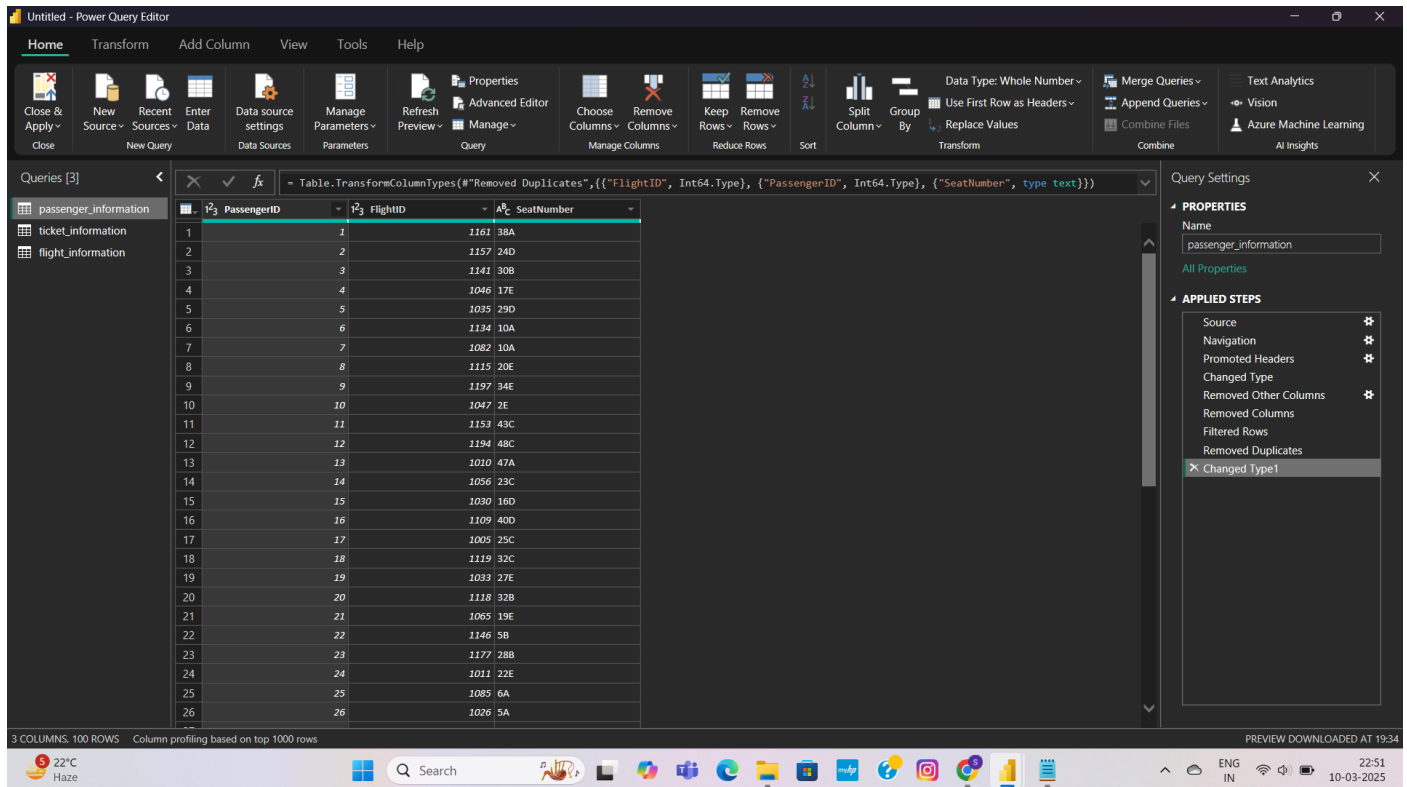


Power BI Project

Task 1



Step 1: Load Data into Power Query

Open Power BI and go to Home > Transform Data (this opens Power Query Editor).

Click New Source and load your dataset (Excel).

Step 2: Remove Duplicates

Select the column(s) where duplicates might exist.

Go to Home > Click Remove Duplicates.

Remove Empty Rows: Select a column > Click Remove Rows > Remove Blank Rows.

