

MODULE 1: DATA MODELLING AND INGESTION

1.Download the Dataset Using Python Code:

The screenshot shows the Visual Studio Code interface with the following details:

- File Explorer:** Shows a project structure for "hotel 1.py". The "OPEN EDITORS" section contains "hotel 1.py" and "D:\Vscode\HotelDataset\Booking.csv". The "HOTEL..." folder contains "snapshots", "HotelDataset", and several CSV files: "Booking.csv", "Branches.csv", "Customer.csv", "DateTable.csv", and "RoomType.csv".
- Code Editor:** Displays the Python script "hotel 1.py". The code generates a "HotelDataset" folder containing various room types (Single, Double, Deluxe Single, Deluxe Double, Family Suite, Presidential Suite, Executive Suite, and Economy Room) with specific prices and amenities.
- Terminal:** Shows command-line output indicating successful execution of the script and saving of CSV files.
- Suggested Actions:** A sidebar with "Build Workspace" and "Show Config" buttons.
- Status Bar:** Shows file paths like "D:\Vscode\HotelDataset\hotel 1.py", encoding ("UTF-8"), and Python version ("Python 3.13").

```
File Edit Selection View Go Run Terminal Help < > Q HotelDataset D:\Vscode> hotel 1.py ... EXPLORE OPEN EDITORS X hotel 1.py D:\Vscode... HOTEL... Branches.csv Customer.csv DateTable.csv RoomType.csv > snapshots > HotelDataset Booking.csv Branches.csv Customer.csv DateTable.csv RoomType.csv D:\Vscode> Vscod... D:\Vscode> hotel 1.py ... 1 import csv 2 import random 3 import os 4 from datetime import datetime, timedelta 5 6 # ===== CONFIG ===== 7 num_customers = 3000 8 num_bookings = 25000 9 output_folder = "HotelDataset" 10 11 # Create folder if it doesn't exist 12 if not os.path.exists(output_folder): 13     os.makedirs(output_folder) 14 15 # ===== ROOM TYPES ===== 16 room_types = [ 17     {"RoomTypeID": "RT1", "RoomType": "Single", "Price": 2500, "MaxOccupancy": 1, "Amenities": "WiFi,TV", "IsDeluxe": false}, 18     {"RoomTypeID": "RT2", "RoomType": "Double", "Price": 4000, "MaxOccupancy": 2, "Amenities": "WiFi,TV,Minibar"}, 19     {"RoomTypeID": "RT3", "RoomType": "Suite", "Price": 7500, "MaxOccupancy": 4, "Amenities": "WiFi,TV,Minibar,Jacuzzi"}, 20     {"RoomTypeID": "RT4", "RoomType": "Deluxe Single", "Price": 3000, "MaxOccupancy": 2, "Amenities": "WiFi,TV,Minibar"}, 21     {"RoomTypeID": "RT5", "RoomType": "Deluxe Double", "Price": 5000, "MaxOccupancy": 2, "Amenities": "WiFi,TV,Minibar,Jacuzzi"}, 22     {"RoomTypeID": "RT6", "RoomType": "Family Suite", "Price": 8000, "MaxOccupancy": 4, "Amenities": "WiFi,TV,Minibar,Jacuzzi,Swimming Pool"}, 23     {"RoomTypeID": "RT7", "RoomType": "Presidential Suite", "Price": 15000, "MaxOccupancy": 5, "Amenities": "WiFi,TV,Minibar,Jacuzzi,Swimming Pool,Butler Service"}, 24     {"RoomTypeID": "RT8", "RoomType": "Executive Suite", "Price": 10000, "MaxOccupancy": 3, "Amenities": "WiFi,TV,Minibar,Jacuzzi,Swimming Pool,Butler Service"}, 25     {"RoomTypeID": "RT9", "RoomType": "Economy Room", "Price": 2000, "MaxOccupancy": 2, "Amenities": "WiFi,TV"}] PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS PS D:\Vscode\HotelDataset> & "C:\Users\Aswin\AppData\Local\Microsoft\WindowsApps\python3.13.exe" "c:\users\Aswin\vscode\extensions\ms-python.python\python.debugpy-2025.16.0-win32-x64\bundled\libs\debugpy\launcher" "53061" '--' 'D:\Vscode\hotel 1.py' Python Deb... Python Deb... SUGGESTED ACTIONS Build Workspace Show Config PS D:\Vscode> hotel 1.py ... Saved: HotelDataset\Customer.csv Saved: HotelDataset\RoomType.csv Saved: HotelDataset\Branch.csv Saved: HotelDataset\Booking.csv Saved: HotelDataset\DateTable.csv ALL CSVs generated inside the 'HotelDataset' folder PS D:\Vscode> HotelDataset > OUTLINE > TIMELINE > Python Debugger: Python File (HotelDataset) Start JSON Server Ln 1, Col 1 Spaces: 4 UTF-8 CRLF () Python Python 3.13 8.5MB
```

2.Insert All Dataset into Excel:

3.Creating Duration Calculation using Formula

Duration = MAX(0, F2 - E2)

