

AIRLINE DATA MANAGEMENT AND ANALYSIS USING POWER BI [SOLUTIONS]

1. DATA PREPARATION AND CLEANING:

SCREENSHOTS OF CLEANED DATA IN POWER QUERY EDITOR:

TABLE 1:

The screenshot displays the Power Query Editor interface. The main area shows a table with the following data:

PassengerID	FlightID	SeatNumber
1	1	1161 38A
2	2	1157 24D
3	3	1141 30B
4	4	1046 17E
5	5	1035 29D
6	6	1134 10A
7	7	1082 10A
8	8	1115 20E
9	9	1197 04E
10	10	1047 2E
11	11	1153 43C
12	12	1194 48C
13	13	1010 47A
14	14	1056 23C
15	15	1030 16D
16	16	1109 40D
17	17	1005 25C
18	18	1119 32C
19	19	1033 27E
20	20	1118 32B
21	21	1065 19E
22	22	1146 5B
23	23	1177 28B
24	24	1011 22E
25	25	1085 6A
26	26	1026 5A
27	27	1063 12B
28	28	1086 46B
29	29	1059 49B

The 'Applied Steps' pane on the right shows the following steps:

- Source
- Promoted Headers
- Changed Type
- Removed Duplicates
- Removed Blank Rows

The status bar at the bottom indicates '100 ROWS' and 'Column profiling based on top 1000 rows'.

TABLE 2:

Table.SelectRows(*Removed Duplicates*, each not List.IsEmpty(List.RemoveMatchingItems(Record.FieldValues(_), ("", null))))

TicketID	FlightID	BookingStatus
1	1001	11/18 Pending
2	1002	2078 Confirmed
3	1003	2117 Cancelled
4	1004	2120 Cancelled
5	1005	2157 Cancelled
6	1006	2162 Pending
7	1007	2070 Pending
8	1008	2023 Cancelled
9	1009	2001 Cancelled
10	1010	2040 Cancelled
11	1011	2004 Pending
12	1012	2130 Cancelled
13	1013	2000 Cancelled
14	1014	2004 Confirmed
15	1015	2083 Confirmed
16	1016	2072 Pending
17	1017	2071 Cancelled
18	1018	2105 Cancelled
19	1019	2014 Confirmed
20	1020	1080 Pending
21	1021	1080 Confirmed
22	1022	2095 Confirmed
23	1023	2165 Confirmed
24	1024	2003 Confirmed
25	1025	1080 Cancelled
26	1026	2133 Cancelled
27	1027	2078 Confirmed
28	1028	2154 Pending
29	1029	1067 Pending

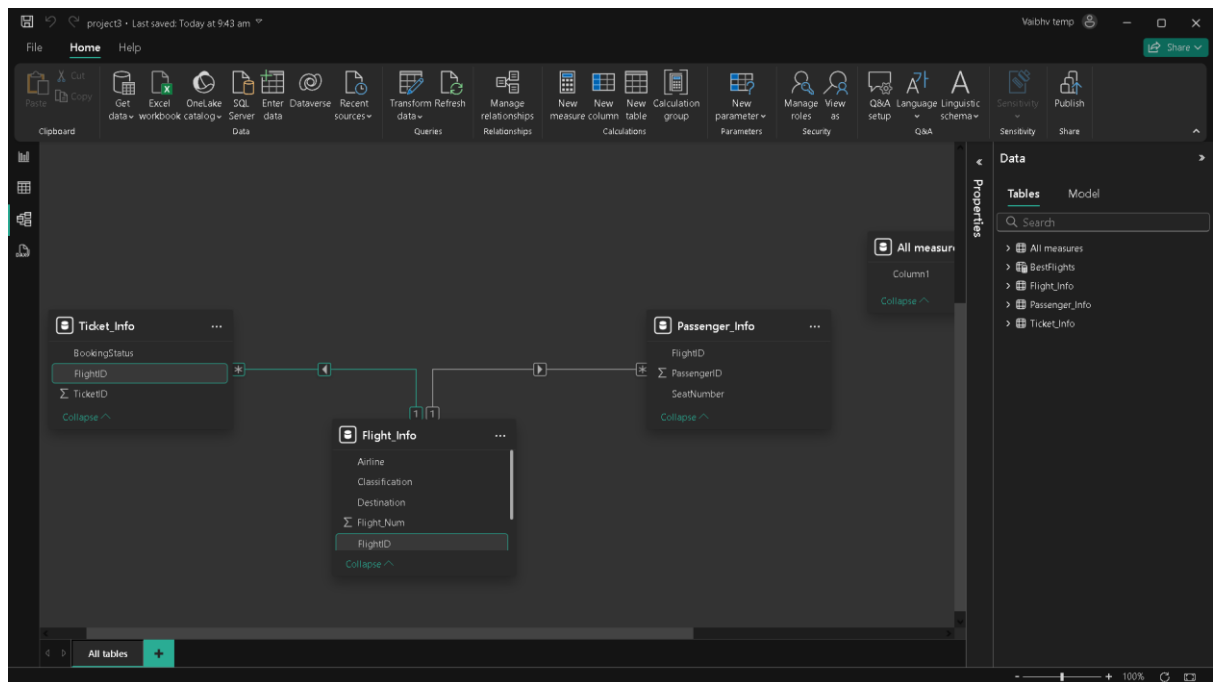
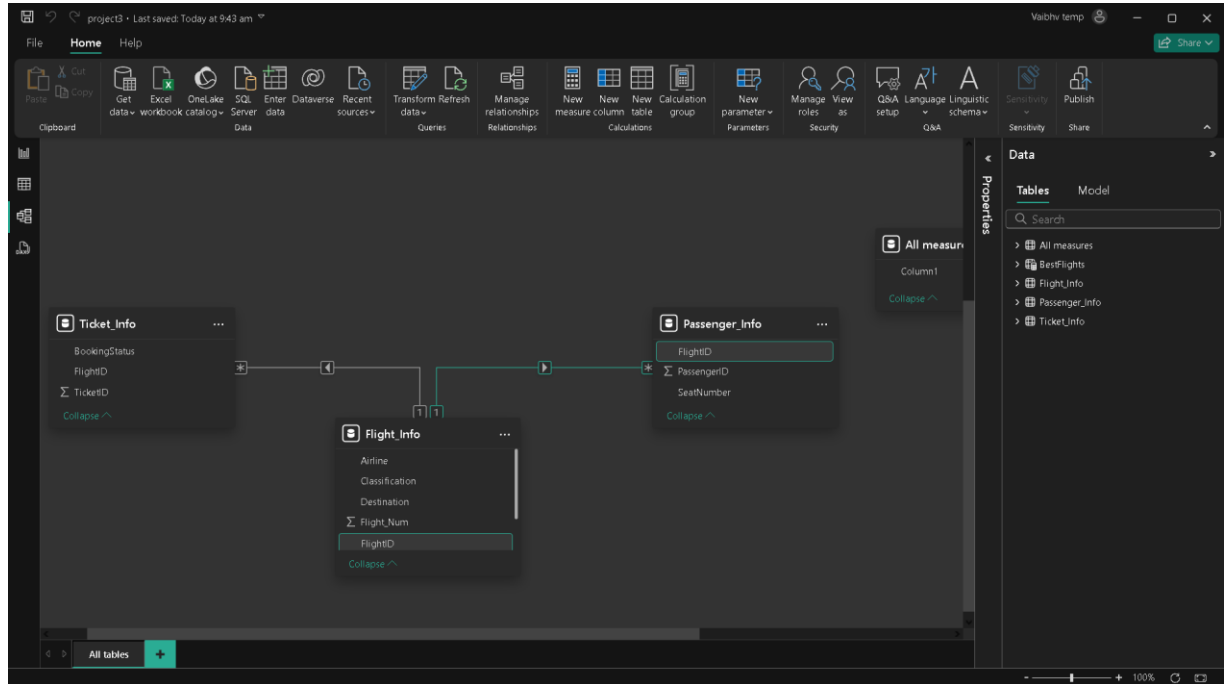
TABLE 3:

