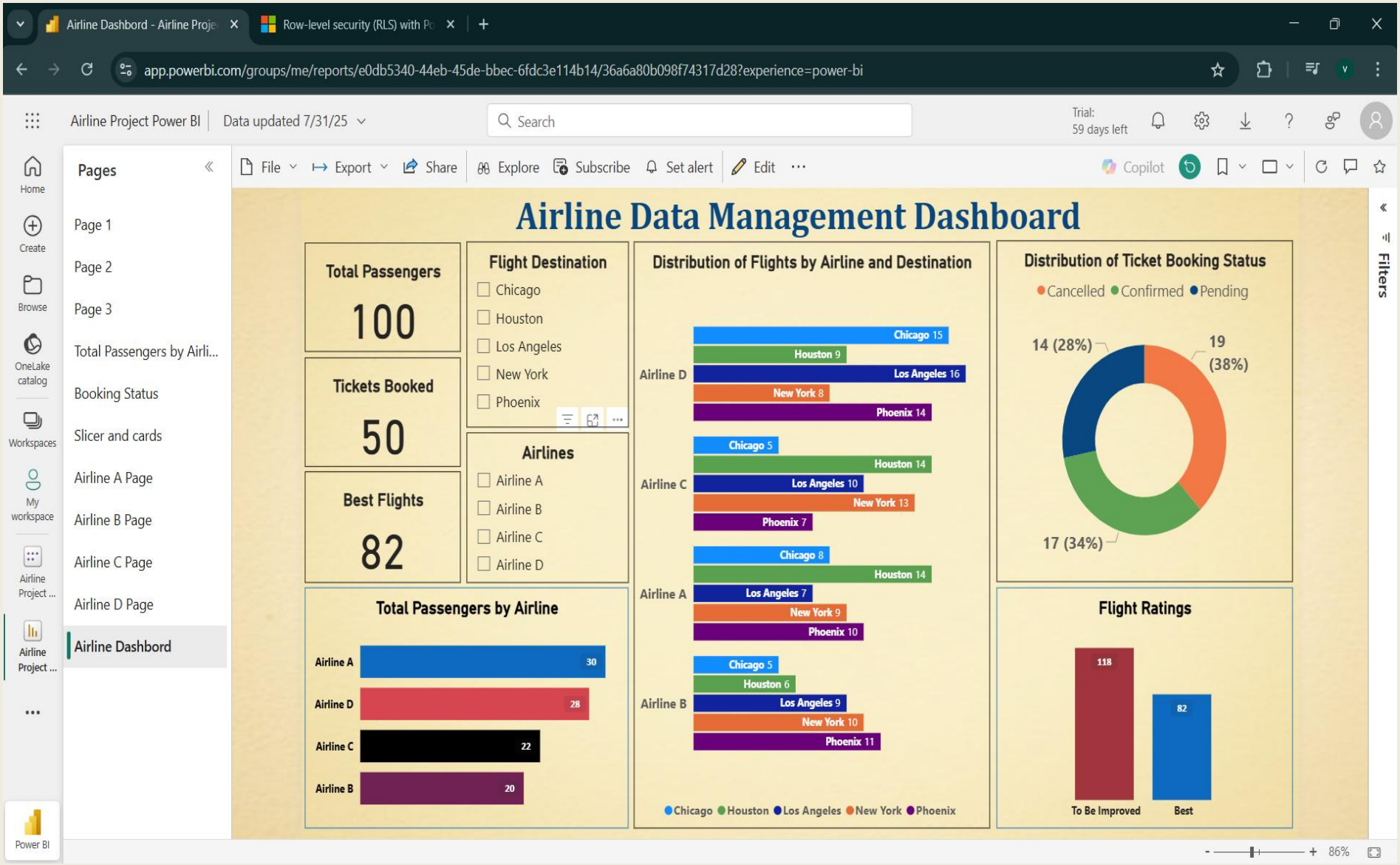
View as Airline A Access only
All pages have only **Airline A** data access



