Data and Artificial Intelligence
Cyber Shujaa Program

Week 4 Assignment
Business Intelligence on Power BI

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Introduction

This week's assignment was mainly aimed at us developing hands-on experience in Business Intelligence using Power BI for Hotel Management and publishing our work on the cloud. Learning Power BI tool was amazing and a great learning experience.

The purpose of the assignment was for us to gain hands-on practice:

1. Understanding the Hotel business and client needs
2. Load Data
3. Transform Data
4. Build DAX
5. Visualize Dashboard
6. Publish your project as part of your portfolio collection

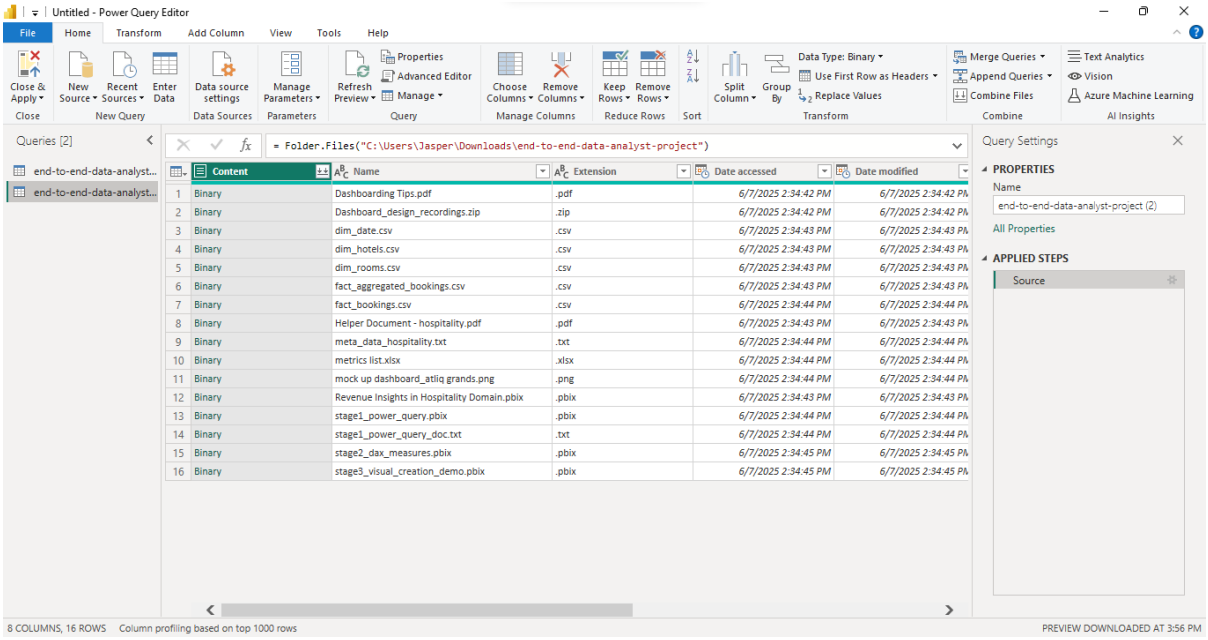
Assignment Link

Note: I had challenges Publishing the assignment as Power Bi needed a work email in publishing. I thus opted to share a public link from my github repository.

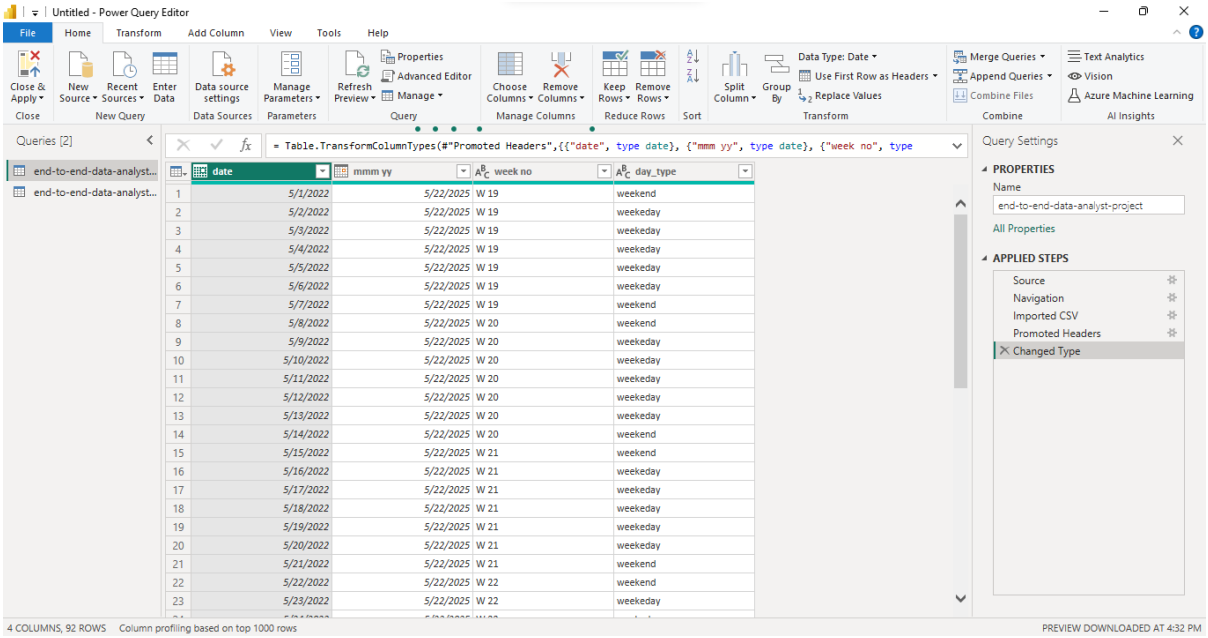
REPOSITORY LINK : GITHUB

Tasks Completed

First Step was for us to load and transform data from csv files;