Table.SelectRows(*Removed Duplicates*, each not List.IsEmpty(List.RemoveMatchingItems(Record.FieldValues(_), ("", null))))

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
25	1025 FL1491	Airline D	Phoenix	On Time
26	1026 FL1413	Airline D	Chicago	Cancelled
27	1027 FL1805	Airline D	Chicago	On Time
28	1028 FL1385	Airline D	Chicago	On Time
29	1029 FL1191	Airline D	Los Angeles	On Time

2. DATA MODELING:

SCREENSHOT OF THE DATA MODEL WITH RELATIONSHIPS.



3. ENHANCED DATA INSIGHTS

SCREENSHOT OF THE TRANSFORMED DATA.

COLUMN FROM EXAMPLE:

7 COLUMNS, 200 ROWS Column profiling based on top 1000 rows

PREVIEW DOWNLOADED AT 12:05

CONDITIONAL COLUMN:

7 COLUMNS, 200 ROWS Column profiling based on top 1000 rows

PREVIEW DOWNLOADED AT 20:26

4. CALCULATIONS USING DAX:

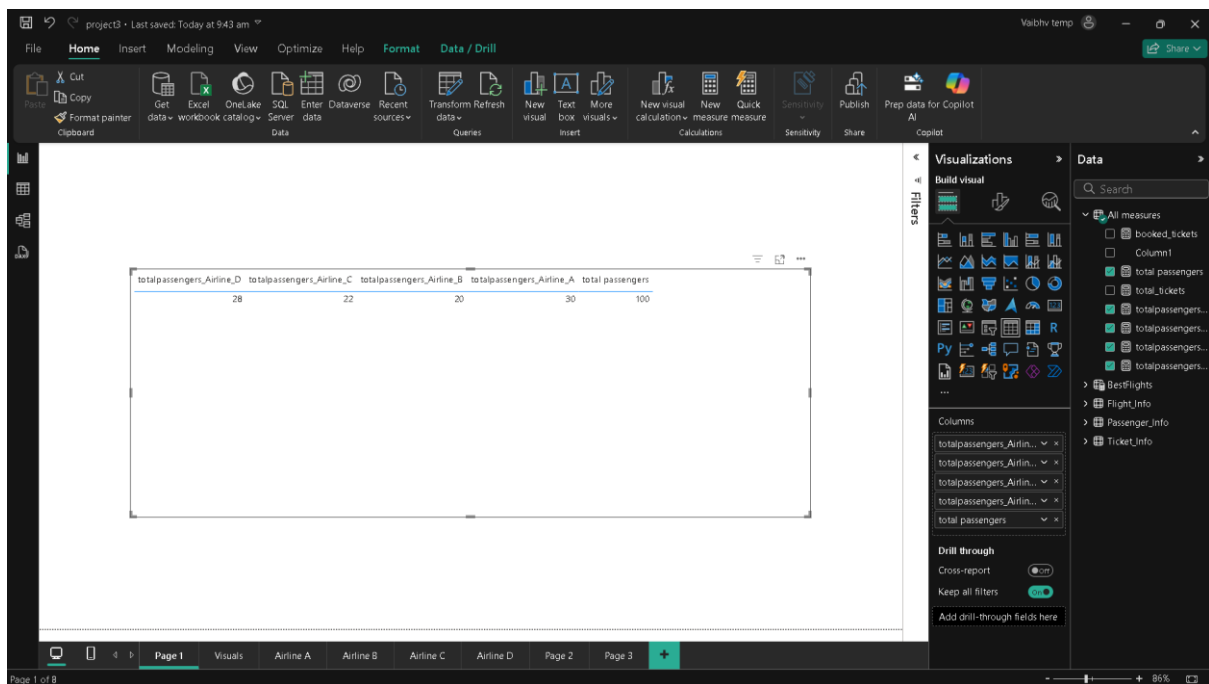
1. DAX: SPECIFIC AIRLINE(A,B,C,D)

