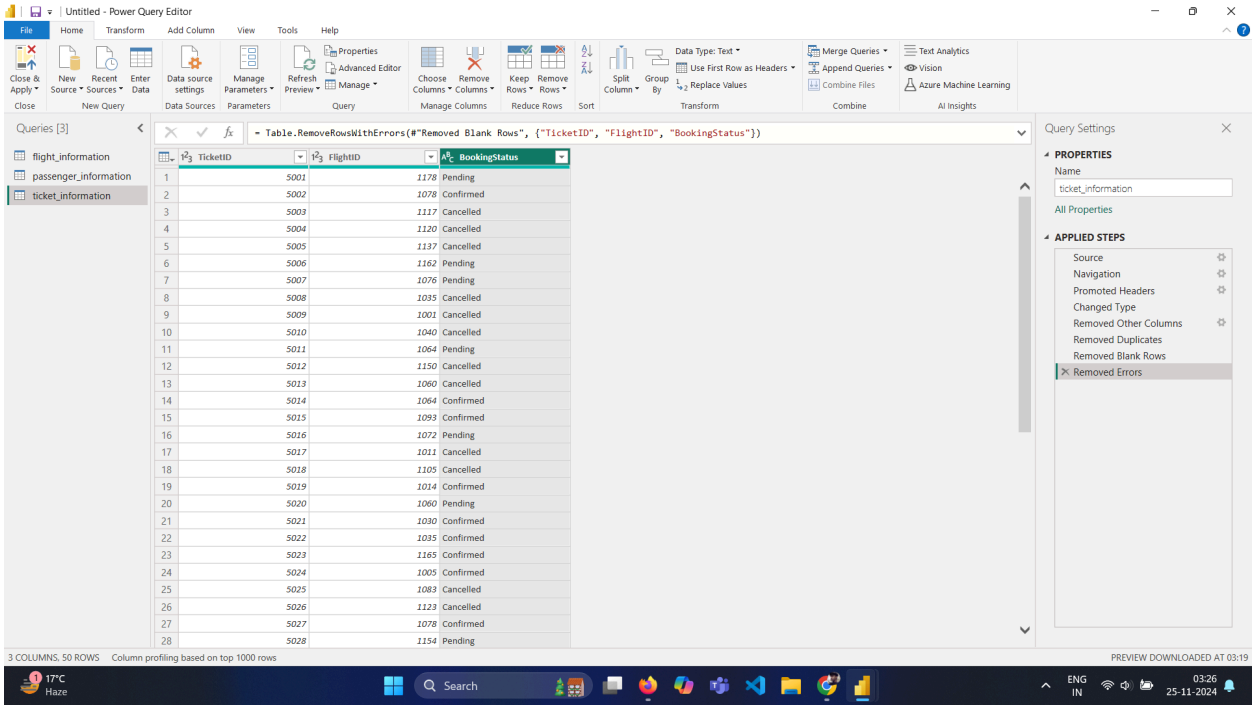
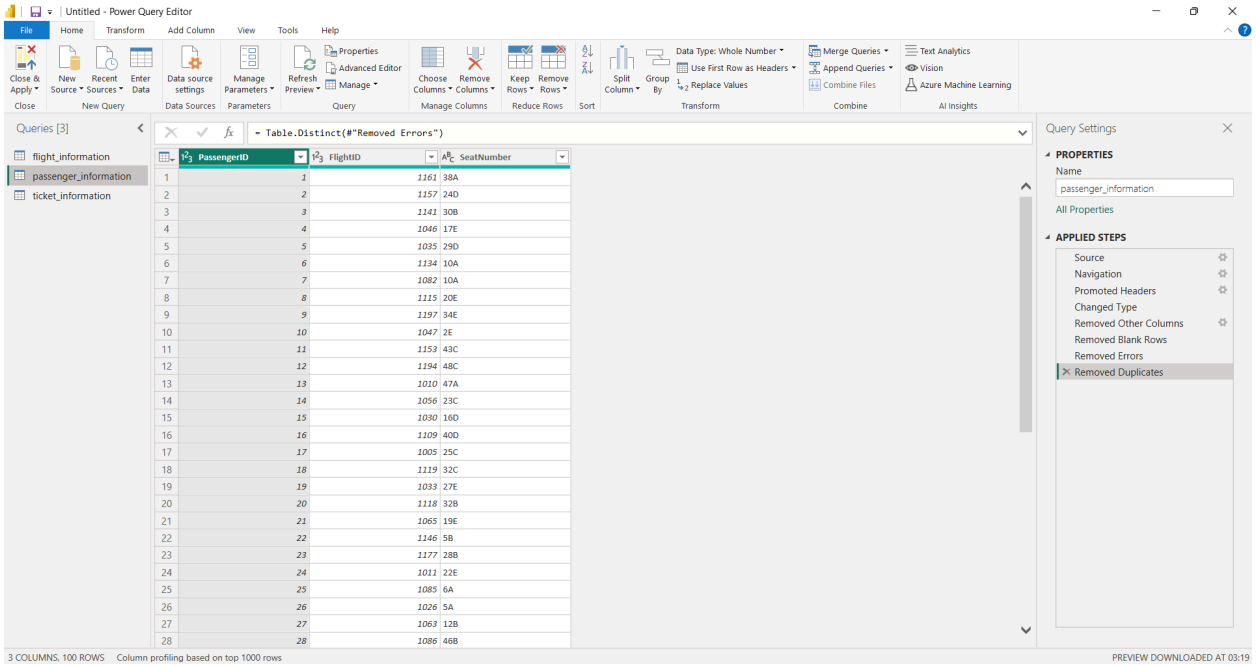
Report on Steps Completed for the Airline Data Management Project