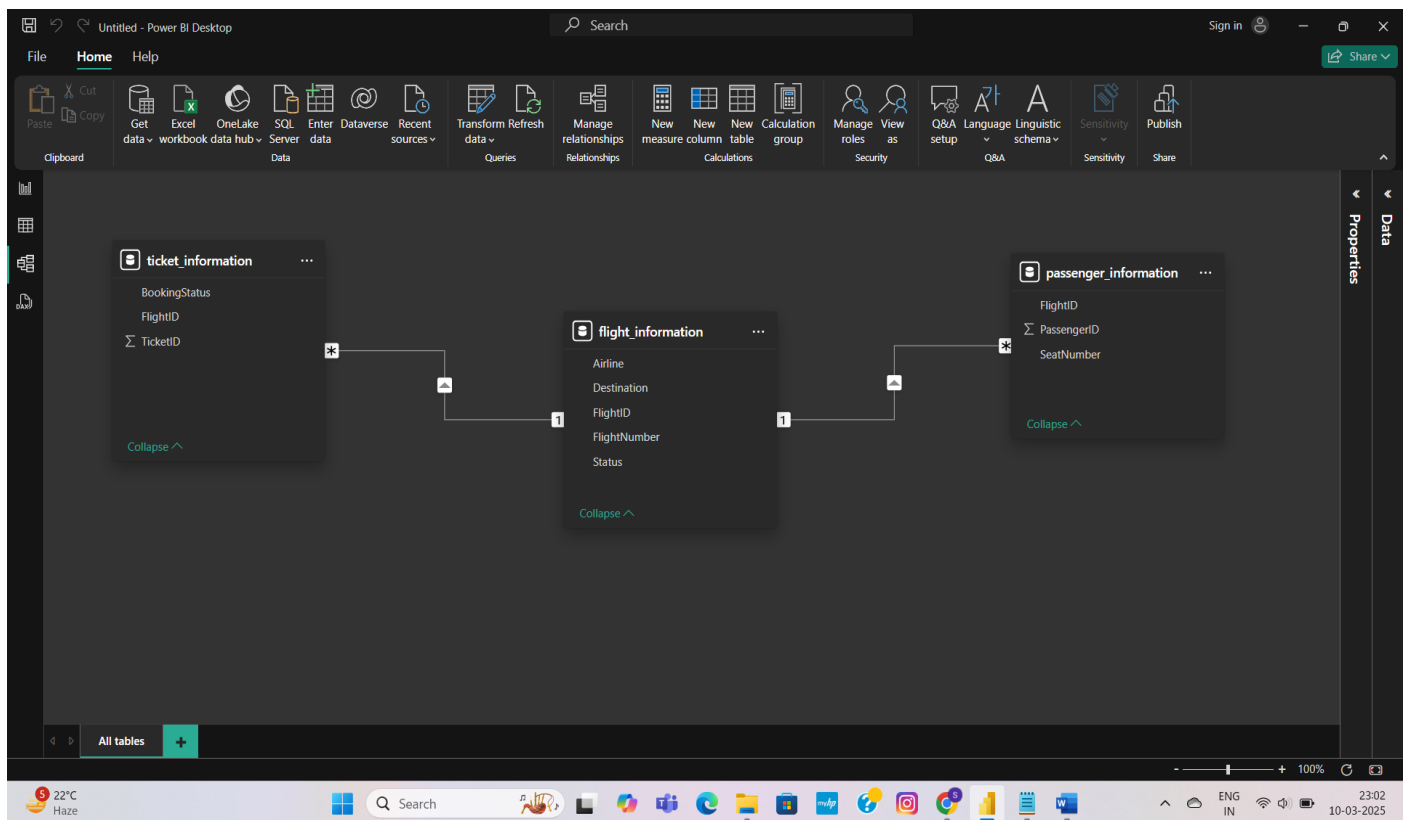
Missing Values: Select a column > Transform > Replace Values > Enter a value.

Change data types: Click the small icon column > Select Text, Number, or Date.

Trim and clean text: Select column > Transform > Format > Trim (removes spaces).

Click **Close & Apply** in the Home tab to save changes to Power BI.

Task 2



Step 1: Open the Data Model View

In Power BI, click on the Model View.

Identify the Key Column (FlightID).

Step 3: Create the Relationship

Drag FlightID from one table to FlightID in another table.

Step 4: Configure Cardinality and Cross-Filter Direction

open the Edit Relationship window.

Set Cardinality: many to one.

Cross-Filter Direction: Single.