TOTALPASSENGERS_AIRLINE_A = CALCULATE([TOTAL PASSENGERS],FLIGHT_INFO[AIRLINE] = "AIRLINE A")

TOTALPASSENGERS_AIRLINE_B = CALCULATE([TOTAL PASSENGERS],FLIGHT_INFO[AIRLINE] = "AIRLINE B")

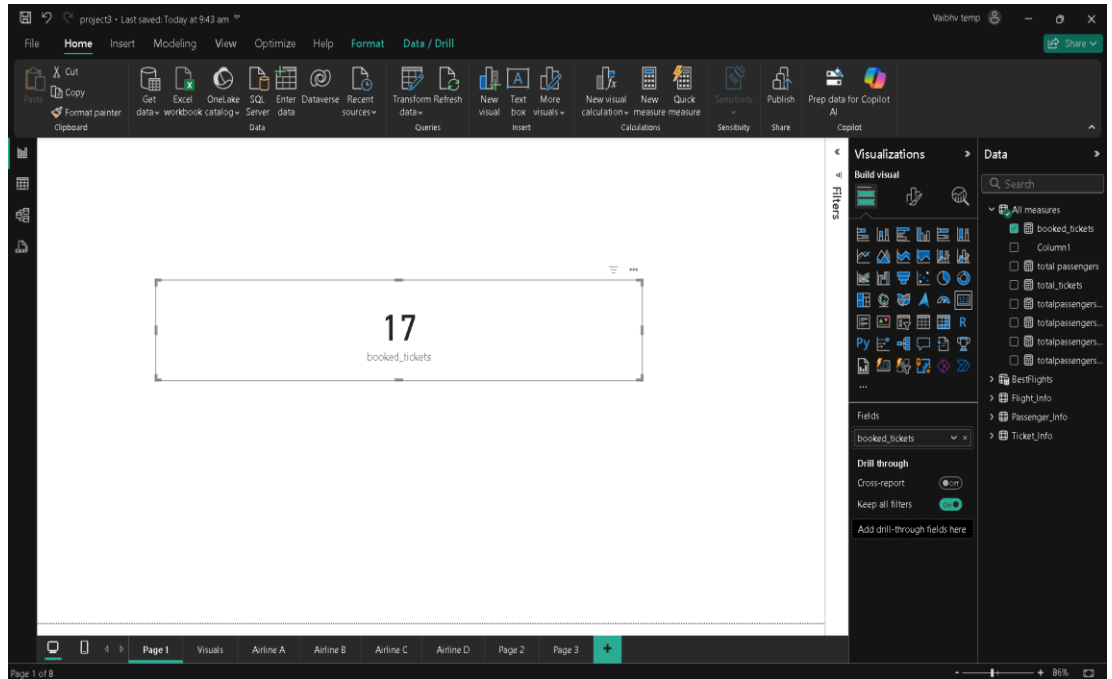
TOTALPASSENGERS_AIRLINE_C = CALCULATE([TOTAL PASSENGERS],FLIGHT_INFO[AIRLINE] = "AIRLINE C")

TOTALPASSENGERS_AIRLINE_D = CALCULATE([TOTAL PASSENGERS],FLIGHT_INFO[AIRLINE] = "AIRLINE D")



2: DAX:

BOOKED_TICKETS =
CALCULATE([TOTAL_TICKETS],TICKET_INFO[BOOKINGSTATUS] =
"CONFIRMED")



3: DAX : [TABLE]

BESTFLIGHTS = FILTER(FLIGHT_INFO,FLIGHT_INFO[CLASSIFICATION] =
"BEST")

The screenshot shows the Power BI Desktop interface with a table visual. The table is titled 'BestFlights' and contains the following data:

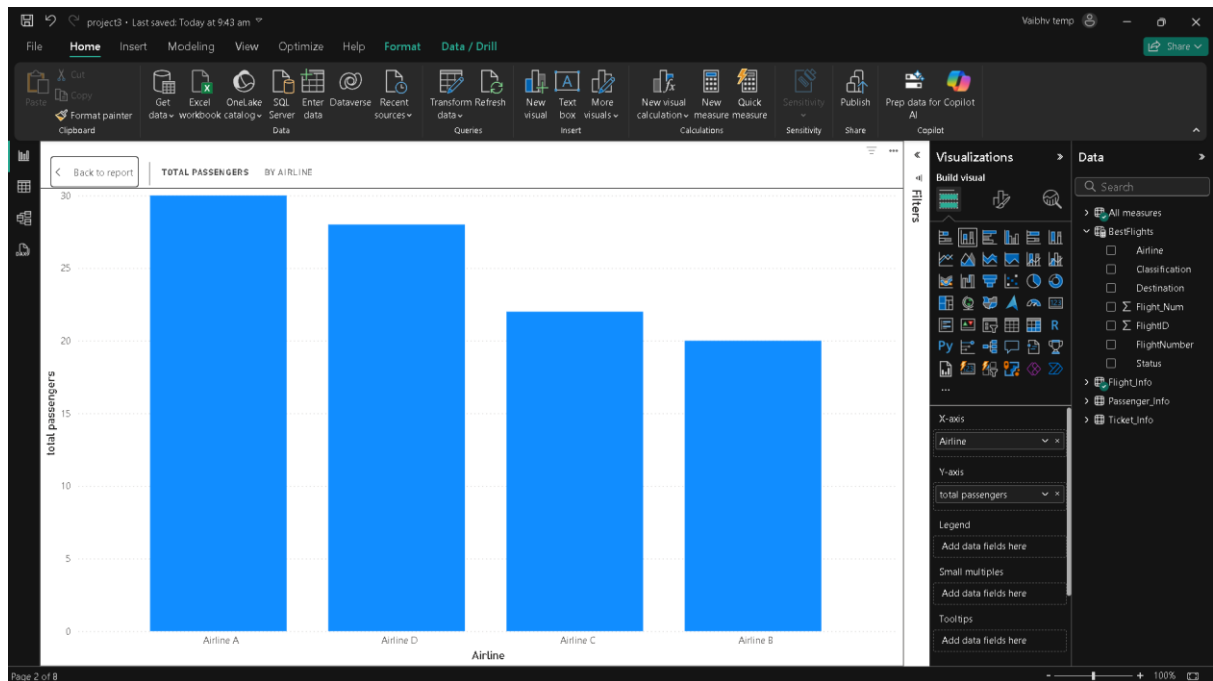
Airline	Classification	Destination	Count of FlightID	Sum of Flight_Num	FlightNumber	Status
Airline A	Best	Chicago	1	1216	FL1216	On Time
Airline A	Best	Chicago	1	1769	FL1769	On Time
Airline A	Best	Houston	1	1389	FL1389	On Time
Airline A	Best	Houston	1	1683	FL1683	On Time
Airline A	Best	Los Angeles	1	1986	FL1986	On Time
Airline A	Best	New York	1	1130	FL1130	On Time
Airline A	Best	New York	1	1134	FL1134	On Time
Airline A	Best	New York	1	1189	FL1189	On Time
Airline A	Best	New York	1	1345	FL1345	On Time
Airline A	Best	New York	1	1508	FL1508	On Time
Airline A	Best	Phoenix	1	1071	FL1071	On Time
Total			82	123115		

The ribbon at the top includes tabs for File, Home, Insert, Modeling, View, Optimize, Help, Format, and Data / Drill. The right-hand pane shows the 'Visualizations' pane with a 'Build visual' dropdown and a 'Data' pane with a search bar and a list of measures including 'Airline', 'Classification', 'Destination', 'Flight_Num', 'FlightID', 'FlightNumber', and 'Status'. The 'Fields' pane shows 'Airline', 'Classification', 'Destination', 'Count of FlightID', 'Sum of Flight_Num', 'FlightNumber', and 'Status' selected. The 'Drill through' section has 'Cross-report' and 'Keep all filters' options.

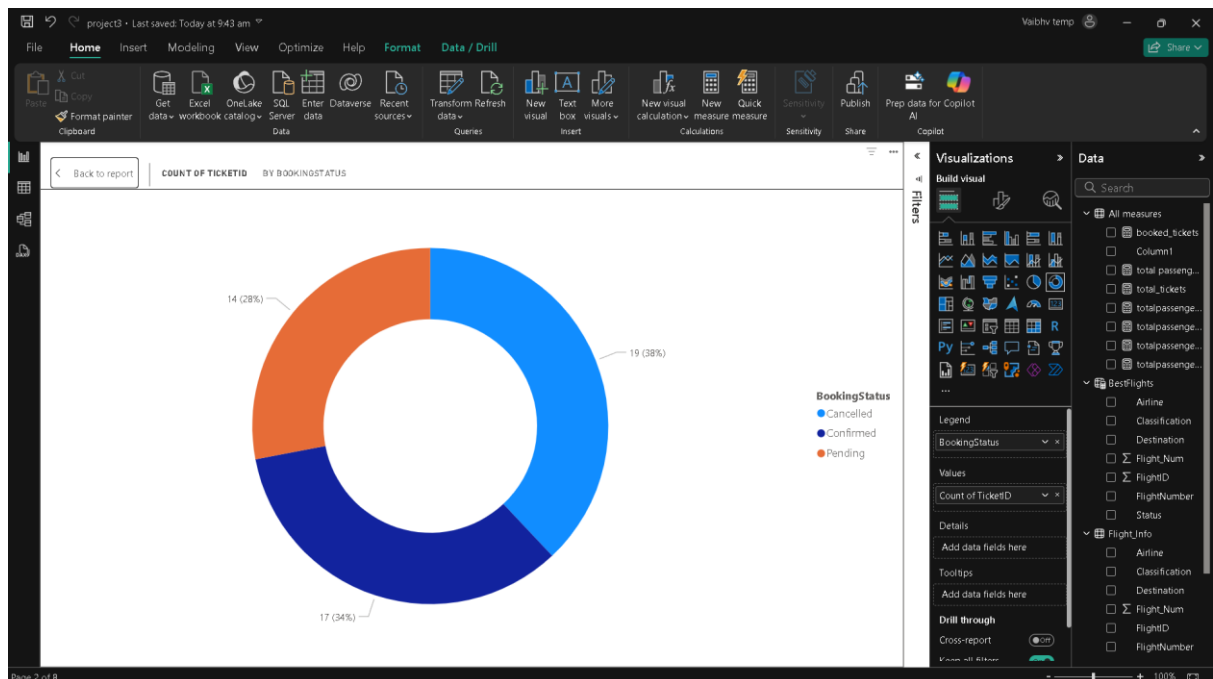
5 : VISUALIZATION AND INTERACTIVE FEATURES