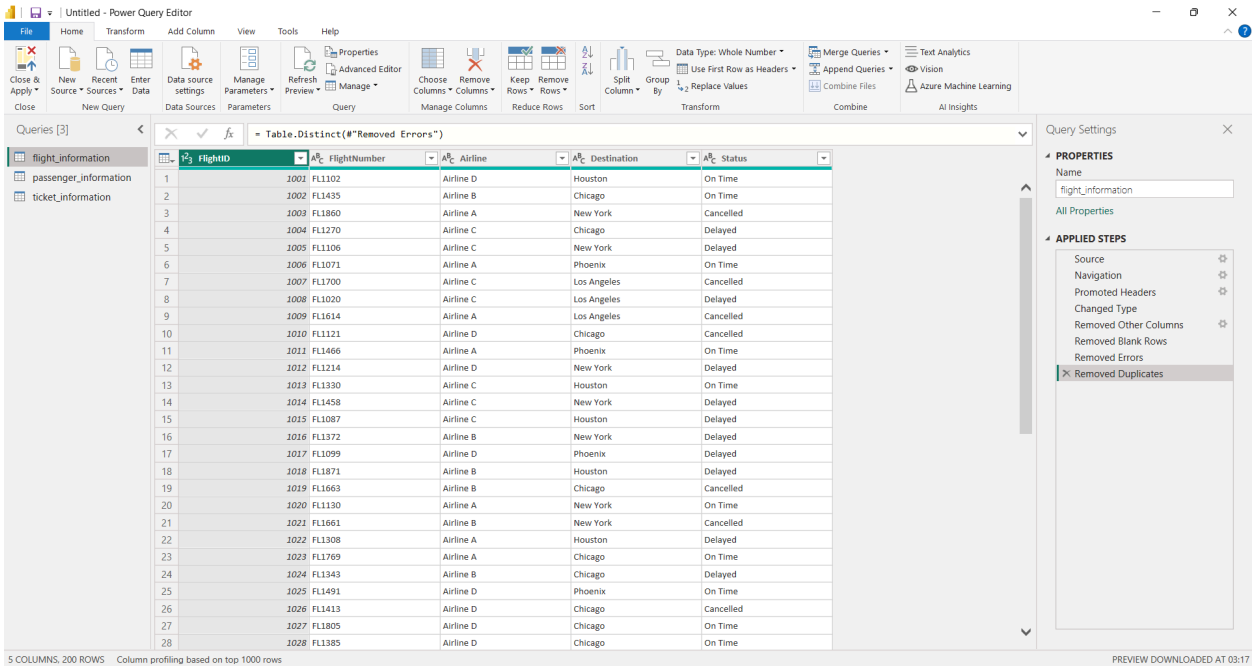
Video Explanation : Project 3 Video Submission .mp4

Task 1: Data Preparation and Cleaning

Loaded datasets into Power BI and used Power Query Editor to remove duplicates and handle missing values. Reformatted columns for consistency. Ensured `FlightID` was clean and served as the key across datasets. Cleaned data is now ready for analysis.