Step 5: Validate & Save

Click OK

Task 3

Power_BI_Project

Home Transform **Add Column** View Tools Help

Column From Custom Invoke Custom Conditional Column Index Column Duplicate Column

Format Extract Parse

Statistics Standard Scientific Trigonometry Rounding Information

Date Time Duration

Text Analytics Vision Azure Machine Learning

Queries [3]

passenger_information

ticket_information

flight_information

fx = Table.TransformColumnTypes(#"Added Conditional Column",{{"Flight_Classification", type text}})

	A ₁ Status	A ₂ Destination	A ₃ Airline	A ₄ FlightNumber	T ₃ FlightID	A ₅ Flight_Classification
1	On Time	Houston	Airline D	FL1102	1001	Best
2	On Time	Chicago	Airline B	FL1435	1002	Best
3	Cancelled	New York	Airline A	FL1860	1003	To Be Improved
4	Delayed	Chicago	Airline C	FL1270	1004	To Be Improved
5	Delayed	New York	Airline C	FL1106	1005	To Be Improved
6	On Time	Phoenix	Airline A	FL1071	1006	Best
7	Cancelled	Los Angeles	Airline C	FL1700	1007	To Be Improved
8	Delayed	Los Angeles	Airline C	FL1020	1008	To Be Improved
9	Cancelled	Los Angeles	Airline A	FL1614	1009	To Be Improved
10	Cancelled	Chicago	Airline D	FL1121	1010	To Be Improved
11	On Time	Phoenix	Airline A	FL1466	1011	Best
12	Delayed	New York	Airline D	FL1214	1012	To Be Improved
13	On Time	Houston	Airline C	FL1330	1013	Best
14	Delayed	New York	Airline C	FL1458	1014	To Be Improved
15	Delayed	Houston	Airline C	FL1087	1015	To Be Improved
16	Delayed	New York	Airline B	FL1372	1016	To Be Improved
17	Delayed	Phoenix	Airline D	FL1099	1017	To Be Improved
18	Delayed	Houston	Airline B	FL1871	1018	To Be Improved
19	Cancelled	Chicago	Airline B	FL1663	1019	To Be Improved
20	On Time	New York	Airline A	FL1130	1020	Best
21	Cancelled	New York	Airline B	FL1661	1021	To Be Improved
22	Delayed	Houston	Airline A	FL1308	1022	To Be Improved
23	On Time	Chicago	Airline A	FL1769	1023	Best
24	Delayed	Chicago	Airline B	FL1343	1024	To Be Improved
25	On Time	Phoenix	Airline D	FL1491	1025	Best
26	Cancelled	Chicago	Airline D	FL1413	1026	To Be Improved

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

PREVIEW DOWNLOADED AT 19:35

21°C Haze

Search

23:23 10-03-2025

Power_BI_Project

Home Transform **Add Column** View Tools Help

Column From Custom Invoke Custom Conditional Column Index Column Duplicate Column

Format Extract Parse

Statistics Standard Scientific Trigonometry Rounding Information

Date Time Duration

Text Analytics Vision Azure Machine Learning

Queries [3]

passenger_information

ticket_information

flight_information

fx = Table.AddColumn(#"Changed Type1", "Flight_Number", each Text.AfterDelimiter([FlightNumber], " "), type text)

	A ₂ Destination	A ₃ Airline	A ₄ FlightNumber	T ₃ FlightID	A ₅ Flight_Classification	A ₆ Flight_Number
1	Houston	Airline D	FL1102	1001	Best	1102
2	Chicago	Airline B	FL1435	1002	Best	1435
3	New York	Airline A	FL1860	1003	To Be Improved	1860
4	Chicago	Airline C	FL1270	1004	To Be Improved	1270
5	New York	Airline C	FL1106	1005	To Be Improved	1106
6	Phoenix	Airline A	FL1071	1006	Best	1071
7	Los Angeles	Airline C	FL1700	1007	To Be Improved	1700
8	Los Angeles	Airline C	FL1020	1008	To Be Improved	1020
9	Los Angeles	Airline A	FL1614	1009	To Be Improved	1614
10	Chicago	Airline D	FL1121	1010	To Be Improved	1121
11	Phoenix	Airline A	FL1466	1011	Best	1466
12	New York	Airline D	FL1214	1012	To Be Improved	1214
13	Houston	Airline C	FL1330	1013	Best	1330
14	New York	Airline C	FL1458	1014	To Be Improved	1458
15	Houston	Airline C	FL1087	1015	To Be Improved	1087
16	New York	Airline B	FL1372	1016	To Be Improved	1372
17	Phoenix	Airline D	FL1099	1017	To Be Improved	1099
18	Houston	Airline B	FL1871	1018	To Be Improved	1871
19	Chicago	Airline B	FL1663	1019	To Be Improved	1663
20	New York	Airline A	FL1130	1020	Best	1130
21	New York	Airline B	FL1661	1021	To Be Improved	1661
22	Houston	Airline A	FL1308	1022	To Be Improved	1308
23	Chicago	Airline A	FL1769	1023	Best	1769
24	Chicago	Airline B	FL1343	1024	To Be Improved	1343
25	Phoenix	Airline D	FL1491	1025	Best	1491
26	Chicago	Airline D	FL1413	1026	To Be Improved	1413