1. VISUALS:

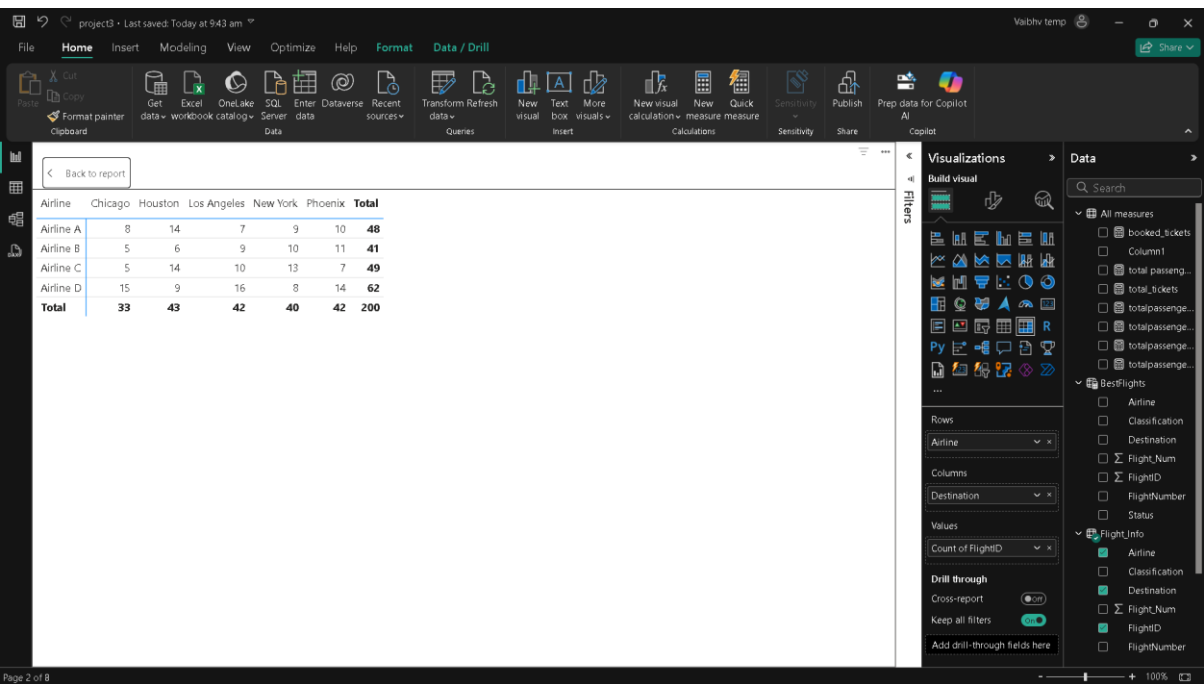
I. PASSENGER COUNT BY AIRLINE.