	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	RoomTypeID	BranchID	CheckInDate	CheckOutDate	Duration	Revenue	BookingStatus	CancellationReason	PaymentMethod	DiscountApplied	BookingChannel	Purpose	Stay Type	DateID
2	RT5	B3	03-07-2025	08-07-2025	5	25000	No-show	Corporate Accou	0 Call Center	Business	Short Stay	20200101		
3	RT5	B6	07-05-2025	08-05-2025	1	4250	Cancelled	Weather	Cash	15 Mobile App	Conference	Medium Stay	20200102	
4	RT2	B6	17-01-2024	22-01-2024	5	18000	No-show	Credit Card	10 Call Center	Holiday	Long Stay	20200103		
5	RT4	B2	18-08-2023	20-08-2023	2	6000	No-show	Credit Card	0 Website	Holiday	Long Stay	20200104		
6	RT2	B6	04-10-2023	08-10-2023	4	16000	Cancelled	Change of plans	Cash	0 Call Center	Other	Other	20200105	
7	RT7	B7	11-09-2024	14-09-2024	3	38250	No-show	Cash	15 Travel Agent	Conference	Medium Stay	20200106		
8	RT5	B3	30-06-2025	04-07-2025	4	18000	Checked-in	UPI	10 Website	Holiday	Long Stay	20200107		
9	RT3	B2	07-07-2023	08-07-2023	1	6000	Checked-in	Corporate Accou	20 Mobile App	Holiday	Long Stay	20200108		
10	RT6	B3	12-05-2025	15-05-2025	3	19200	No-show	Credit Card	20 Mobile App	Vacation	Long Stay	20200109		
11	RT2	B4	31-08-2023	04-09-2023	4	16000	Cancelled	Change of plans	Corporate Accou	0 Call Center	Other	Other	20200110	
12	RT7	B7	06-09-2024	11-09-2024	5	60000	No-show	UPI	20 Mobile App	Vacation	Long Stay	20200111		
13	RT2	B1	02-01-2024	09-01-2024	7	22400	Cancelled	Other	Credit Card	20 Call Center	Vacation	Long Stay	20200112	
14	RT6	B5	05-05-2025	10-05-2025	5	38000	Checked-in	Credit Card	5 Call Center	Business	Short Stay	20200113		
15	RT6	B1	16-11-2023	21-11-2023	5	34000	Checked-in	Cash	15 Travel Agent	Conference	Medium Stay	20200114		
16	RT2	B4	07-04-2025	14-04-2025	7	28000	Cancelled	Other	Cash	0 Travel Agent	Other	Other	20200115	
17	RT1	B4	08-08-2025	15-08-2025	7	15750	Checked-in	Cash	10 Website	Business	Short Stay	20200116		
18	RT2	B3	28-05-2023	30-05-2023	2	8000	No-show	UPI	0 Mobile App	Conference	Medium Stay	20200117		
19	RT3	B5	08-06-2024	09-06-2024	1	6750	Cancelled	Price	Cash	10 Mobile App	Business	Short Stay	20200118	
20	RT6	B1	26-05-2024	27-05-2024	1	8000	No-show	Credit Card	0 Mobile App	Business	Short Stay	20200119		
21	RT4	B7	10-07-2024	15-07-2024	5	12000	No-show	Corporate Accou	20 Mobile App	Other	Other	20200120		
22	RT7	B5	10-10-2023	15-10-2023	5	67500	Cancelled	Price	Credit Card	10 Travel Agent	Other	Other	20200121	
23	RT5	B6	19-12-2024	22-12-2024	3	14250	No-show	Corporate Accou	5 Travel Agent	Holiday	Long Stay	20200122		
24	RT5	B6	09-09-2025	12-09-2025	3	12750	Checked-in	Cash	15 Website	Conference	Medium Stay	20200123		
25	RT6	B5	27-11-2023	30-11-2023	3	20400	No-show	Corporate Accou	15 Call Center	Vacation	Long Stay	20200124		
26	RT3	B3	14-09-2023	18-09-2023	4	28500	No-show	Credit Card	5 Website	Conference	Medium Stay	20200125		
27	RT1	B4	30-09-2023	04-10-2023	4	9500	Checked-in	Cash	5 Travel Agent	Conference	Medium Stay	20200126		
28	RT6	B3	29-06-2025	03-07-2025	2	12800	No-show	Credit Card	20 Mobile App	Other	Other	20200127		
29	RT1	B1	29-09-2023	04-10-2023	5	10000	Checked-in	Credit Card	20 Website	Other	Other	20200128		
30	RT1	B4	01-01-2025	02-01-2025	1	2250	Cancelled	Other	Corporate Accou	10 Mobile App	Other	Other	20200129	
31	RT3	B6	08-03-2025	15-03-2025	7	44625	Cancelled	Other	Corporate Accou	15 Mobile App	Business	Short Stay	20200130	

4.Creating Revenue Calculation Using Formula:

Revenue =VLOOKUP(C2, '[RoomType]Room Type'!A:C, 3, FALSE) * G2 * (1 - (L2 / 100))