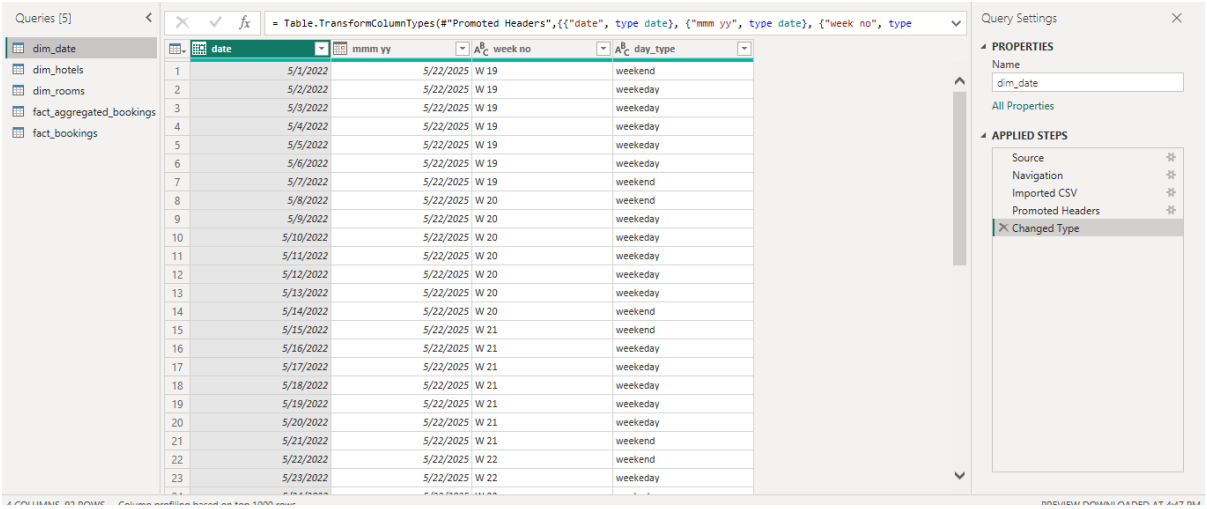


Expand file when I click binary for the dim_date.csv file



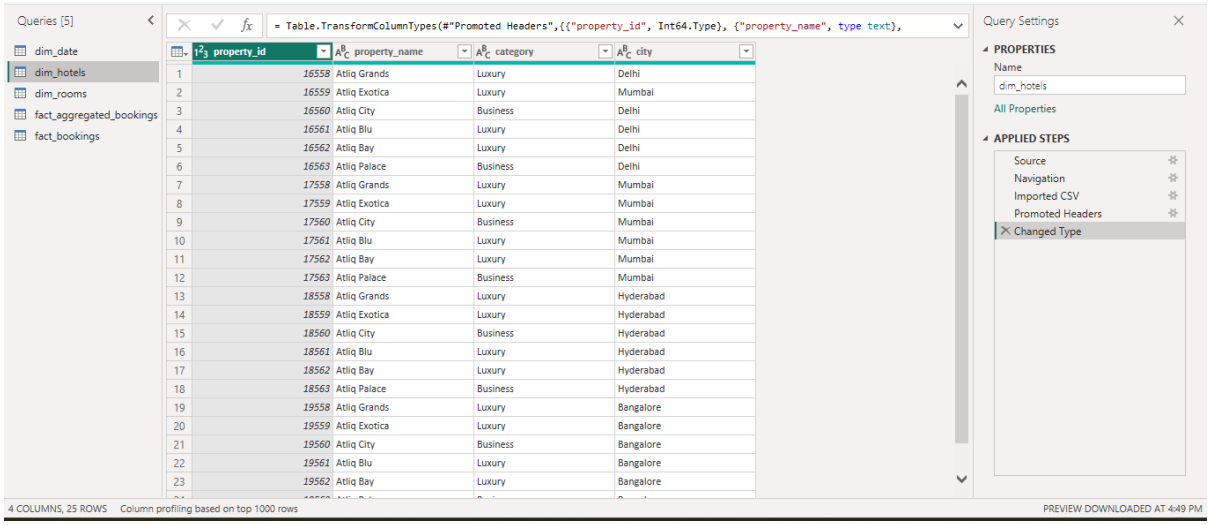
Load and Transform data

- dim_date



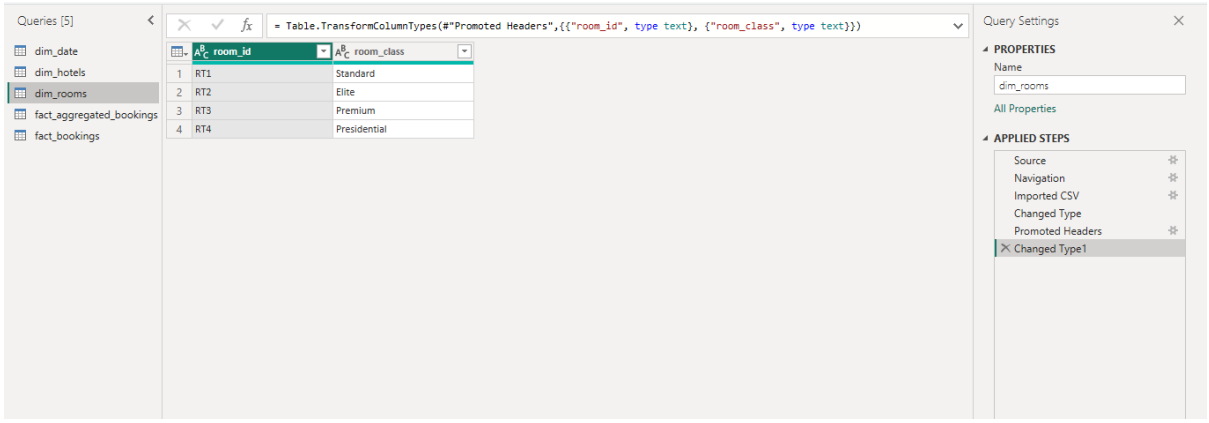
	date	mmm yy	week no	day_type
1	5/1/2022	5/22/2025	W 19	weekend
2	5/2/2022	5/22/2025	W 19	weekday
3	5/3/2022	5/22/2025	W 19	weekday
4	5/4/2022	5/22/2025	W 19	weekday
5	5/5/2022	5/22/2025	W 19	weekday
6	5/6/2022	5/22/2025	W 19	weekday
7	5/7/2022	5/22/2025	W 19	weekend
8	5/8/2022	5/22/2025	W 20	weekend
9	5/9/2022	5/22/2025	W 20	weekday
10	5/10/2022	5/22/2025	W 20	weekday
11	5/11/2022	5/22/2025	W 20	weekday
12	5/12/2022	5/22/2025	W 20	weekday
13	5/13/2022	5/22/2025	W 20	weekday
14	5/14/2022	5/22/2025	W 20	weekend
15	5/15/2022	5/22/2025	W 21	weekend
16	5/16/2022	5/22/2025	W 21	weekday
17	5/17/2022	5/22/2025	W 21	weekday
18	5/18/2022	5/22/2025	W 21	weekday
19	5/19/2022	5/22/2025	W 21	weekday
20	5/20/2022	5/22/2025	W 21	weekday
21	5/21/2022	5/22/2025	W 21	weekend
22	5/22/2022	5/22/2025	W 22	weekend
23	5/23/2022	5/22/2025	W 22	weekday

- dim_hotels



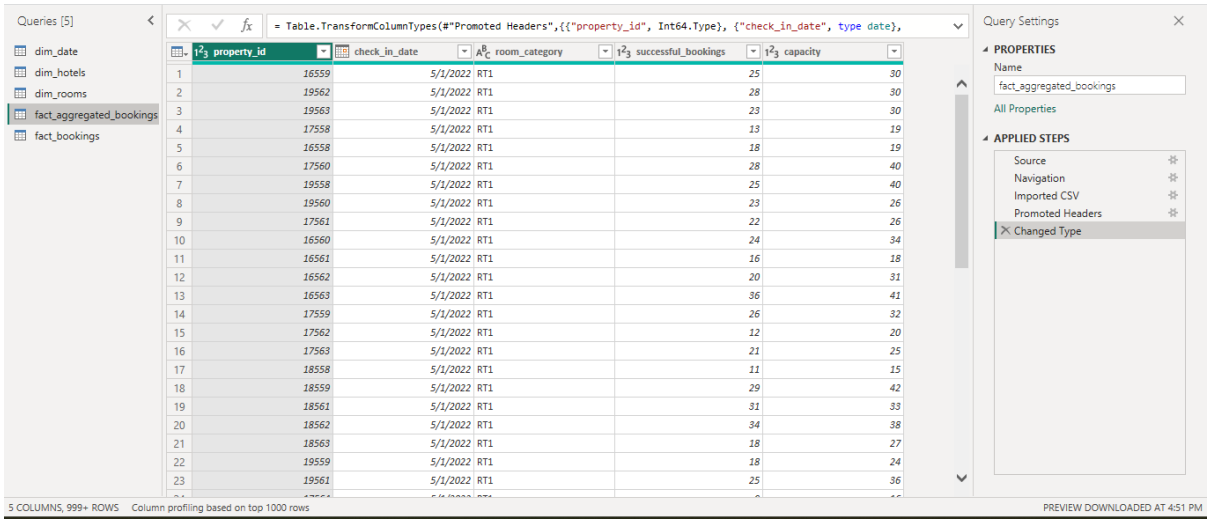
	property_id	property_name	category	city
1	16558	Atliq Grands	Luxury	Delhi
2	16559	Atliq Exotica	Luxury	Mumbai
3	16560	Atliq City	Business	Delhi
4	16561	Atliq Blu	Luxury	Delhi
5	16562	Atliq Bay	Luxury	Delhi
6	16563	Atliq Palace	Business	Delhi
7	17558	Atliq Grands	Luxury	Mumbai
8	17559	Atliq Exotica	Luxury	Mumbai
9	17560	Atliq City	Business	Mumbai
10	17561	Atliq Blu	Luxury	Mumbai
11	17562	Atliq Bay	Luxury	Mumbai
12	17563	Atliq Palace	Business	Mumbai
13	18558	Atliq Grands	Luxury	Hyderabad
14	18559	Atliq Exotica	Luxury	Hyderabad
15	18560	Atliq City	Business	Hyderabad
16	18561	Atliq Blu	Luxury	Hyderabad
17	18562	Atliq Bay	Luxury	Hyderabad
18	18563	Atliq Palace	Business	Hyderabad
19	19558	Atliq Grands	Luxury	Bangalore
20	19559	Atliq Exotica	Luxury	Bangalore
21	19560	Atliq City	Business	Bangalore
22	19561	Atliq Blu	Luxury	Bangalore
23	19562	Atliq Bay	Luxury	Bangalore