II. TICKET BOOKING STATUSES.



III. FLIGHTS BY AIRLINE AND DESTINATION.

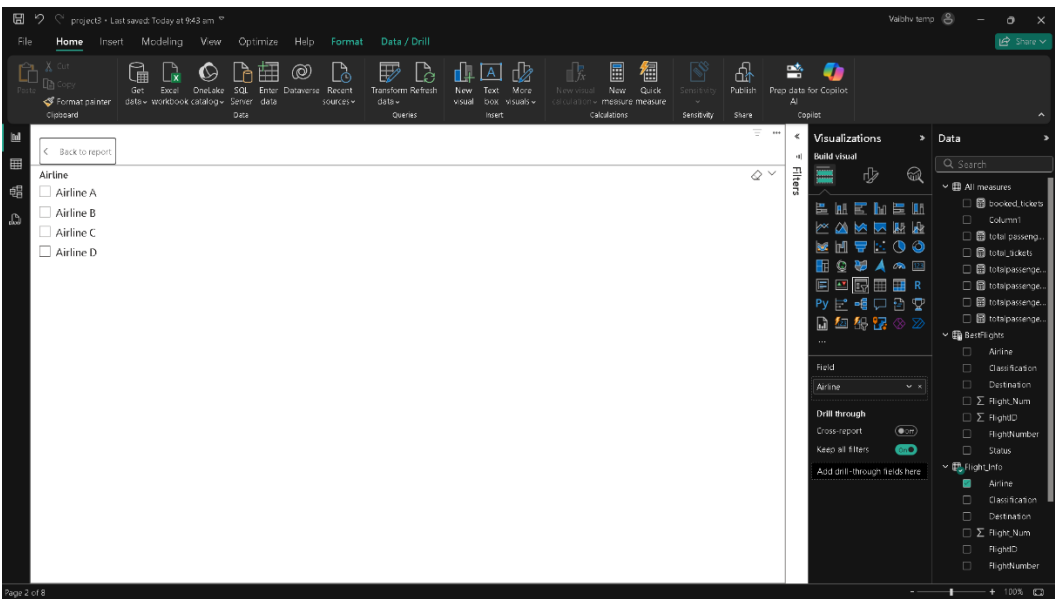


The screenshot shows the Power BI Desktop interface with a table visualization. The table displays flight data categorized by airline and destination. The columns are Airline, Chicago, Houston, Los Angeles, New York, Phoenix, and Total. The rows list Airline A, Airline B, Airline C, Airline D, and a Total row. The right-hand pane shows the 'Visualizations' and 'Data' sections, indicating the current view is a table.

Airline	Chicago	Houston	Los Angeles	New York	Phoenix	Total
Airline A	8	14	7	9	10	48
Airline B	5	6	9	10	11	41
Airline C	5	14	10	13	7	49
Airline D	15	9	16	8	14	62
Total	33	43	42	40	42	200

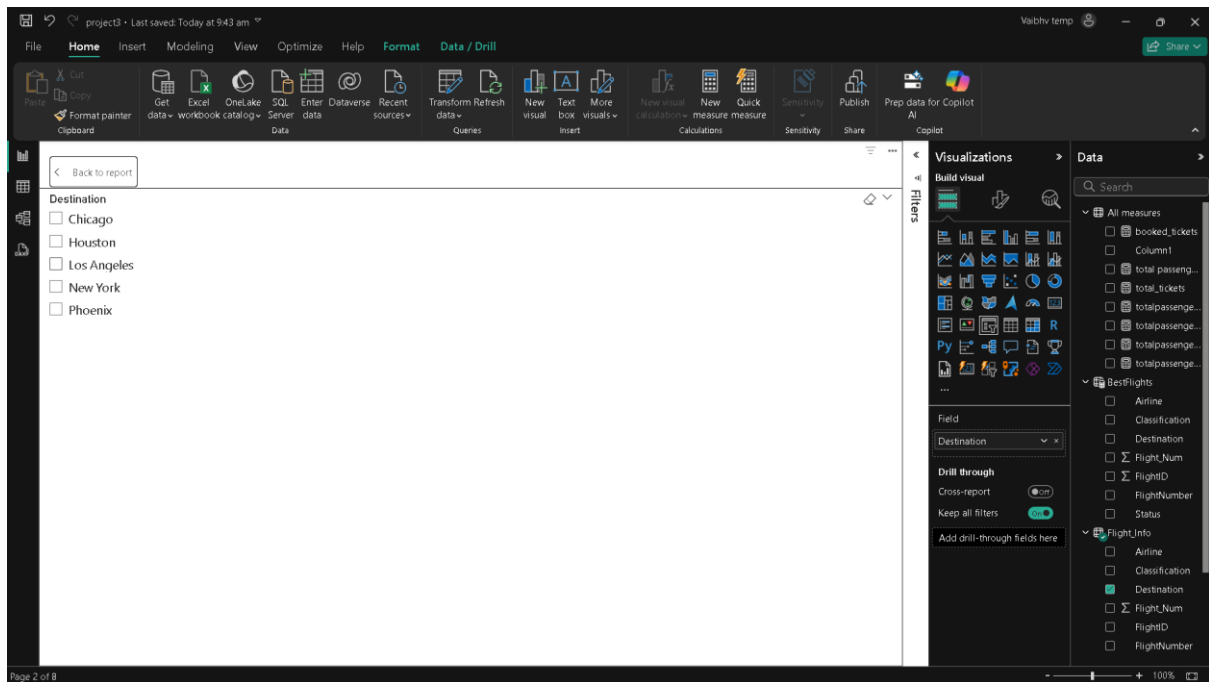
2.

