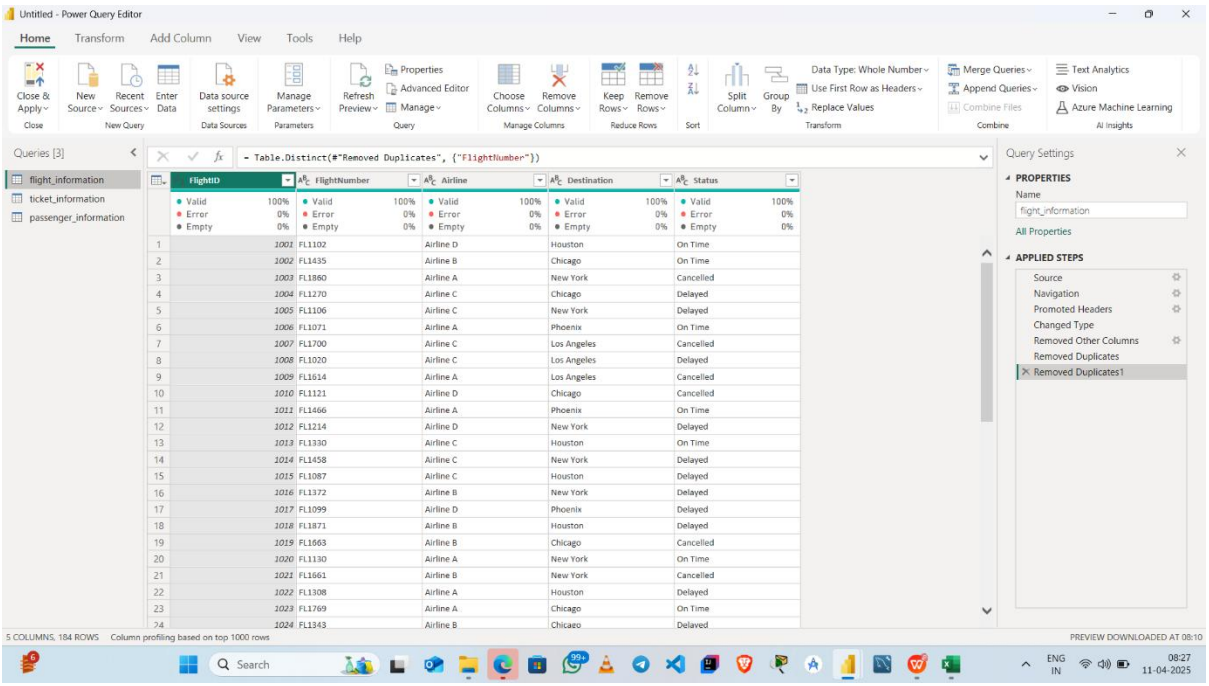
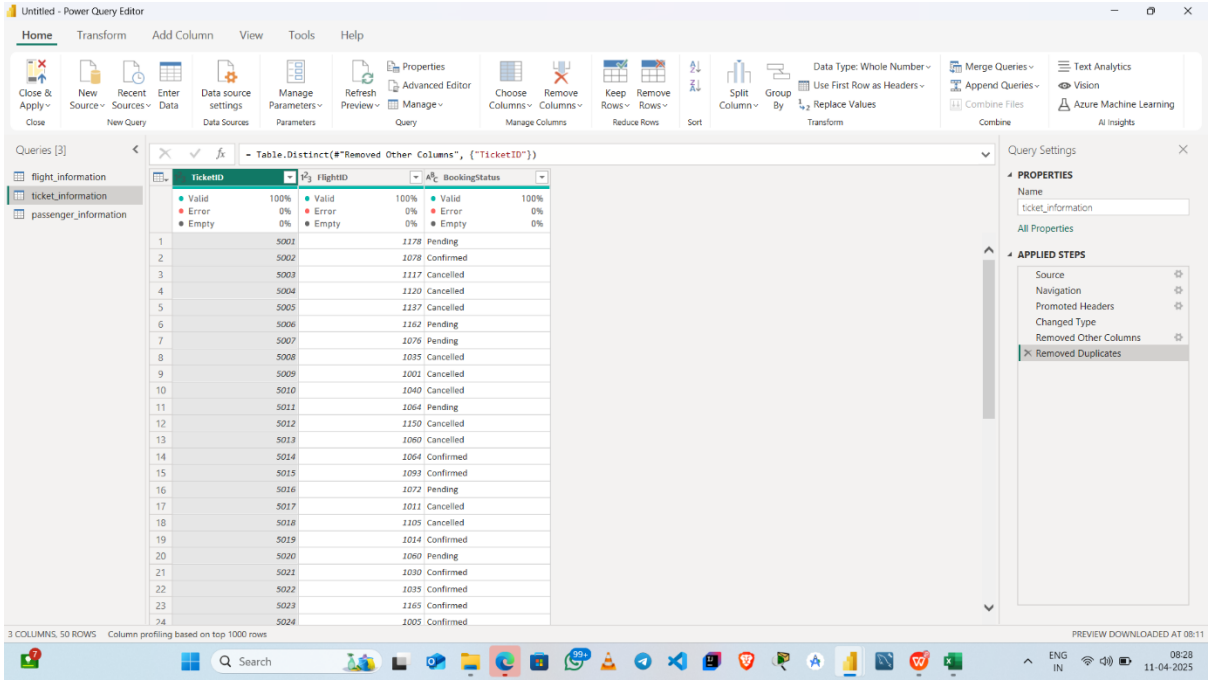
Power BI Final Project

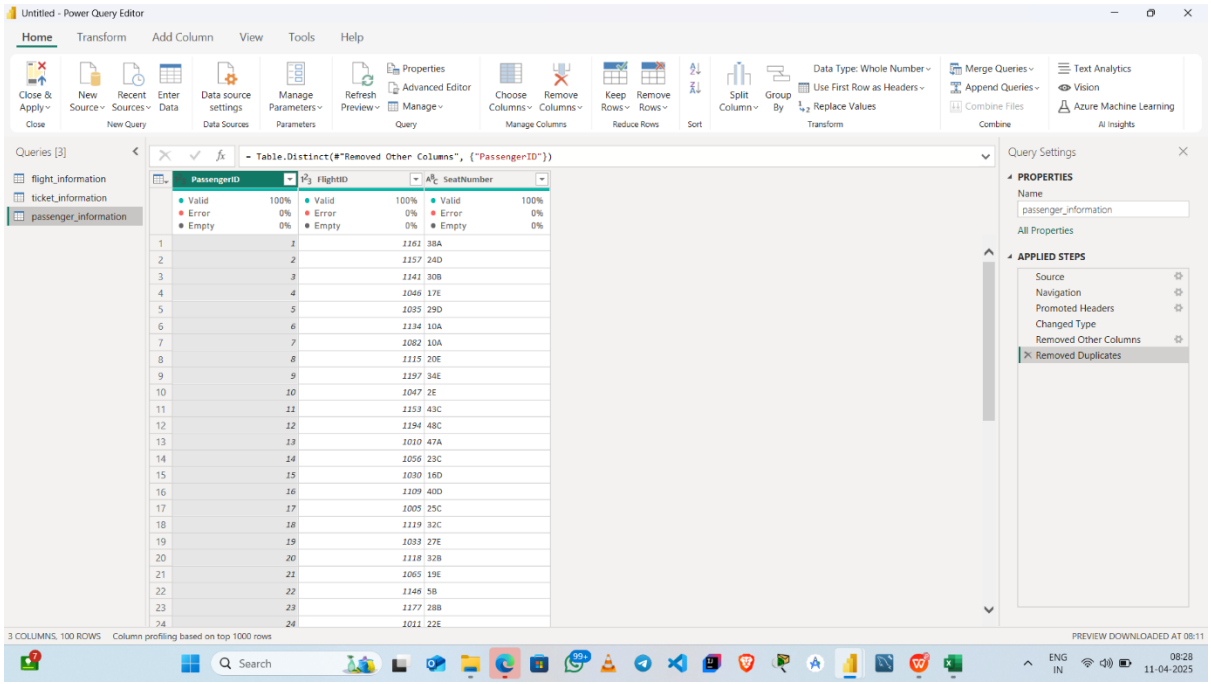
Task 1. Data Preparation and Cleaning

STEPS:

1. **Imported all three datasets** into Power BI using **Get Data → Excel**
2. **Opened Power Query Editor** via **Transform Data**
3. **Removed Duplicates**
   - Selected flightID from flight_information table , ticketID from ticket_information table , passengerID from passenger_information table
   - Clicked **Remove Duplicates** from the **Home** tab
4. **Handled Missing Values**
   - Checked for `null` or empty values in each column
5. **Formatted Columns**
   - Ensured each column is in the correct format according to the data it contains
6. **Applied Changes** by clicking **Close & Apply**





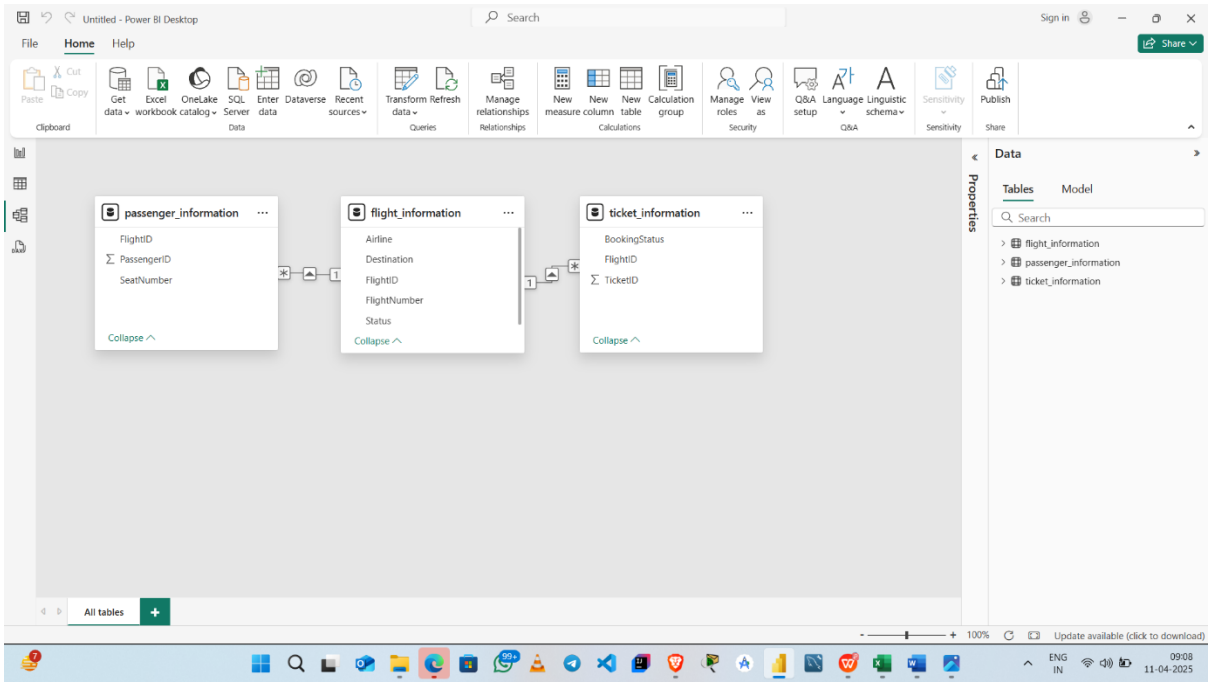


Task 2. Data Modeling

STEPS:

1. **Opened Model View** in Power BI
2. **Created Relationships**
   - Connected FlightID in Flight_Information to FlightID in Passenger_Information
   - Connected FlightID in Flight_Information to FlightID in Ticket_Information
3. **Verified Cardinality and Cross Filter Direction**
   - All relationships were **One-to-Many**

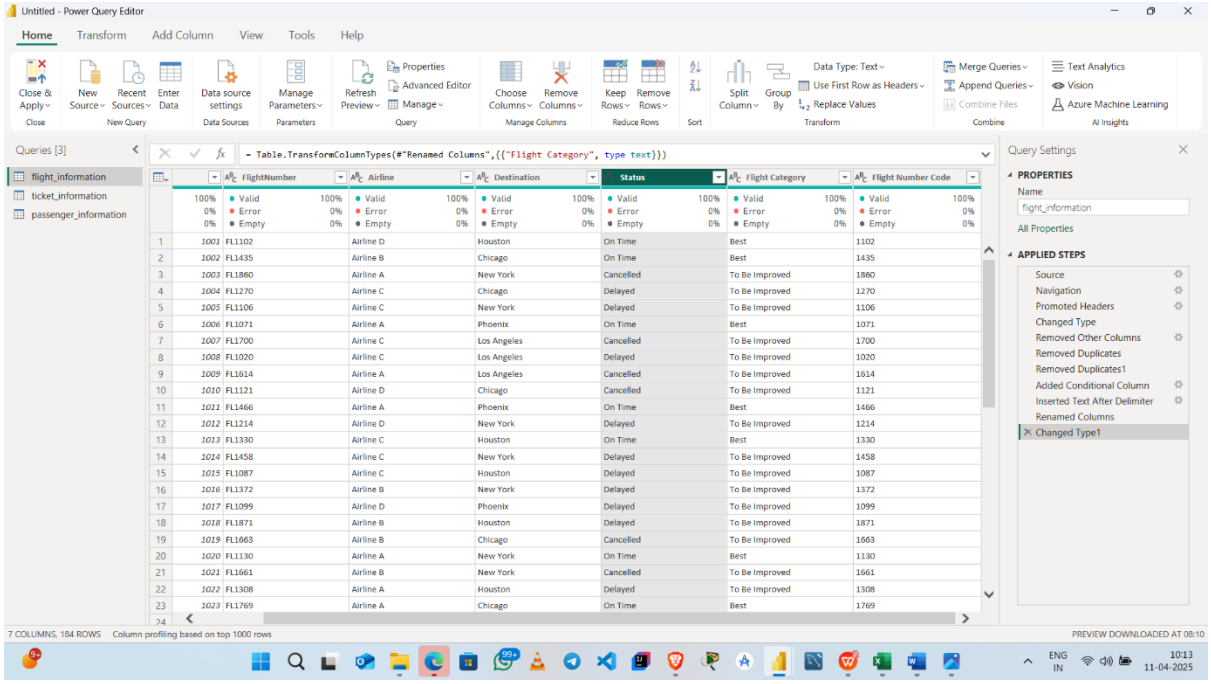
        - One (Flight_Information) to Many (Passenger_Information, Ticket_Information)
    - Ensured **Cross Filter Direction** was set to **Single** for performance and accuracy



Task 3. Enhanced Data Insights

STEPS:

- **Opened Power Query Editor** in Power BI
- **Added Conditional Column** in `Flight_Information`
    - Created a new column named `Flight Category`
        - If `Status` = "On Time", then "Best"
        - Else, "To Be Improved"
- **Used Column From Examples**
    - Chose “Column from Examples” and extracted the flight number by entering the code for 1st and 2nd row as a sample
    - Renamed the column as “Flight Number Code”
- **Applied Changes and Closed Power Query**



