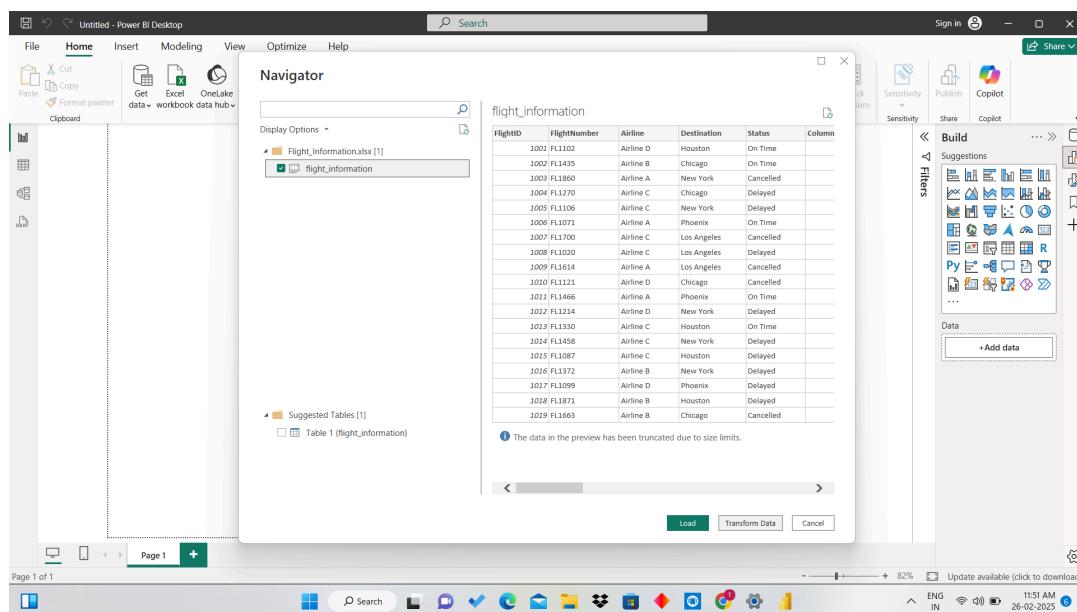
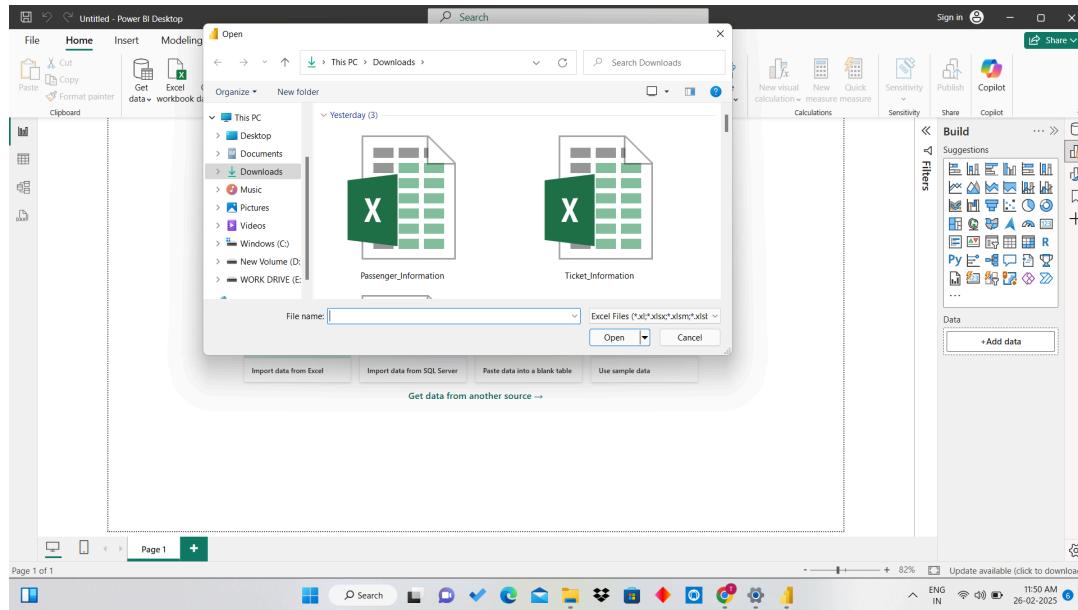


# Power Bi Project

## 1st Task

To clean the data first i go to the power bi selected the option for extract excel data the sect the option for transform data.



- After that it opens a power query in that i simply opened the remaining file from the new source option in the home tab.

The screenshot shows the Power Query Editor interface. In the center, there's a preview window for the 'Ticket\_Information' file, which contains a grid of data. The main table in the editor has 26 columns and 28 rows. The 'APPLIED STEPS' pane on the right lists the 'Changed Type' step. The status bar at the bottom indicates 'PREVIEW DOWNLOADED AT 11:51 AM' and the date '26-02-2025'.

- After that i simply delete the null values from all given data by selecting the option remove column from given tables.

The screenshot shows the Power Query Editor after removing columns. The table now has only three columns: 'PassengerID', 'FlightID', and 'SeatNumber'. The 'APPLIED STEPS' pane on the right shows the 'Removed Columns' step. The status bar at the bottom indicates 'PREVIEW DOWNLOADED AT 11:51 AM' and the date '26-02-2025'.