I. SLICERS FOR DESTINATION AND AIRLINE -[IN FOCUS MODE]

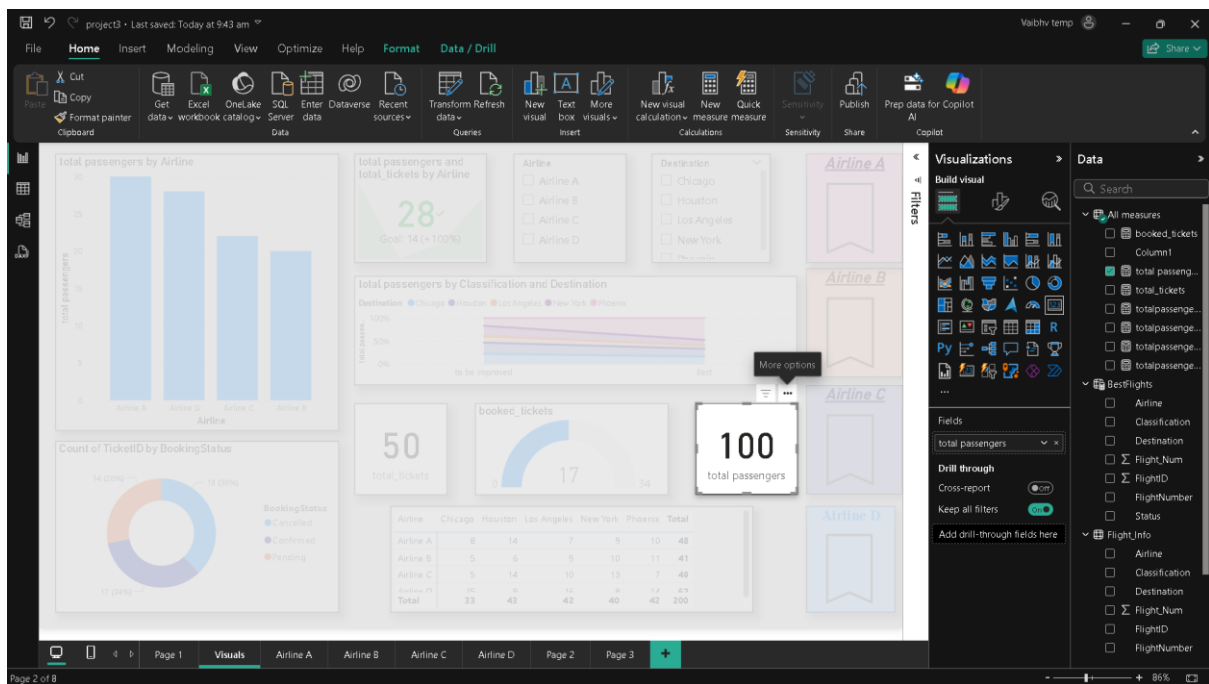


The screenshot shows the Power BI Desktop interface with a table visualization. The table displays flight data categorized by airline and destination. The columns are Airline, Chicago, Houston, Los Angeles, New York, Phoenix, and Total. The rows list Airline A, Airline B, Airline C, Airline D, and a Total row. The right-hand pane shows the 'Visualizations' and 'Data' sections, indicating the current view is a table. The 'Filters' pane on the left shows the 'Airline' and 'Destination' slicers.

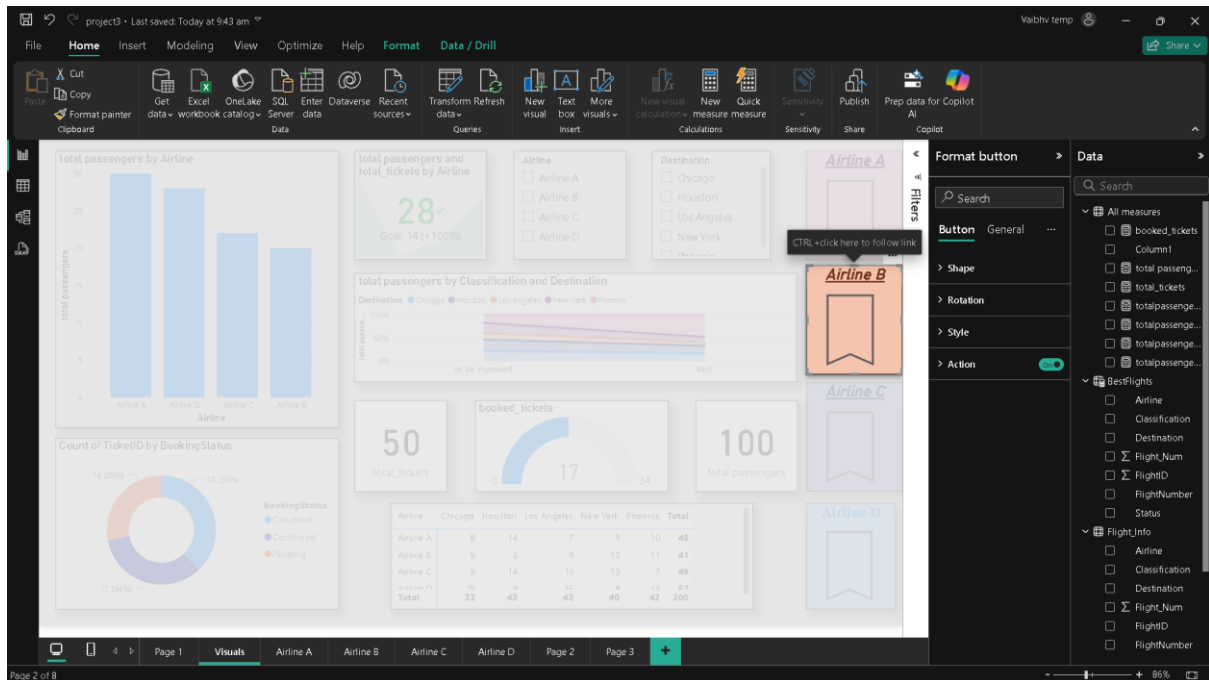
Airline	Chicago	Houston	Los Angeles	New York	Phoenix	Total
Airline A	8	14	7	9	10	48
Airline B	5	6	9	10	11	41
Airline C	5	14	10	13	7	49
Airline D	15	9	16	8	14	62
Total	33	43	42	40	42	200