- dim_rooms

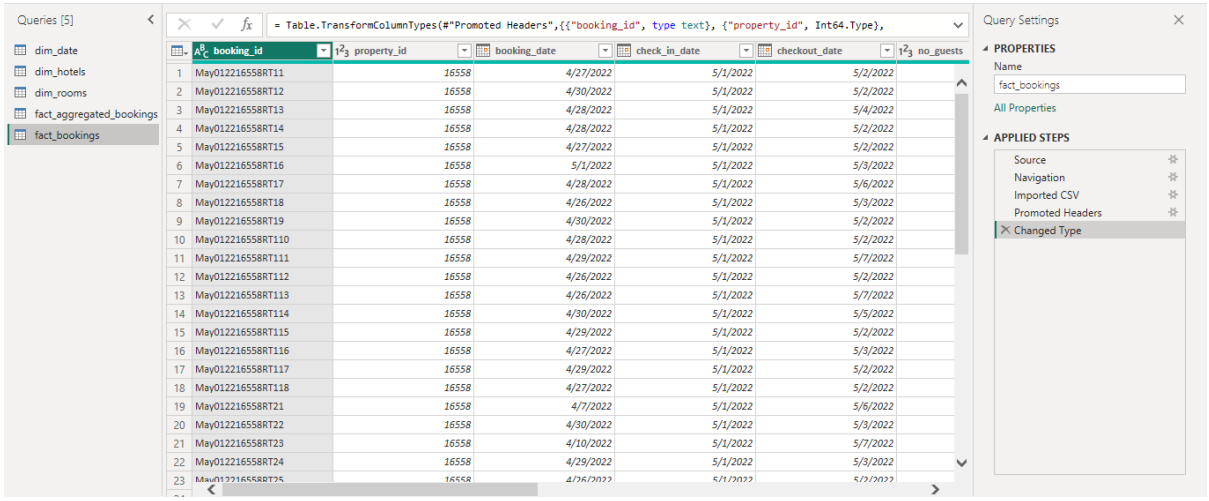


	room_id	room_class
1	RT1	Standard
2	RT2	Elite
3	RT3	Premium
4	RT4	Presidential

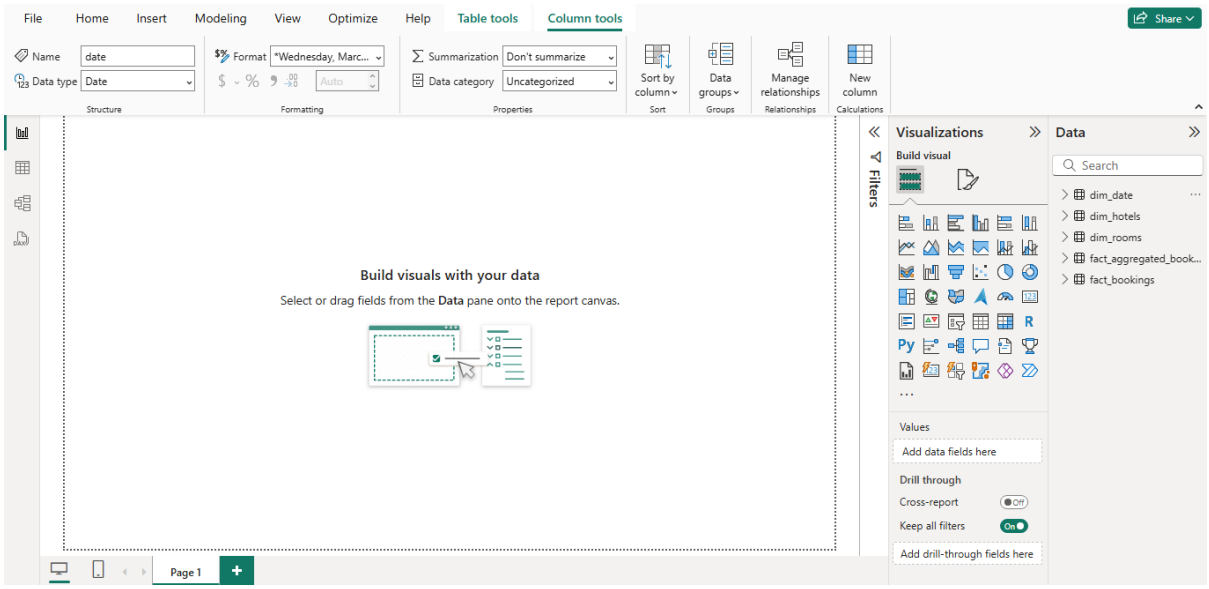
- fact_aggregated bookings



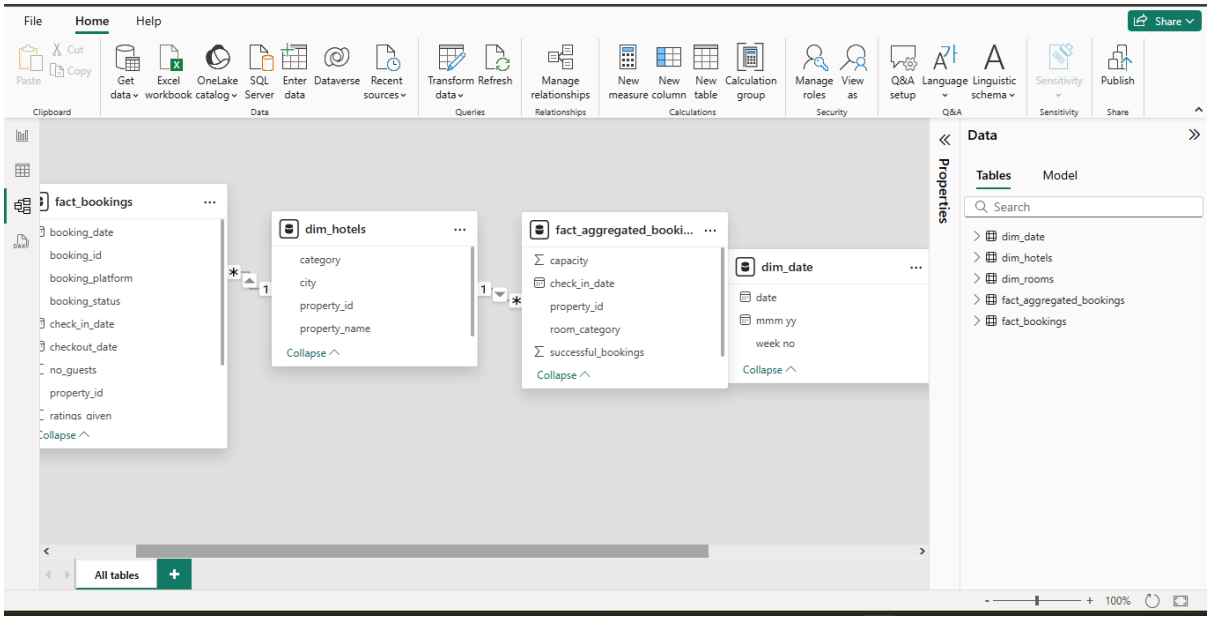