The screenshot shows the Microsoft Power Query Editor interface. The ribbon at the top includes File, Home, Transform, Add Column, View, Tools, and Help. The Home tab is selected. The left sidebar lists three queries: flight\_information, passenger\_information, and ticket\_information. The main area displays a table titled "TicketID" with columns FlightID, BookingStatus, and TicketID. The table contains 50 rows of data. The right side features a "Query Settings" pane with sections for Properties (Name: ticket\_information) and Applied Steps (Source, Navigation, Promoted Headers, Changed Type, Removed Columns). A status bar at the bottom indicates "3 COLUMNS, 50 ROWS" and "Column profiling based on top 1000 rows".

	FlightID	BookingStatus	TicketID
1	5001	Pending	5001
2	5002	Confirmed	5002
3	5003	Cancelled	5003
4	5004	Cancelled	5004
5	5005	Cancelled	5005
6	5006	Pending	5006
7	5007	Pending	5007
8	5008	Cancelled	5008
9	5009	Cancelled	5009
10	5010	Cancelled	5010
11	5011	Pending	5011
12	5012	Cancelled	5012
13	5013	Cancelled	5013
14	5014	Confirmed	5014
15	5015	Confirmed	5015
16	5016	Pending	5016
17	5017	Cancelled	5017
18	5018	Cancelled	5018
19	5019	Confirmed	5019
20	5020	Pending	5020
21	5021	Confirmed	5021
22	5022	Confirmed	5022
23	5023	Confirmed	5023
24	5024	Confirmed	5024
25	5025	Cancelled	5025
26	5026	Cancelled	5026
27	5027	Confirmed	5027
28	5028	Pending	5028

Untitled - Power Query Editor

File Home Transform Add Column View Tools Help

Close & Apply New Recent Sources Enter Data Refresh Preview Advanced Editor Properties Manage Columns Remove Columns Keep Rows Remove Rows Group By Split Column Replace Values Data Type: Text Use First Row as Headers Merge Queries Append Queries Text Analytics Vision Combine Files Azure Machine Learning Transform Combine AI Insights

Queries [3]

flight\_information

passenger\_information

ticker\_information

flightID FlightNumber Airline Destination Status

	FlightID	FlightNumber	Airline	Destination	Status
1	1001	FL1102	Airline D	Houston	On Time
2	1002	FL1455	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	FL700	Airline C	Los Angeles	Cancelled
8	1008	FL1020	Airline C	Los Angeles	Delayed
9	1009	FL1014	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

5 COLUMNS, 200 ROWS Column profiling based on top 1000 rows PREVIEW DOWNLOADED AT 11:56 AM 26-02-2025

Query Settings

PROPERTIES

Name: flightInformation  
All Properties

APPLIED STEPS

Source Navigation Promoted Headers Changed Type Removed Columns

- After the to I selected all the data from respective columns and and selected the remove duplicates option from home tab remove rows dragged down.

Screenshot of Power Query Editor showing the "passenger\_information" query. The table contains 100 rows with columns: PassengerID, FlightID, and SeatNumber. The "Applied Steps" pane shows a step for "Removed Duplicates".

PassengerID	FlightID	SeatNumber
1	2194	18A
2	2157	24D
3	1241	30B
4	1066	17E
5	1085	19D
6	1184	10A
7	1082	10A
8	1115	20E
9	1197	34E
10	1047	2E
11	1153	43C
12	1184	48C
13	1010	47A
14	1056	23C
15	1080	16D
16	1109	40D
17	1005	25C
18	1119	33C
19	1083	27E
20	1118	52B
21	1065	19C
22	1140	5B
23	1177	28B
24	1011	22E
25	1085	6A
26	1026	5A
27	1063	12B
28	1086	46B

Screenshot of Power Query Editor showing the "ticket\_information" query. The table contains 50 rows with columns: TicketID, FlightID, and BookingStatus. The "Applied Steps" pane shows a step for "Removed Duplicates".

TicketID	FlightID	BookingStatus
1	2178	Pending
2	5002	2078 Confirmed
3	5003	1117 Cancelled
4	5004	1220 Cancelled
5	5005	1137 Cancelled
6	5006	1162 Pending
7	5007	2076 Pending
8	5008	1035 Cancelled
9	5009	2001 Cancelled
10	5010	1040 Cancelled
11	5011	1064 Pending
12	5012	1103 Cancelled
13	5013	1065 Cancelled
14	5014	1064 Confirmed
15	5015	1093 Confirmed
16	5016	1072 Pending
17	5017	1011 Cancelled
18	5018	1105 Cancelled
19	5019	2104 Confirmed
20	5020	1080 Pending
21	5021	1030 Confirmed
22	5022	1035 Confirmed
23	5023	1165 Confirmed
24	5024	1005 Confirmed
25	5025	1083 Cancelled
26	5026	1123 Cancelled
27	5027	2078 Confirmed
28	5028	2154 Pending

Screenshot of Power Query Editor showing the "ticket\_information" query. The table contains 50 rows with columns: TicketID, FlightID, and BookingStatus. The "Applied Steps" pane shows a step for "Removed Duplicates".