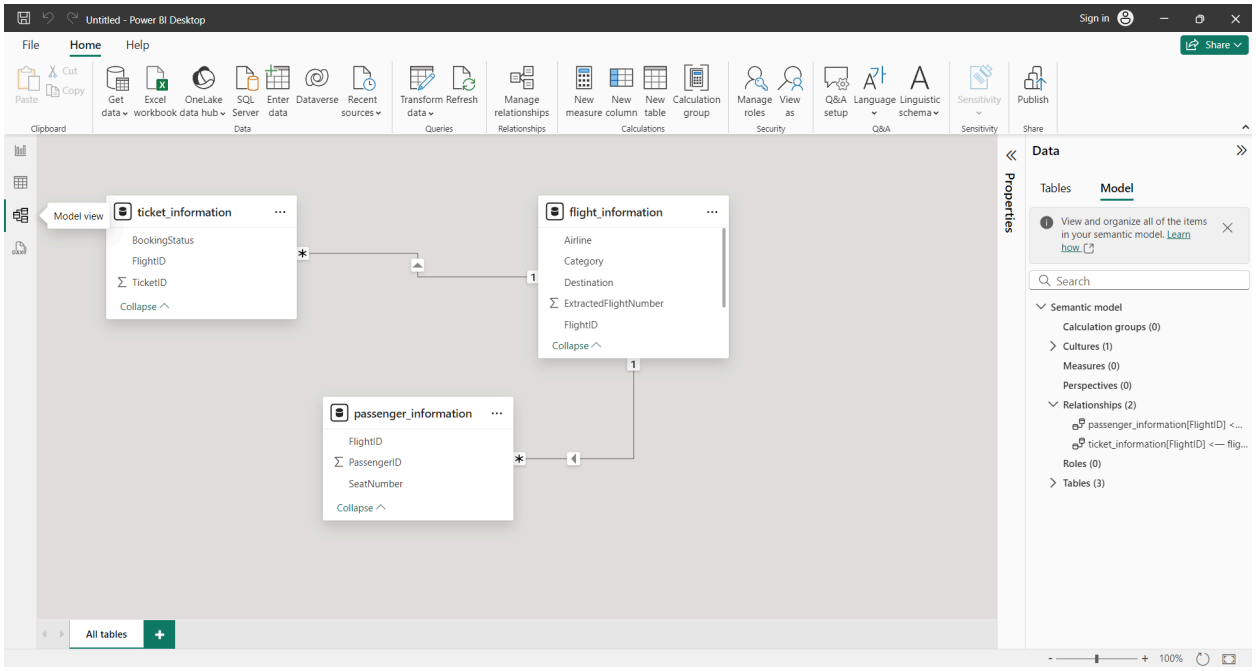




Task 2: Data Modeling

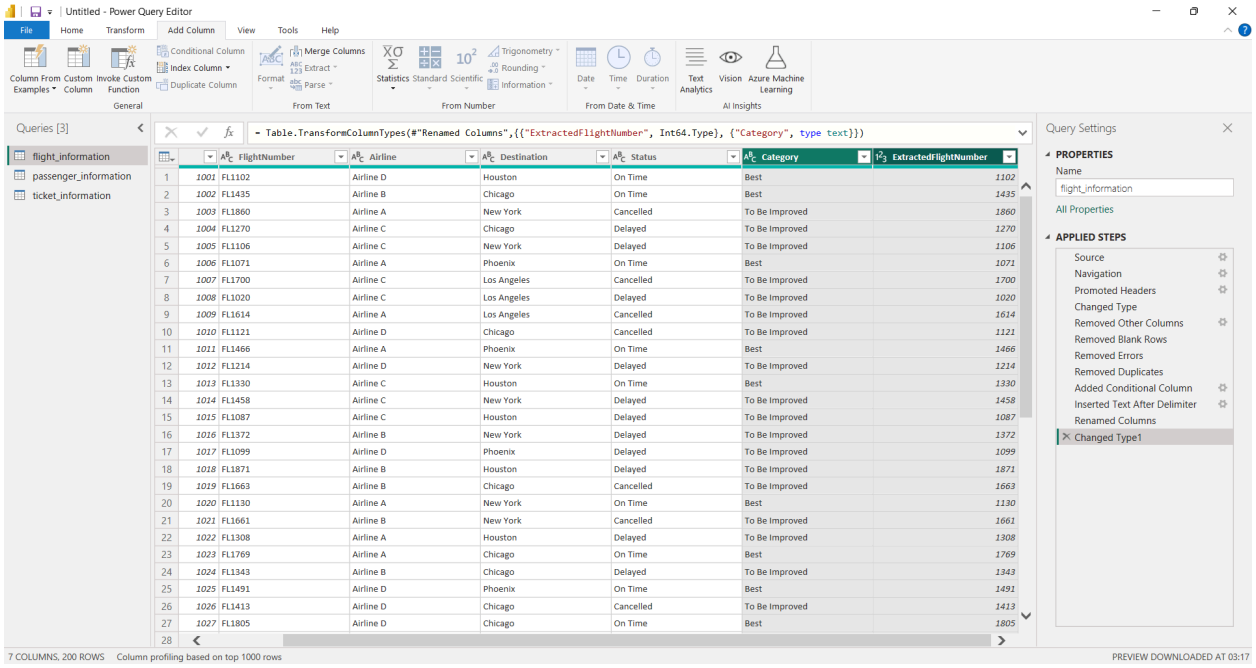
Established relationships between datasets using `FlightID` as the primary key. Configured relationships as one-to-many cardinality for `Flight_Information`,

`Passenger_Information`, and `Ticket_Information`. Verified the integrity of data flow in the model.



Task 3: Enhanced Data Insights

Created a conditional column classifying flights as "Best" or "To Be Improved" based on status. Used the "Column from Examples" feature to extract numeric parts from `FlightNumber`.



Task 4: DAX Calculations

Created DAX formulas for:

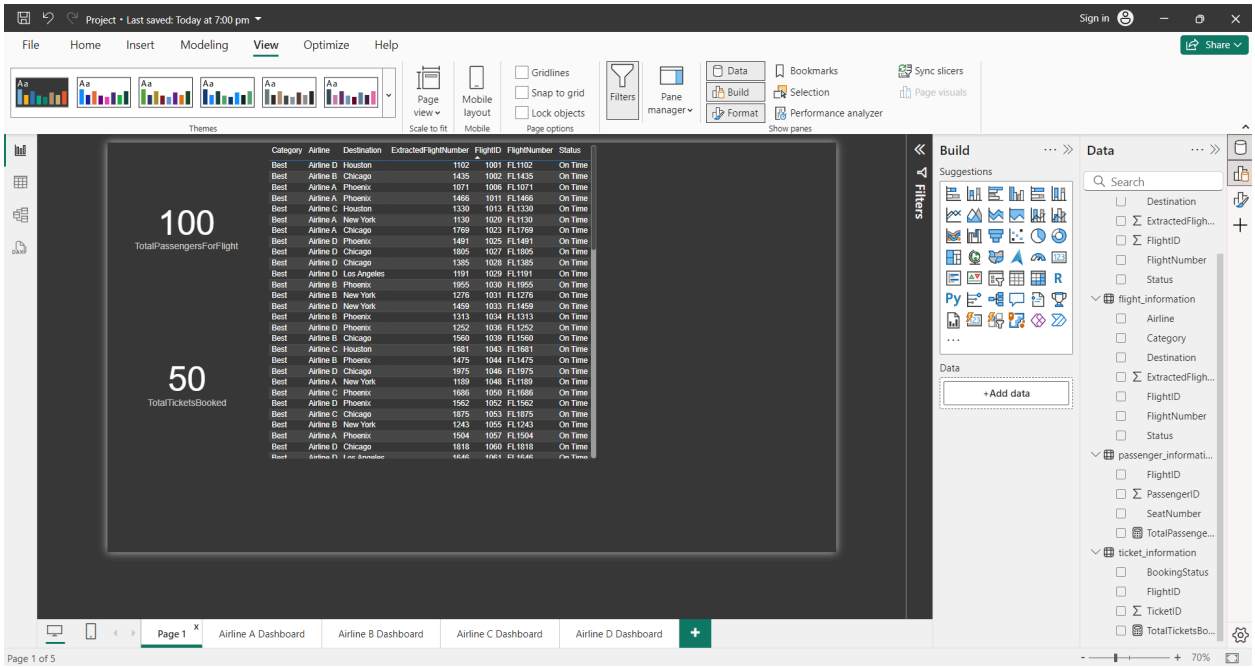
```
TotalPassengersForFlight =
COUNTROWS(DISTINCT(passenger_information))
```

Total Tickets Booked:

```
TotalTicketsBooked = COUNTROWS(ticket_information)
```

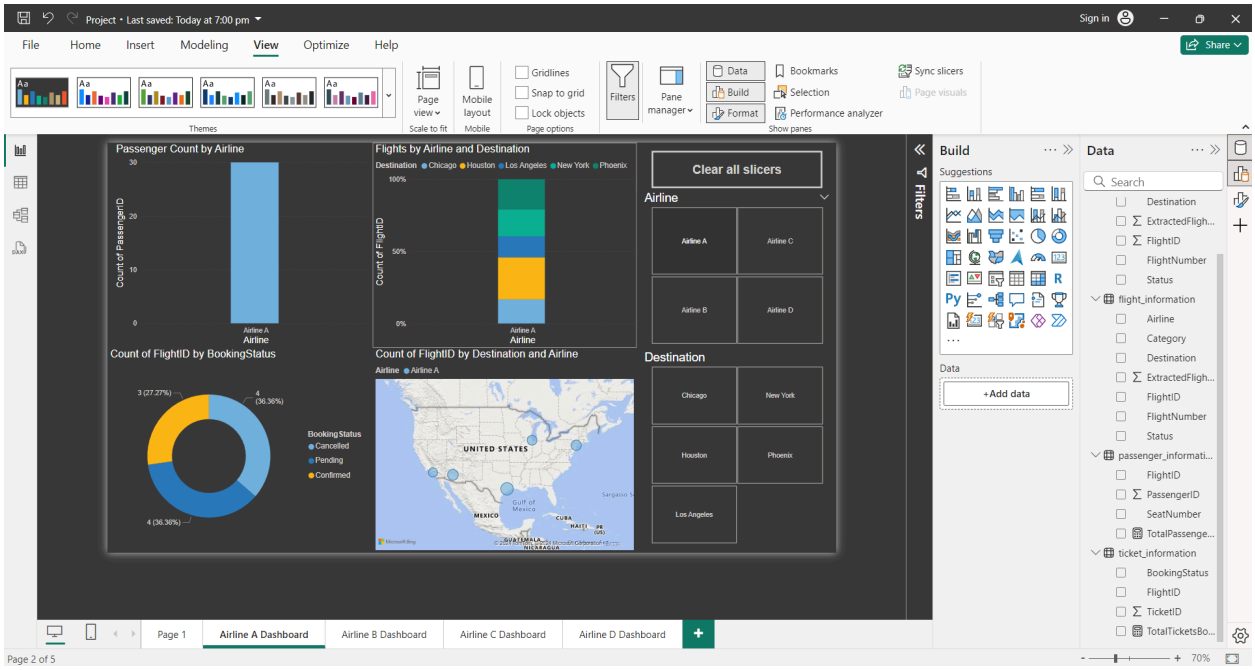
Filtered Table for Best Flights:

```
BestFlightsTable = FILTER(flight_information,
flight_information[Category] = "Best")
```