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

PREVIEW DOWNLOADED AT 19:35

Finance headline
China's retaliatio...

Search

23:28 10-03-2025

Step 1: Open Power Query Editor

In Power BI > Home Tab > Click Transform Data (opens Power Query Editor).

Step 2: Add a Conditional Column

In Power Query Editor, select the dataset.

Click Add Column > Conditional Column > rename the column to Flight_Classification.

Configure the conditions:

If Status = "On Time" → Then "Best"

Else "To Be Improved"

Click OK

Step 3: Extract Flight Number Using "Column from Examples"

Select the FlightNumber column.

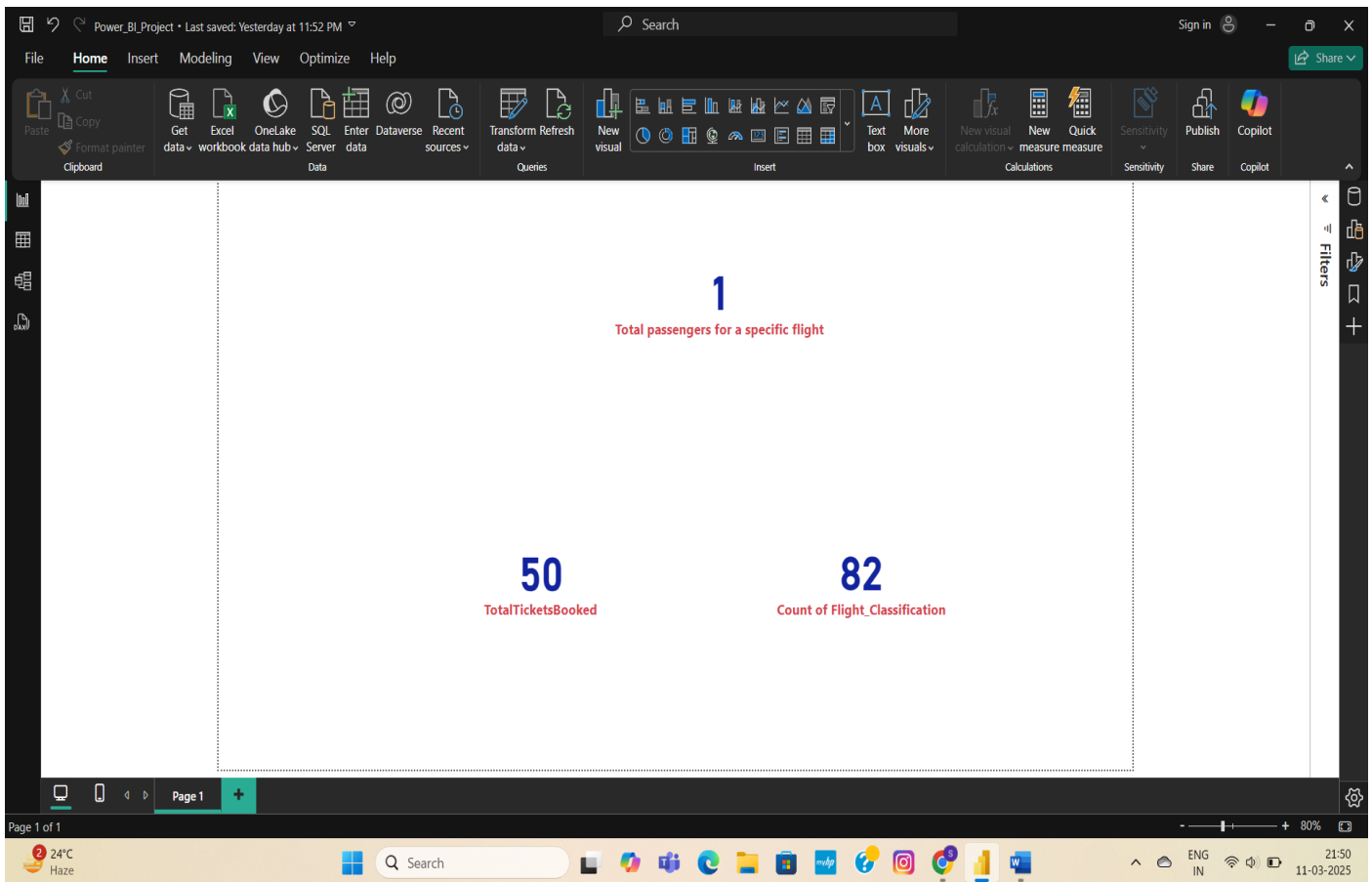
Click Add Column > Column from Examples > From Selection (Type 1102, Power Query will detect a pattern and apply it to all rows).