- fact_bookings



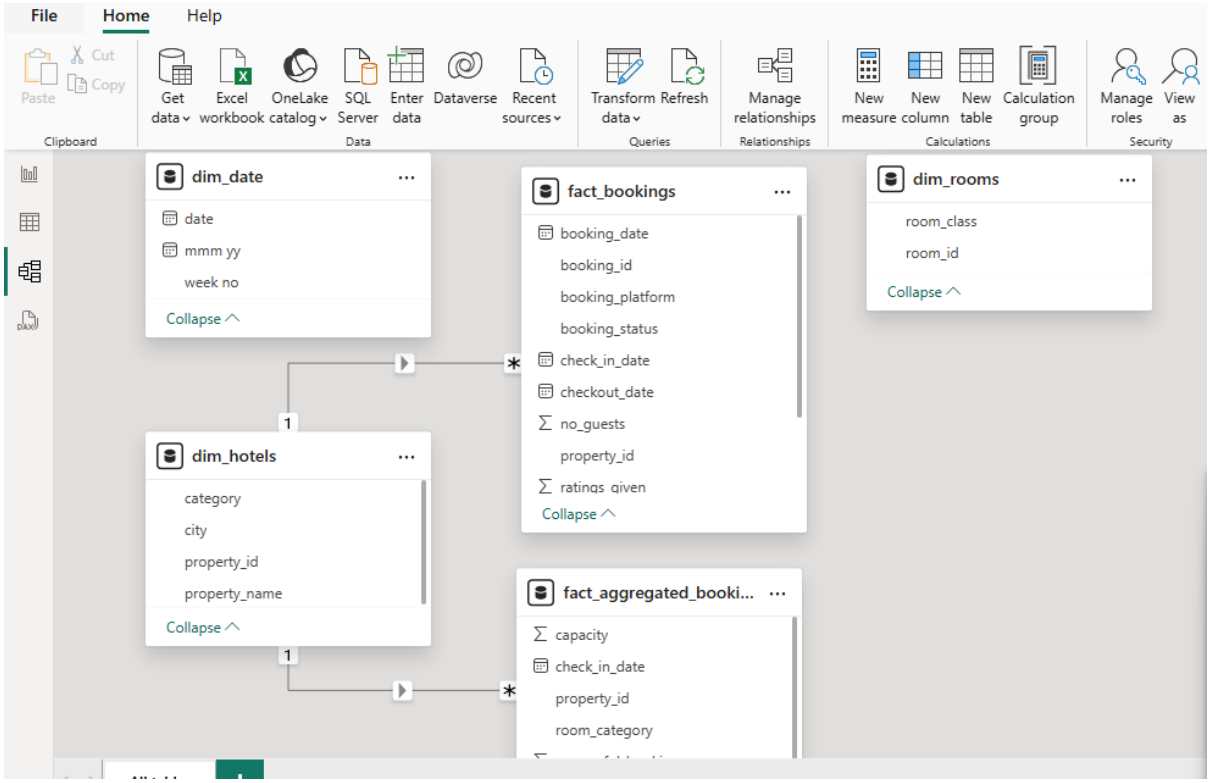
- Remove column day_type
- Close and apply changes on power query



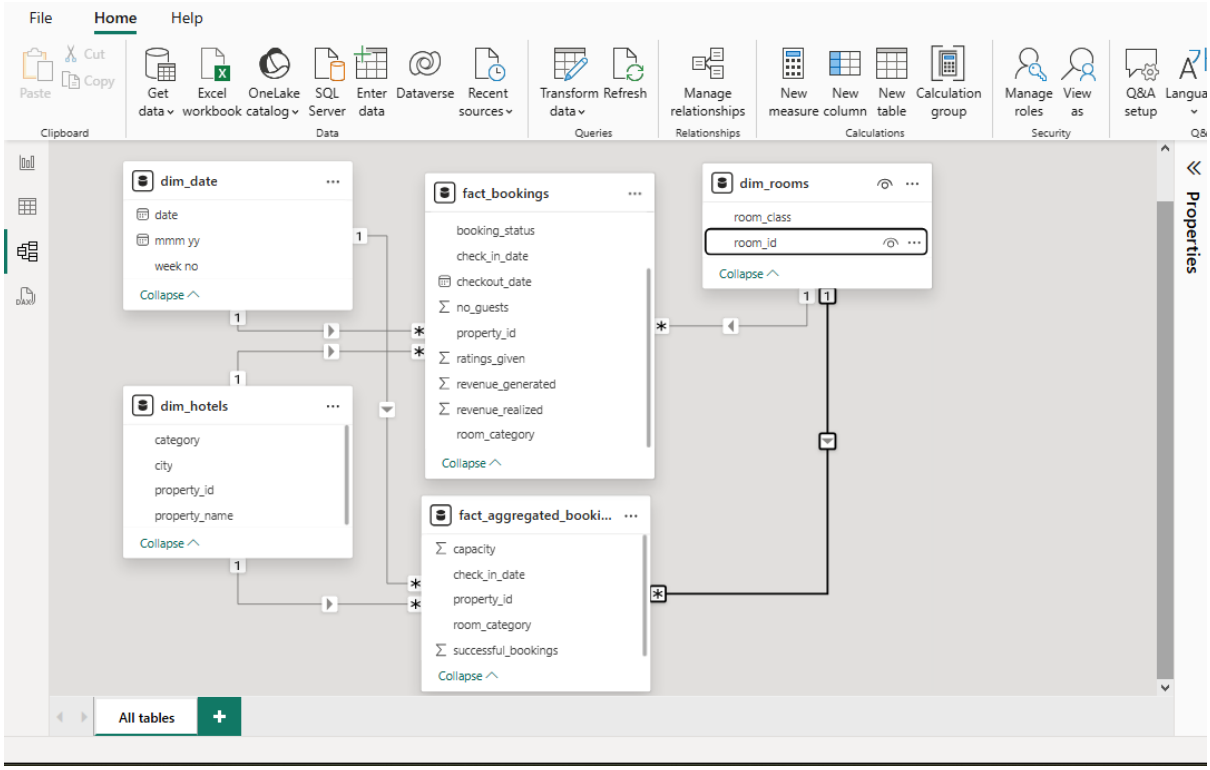
Navigate to data modelling tab to establish relationships