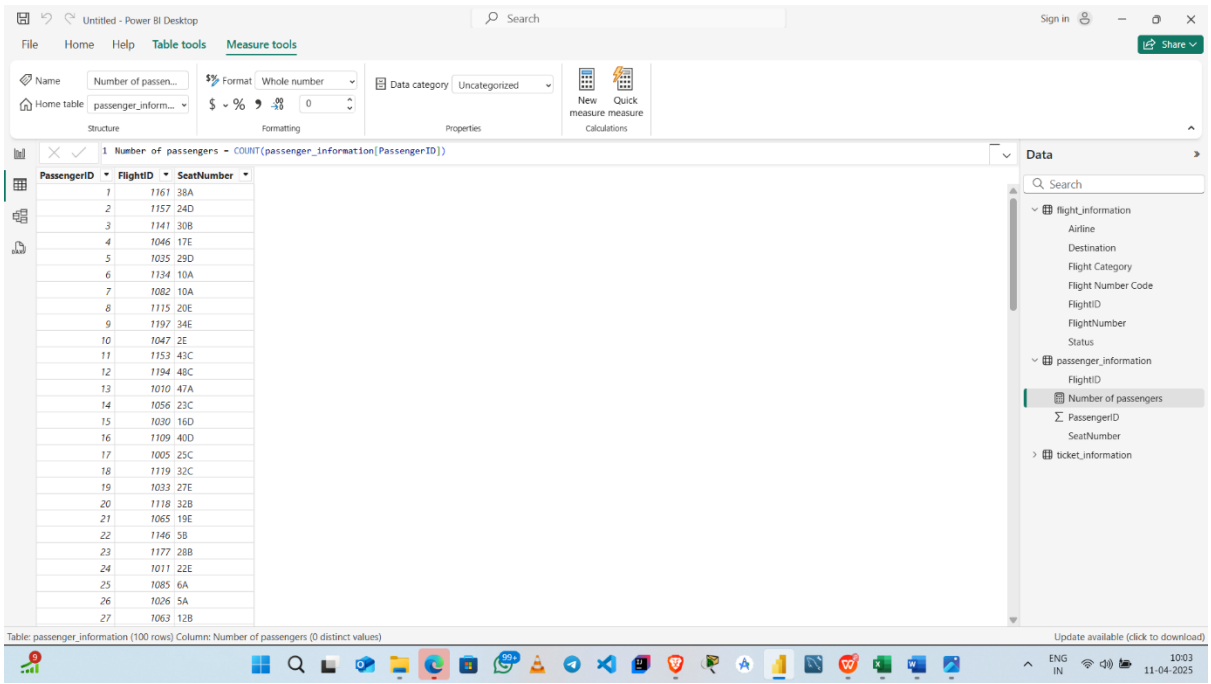
TASK 4. Calculations Using DAX

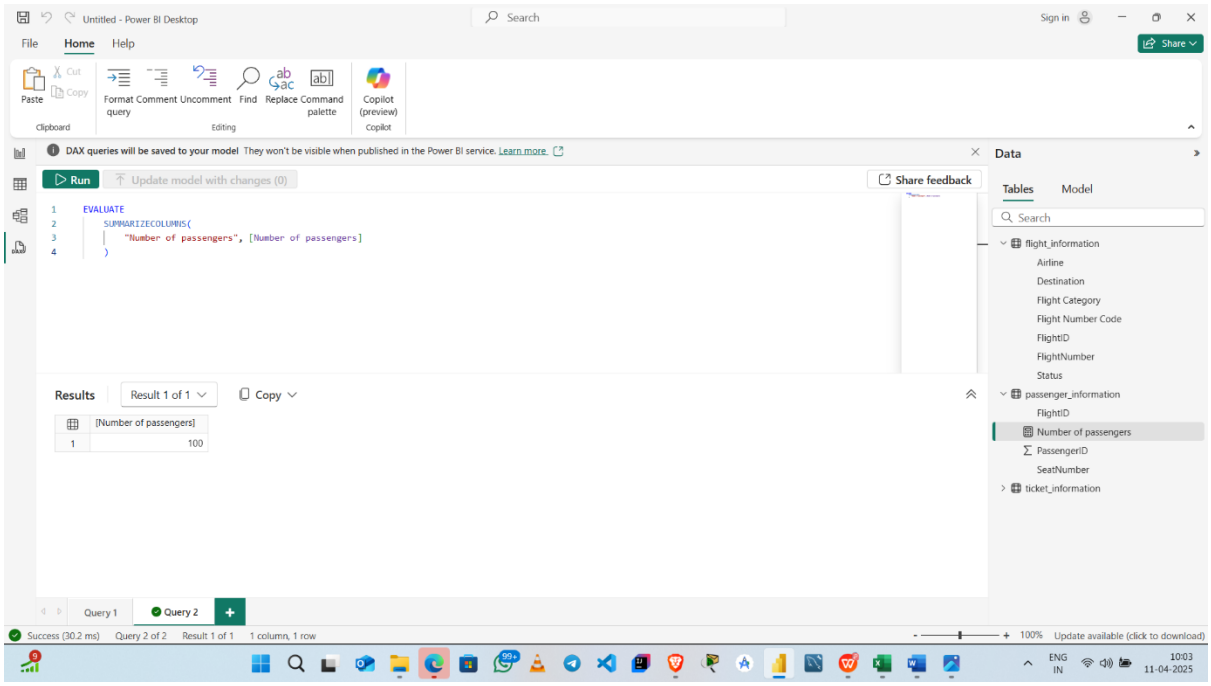
STEPS:

1.
   - Table: `Passenger_Information`

Formula:

```
Number of passengers = COUNT(passenger_information[PassengerID])
```



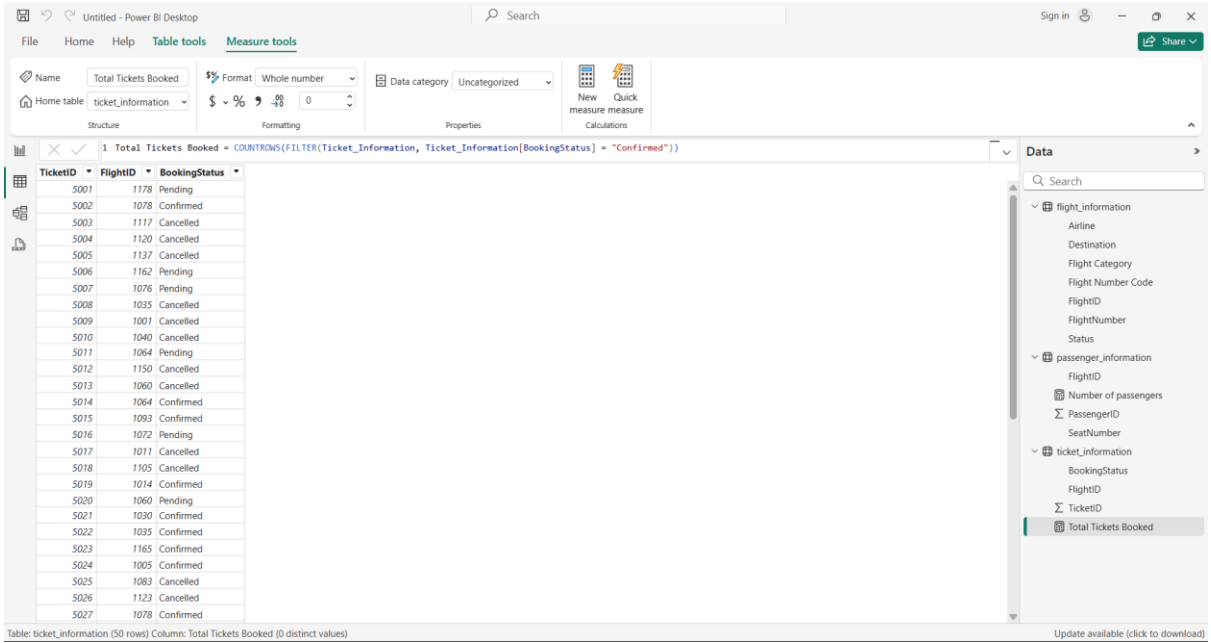


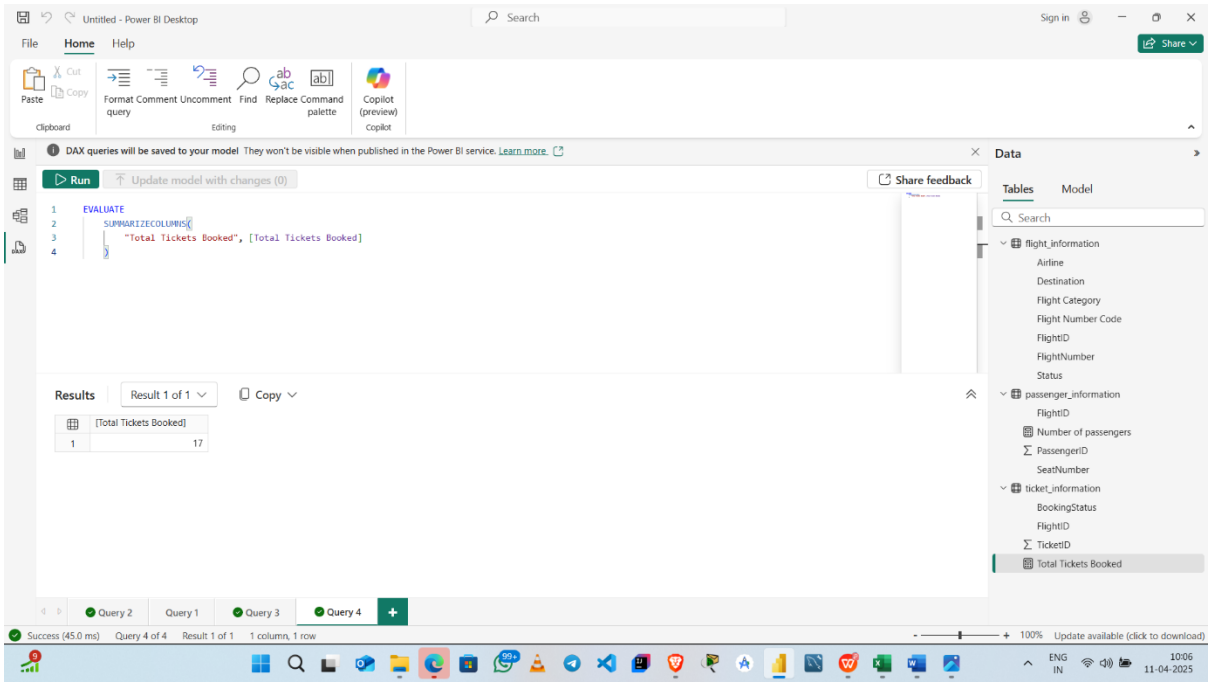
2.