	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	RoomTypeID	BranchID	CheckInDate	CheckOutDate	Duration	Revenue	BookingStatus	CancellationReason	PaymentMethod	DiscountApplied	BookingChannel	Purpose	Stay Type	DateID
2	RT5	B3	03-07-2025	08-07-2025	5	25000	No-show	Corporate Accou	0 Call Center	Business	Short Stay	20200101		
3	RT5	B6	07-05-2025	08-05-2025	1	4250	Cancelled	Weather	Cash	15 Mobile App	Conference	Medium Stay	20200102	
4	RT2	B6	17-01-2024	22-01-2024	5	18000	No-show	Credit Card	10 Call Center	Holiday	Long Stay	20200103		
5	RT4	B2	18-08-2023	20-08-2023	2	6000	No-show	Credit Card	0 Website	Holiday	Long Stay	20200104		
6	RT2	B6	04-10-2023	08-10-2023	4	16000	Cancelled	Change of plans	Cash	0 Call Center	Other	Other	20200105	
7	RT7	B7	11-09-2024	14-09-2024	3	38250	No-show	Cash	15 Travel Agent	Conference	Medium Stay	20200106		
8	RT5	B3	30-06-2025	04-07-2025	4	18000	Checked-in	UPI	10 Website	Holiday	Long Stay	20200107		
9	RT3	B2	07-07-2023	08-07-2023	1	6000	Checked-in	Corporate Accou	20 Mobile App	Vacation	Long Stay	20200108		
10	RT6	B3	12-05-2025	15-05-2025	3	19200	No-show	Credit Card	20 Mobile App	Other	Other	20200109		
11	RT2	B4	31-08-2023	04-09-2023	4	16000	Cancelled	Change of plans	Corporate Accou	0 Call Center	Other	Other	20200110	
12	RT7	B7	06-09-2024	11-09-2024	5	60000	No-show	UPI	20 Mobile App	Vacation	Long Stay	20200111		
13	RT2	B1	02-01-2024	09-01-2024	7	22400	Cancelled	Other	Credit Card	20 Call Center	Vacation	Long Stay	20200112	
14	RT6	B5	05-05-2025	10-05-2025	5	38000	Checked-in	Credit Card	5 Call Center	Business	Short Stay	20200113		
15	RT6	B1	16-11-2023	21-11-2023	5	34000	Checked-in	Cash	15 Travel Agent	Conference	Medium Stay	20200114		
16	RT2	B4	07-04-2025	14-04-2025	7	28000	Cancelled	Other	Cash	0 Travel Agent	Other	Other	20200115	
17	RT1	B4	08-08-2025	15-08-2025	7	15750	Checked-in	Cash	10 Website	Business	Short Stay	20200116		
18	RT2	B3	28-05-2023	30-05-2023	2	8000	No-show	UPI	0 Mobile App	Conference	Medium Stay	20200117		
19	RT3	B5	08-06-2024	09-06-2024	1	6750	Cancelled	Price	Cash	10 Mobile App	Business	Short Stay	20200118	
20	RT6	B1	26-05-2024	27-05-2024	1	8000	No-show	Credit Card	0 Mobile App	Business	Short Stay	20200119		
21	RT4	B7	10-07-2024	15-07-2024	5	12000	No-show	Corporate Accou	20 Mobile App	Other	Other	20200120		
22	RT7	B5	10-10-2023	15-10-2023	5	67500	Cancelled	Price	Credit Card	10 Travel Agent	Other	Other	20200121	
23	RT5	B6	19-12-2024	22-12-2024	3	14250	No-show	Corporate Accou	5 Travel Agent	Holiday	Long Stay	20200122		
24	RT5	B6	09-09-2025	12-09-2025	3	12750	Cancelled	Cash	15 Website	Conference	Medium Stay	20200123		
25	RT6	B5	27-11-2023	30-11-2023	3	20400	No-show	Corporate Accou	15 Call Center	Vacation	Long Stay	20200124		
26	RT3	B3	14-09-2023	18-09-2023	4	28500	No-show	Credit Card	5 Website	Conference	Medium Stay	20200125		
27	RT1	B4	30-09-2023	04-10-2023	4	9500	Checked-in	Cash	5 Travel Agent	Conference	Medium Stay	20200126		
28	RT6	B3	29-06-2025	01-07-2025	2	12800	No-show	Credit Card	20 Mobile App	Other	Other	20200127		
29	RT1	B1	29-09-2023	04-10-2023	5	10000	Checked-in	Credit Card	20 Website	Other	Other	20200128		
30	RT1	B4	01-01-2025	02-01-2025	1	2250	Cancelled	Other	Corporate Accou	10 Mobile App	Other	Other	20200129	

5.Creating StayType Calculation Using Formula:

StayType =SWITCH(TRIM(UPPER(N2)),

"BUSINESS", "Short Stay",

"CONFERENCE", "Medium Stay",

"VACATION", "Long Stay",

"HOLIDAY", "Long Stay",

"FAMILY", "Leisure",

"LEISURE", "Leisure",

"GROUP", "Group Stay",

"SOLO", "Solo Stay",

"UNKNOWN", "Unknown",

"Other"

)

The screenshot shows an Excel spreadsheet titled "Hotel booking - Excel". The formula in cell O2 is:

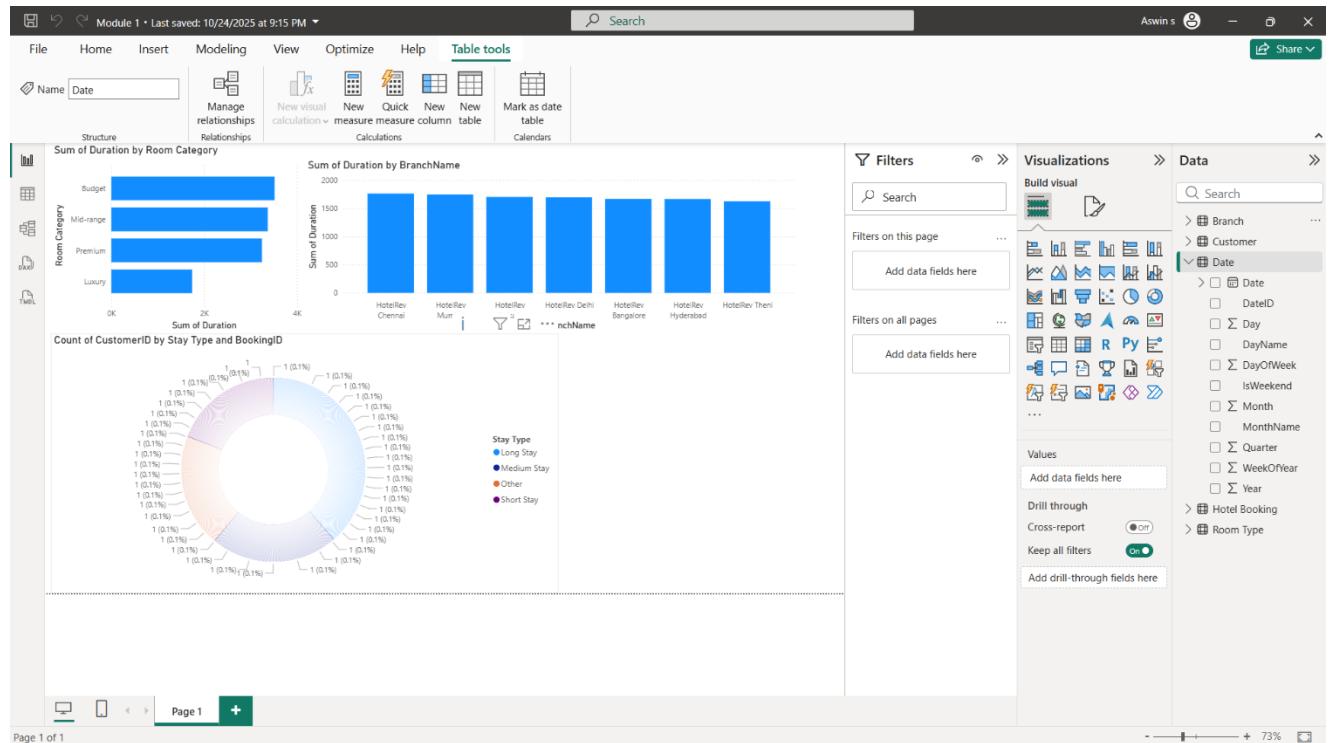
```
=SWITCH(TRIM(UPPER(N2)),  
"BUSINESS", "Short Stay",  
"CONFERENCE", "Medium Stay",  
"VACATION", "Long Stay",  
"HOLIDAY", "Long Stay",  
"FAMILY", "Leisure",  
"LEISURE", "Leisure",  
"GROUP", "Group Stay",  
"SOLO", "Solo Stay",  
"UNKNOWN", "Unknown",  
"Other"  
)
```

The table below contains 19 rows of data with columns: RoomTypeID, BranchID, CheckInDate, CheckOutDate, Duration, Revenue, BookingStatus, CancellationReason, PaymentMethod, DiscountApplied, BookingChannel, Purpose, Stay Type, and DateID.

	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	RoomTypeID	BranchID	CheckInDate	CheckOutDate	Duration	Revenue	BookingStatus	CancellationReason	PaymentMethod	DiscountApplied	BookingChannel	Purpose	Stay Type	DateID
2	RT5	B3	03-07-2025	08-07-2025	5	25000	No-show	Corporate Accou	0 Call Center	Business	Short Stay		20200101	
3	RT5	B6	07-05-2025	08-05-2025	1	4250	Cancelled	Weather	Cash	15 Mobile App	Conference	Medium Stay		20200102
4	RT2	B6	17-01-2024	22-01-2024	5	18000	No-show		Credit Card	10 Call Center	Holiday	Long Stay		20200103
5	RT4	B2	18-08-2023	20-08-2023	2	6000	No-show		Credit Card	0 Website	Holiday	Long Stay		20200104
6	RT2	B6	04-10-2023	08-10-2023	4	16000	Cancelled	Change of plans	Cash	0 Call Center	Other	Other		20200105
7	RT7	B7	11-09-2024	14-09-2024	3	38250	No-show		Cash	15 Travel Agent	Conference	Medium Stay		20200106
8	RT5	B3	30-06-2025	04-07-2025	4	18000	Checked-in		UPI	10 Website	Holiday	Long Stay		20200107
9	RT3	B2	07-07-2023	08-07-2023	1	6000	Checked-in	Corporate Accou	20 Mobile App	Holiday	Long Stay			20200108
10	RT6	B3	12-05-2025	15-05-2025	3	19200	No-show		Credit Card	20 Mobile App	Vacation	Long Stay		20200109
11	RT2	B4	31-08-2023	04-09-2023	4	16000	Cancelled	Change of plans	Corporate Accou	0 Call Center	Other	Other		20200110
12	RT7	B7	06-09-2024	11-09-2024	5	60000	No-show		UPI	20 Mobile App	Vacation	Long Stay		20200111
13	RT2	B1	02-01-2024	09-01-2024	7	22400	Cancelled	Other	Credit Card	20 Call Center	Vacation	Long Stay		20200112
14	RT6	B5	05-05-2025	10-05-2025	5	38000	Checked-in		Credit Card	5 Call Center	Business	Short Stay		20200113
15	RT6	B1	16-11-2023	21-11-2023	5	34000	Checked-in		Cash	15 Travel Agent	Conference	Medium Stay		20200114
16	RT2	B4	07-04-2025	14-04-2025	7	28000	Cancelled	Other	Cash	0 Travel Agent	Other	Other		20200115
17	RT1	B4	08-08-2025	15-08-2025	7	15750	Checked-in		Cash	10 Website	Business	Short Stay		20200116
18	RT2	B3	28-05-2023	30-05-2023	2	8000	No-show		UPI	0 Mobile App	Conference	Medium Stay		20200117
19	RT3	B5	08-06-2024	09-06-2024	1	6750	Cancelled	Price	Cash	10 Mobile App	Business	Short Stay		20200118

6. Import the Excel into Power BI and Create the Visualization:

- Duration by Room Category
- Duration by Branch Name
- Count of Customer ID by Stay Type and Booking ID



Module 1 documentation has been successfully completed.