Arrange in star schema format

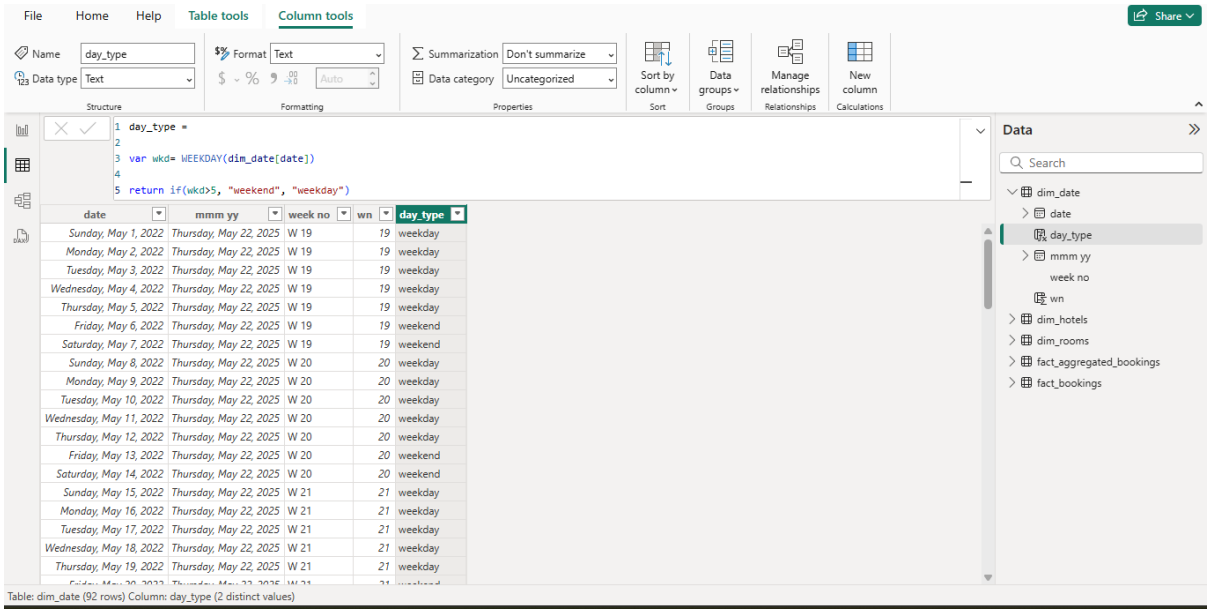


Establish relationships



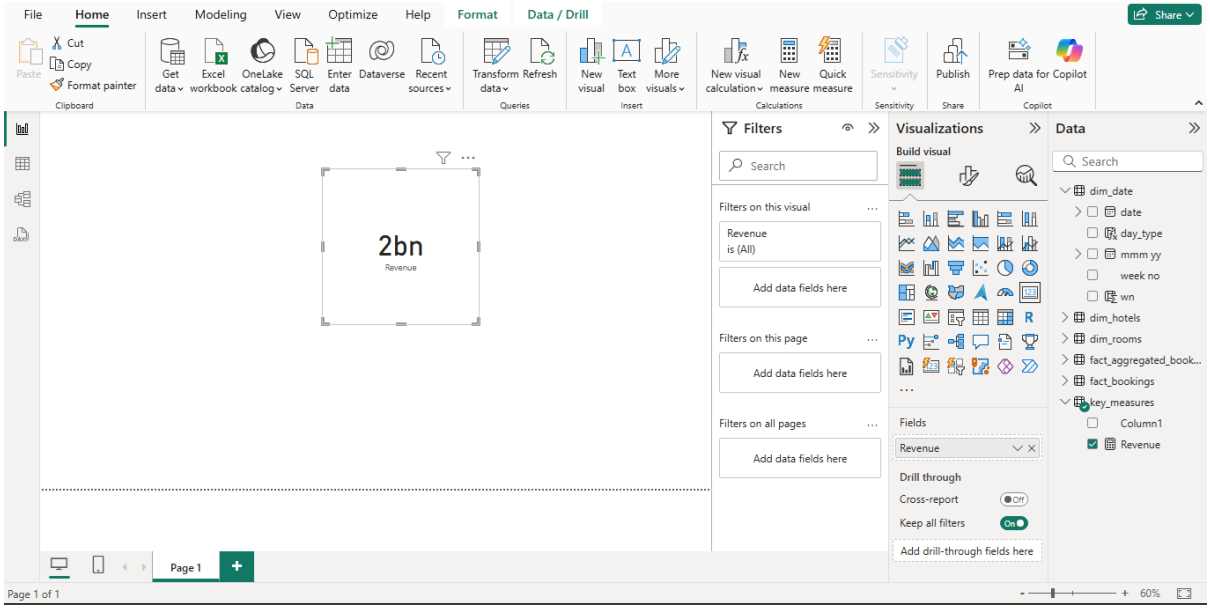
DAX-Data Analysis Expression

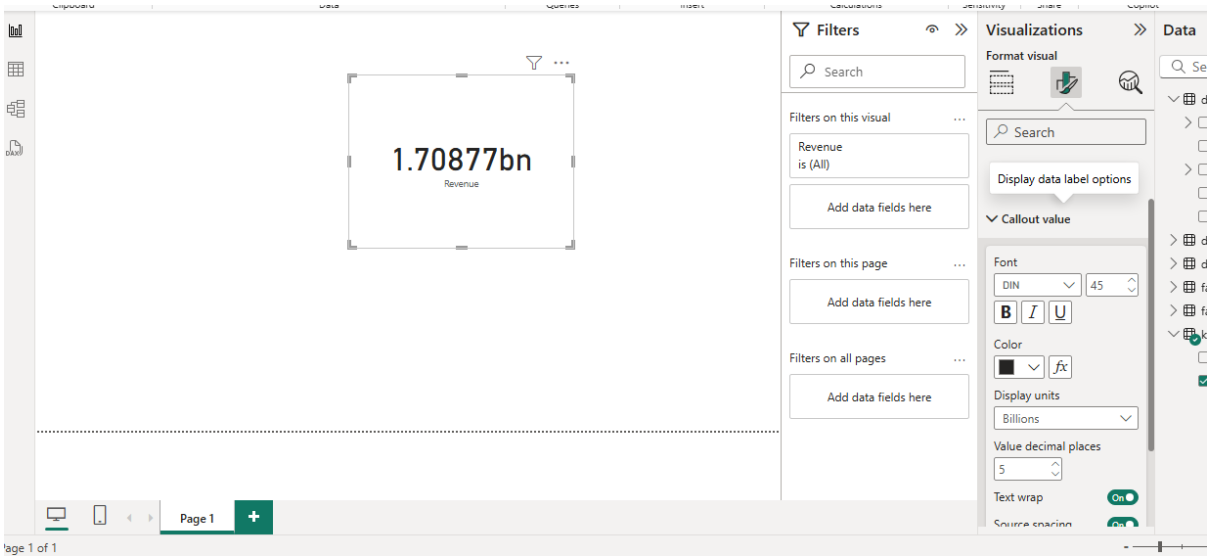
Create extra columns and derive calculated columns