TicketID	FlightID	BookingStatus
1	5001	2178 Pending
2	5002	1078 Confirmed
3	5003	1117 Cancelled
4	5004	1110 Cancelled
5	5005	1117 Cancelled
6	5006	1162 Pending
7	5007	2076 Pending
8	5008	1035 Cancelled
9	5009	2001 Cancelled
10	5010	1040 Cancelled
11	5011	1064 Pending
12	5012	1110 Cancelled
13	5013	1060 Cancelled
14	5014	1064 Confirmed
15	5015	1091 Confirmed
16	5016	1072 Pending
17	5017	1011 Cancelled
18	5018	1105 Cancelled
19	5019	1014 Confirmed
20	5020	1060 Pending
21	5021	1030 Confirmed
22	5022	1035 Confirmed
23	5023	1165 Confirmed
24	5024	1005 Confirmed
25	5025	1081 Cancelled
26	5026	1121 Cancelled
27	5027	2078 Confirmed
28	5028	2154 Pending

## Task 2

- To create the relationship I simply load the data in power bi with using the option close and apply.
- After that in power bi i simply go to the model view and create a relationship by using FlightID as the key.

The screenshot shows the Power BI Desktop interface with the 'Data' tab selected. In the center, three tables are listed: 'ticket\_information', 'flight\_information', and 'passenger\_information'. A relationship is visible between 'ticket\_information' and 'flight\_information' based on the 'FlightID' column. Another relationship is visible between 'flight\_information' and 'passenger\_information' based on the 'FlightID' column. The 'Model' tab is also visible in the ribbon.

## Task 3

- For adding a conditional column i simply go to the the transform tab from home tab and selected that option and opened power query.
- After that I simply selected the flight information data and select the conditional column option to add column names flight remarks for getting information about which is best flight and which flight needs to be improved.
- In that conditional column dialog box I simply put the values “best” for “on time” and “to be improved” for cancelled & delayed flights.

The screenshot shows the Power Query Editor with the 'Transform' tab selected. A table named 'flight\_information' is currently being edited. An 'Add Conditional Column' dialog box is open, allowing the creation of a new column ('Flight Remarks') based on the existing 'Status' column. The dialog lists three conditions: if 'Status' equals 'On Time', then 'Best'; if 'Status' equals 'Delayed', then 'To Be Improved'; and if 'Status' equals 'Cancelled', then 'To Be Improved'. The 'APPLIED STEPS' pane on the right side of the editor shows the step 'Removed Duplicates'.

The screenshot shows the Power Query Editor interface with the 'flight\_information' query selected. In the 'Flight Remarks' column, a conditional formula is being applied:

```
= Table.AddColumn(#"Removed Duplicates", "Flight Remarks", each if [Status] = "On Time" then "Best" else if [Status] = "Delayed" then "To Be Improved" else [Status])
```

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

- Source
- Navigation
- Promoted Headers
- Changed Type
- Removed Columns
- Removed Duplicates
- Added Conditional Column**

- For extraction only the flight number from the given column I simply just go to the Column from Examples option .
- After selection i give the example in the new column.
- After selecting okay it automatically fills out.
- After that I changed the column name to Extracted Flight Number.

The screenshot shows the Power Query Editor interface with the 'flight\_information' query selected. A new column 'FlightNumber' is being added using the 'Column From Examples' option. The formula used is:

```
Text.AfterDelimiter([FlightNumber], 'L')
```

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

- Source
- Navigation
- Promoted Headers
- Changed Type
- Removed Columns
- Removed Duplicates
- Column From Examples**

Untitled - Power Query Editor

Queries [3]

flight\_information

passenger\_information

ticket\_information

From Text

From Number

From Date & Time

AI Insights

Query Settings

Properties

Name: flight\_information

Applied Steps

Source, Navigation, Promoted Headers, Changed Type, Removed Column, Removed Duplicates, Added Conditional Column, Inserted Text After Delimiter, Renamed Columns

	FlightNumber	Airline	Destination	Status	Flight Remarks	Extracted Flight Number
1	1001 FL1102	Airline D	Houston	On Time	Best	1102
2	1002 FL1435	Airline B	Chicago	On Time	Best	1435
3	1003 FL1860	Airline A	New York	Cancelled	To Be Improved	1860
4	1004 FL1270	Airline C	Chicago	Delayed	To Be Improved	1270
5	1005 FL1106	Airline C	New York	Delayed	To Be Improved	1106
6	1006 FL1071	Airline A	Phoenix	On Time	Best	1071
7	1007 FL1700	Airline C	Los Angeles	Cancelled	To Be Improved	1700
8	1008 FL1020	Airline C	Los Angeles	Delayed	To Be Improved	1020
9	1009 FL1614	Airline A	Los Angeles	Cancelled	To Be Improved	1614
10	1010 FL1121	Airline D	Chicago	Cancelled	To Be Improved	1121
11	1011 FL1466	Airline A	Phoenix	On Time	Best	1466
12	1012 FL1214	Airline D	New York	Delayed	To Be Improved	1214
13	1013 FL1330	Airline C	Houston	On Time	Best	1330
14	1014 FL1458	Airline C	New York	Delayed	To Be Improved	1458
15	1015 FL1087	Airline C	Houston	Delayed	To Be Improved	1087
16	1016 FL1372	Airline B	New York	Delayed	To Be Improved	1372
17	1017 FL1099	Airline D	Phoenix	Delayed	To Be Improved	1099
18	1018 FL1871	Airline B	Houston	Delayed	To Be Improved	1871
19	1019 FL1663	Airline B	Chicago	Cancelled	To Be Improved	1663
20	1020 FL1130	Airline A	New York	On Time	Best	1130
21	1021 FL1661	Airline B	New York	Cancelled	To Be Improved	1661
22	1022 FL1308	Airline A	Houston	Delayed	To Be Improved	1308
23	1023 FL1769	Airline A	Chicago	On Time	Best	1769
24	1024 FL1343	Airline B	Chicago	Delayed	To Be Improved	1343
25	1025 FL1491	Airline D	Phoenix	On Time	Best	1491
26	1026 FL1413	Airline D	Chicago	Cancelled	To Be Improved	1413
27	1027 FL1805	Airline D	Chicago	On Time	Best	1805
28						

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

PREVIEW DOWNLOADED AT 11:51 AM

ENG IN 01:12 PM 26-02-2025

#### Task 4

- I simply go to the modeling tab in that i go to the new measure then i insert the formula.