- Table: `Ticket_Information`

Formula:

```
Total Tickets Booked = COUNTROWS(FILTER(Ticket_Information,
Ticket_Information[BookingStatus] = "Confirmed"))
```

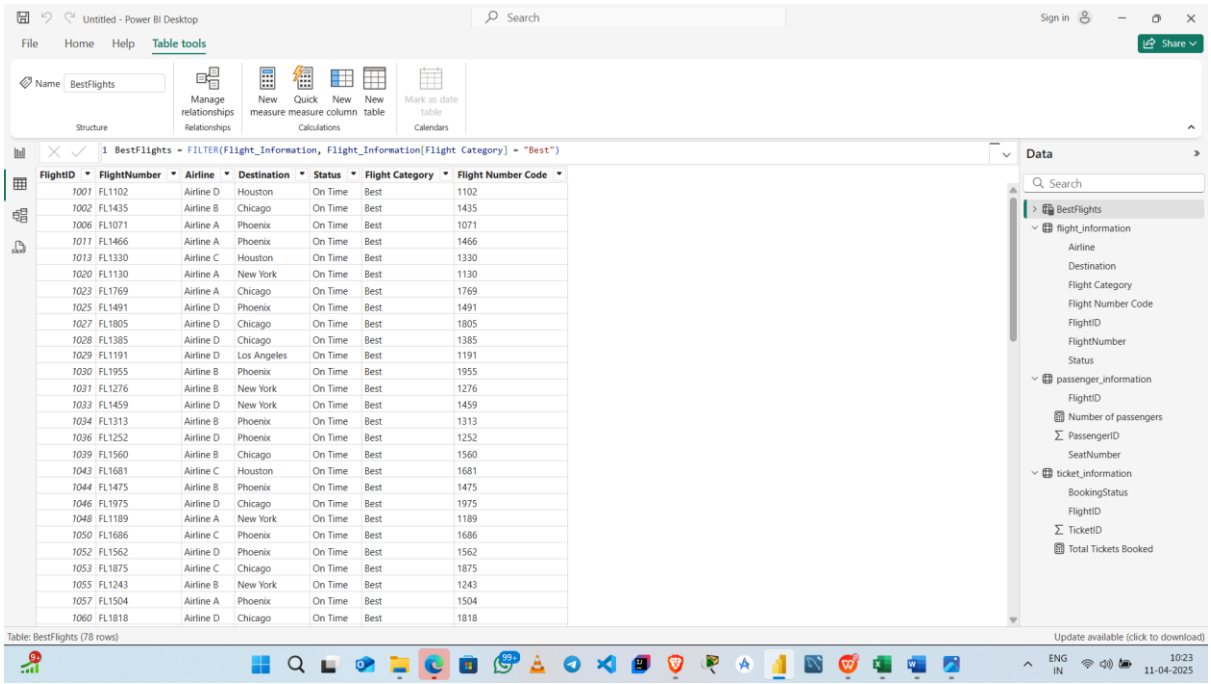




3.

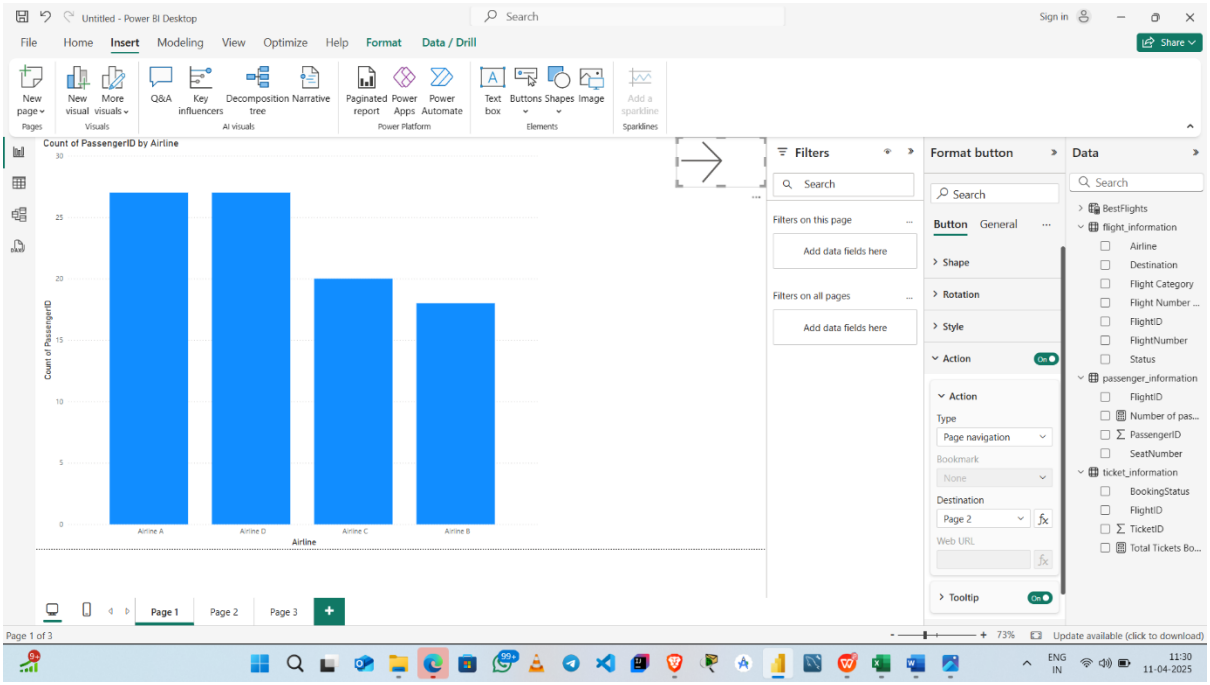
- Used DAX to create a new table:

```
BestFlights = FILTER(Flight_Information, Flight_Information[Flight Category] = "Best")
```

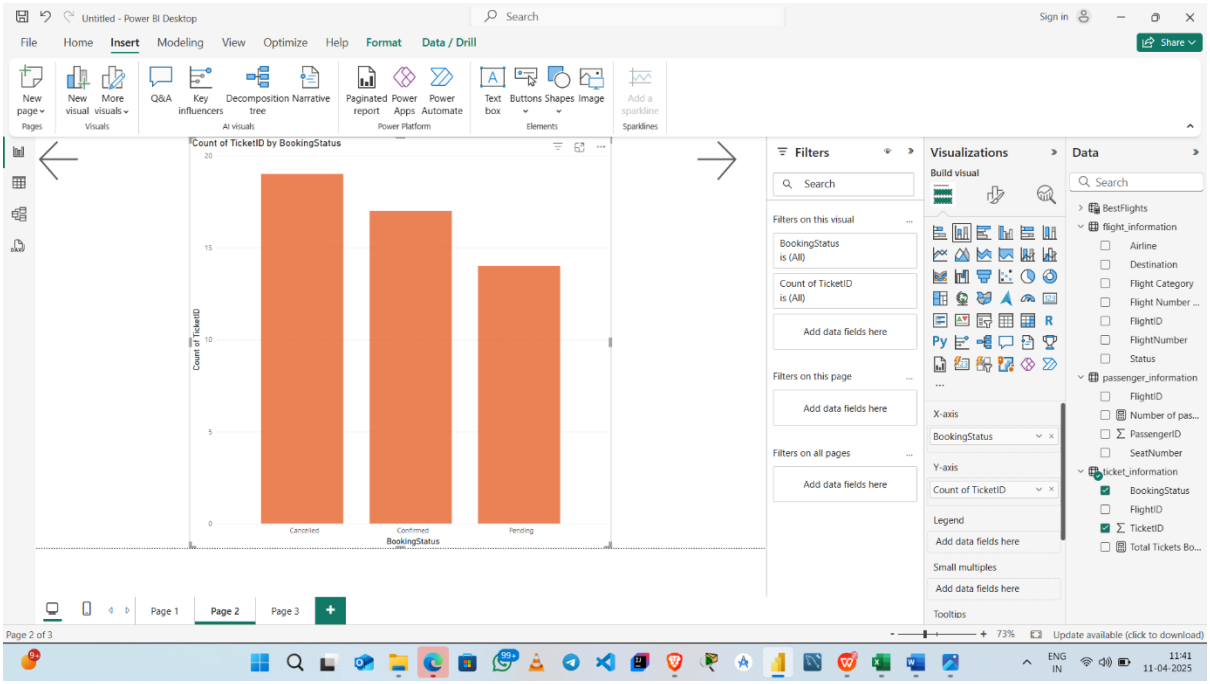


TASK 5. Visualization and Interactive Features 5. Visualization and Interactive Features