II. KPI AND CARDS AS QUICK VIEWS: -[SPOTLIGHT MODE]

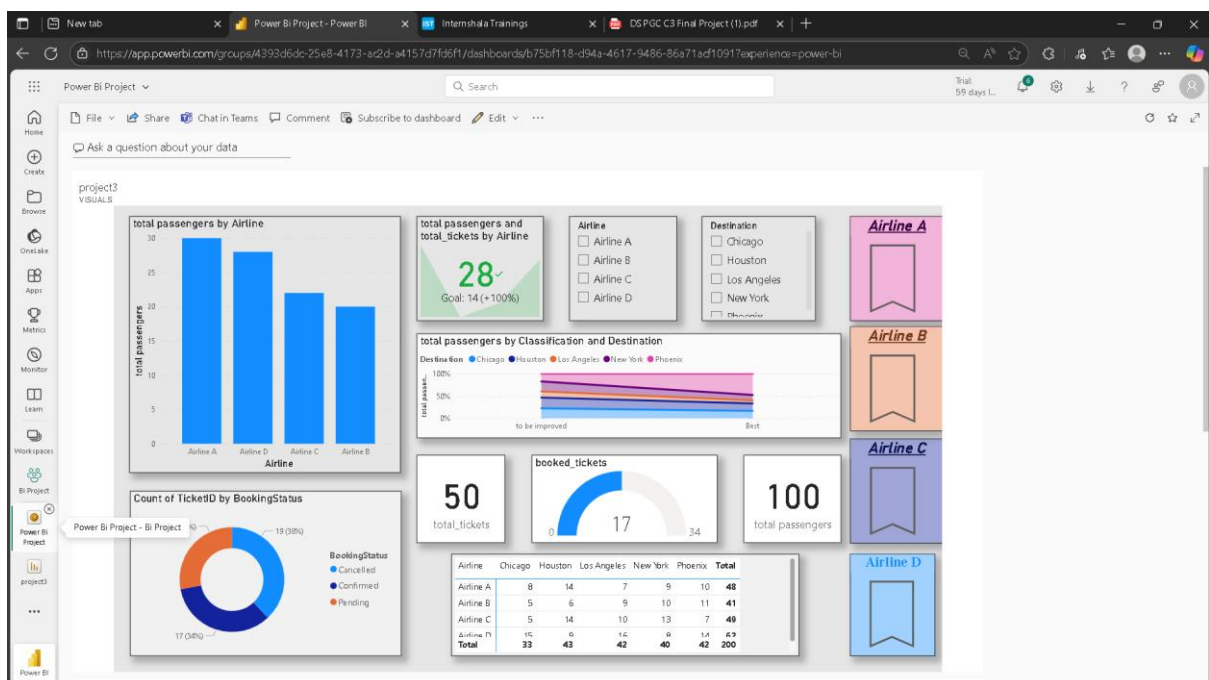


III. BOOKMARKS TO REDIRECT FOR SPECIFIC FLIGHT PAGES:

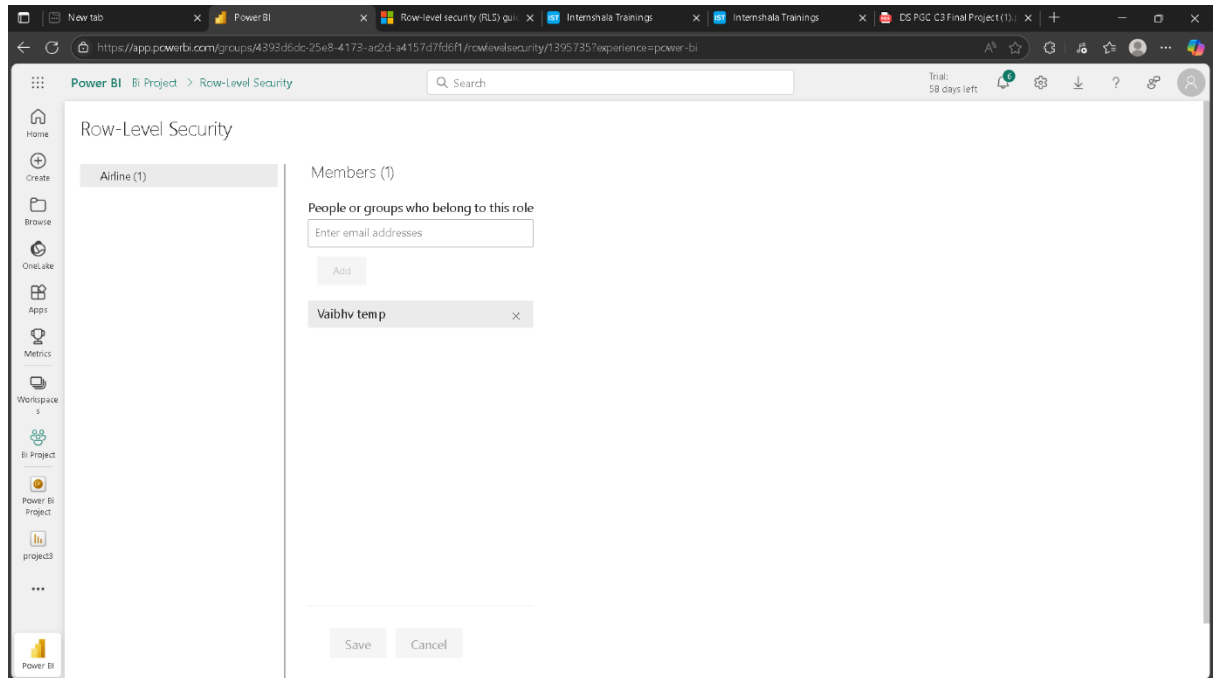


6: FINAL DASHBOARD AND POWER BI SERVICE

1. COMPREHENSIVE DASHBOARD



2. ROW-LEVEL SECURITY (RLS)



3. SCHEDULED REFRESH AT 5 PM