Total Passengers = COUNTROWS(FILTER(passenger\_information,  
passenger\_information[FlightID] = SELECTEDVALUE(passenger\_information[FlightID])))

Untitled - Power BI Desktop

File Home Help

Paste Cut Copy Get Excel OneLake SQL Enter Dataview Recent sources Transform Refresh Data Data Sources Relationships New measure column New table Calculations Manage roles as Security Q&A Language setup Sensitivity Publish Share

Clipboard

Tables Model

Search

Properties

ticket\_information

flight\_information

BookingStatus

FlightID

Σ TicketID

Collapsible

Flight Remarks

Airline

Destination

Extracted Flight Number

FlightID

1 Total Passengers = COUNTROWS(FILTER(passenger\_information, passenger\_information[FlightID] = SELECTEDVALUE(passenger\_information[FlightID])))

FlightID

PassengerID

SeatNumber

Total Passengers

ticket\_information

ENG IN 01:55 PM 26-02-2025

- For total tickets booked i simply go to the modeling tab and select the ticket information table and click od on new measure and write down the dax formula in the formula bar.

**Total Tickets Booked =**

**COUNTROWS(ticket\_information)**

The screenshot shows the Power BI Desktop interface. In the center, there is a large number visual displaying '50' with the text 'Total Tickets Booked' below it. To the right of the visual is a 'Suggest a visual' pane with various chart and table suggestions. On the far right is the 'Build' pane, which contains sections for 'Suggestions', 'Filters', and 'Fields'. The 'Fields' section lists several data sources: flight\_information, passenger\_information, and ticket\_information. Under 'ticket\_information', the 'TicketID' column is selected, indicated by a green checkmark.

- For filtering I simply go to the table view and in that I select the flight remarks column.
- I simply go to the report view, select the table visuals and in that i simply select all columns.
- After that in the filters pane I simply select the “best” option from the flight remarks column to filter out the data.

The screenshot shows the Power BI Desktop interface with a table view. The table has columns: Flight Remarks, Airline, Destination, FlightID, Status, FlightNumber, and Extracted Flight Number. A filters pane is open on the right side, showing a list of filters applied to the 'Flight Remarks' column. The 'Best' filter is selected, with a count of 82. Other filter options include 'To Be Improved' with 118 items and 'Require single selection'. Below the filters, there are additional filter panes for 'Airline', 'Destination', 'FlightID', 'FlightNumber', 'Status', and 'Extracted Flight Number', each set to '(All)'. The 'Build' pane is also visible on the right.

## Task 5

1

- For passenger count by airline i simply go to the model view and select the new measure option then write down the dax formula.

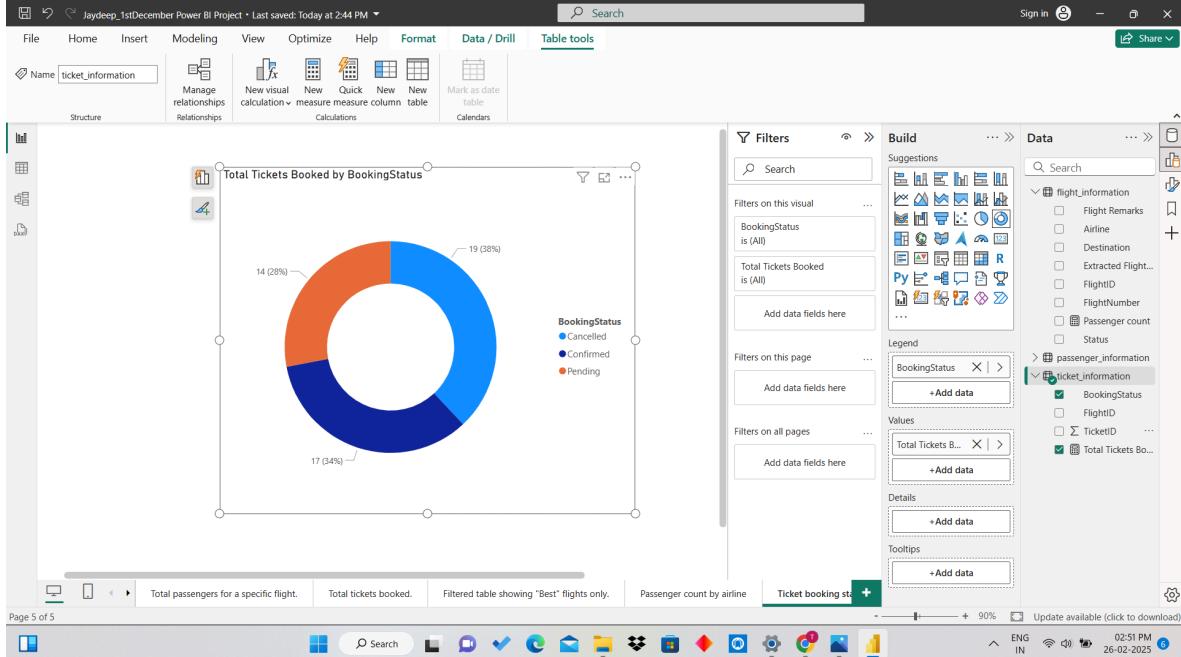
Passenger count = **COUNTROWS(flight\_information)**