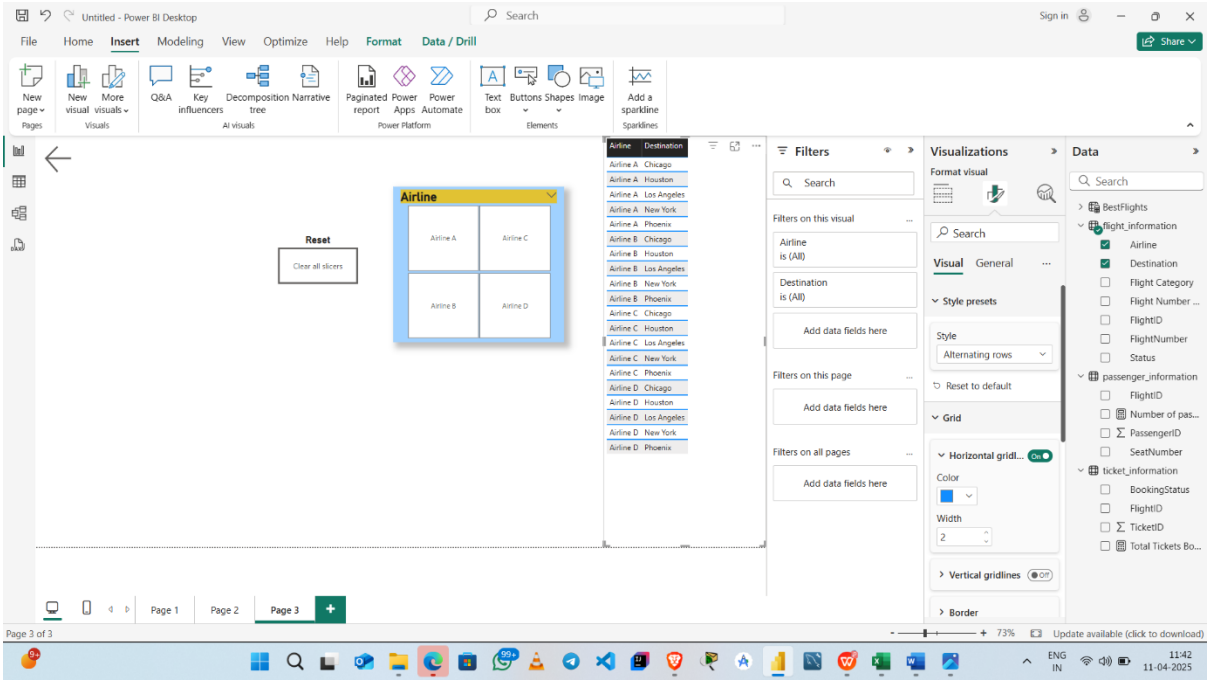
- Created a **bar chart** to show the **Passenger Count by Airline** using data from the Passenger and Flight tables



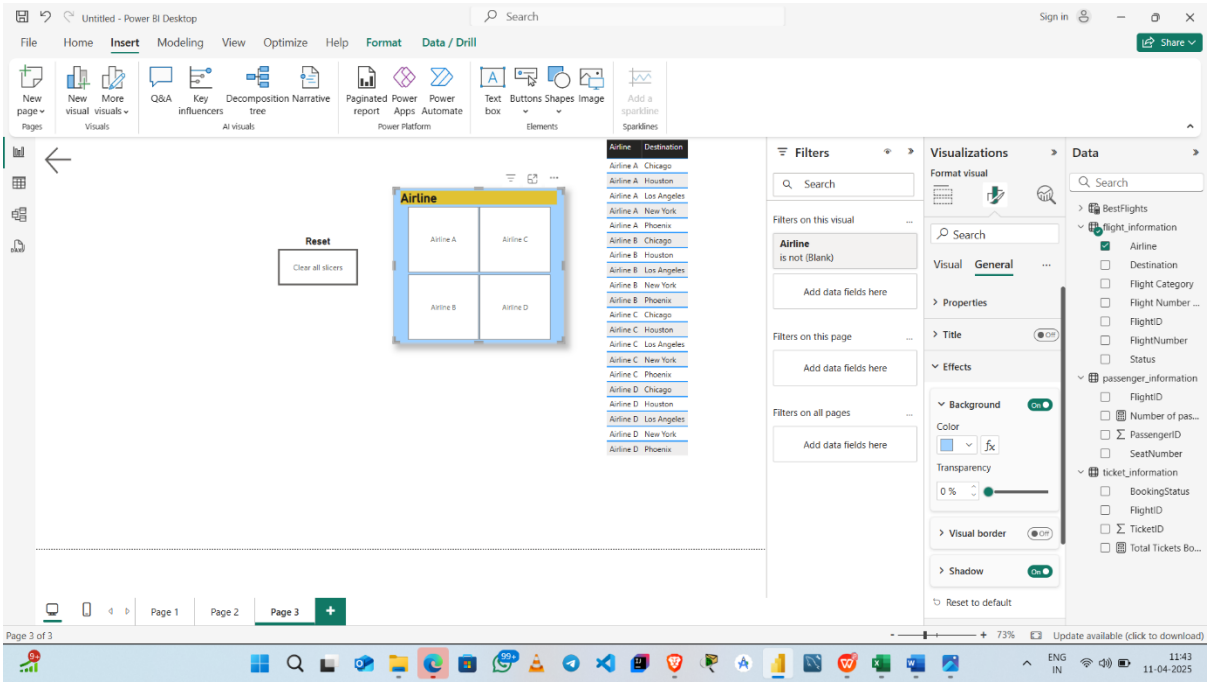
- Created a **Bar chart** to display **Ticket Booking Statuses** using data from the Ticket_Information table



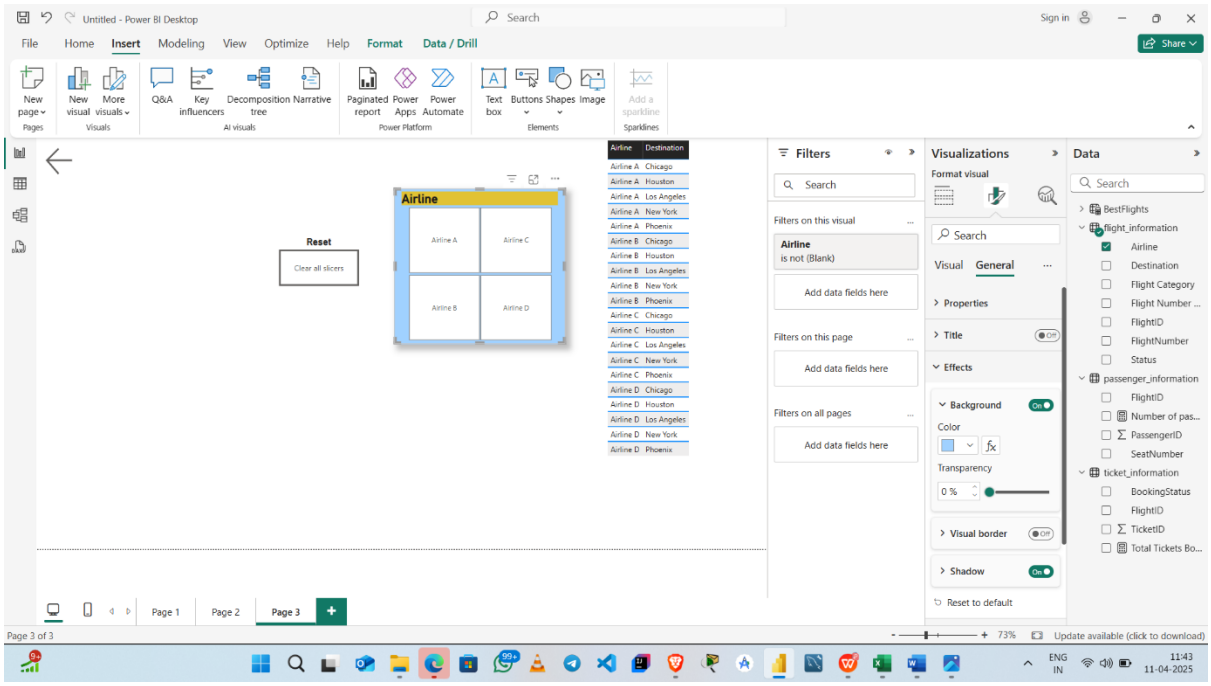
- Built a **Table visual** to show **Flights by Airline and Destination** from the Flight_Information table