Task 5: Visualization and Interactivity

Developed visuals for passenger count by airline, ticket booking statuses, and flights by destination. Added slicers for dynamic filtering by airline and destination.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Passenger Count by Airline
Count of PassengerID
Airline
Airline A
Flights by Airline and Destination
Destination Chicago Houston Los Angeles New York Phoenix
Count of FlightID
100%
50%
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Clear all slicers
Airline
Airline A
Airline C
Airline B
Airline D
Destination
Chicago
New York
Houston
Phoenix
Los Angeles
Count of FlightID by BookingStatus
3 (27.27%)
4 (36.36%)
4 (36.36%)
BookingStatus
Cancelled
Pending
Confirmed
Count of FlightID by Destination and Airline
Airline Airline A
UNITED STATES
MEXICO
Gulf of Mexico
CUBA
HAITI
GUATEMALA
NICARAGUA
Filters
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Airline B Dashboard
Airline C Dashboard
Airline D Dashboard
Page 2 of 5
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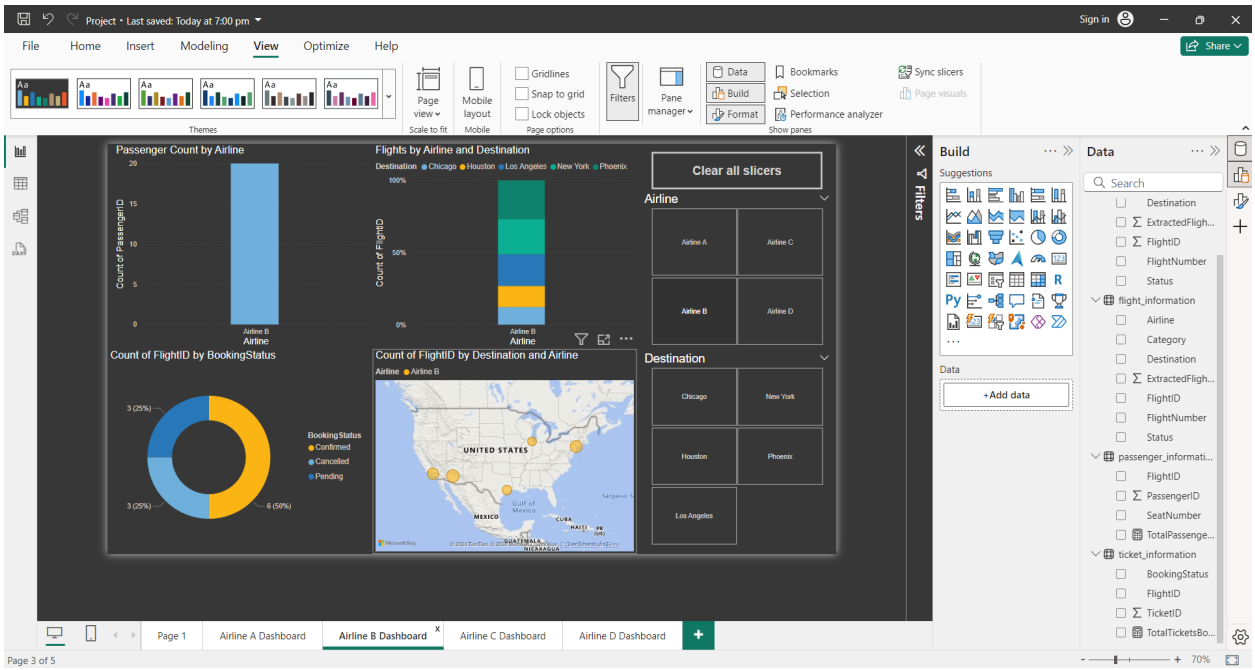
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Passenger Count by Airline
Count of PassengerID
Airline
Airline B
Flights by Airline and Destination
Destination Chicago Houston Los Angeles New York Phoenix
Count of FlightID
100%
50%
0%
Clear all slicers
Airline
Airline A
Airline C
Airline B
Airline D
Destination
Chicago
New York
Houston
Phoenix
Los Angeles
Count of FlightID by BookingStatus
3 (25%)
3 (25%)
6 (50%)
BookingStatus
Confirmed
Cancelled
Pending
Count of FlightID by Destination and Airline
Airline Airline B
UNITED STATES
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Gulf of Mexico
CUBA
HAITI
GUATEMALA
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Airline D Dashboard
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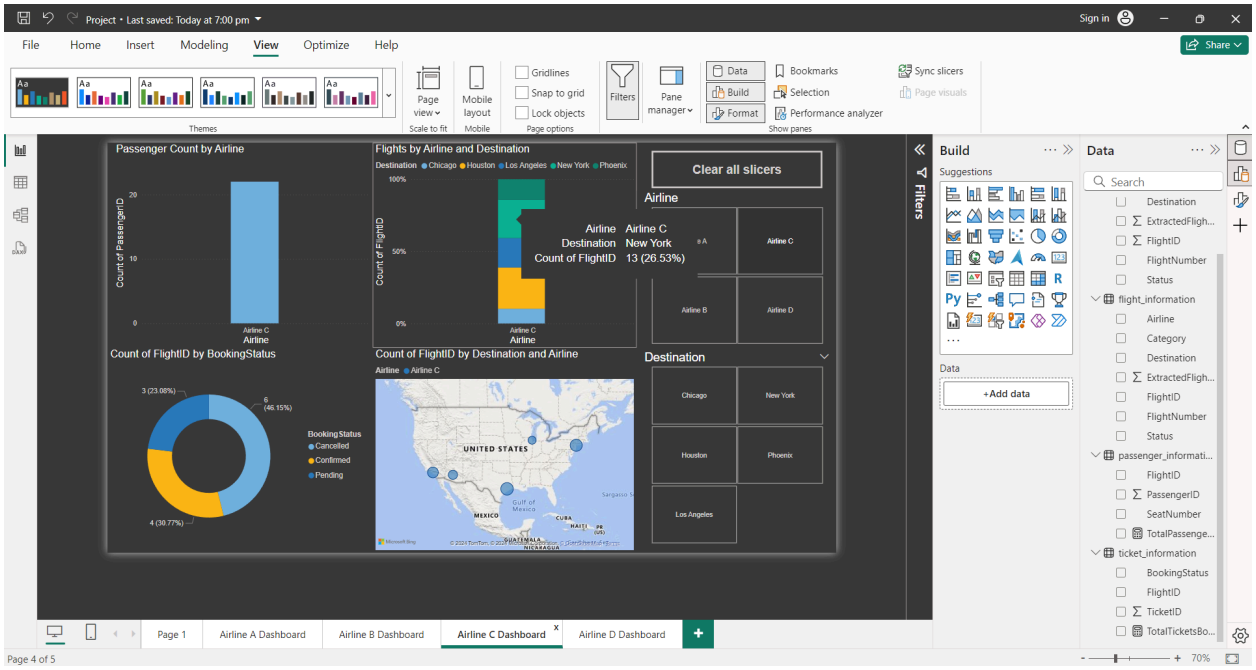
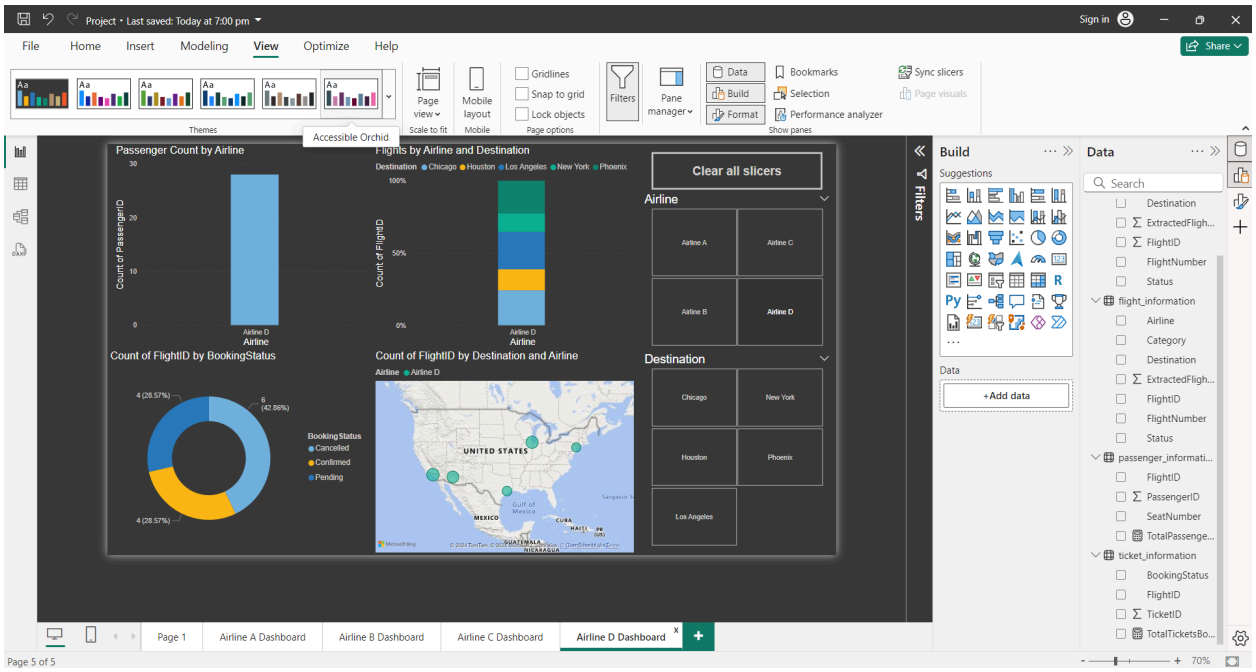