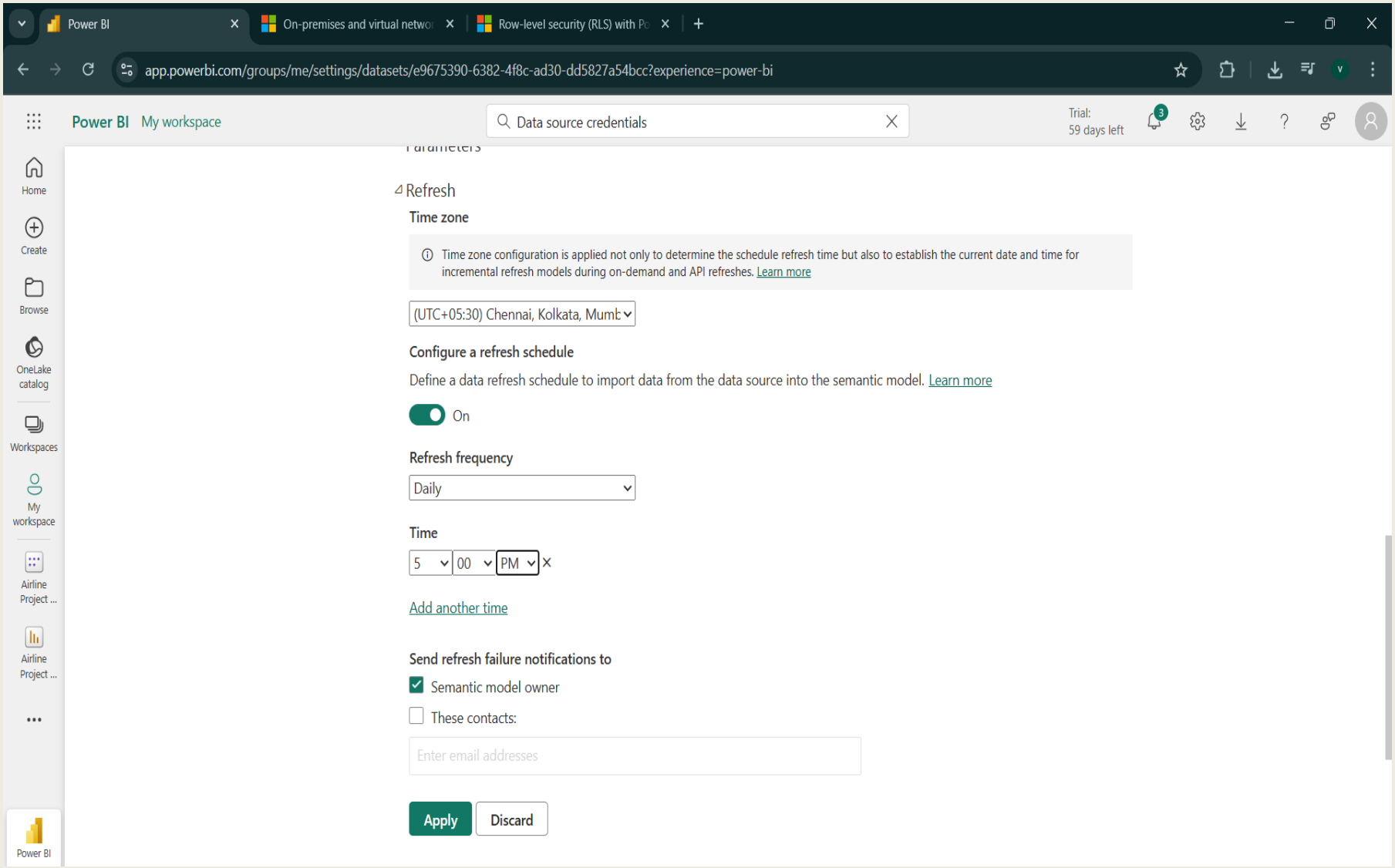
Applied Row-Level Security(RLS) to Members on **Power Bi Service**