The screenshot shows the Power BI Model view. It displays three tables: **ticket\_information**, **flight\_information**, and **passenger\_information**. The **flight\_information** table is currently selected. In the query editor at the top, there is a DAX formula: **1 Passenger count = COUNTROWS(flight\_information)**. On the right side, the **Properties** pane is open, showing the **Model** tab. Under the **Tables** section, the **Passenger count** measure is selected, and its properties are displayed. The status bar at the bottom right shows the date and time as 26-02-2025 02:45 PM.

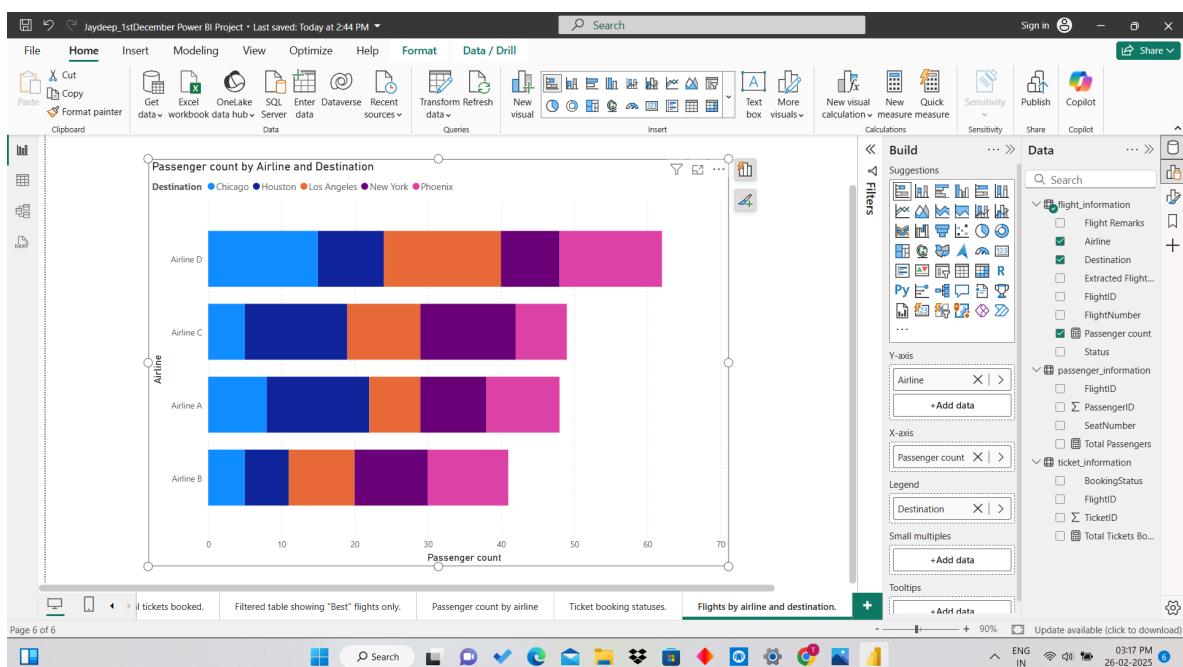
- After that for visuals i simply go to the report view and then i select the table visual and add the new measured passenger count and airline columns.

The screenshot shows the Power BI Report view. A table visual is present on the canvas, displaying data with two columns: **Passenger count** and **Airline**. The **Passenger count** column contains values 62, 49, 48, and 200, corresponding to Airline D, C, A, and B respectively. The **Airline** column lists the same four airlines. The Power BI ribbon is visible at the top, and the Data pane on the right shows the selected measures (**Passenger count**) and columns (**Passenger count**, **Airline**). The status bar at the bottom right shows the date and time as 26-02-2025 02:46 PM.

- For the next visuals i simply selected the donut chart visual for visualization i add booking status in legend whereas new measured total tickets value in values.