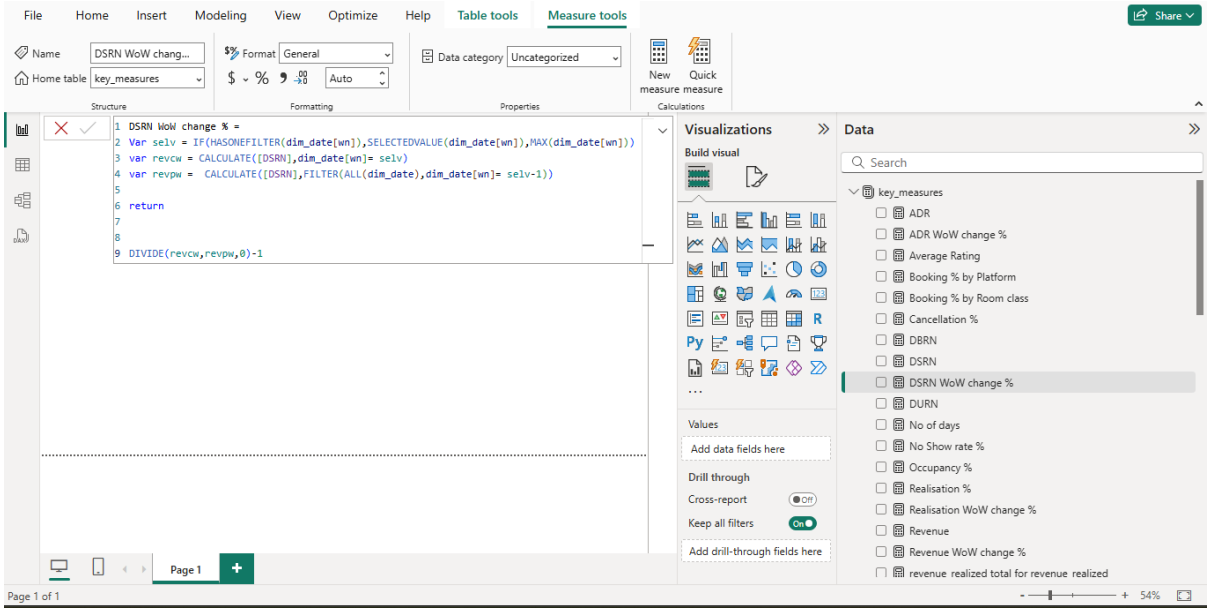
date	mmm yy	week no	wn	day_type
Sunday, May 1, 2022	Thursday, May 22, 2025	W 19	19	weekday
Monday, May 2, 2022	Thursday, May 22, 2025	W 19	19	weekday
Tuesday, May 3, 2022	Thursday, May 22, 2025	W 19	19	weekday
Wednesday, May 4, 2022	Thursday, May 22, 2025	W 19	19	weekday
Thursday, May 5, 2022	Thursday, May 22, 2025	W 19	19	weekday
Friday, May 6, 2022	Thursday, May 22, 2025	W 19	19	weekend
Saturday, May 7, 2022	Thursday, May 22, 2025	W 19	19	weekend
Sunday, May 8, 2022	Thursday, May 22, 2025	W 20	20	weekday
Monday, May 9, 2022	Thursday, May 22, 2025	W 20	20	weekday
Tuesday, May 10, 2022	Thursday, May 22, 2025	W 20	20	weekday
Wednesday, May 11, 2022	Thursday, May 22, 2025	W 20	20	weekday
Thursday, May 12, 2022	Thursday, May 22, 2025	W 20	20	weekday
Friday, May 13, 2022	Thursday, May 22, 2025	W 20	20	weekend
Saturday, May 14, 2022	Thursday, May 22, 2025	W 20	20	weekend
Sunday, May 15, 2022	Thursday, May 22, 2025	W 21	21	weekday
Monday, May 16, 2022	Thursday, May 22, 2025	W 21	21	weekday
Tuesday, May 17, 2022	Thursday, May 22, 2025	W 21	21	weekday
Wednesday, May 18, 2022	Thursday, May 22, 2025	W 21	21	weekday
Thursday, May 19, 2022	Thursday, May 22, 2025	W 21	21	weekday

Find Revenue made

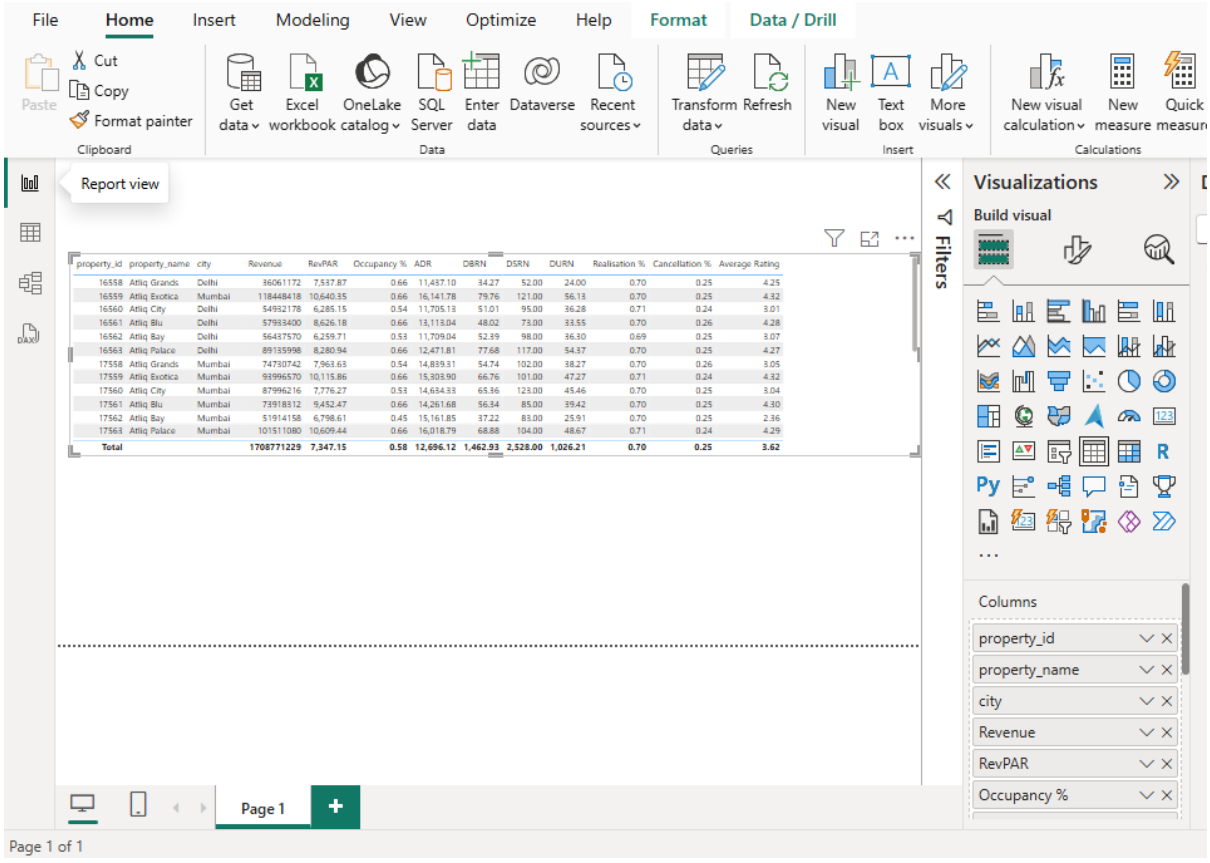

File
Home
Insert
Modeling
View
Optimize
Help
Format
Data / Drill
Share
Cut
Copy
Format painter
Paste
Clipboard
Get data
Excel workbook
OneLake catalog
SQL Server
Enter data
Dataverse
Recent sources
Data
Transform data
Refresh
Queries
New visual
Text box
More visuals
Insert
New visual calculation
New measure
Quick measure
Calculations
Sensitivity
Publish
Share
Prep data for AI
Copilot
2bn
Revenue
Filters
Search
Filters on this visual
Revenue is (All)
Add data fields here
Filters on this page
Add data fields here
Filters on all pages
Add data fields here
Visualizations
Build visual
Fields
Revenue
Drill through
Cross-report
Off
Keep all filters
On
Add drill-through fields here
Data
Search
dim_date
date
day_type
mmm yy
week no
wn
dim_hotels
dim_rooms
fact_aggregated_book...
fact_bookings
key_measures
Column1
Revenue
Page 1
Page 1 of 1
60%