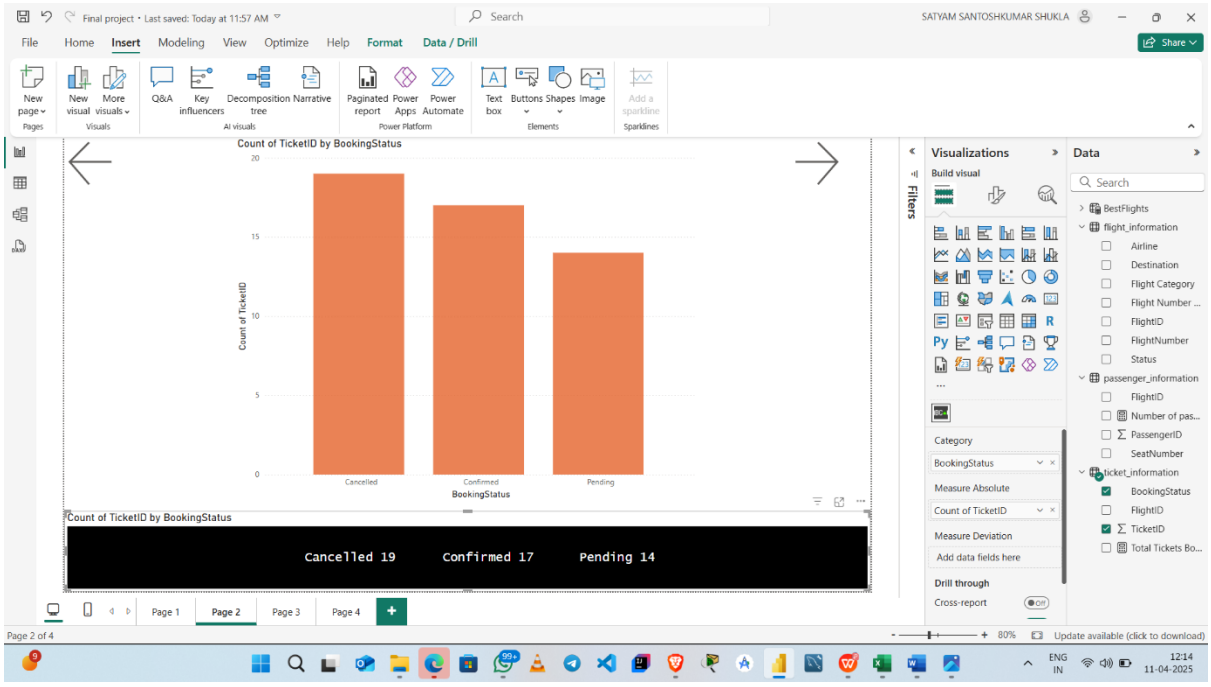


- Added **slicers for Destination and Airline** to enable users to interactively filter the visuals

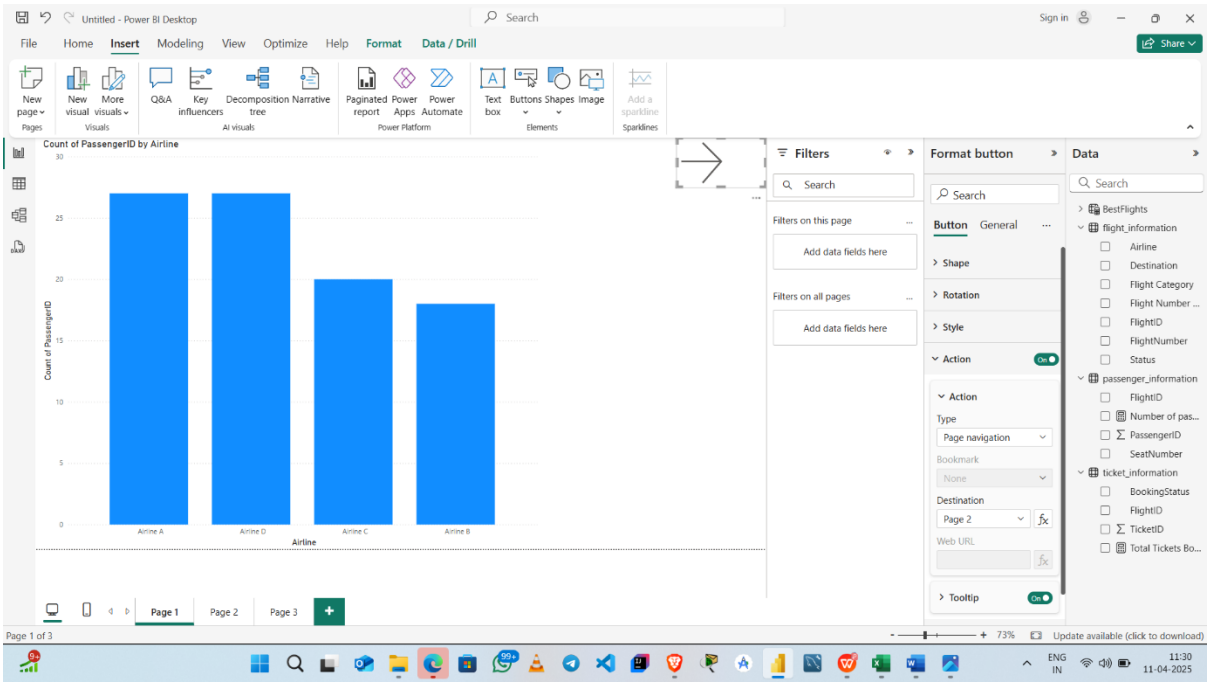


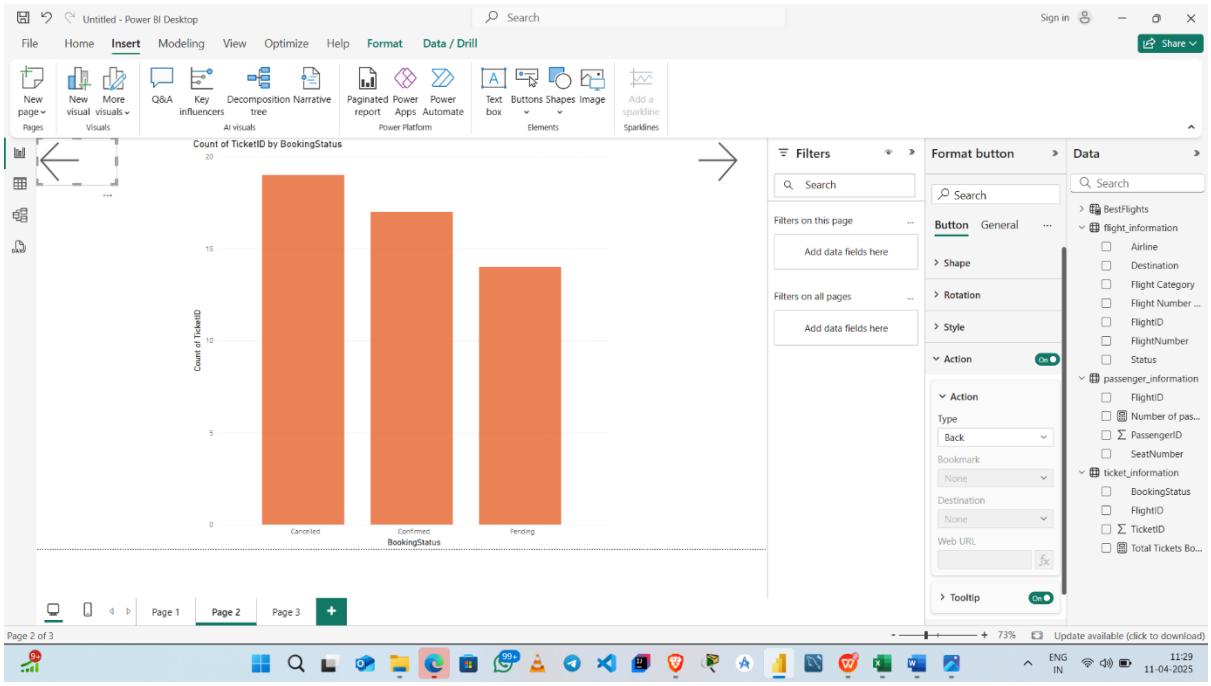
- Configured **Quick Views** using button and scroller