Click OK and rename the column to Flight_Number.

Step 4: Apply & Save Changes

Click Close & Apply

Task 4



DAX Calculations

1.Total Passengers for a Specific Flight

Click Modeling > New Measure.

Enter the following DAX formula:

TotalPassengers =

```
CALCULATE(  
    COUNT(passenger_information[PassengerID]),  
    passenger_information[FlightID] = "1001"  
)
```

2.Total Tickets Booked

Click Modeling > New Measure.

Enter DAX formula:

```
TotalTicketsBooked = COUNT(Flights[TicketsBooked])
```

3.Create a Visual with a Filter

Go to Report View

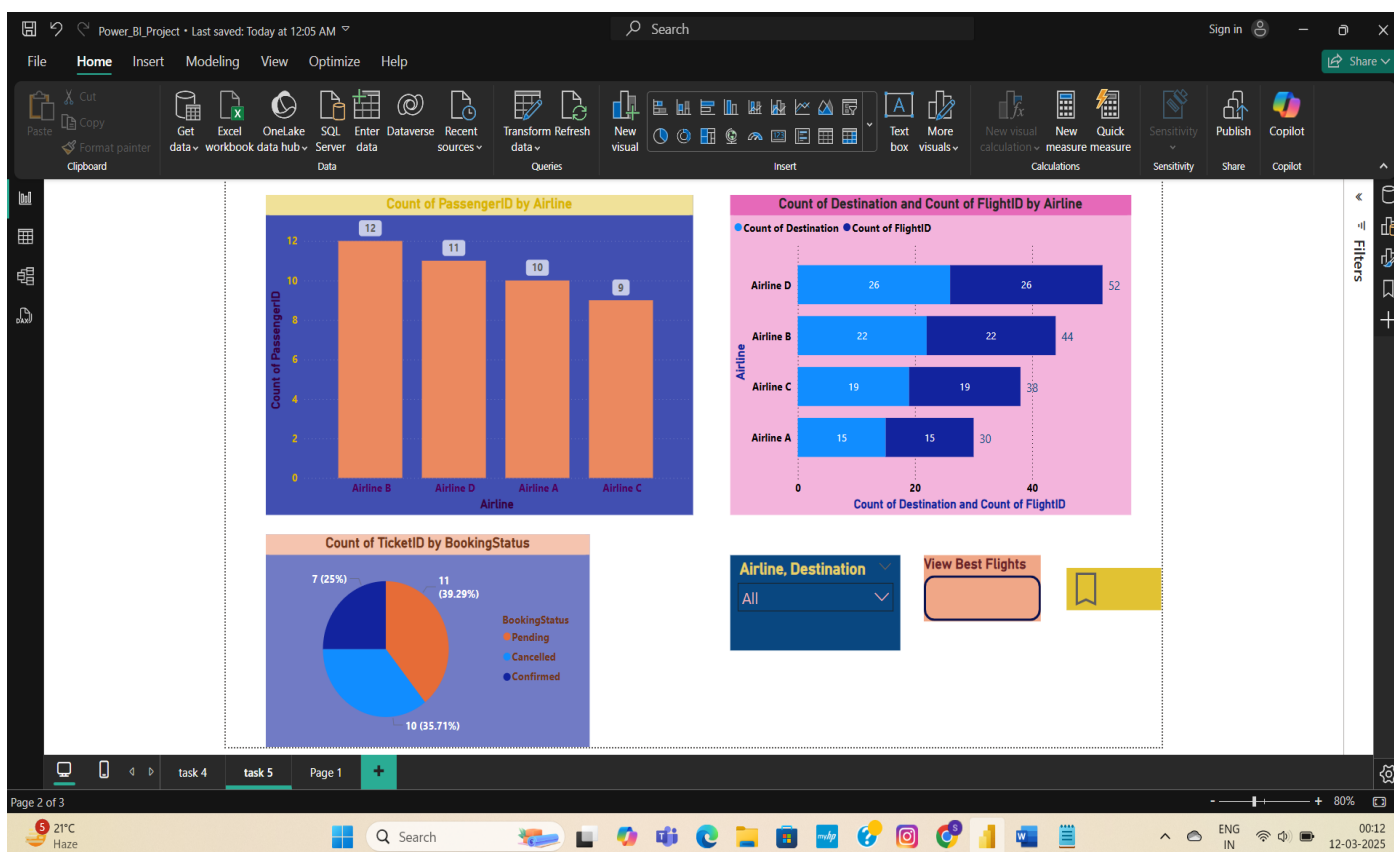
Click Table from the Visualizations panel.