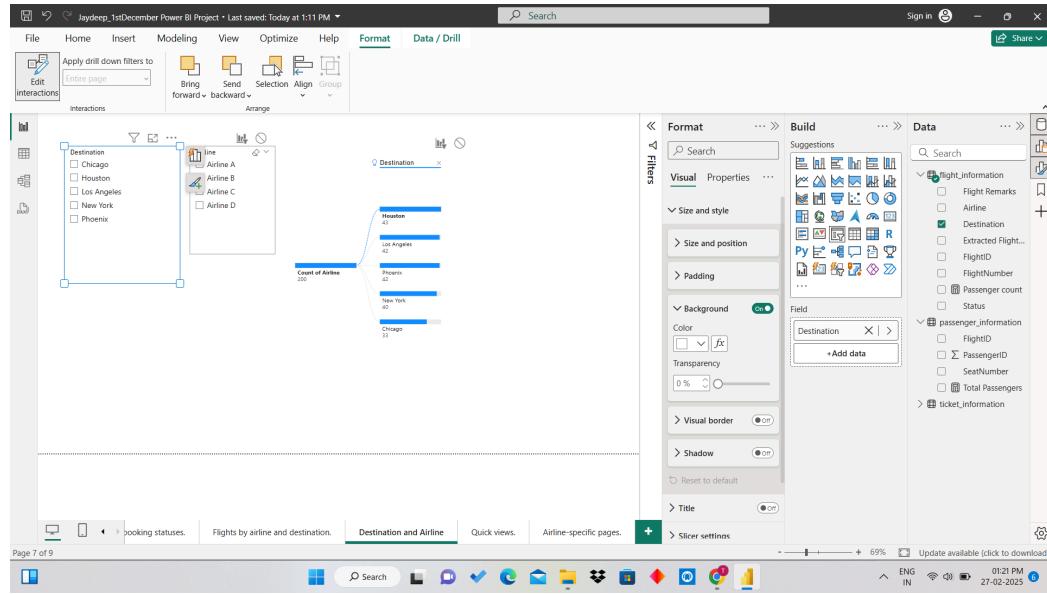


- For the Flights by airline and destination I simply go to the report view and select the stacked bar chart in that I put airline column in the y axis whereas in x axis I put passenger count and in the legend I simply put the destination column.

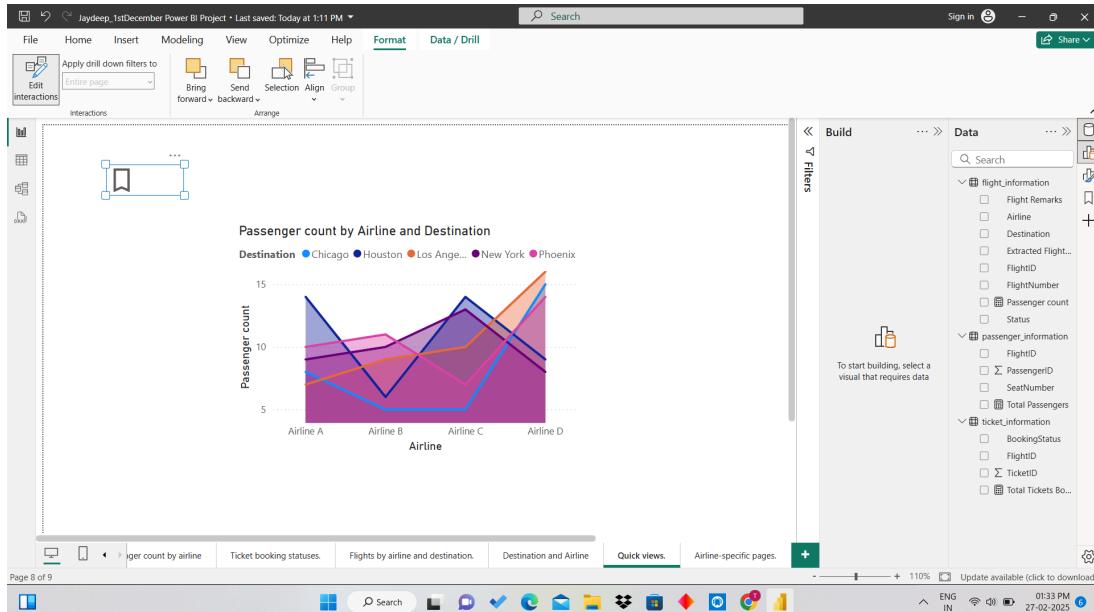


2

- For interactive features I choose the decomposition tree as well as slicer in the report view and add the destination and airline column.



- For quick views i simply go for bookmarks and add area charts for visualisation i simply add destination in legend whereas airline in x axis and passenger count in y axis.