1.70877bn
Revenue
Filters
Search
Filters on this visual
Revenue is (All)
Add data fields here
Filters on this page
Add data fields here
Filters on all pages
Add data fields here
Visualizations
Format visual
Search
Display data label options
Callout value
Font
DIN
45
Color
Display units
Billions
Value decimal places
5
Text wrap
On
Data
Page 1
Page 1 of 1

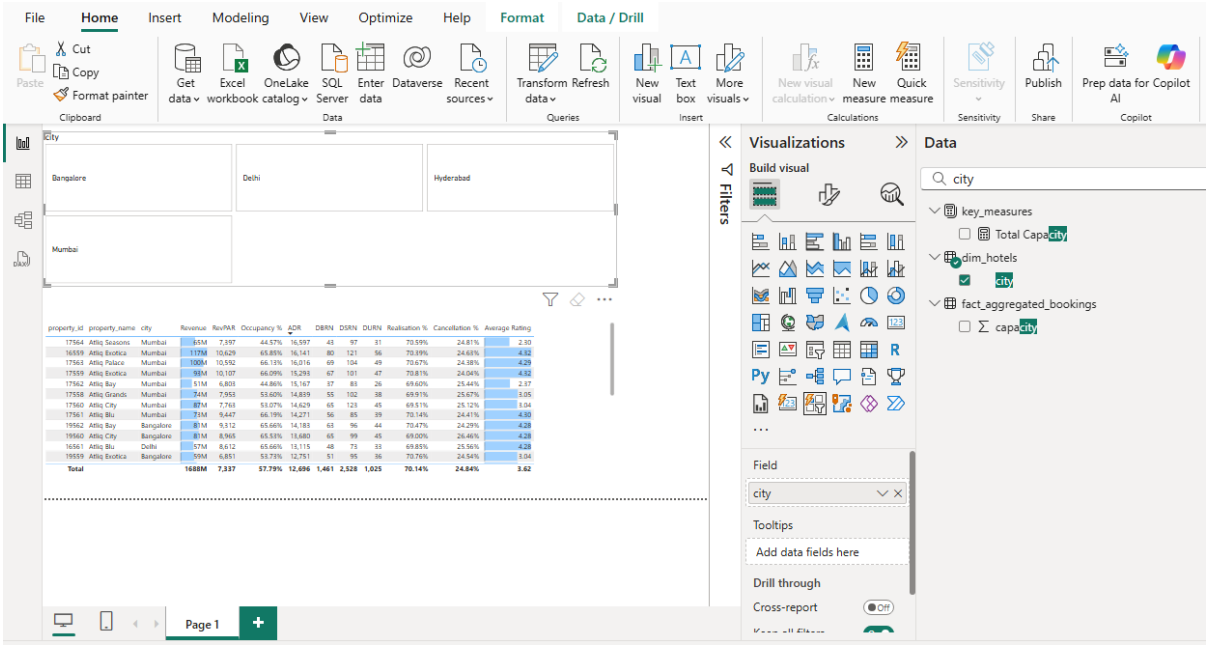
Generate various formulas to be used in the dashboard creation



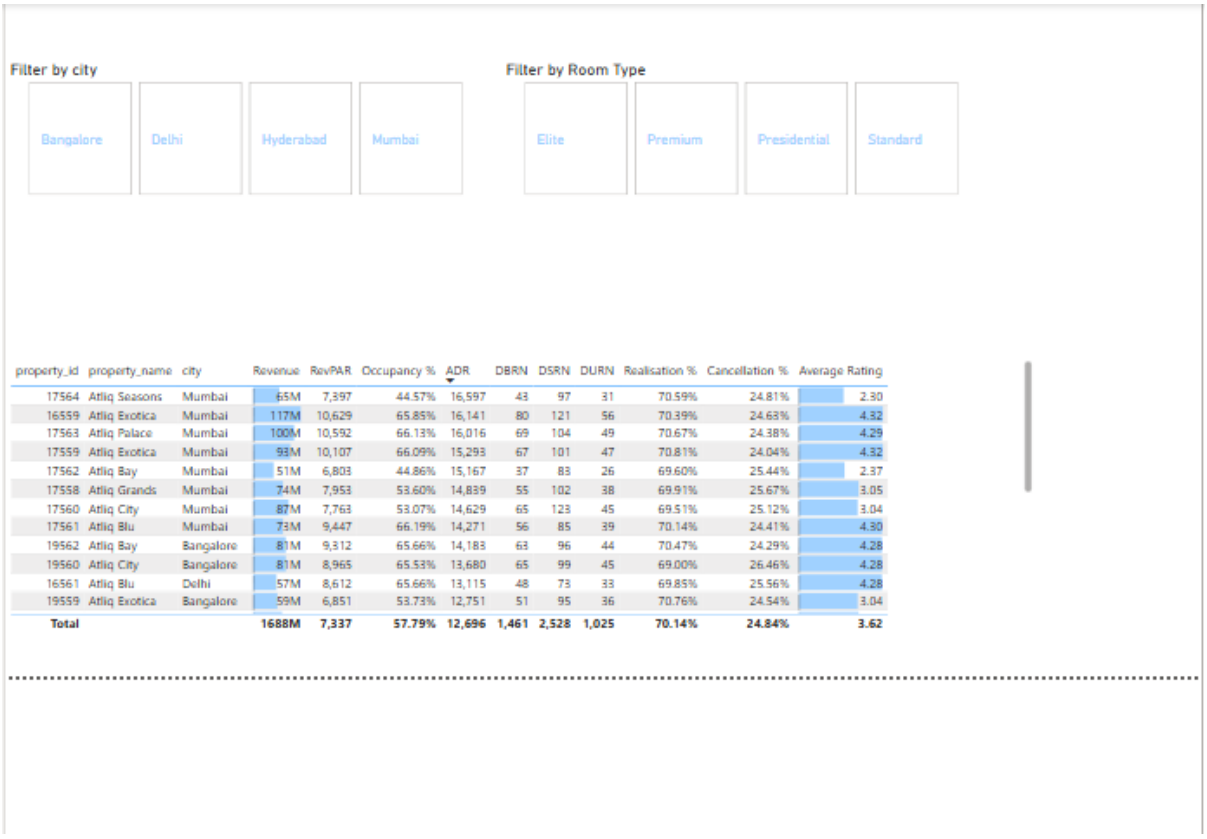
Transfer data to be used in creating dashboard