Drag the following columns into the table:

Status

In the Filters pane, Set the filter to Show Only "Best" flights.

Task 5



Create Visuals:

Passenger Count by Airline

Go to Report View > Click Clustered Column Chart from Visualizations.

Drag:

Airline to X-Axis

TotalPassengers to Y-Axis

Ticket Booking Status

Click Pie Chart from Visualizations.

Drag:

Status to Legend

TicketID to Values

Flights by Airline and Destination

Select Stacked Bar Chart from Visualizations.

Drag:

Airline to Y-Axis

Destination to X-Axis

FlightID to Values (Count).

Add Interactive Features:

Destination and Airline Filters (Slicers)

Click Slicer from Visualizations.

Drag Destination and Airline to separate slicers.

Quick Views (Buttons & Bookmarks)

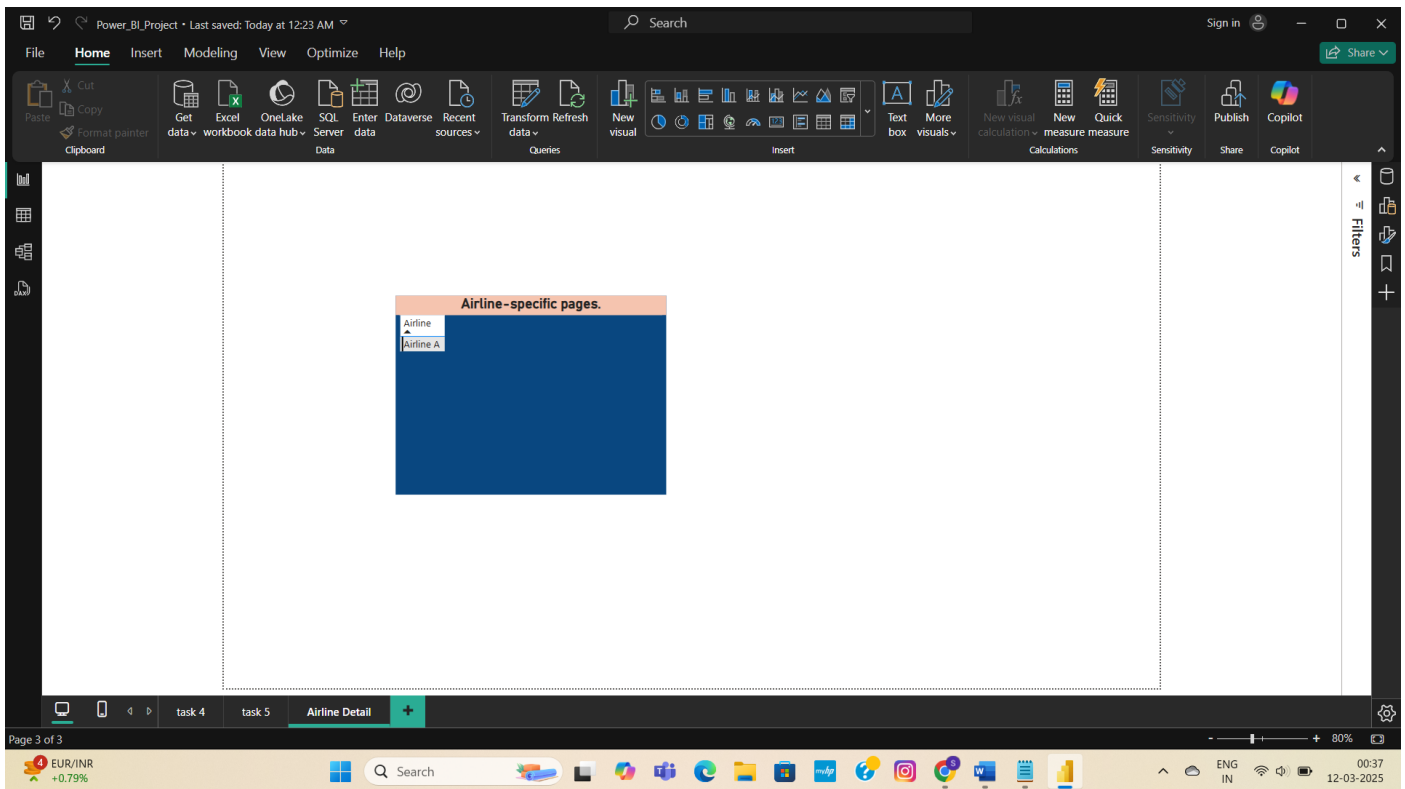
Go to Insert > Click Buttons > Select Blank.