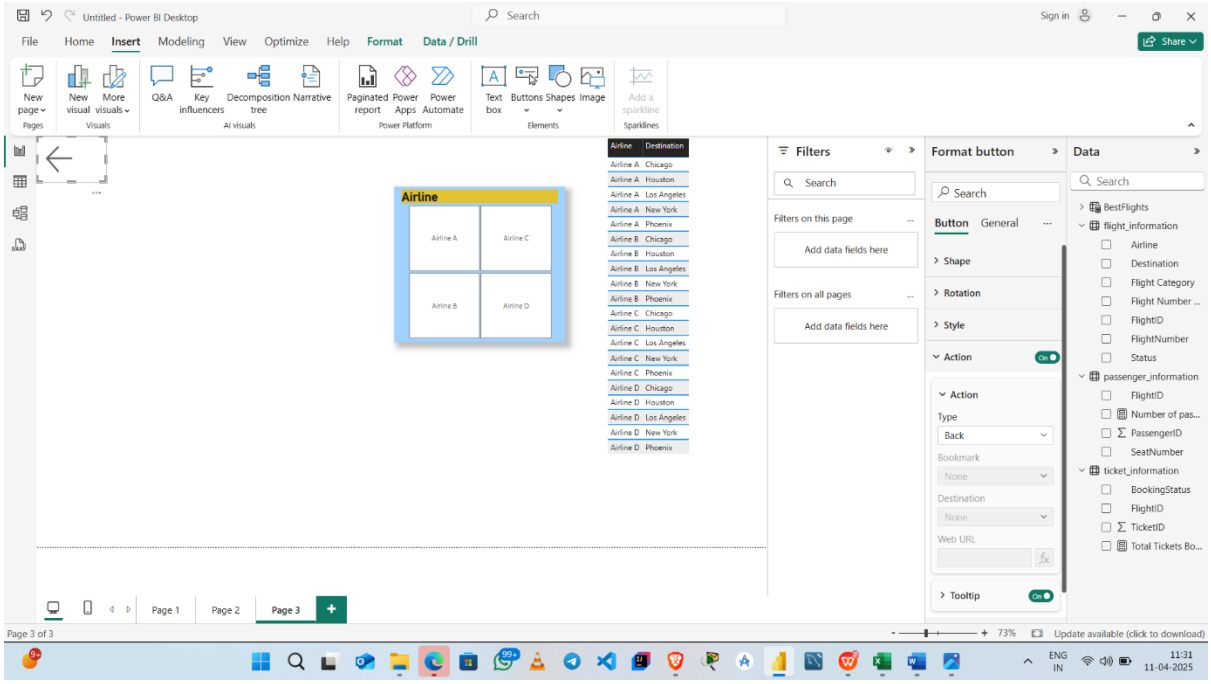




- Created **Airline-specific report pages** by applying page-level filters for individual airlines

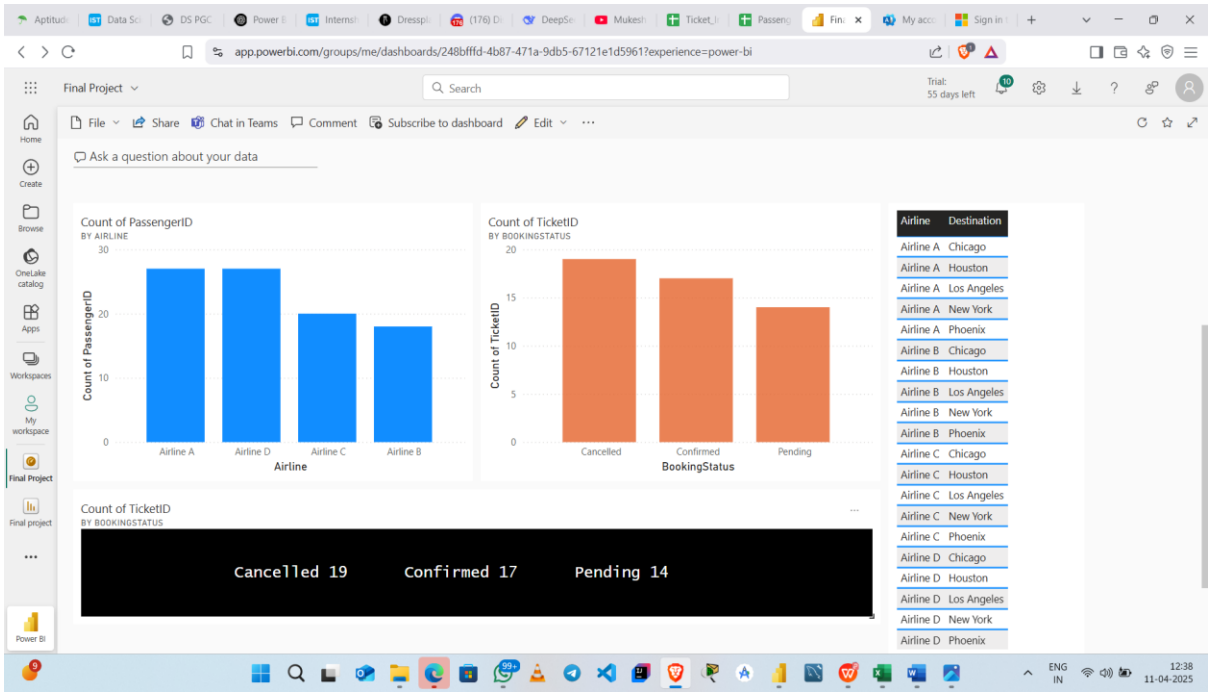

Untitled - Power BI Desktop
Count of PassengerID by Airline
Count of PassengerID
Airline
Airline A
Airline D
Airline C
Airline B
Filters
Format button
Data
Page 1
Page 2
Page 3
Page 1 of 3


Untitled - Power BI Desktop
Count of TicketID by BookingStatus
Count of TicketID
BookingStatus
Cancelled
Confirmed
Pending
Filters
Format button
Data
Page 1
Page 2
Page 3
Page 2 of 3