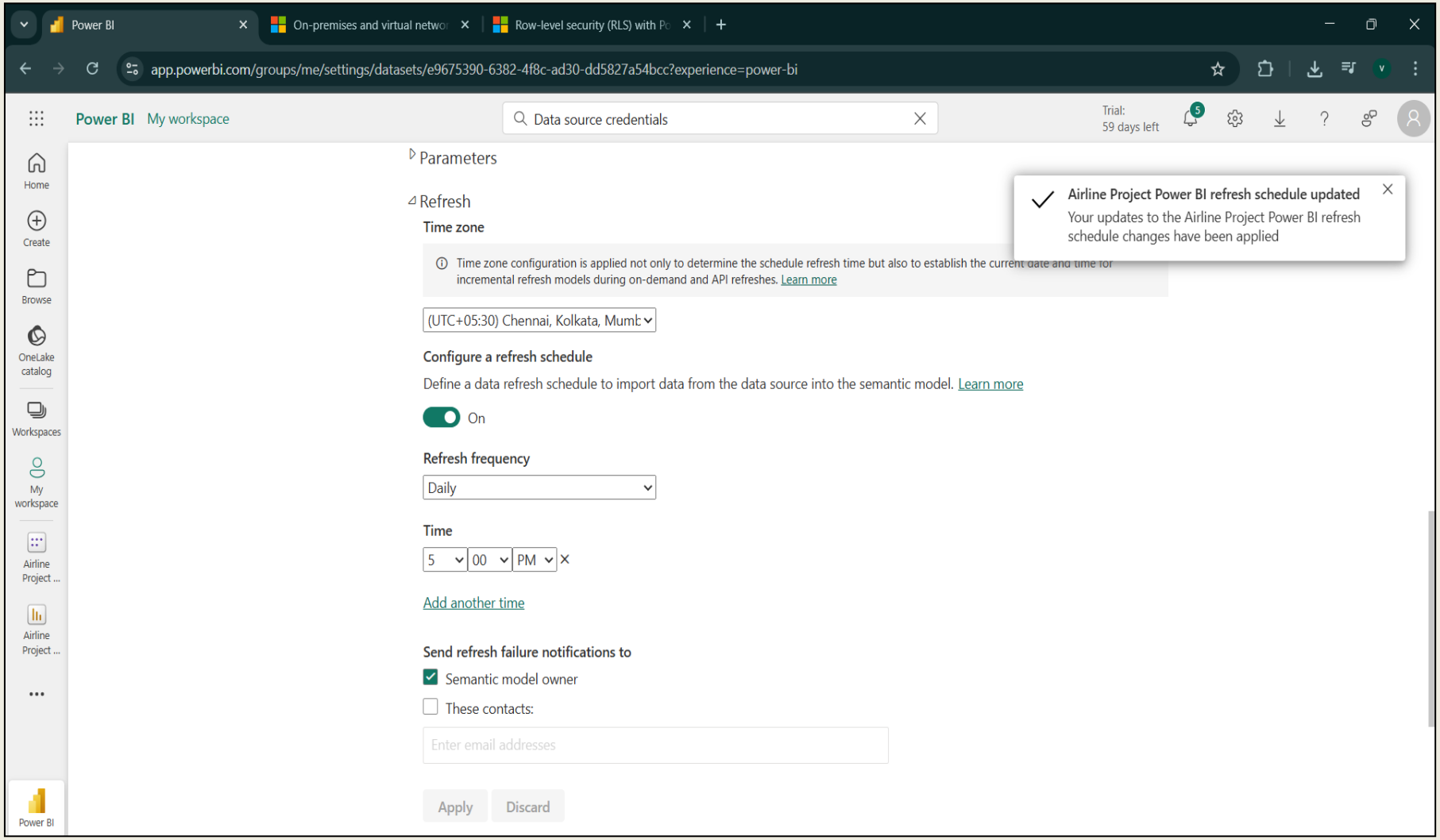
All pages Shared on **Power Bi Service**



Set up a schedule refresh at 5 PM daily



Applied Set up a schedule refresh at 5 PM daily



Loom Video Link for Project Explanation

https://www.loom.com/share/9263f6fe69df45b3bdd0ee04155f24ca?sid=52804afe-292a-417e-bbee-85c23800b273

Thank you