Create a button labeled "View Best Flights".

Use Bookmarks:

Click View > Bookmarks Pane.

Set a bookmark that filters only "Best" flights.



Assign the bookmark to the button.

Airline-Specific Pages (Drill-Through)

Create a new Report Page.

Add a table or chart for airline A details.

Go to the main page, select a visual > Enable Drill-Through on airline A.

Now, clicking an airline A will navigate to the detailed page.

Task 6

Only discussed the points because I try to many times Power BI service tool (account) but didn't configure.

Note* some time popup is (don't use personal mail id, use college or organization) and some time popup (purchase a Powe BI service, your free access is expired).

I am not capable to purchase Power BI service, please consider as, I discussed points.

Step 1: Design a Comprehensive Dashboard

Combine Key Visuals & Insights:

Passenger Count by Airline: Use a Line and clustered column chart showing total passengers per airline.

Ticket Booking Statuses: Create a pie chart displaying the distribution of ticket statuses (e.g., booked, cancelled, pending).

Flights by Airline and Destination: Use a stacked bar chart to present flight counts split by airline and destination.

Enhance with Interactive Elements:

Slicers: Add slicers for Destination and Airline to allow filtering across all visuals.

Quick Views & Drill-Throughs: I bookmark and drill-through page (as set up in previous steps).

Dashboard Layout:

Arrange visuals on a single report page to create a dashboard-like view. Add titles, text boxes.

Publish to Power BI Service:

Now report is complete, click Publish from Power BI Desktop to upload dashboard to Power BI Service.

Step 2: Configure Row-Level Security (RLS) for Airline A

1.RLS Role in Power BI Desktop:

Power BI Desktop > Modeling tab > click Manage Roles.

Create a new role (e.g., airline A role).

DAX formula for airline A:

[airline] = "airline A"

click save and view as role.

2.Publish & Assign the Role in Power BI Service:

Publish report to Power BI Service.

In Power BI Service > go to dataset settings and click Security.

Find the role also i created "airline A" and add the email address access to only Airline A data.

Step 3: Set Up a Scheduled Refresh at 5 PM Daily

In Dataset Settings in Power BI Service:

After publishing report > open Power BI Service, and go to the Datasets section for report.

Configure Scheduled Refresh:

Click on the dataset Settings icon.

Under Scheduled Refresh, ensure the refresh is Enabled.

Set the Refresh Frequency to Daily.

Configure the refresh time choosing 5:00 PM. (confirm the time zone settings.)

Save Your Settings:

Click Apply or Save to confirm the scheduled refresh settings.