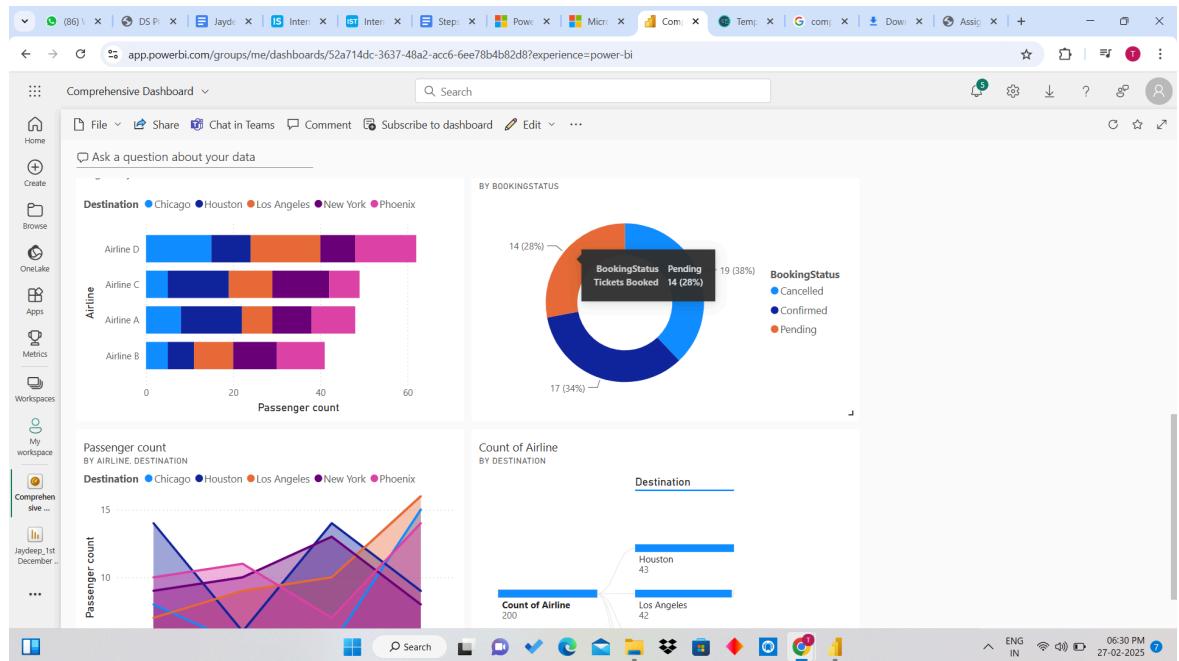
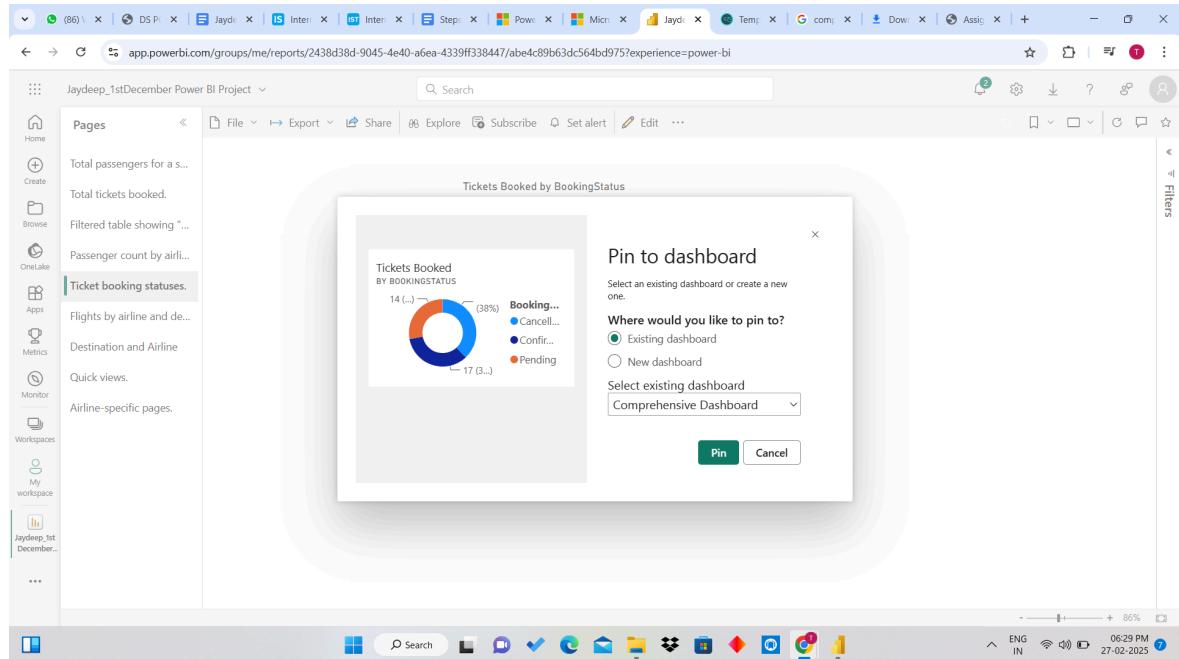
- I simply add a page navigator to access airline specific pages.

The screenshot shows the Microsoft Power BI desktop interface. A report titled "Jaydeep\_1stDecember Power BI Project" is open. The ribbon menu at the top includes File, Home, Insert, Modeling, View, Optimize, and Help. The Insert tab is selected, showing various visual options like New page, New visual, and Pages. A table visual titled "Passenger count by airline" is displayed, showing data for Airline A (48), Airline B (41), Airline C (49), and Airline D (62), with a total of 200 passengers. To the right of the table is a "Build" pane containing a "Data" section with a tree view of data sources: flight\_information, passenger\_information, and ticket\_information. Below the table is a "Pages" section with tabs for "Total passengers for a specific..." and "Airline-specific pages.". The status bar at the bottom indicates "Page 9 of 9".