MODULE 2: ANALYZING METRICS OVERTIME

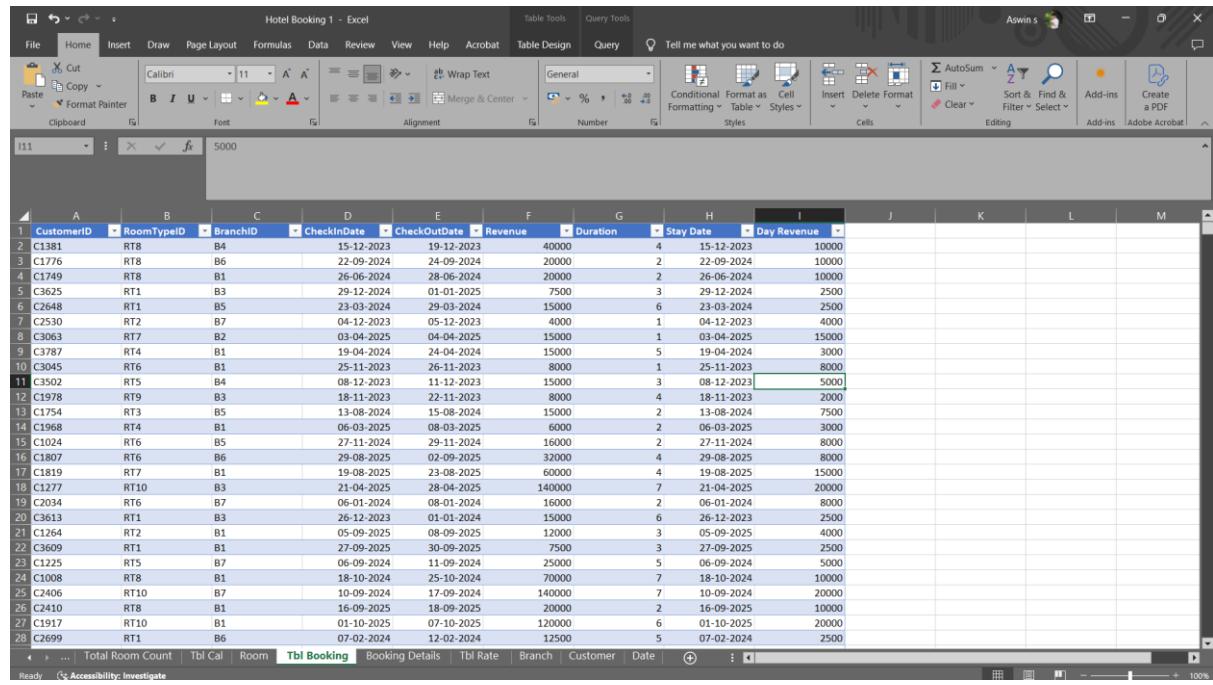
1.Creating the New Table Duration For analysis by Copying Data from Bookings

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
1	CustomerID	CheckinDate	CheckoutDate	Duration																	
2	C1381	15-12-2023	19-12-2023	4																	
3	C3625	29-12-2024	01-01-2025	3																	
4	C3063	03-04-2025	04-04-2025	1																	
5	C2648	23-03-2024	29-03-2024	6																	
6	C3045	25-11-2023	26-11-2023	1																	
7	C2530	04-12-2023	05-12-2023	1																	
8	C1776	22-09-2024	24-09-2024	2																	
9	C3787	19-04-2024	24-04-2024	5																	
10	C3502	08-12-2023	11-12-2023	3																	
11	C1978	18-11-2023	22-11-2023	4																	
12	C1749	26-06-2024	28-06-2024	2																	
13	C1754	13-08-2024	15-08-2024	2																	
14	C1968	06-03-2025	08-03-2025	2																	
15	C1024	27-11-2024	29-11-2024	2																	
16	C1807	29-08-2025	02-09-2025	4																	
17	C1819	19-08-2025	23-08-2025	4																	
18	C1277	21-04-2025	28-04-2025	7																	
19	C2034	06-01-2024	08-01-2024	2																	
20	C3613	26-12-2023	01-01-2024	6																	
21	C1264	05-09-2025	08-09-2025	3																	
22	C3609	27-09-2025	30-09-2025	3																	
23	C1225	06-09-2024	11-09-2024	5																	
24	C1008	18-10-2024	25-10-2024	7																	
25	C2406	10-09-2024	17-09-2024	7																	
26	C2410	16-09-2025	18-09-2025	2																	
27	C1917	01-10-2025	07-10-2025	6																	
28	C2699	07-02-2024	12-02-2024	5																	