Task 6. Final Dashboard and Power BI Service

- Published the report to **Power BI Service**
- Designed a **comprehensive dashboard** with key visuals:
  - Passenger Count by Airline
  - Ticket Booking Status Distribution
  - Flights grouped by Airline and Destination
  - Scroller
- Configured **Row-Level Security (RLS)**:
  - Created a role called Airline A
  - Assigned this role to the relevant user in Power BI Service
- Set up a **Scheduled Refresh** to run **daily at 5 PM** from the dataset settings in Power BI Service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File
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Comment
Subscribe to dashboard
Edit
Ask a question about your data
Count of PassengerID
BY AIRLINE
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Airline D
Airline C
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Airline Destination
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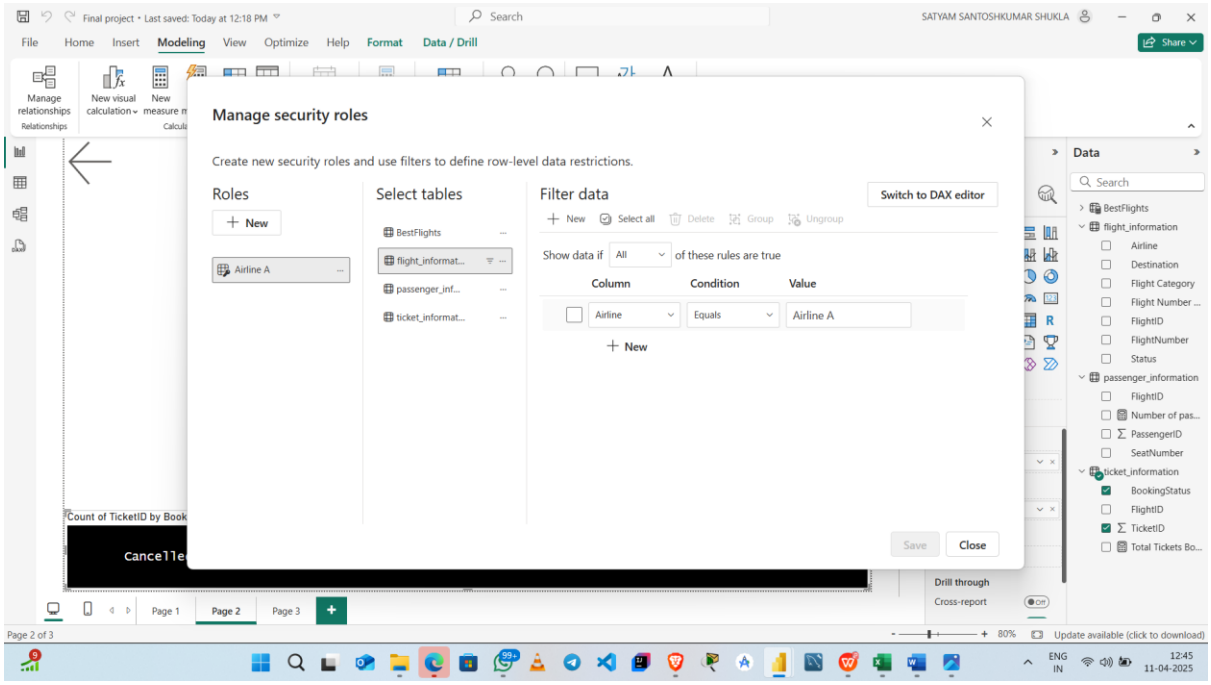
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Share
Manage relationships
New visual calculation
New measure
Manage security roles
Create new security roles and use filters to define row-level data restrictions.
Roles
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Airline A
Select tables
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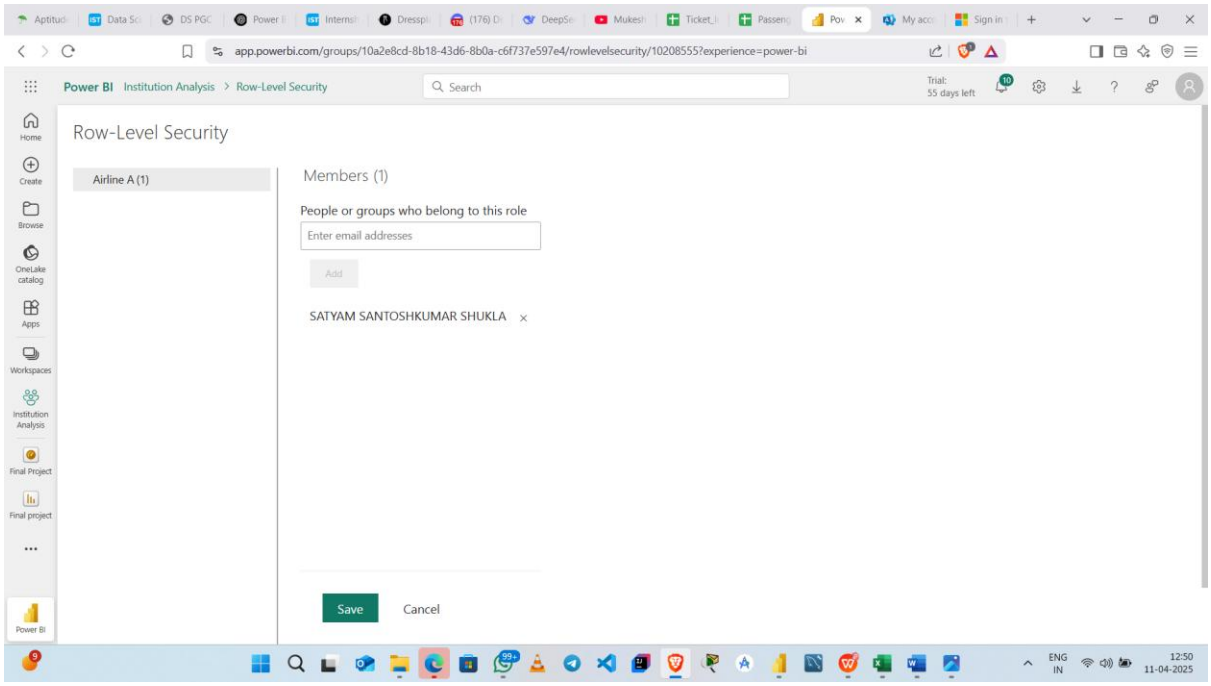
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Power BI
Institution Analysis
Row-Level Security
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Trial: 55 days left
Row-Level Security
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Members (1)
People or groups who belong to this role
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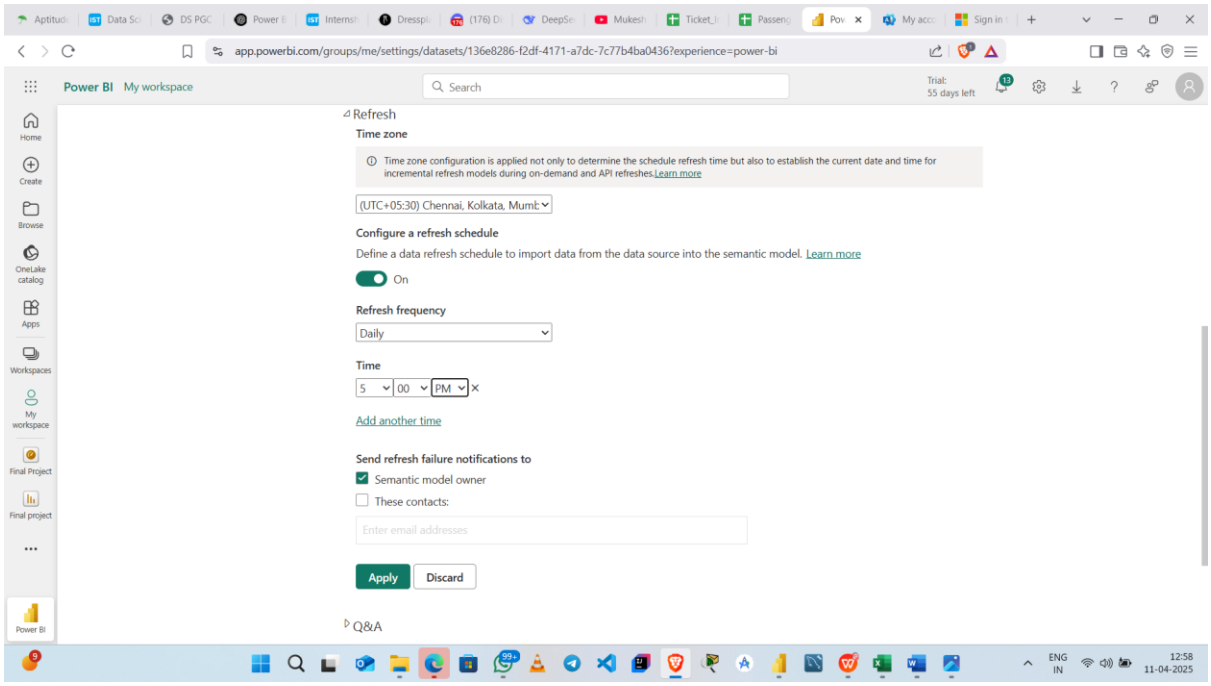
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Power BI
My workspace
Search
Trial: 55 days left
Refresh
Time zone
Time zone configuration is applied not only to determine the schedule refresh time but also to establish the current date and time for incremental refresh models during on-demand and API refreshes. Learn more
(UTC+05:30) Chennai, Kolkata, Mumb
Configure a refresh schedule
Define a data refresh schedule to import data from the data source into the semantic model. Learn more
On
Refresh frequency
Daily
Time
5
00
PM
Add another time
Send refresh failure notifications to
Semantic model owner
These contacts:
Enter email addresses
Apply
Discard
Q&A
Home
Create
Browse
OneLake catalog
Apps
Workspaces
My workspace
Final Project
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