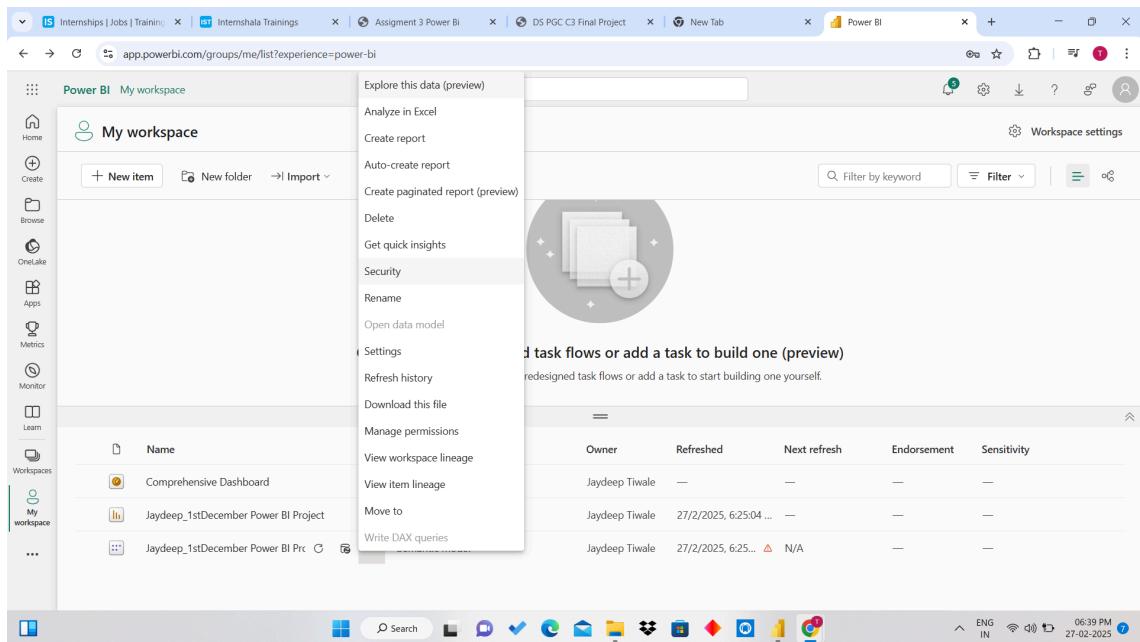
## Task 6

- To make comprehensive dashboard I simply go the the power bi service and create my workspace in that I insert file of my project in that report I simply go to the three dot besides edit option in that I selected the pin to dashboard after that I simply selected the visuals from every page and pinned it down to the dashboard. I gave it a name as comprehensive dashboard.

The screenshot shows the Microsoft Power BI service workspace. The left sidebar includes options for Home, Create, Browse, Apps, Metrics, Monitor, Learn, and Workspaces. The main area is titled "My workspace" and shows a "Create dashboard" dialog box. The dialog box has a "Dashboard name" field containing "comprehensive dashboard" and two buttons: "Create" and "Cancel". Below the dialog is a message: "No build one (preview) start building one yourself." To the right of the dialog is a table listing projects: "Jaydeep\_1stDecember Power BI Project" (Report, Owner: Jaydeep Tiwale, Refreshed: 27/2/2025, 6:25:04...) and "Jaydeep\_1stDecember Power BI Project" (Semantic model, Owner: Jaydeep Tiwale, Refreshed: 27/2/2025, 6:25:04... N/A). The status bar at the bottom indicates "Page 9 of 9".



- After that for RLS I go to the security and in dax I just put the required value .



The screenshot shows the 'Manage security roles' dialog in Power BI desktop. It displays a list of roles (including 'Untitled') and a 'Select tables' section where multiple tables are listed. A specific DAX filter expression, `1 [Airline] = "A"`, is applied to the 'flight\_information' table. The preview pane on the right shows the results of this filter. The status bar at the bottom indicates the file was last saved at 6:23 PM on 27-02-2025.

- After that for scheduled refresh I simply go to my workspace then into the settings then to the power bi settings then after that to the semantic models after that in the refresh option i selected the time to the daily 5:00 PM.

Choose from predesigned task flows or add a task to build one (preview)  
Select from one of Microsoft's predesigned task flows or add a task to start building one yourself.

Name	Type	Task	Owner	Refreshed	Next refresh
Comprehensive Dashboard	Dashboard	—	Jaydeep Tiwale	—	—
Jaydeep_1stDecember Power BI Project	Report	—	Jaydeep Tiwale	27/2/2025, 6:25:04 PM	—
Jaydeep_1stDecember Power BI Project	Semantic model	—	Jaydeep Tiwale	27/2/2025, 6:25:04 PM	N/A

Settings for Jaydeep\_1stDecember Power BI Project  
[View semantic model](#)

Last refresh failed: 2/27/2025, 6:25:04 PM  
Scheduled refresh has been disabled. [Show details](#)

Refresh history

Semantic model description  
Describe the contents of this semantic model.  
500 characters left

Apply Discard

Gateway and cloud connections  
Data source credentials  
Parameters  
Refresh

The screenshot shows the Microsoft Edge browser with the following details:

- Address Bar:** app.powerbi.com/groups/me/settings/datasets/3974c4bc-9d89-4e63-af9a-33ea4e50aae?experience=power-bi
- Header:** Trial: 59 days left, with a refresh icon.
- Left Sidebar:** Home, Create, Browse, OneLake, Apps, Workspaces, My workspace, and a workspace named "jaydeep\_1st December".
- Main Content Area:**
  - Dataset List:** Flight\_Information.xlsx, Passenger\_Information.xlsx, and Ticket\_Information.xlsx. Each item has "Edit credentials" and "Show in lineage view" options.
  - Parameters:** A section titled "Parameters" is collapsed.
  - Refresh:** A section titled "Refresh" is expanded, showing "Time zone" set to "(UTC) Coordinated Universal Time".
    - A note states: "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." with a "Learn more" link.
  - Configure a refresh schedule:** A section where users can define a data refresh schedule to import data from the data source into the semantic model. It includes a toggle switch set to "On", a dropdown for "Refresh frequency" set to "Daily", and a time selector set to "5:00 PM". There is also a link "Add another time".
  - Send refresh failure notifications to:** A section with checkboxes for "Semantic model owner" (checked) and "These contacts:" (unchecked). An input field "Enter email addresses" is provided.
- Bottom Bar:** Includes the Windows Start button, a search bar, and various pinned icons like File Explorer, Mail, and Edge.
- System Tray:** Shows ENG IN, a signal strength icon, 27-02-2025, and a battery icon.