2.New Table for Duration Details by Copying Data from Bookings

	A	B	C	D	E	F	G	H	I	J	K	L
1	BookingID	CustomerID	RoomTypeID	BranchID	CheckinDate	CheckoutDate	Duration					
2	BK10000	C1381	RT8	B4	15-12-2023	19-12-2023	4					
3	BK10001	C3625	RT1	B3	29-12-2024	01-01-2025	3					
4	BK10002	C3063	RT7	B2	03-04-2025	04-04-2025	1					
5	BK10003	C2648	RT1	B5	23-03-2024	29-03-2024	6					
6	BK10004	C3045	RT6	B1	25-11-2023	26-11-2023	1					
7	BK10005	C2530	RT2	B7	04-12-2023	05-12-2023	1					
8	BK10006	C1776	RT8	B6	22-09-2024	24-09-2024	2					
9	BK10007	C3787	RT4	B1	19-04-2024	24-04-2024	5					
10	BK10008	C3502	RT5	B4	08-12-2023	11-12-2023	3					
11	BK10009	C1978	RT9	B3	18-11-2023	22-11-2023	4					
12	BK10010	C1749	RT8	B1	26-06-2024	28-06-2024	2					
13	BK10011	C1754	RT3	B5	13-08-2024	15-08-2024	2					
14	BK10012	C1968	RT4	B1	06-03-2025	08-03-2025	2					
15	BK10013	C1024	RT6	B5	27-11-2024	29-11-2024	2					
16	BK10014	C1807	RT6	B6	29-08-2025	02-09-2025	4					
17	BK10015	C1819	RT7	B1	19-08-2025	23-08-2025	4					
18	BK10016	C1277	RT10	B3	21-04-2025	28-04-2025	7					
19	BK10017	C2034	RT6	B7	06-01-2024	08-01-2024	2					
20	BK10018	C3613	RT1	B3	26-12-2023	01-01-2024	6					
21	BK10019	C1264	RT2	B1	05-09-2025	08-09-2025	3					
22	BK10020	C3609	RT1	B1	27-09-2025	30-09-2025	3					
23	BK10021	C1225	RT5	B7	06-09-2024	11-09-2024	5					
24	BK10022	C1008	RT8	B1	18-10-2024	25-10-2024	7					
25	BK10023	C2406	RT10	B7	10-09-2024	17-09-2024	7					
26	BK10024	C2410	RT8	B1	16-09-2025	18-09-2025	2					
27	BK10025	C1917	RT10	B1	01-10-2025	07-10-2025	6					
28	BK10026	C2699	RT1	B6	07-02-2024	12-02-2024	5					

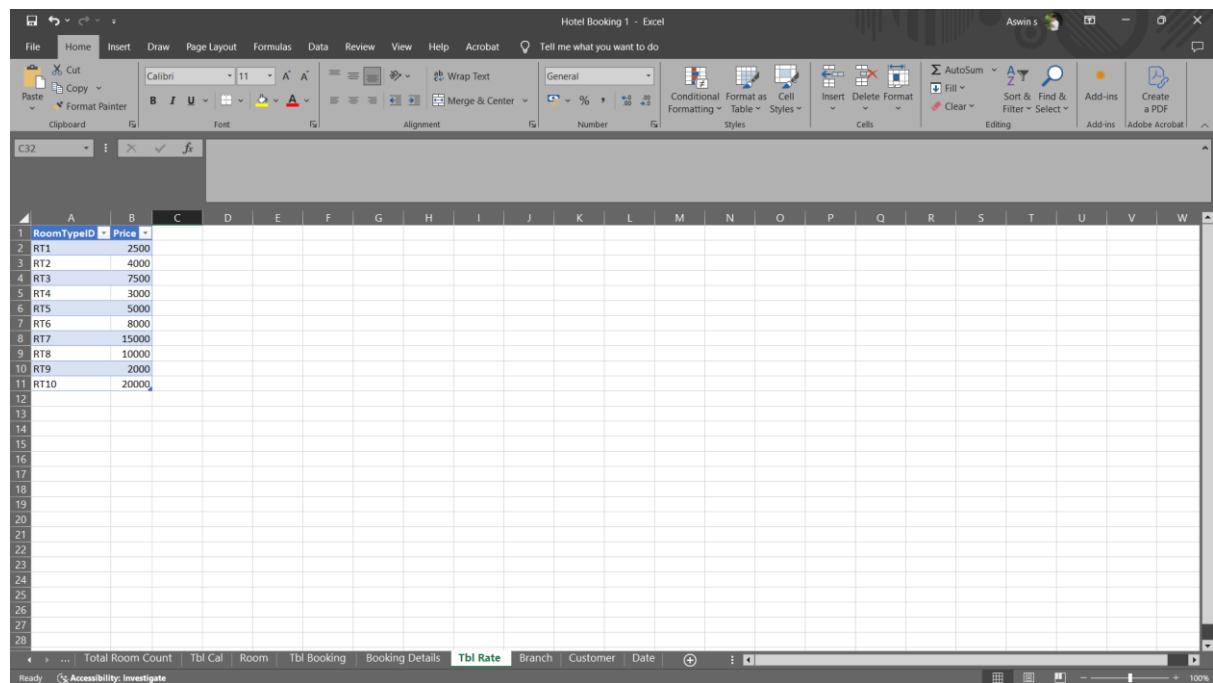
3.Creating a new Table as Table Bookings:



CustomerID	RoomTypeID	BranchID	CheckInDate	CheckOutDate	Revenue	Duration	Stay Date	Day Revenue
C1381	RT8	B4	15-12-2023	19-12-2023	40000	4	15-12-2023	10000
C1776	RT8	B6	22-09-2024	24-09-2024	20000	2	22-09-2024	10000
C1749	RT8	B1	26-06-2024	28-06-2024	20000	2	26-06-2024	10000
C9625	RT1	B3	29-12-2024	01-01-2025	7500	3	29-12-2024	2500
C6248	RT1	B5	23-03-2024	29-03-2024	15000	6	23-03-2024	2500
C2530	RT2	B7	04-12-2023	05-12-2023	4000	1	04-12-2023	4000
C3063	RT7	B2	03-04-2025	04-04-2025	15000	1	03-04-2025	15000
C3787	RT4	B1	19-04-2024	24-04-2024	15000	5	19-04-2024	3000
C3045	RT6	B1	25-11-2023	26-11-2023	8000	1	25-11-2023	8000
C3502	RT5	B4	08-12-2023	11-12-2023	15000	3	08-12-2023	5000
C1978	RT9	B3	18-11-2023	22-11-2023	8000	4	18-11-2023	2000
C1754	RT3	B5	13-08-2024	15-08-2024	15000	2	13-08-2024	7500
C1968	RT4	B1	06-03-2025	08-03-2025	6000	2	06-03-2025	3000
C1024	RT6	B5	27-11-2024	29-11-2024	16000	2	27-11-2024	8000
C1807	RT6	B6	29-08-2025	02-09-2025	32000	4	29-08-2025	8000
C1819	RT7	B1	19-08-2025	23-08-2025	60000	4	19-08-2025	15000
C1277	RT10	B3	21-04-2025	28-04-2025	140000	7	21-04-2025	20000
C2034	RT6	B7	06-01-2024	08-01-2024	16000	2	06-01-2024	8000
C2613	RT1	B3	26-12-2023	01-01-2024	15000	6	26-12-2023	2500
C1264	RT2	B1	05-09-2025	08-09-2025	12000	3	05-09-2025	4000
C3609	RT1	B1	27-09-2025	30-09-2025	7500	3	27-09-2025	2500
C1225	RT5	B7	06-09-2024	11-09-2024	25000	5	06-09-2024	5000
C1008	RT8	B1	18-10-2024	25-10-2024	70000	7	18-10-2024	10000
C2406	RT10	B7	10-09-2024	17-09-2024	140000	7	10-09-2024	20000
C2410	RT8	B1	16-09-2025	18-09-2025	20000	2	16-09-2025	10000
C1917	RT10	B1	01-10-2025	07-10-2025	120000	6	01-10-2025	20000
C2699	RT1	B6	07-02-2024	12-02-2024	12500	5	07-02-2024	2500

4.Creating Tbl Rate from RoomType:

Only Choosing Columns RoomTypeID and Price



RoomTypeID	Price
RT1	2500
RT2	4000
RT3	7500
RT4	3000
RT5	5000
RT6	8000
RT7	15000
RT8	10000
RT9	2000
RT10	20000

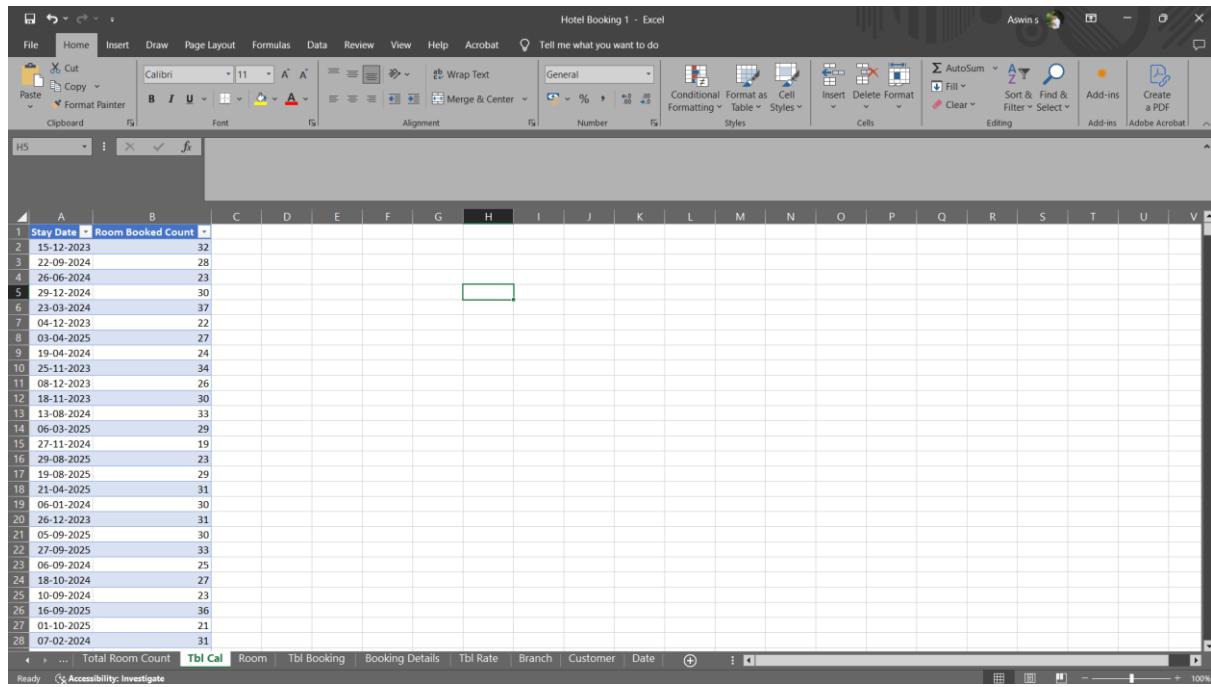
3.Creating Room Category Calculation in Room Table:

Room Category =SWITCH(B2,
"Single", "Budget",
"Double", "Budget",
"Deluxe Single", "Mid-range",
"Deluxe Double", "Mid-range",
"Suite", "Premium",
"Family Suite", "Premium",
"Executive Suite", "Luxury",
"Presidential Suite", "Luxury",
"Economy Room", "Budget",
"Penthouse", "Luxury",
"Other")

)