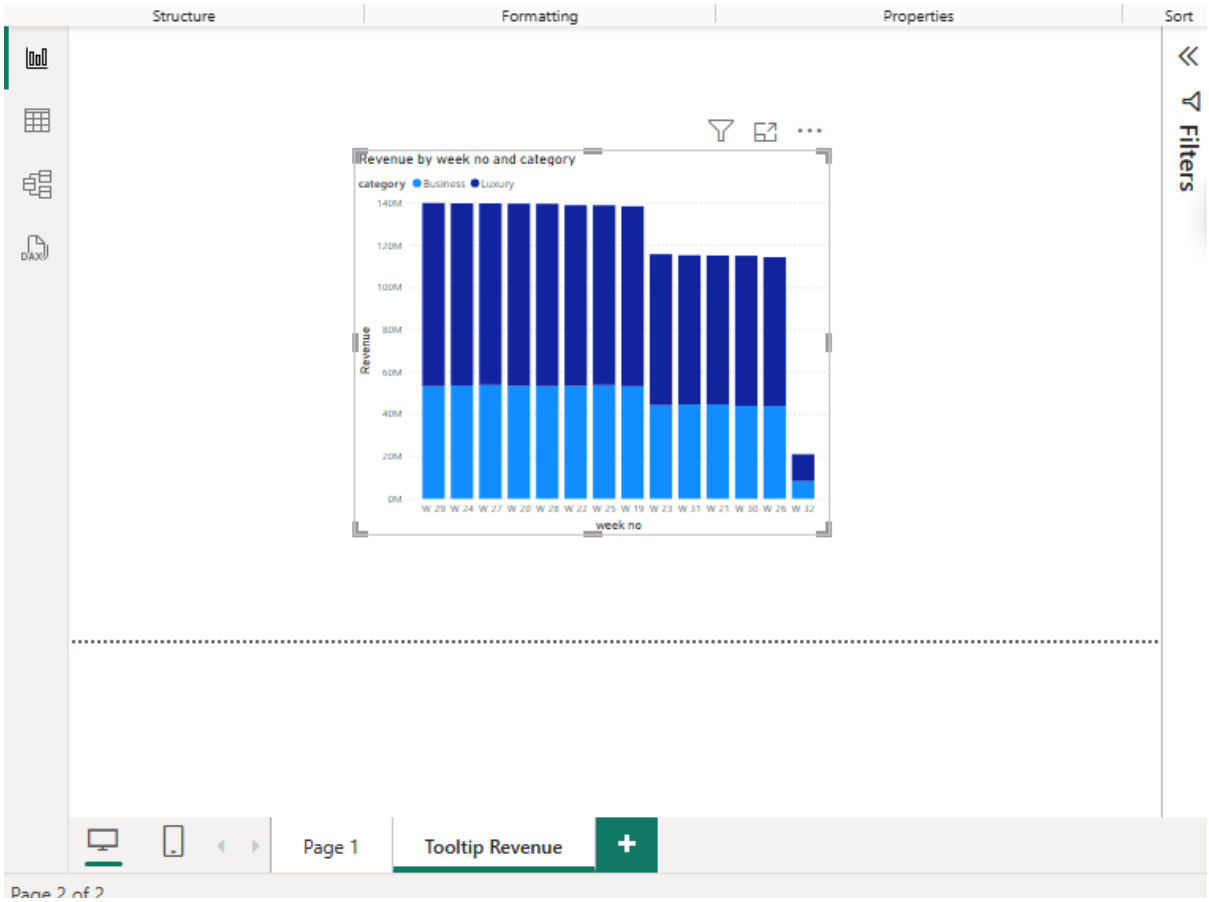
Filter countries by city



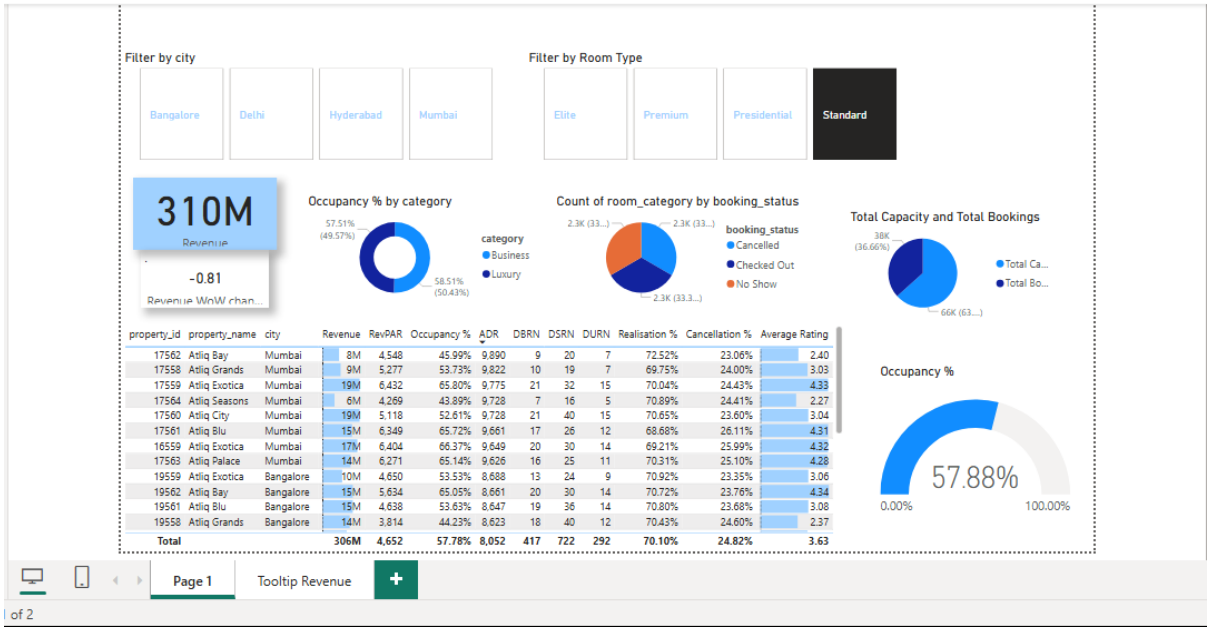
Filter by room type



property_id	property_name	city	Revenue	RevPAR	Occupancy %	ADR	DBRN	DSRN	DURN	Realisation %	Cancellation %	Average Rating
17564	Atliq Seasons	Mumbai	65M	7,397	44.57%	16,597	43	97	31	70.59%	24.81%	2.30
16559	Atliq Exotica	Mumbai	117M	10,629	65.85%	16,141	80	121	56	70.39%	24.63%	4.32
17563	Atliq Palace	Mumbai	100M	10,592	66.13%	16,016	69	104	49	70.67%	24.38%	4.29
17559	Atliq Exotica	Mumbai	93M	10,107	66.09%	15,293	67	101	47	70.81%	24.04%	4.32
17562	Atliq Bay	Mumbai	51M	6,803	44.86%	15,167	37	83	26	69.60%	25.44%	2.37
17558	Atliq Grands	Mumbai	74M	7,953	53.60%	14,839	55	102	38	69.91%	25.67%	3.05
17560	Atliq City	Mumbai	87M	7,763	53.07%	14,629	65	123	45	69.51%	25.12%	3.04
17561	Atliq Blu	Mumbai	73M	9,447	66.19%	14,271	56	85	39	70.14%	24.41%	4.30
19562	Atliq Bay	Bangalore	81M	9,312	65.66%	14,183	63	96	44	70.47%	24.29%	4.28
19560	Atliq City	Bangalore	81M	8,965	65.53%	13,680	65	99	45	69.00%	26.46%	4.28
16561	Atliq Blu	Delhi	57M	8,612	65.66%	13,115	48	73	33	69.85%	25.56%	4.28
19559	Atliq Exotica	Bangalore	59M	6,851	53.73%	12,751	51	95	36	70.76%	24.54%	3.04
Total			**1688M**	**7,337**	**57.79%**	**12,696**	**1,461**	**2,528**	**1,025**	**70.14%**	**24.84%**	**3.62**



Final Dashboard



Conclusion

Working on the Power BI was quite enjoyable as I got to explore various layouts and modes of presenting the chats and I look forward to future projects and to the coming week.