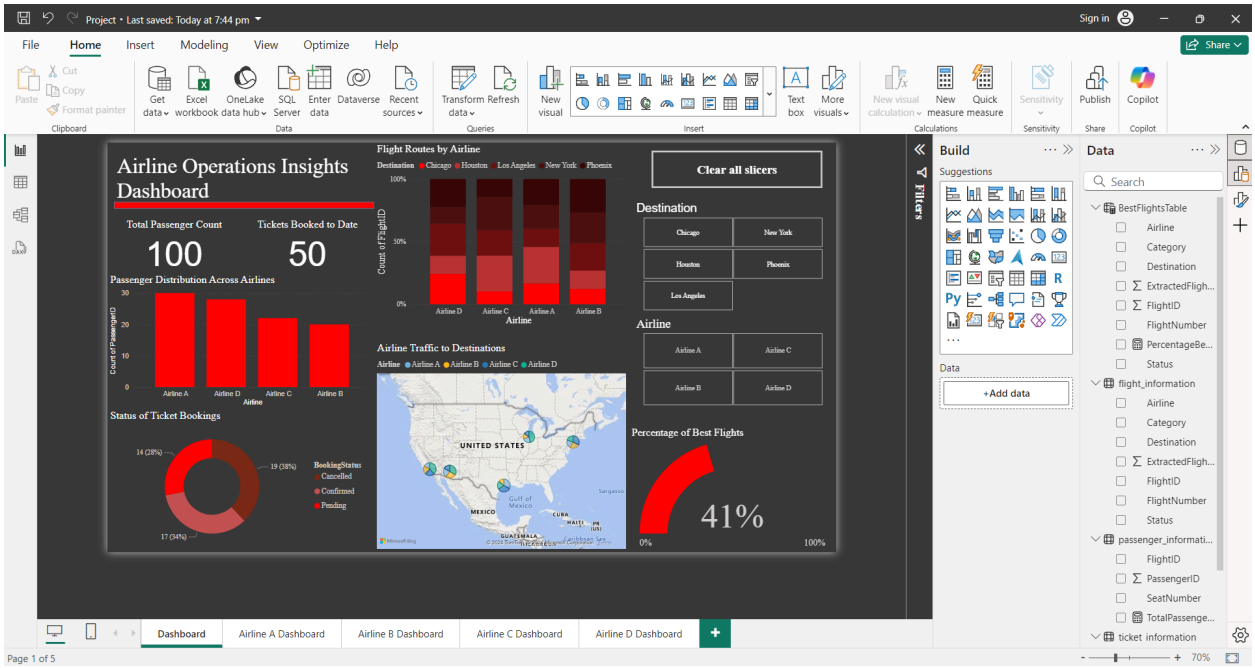
Task 6: Dashboard and RLS

Designed a dashboard with KPIs, including total passengers, tickets booked, and a gauge visual showing the percentage of "Best" flights:

```
PercentageBestFlights = DIVIDE(
    COUNTROWS(FILTER(Flight_Information, Flight_Information[Category] = "Best")),
    COUNTROWS(Flight_Information),
    0
)
```

Then Convert it into percentage format

Configured RLS for Airline A and scheduled a 5 PM daily refresh.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Tickets Booked to Date
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Flight Routes by Airline
Clear all slicers
Destination
Chicago
New York
Houston
Phoenix
Los Angeles
Airline
Airline A
Airline C
Airline D
Airline B
Airline Traffic to Destinations
Status of Ticket Bookings
Percentage of Best Flights
41%
Build
Suggestions
Data
+Add data
Search
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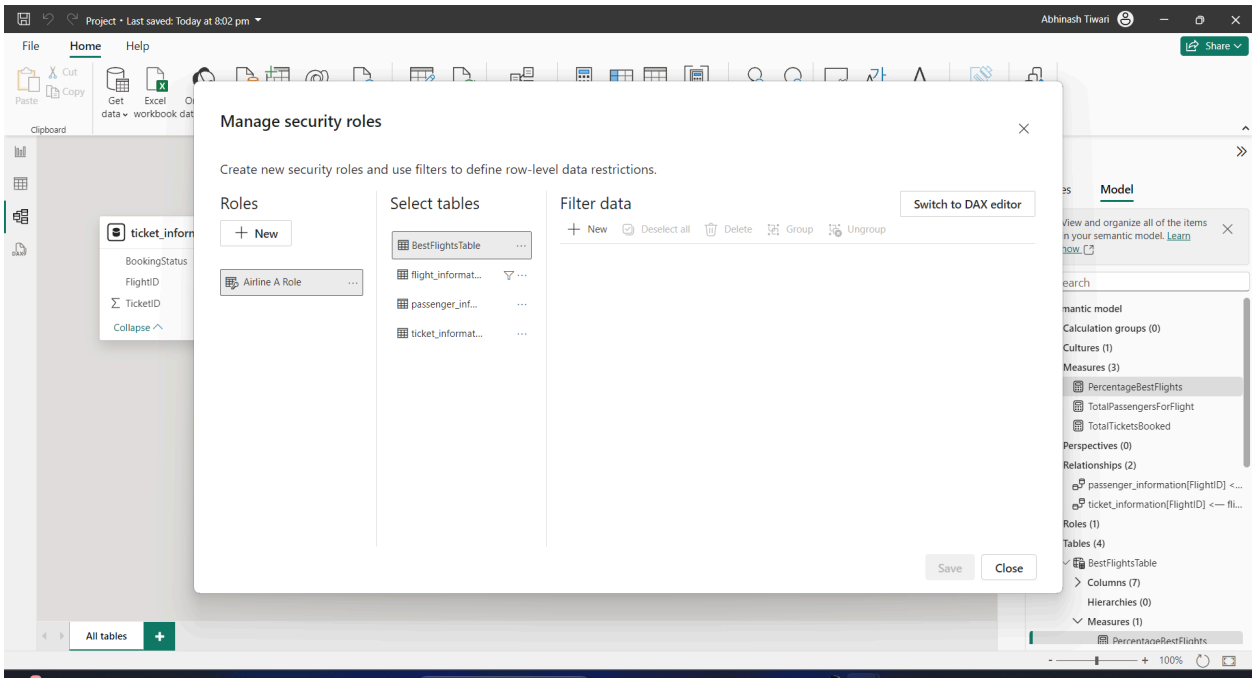
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Create new security roles and use filters to define row-level data restrictions.
Roles
New
Airline A Role
Select tables
BestFlightsTable
flight_informat...
passenger_inf...
ticket_informat...
Filter data
Switch to DAX editor
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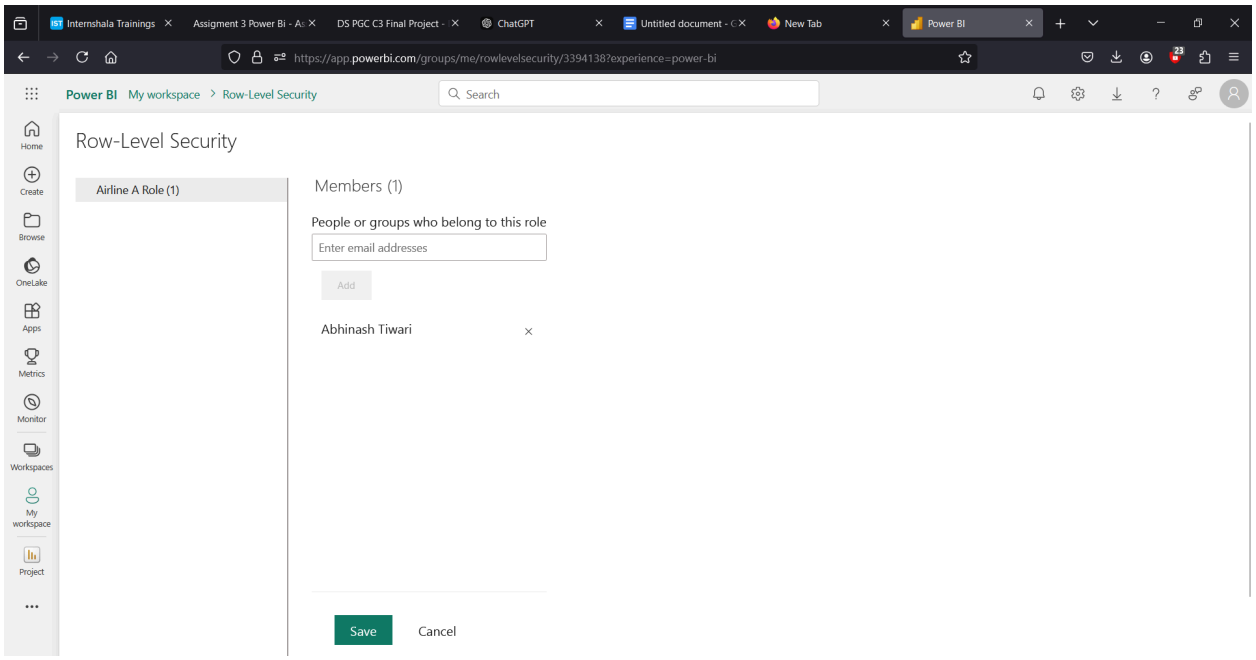
Deselect all
Delete
Group
Ungroup
Save
Close
Model
All tables
100%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Monitor
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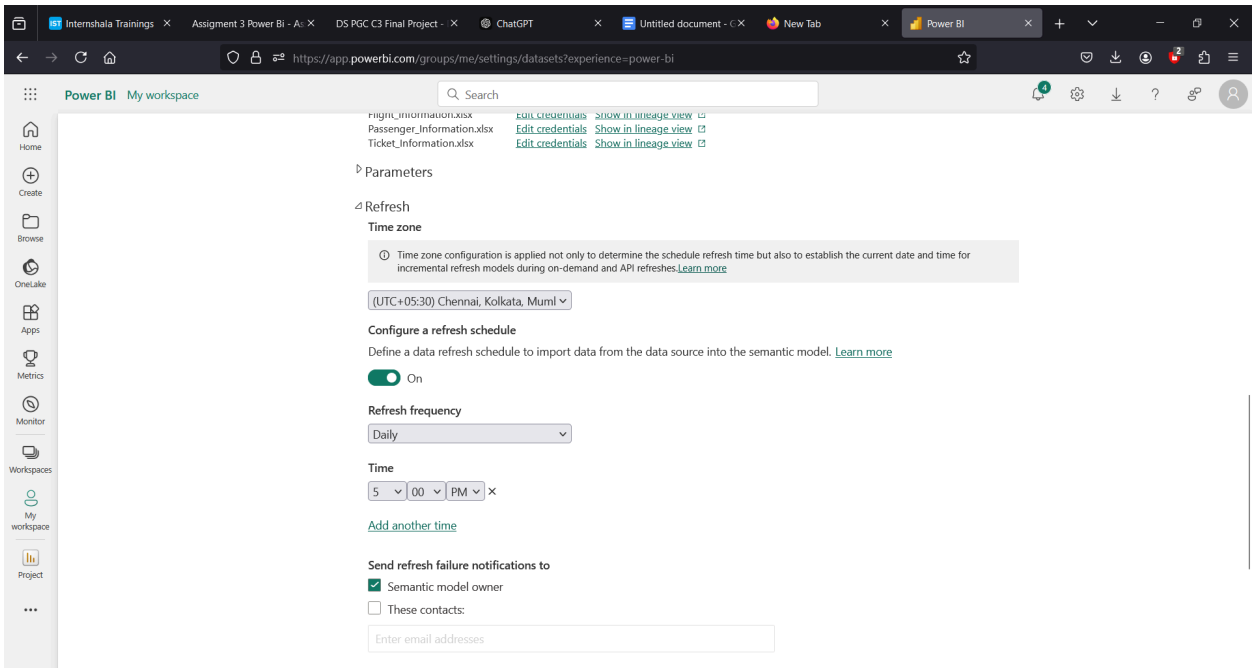
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Passenger_Information.xlsx
Edit credentials
Show in lineage view
Ticket_Information.xlsx
Edit credentials
Show in lineage view
Parameters
Refresh
Time zone
Time zone configuration is applied not only to determine the schedule refresh time but also to establish the current date and time for incremental refresh models during on-demand and API refreshes.Learn more
(UTC+05:30) Chennai, Kolkata, Muml
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
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Add another time
Send refresh failure notifications to
Semantic model owner
These contacts:
Enter email addresses