A	B	C	D	E	F	G	H
RoomTypeID	RoomType	Price	MaxOccupancy	Amenities	IsAC	IsSeaFacing	Room Category
2 RT1	Single	2500	1 WiFi,TV	TRUE	FALSE		Budget
3 RT2	Double	4000	2 WiFi,TV,Minibar	TRUE	TRUE		Budget
4 RT3	Suite	7500	4 WiFi,TV,Minibar,Balcony	TRUE	TRUE		Premium
5 RT4	Deluxe Single	3000	2 WiFi,TV,Minibar	TRUE	FALSE		Mid-range
6 RT5	Deluxe Double	5000	2 WiFi,TV,Minibar,Balcony	TRUE	TRUE		Mid-range
7 RT6	Family Suite	8000	4 WiFi,TV,Minibar,Balcony	TRUE	TRUE		Premium
8 RT7	Presidential Suite	15000	5 WiFi,TV,Minibar,Balcony,Jacuzz	TRUE	TRUE		Luxury
9 RT8	Executive Suite	10000	3 WiFi,TV,Minibar,Balcony,Work	TRUE	TRUE		Luxury
10 RT9	Economy Room	2000	2 WiFi,TV	FALSE	FALSE		Budget
11 RT10	Penthouse	20000	6 WiFi,TV,Minibar,Balcony,Jacuzz	TRUE	TRUE		Luxury
12							
13							
14							
15							
16							
17							
18							
19							

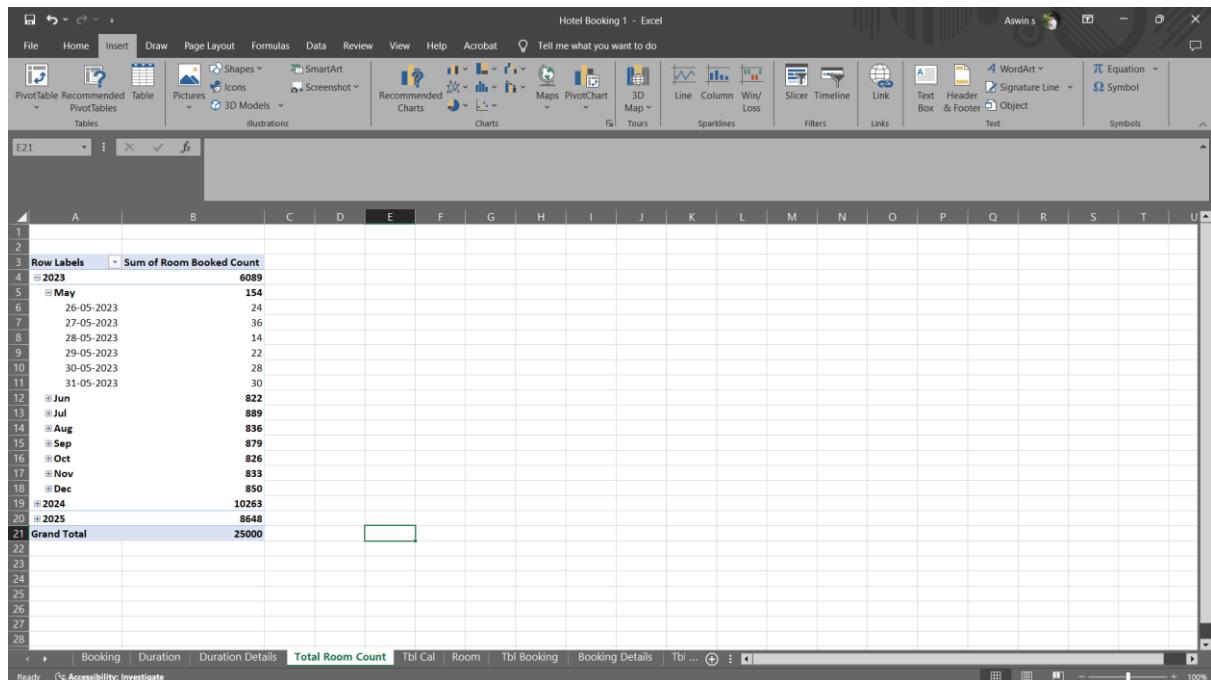
4. Creating Table Calculation Using Power Query Editor :



A screenshot of Microsoft Excel showing a table titled "Stay Date" and "Room Booked Count". The table contains 28 rows of data, starting from row 1 and ending at row 28. The data shows room bookings for various dates, with counts ranging from 14 to 37. The Excel ribbon is visible at the top, and the status bar at the bottom indicates "Ready" and "Accessibility: Investigate".

Stay Date	Room Booked Count
15-12-2023	32
22-09-2024	28
26-06-2024	23
29-12-2024	30
23-03-2024	37
04-12-2023	22
03-04-2025	27
19-04-2024	24
25-11-2023	34
08-12-2023	26
18-11-2023	30
13-08-2024	33
06-03-2025	29
27-11-2024	19
29-08-2025	23
19-08-2025	29
21-04-2025	31
06-01-2024	30
26-12-2023	31
05-09-2025	30
27-09-2025	33
06-09-2024	25
18-10-2024	27
10-09-2024	23
16-09-2025	36
01-10-2025	21
07-02-2024	31

5.By using Pivot table Create the Sum of Room Booked Count:



A screenshot of Microsoft Excel showing a PivotTable titled "Sum of Room Booked Count". The table contains 21 rows of data, starting from row 1 and ending at row 21. The data shows room bookings for various months in 2023, 2024, and 2025, with totals for each month and a grand total. The Excel ribbon is visible at the top, and the status bar at the bottom indicates "Ready" and "Accessibility: Investigate".

Row Labels	Sum of Room Booked Count
2023	6089
May	154
26-05-2023	24
27-05-2023	36
28-05-2023	14
29-05-2023	22
30-05-2023	28
31-05-2023	30
Jun	822
Jul	889
Aug	836
Sep	879
Oct	826
Nov	833
Dec	850
2024	10263
2025	8648
Grand Total	25000

6. Load the date to Power BI and Create columns Using Dax Formula in Table Calculation

1. ADR = `DIVIDE([TotalRevenue],[Room Booked Count])`
2. Month = `FORMAT([MonthStart], "MMMM")`
3. MonthStart = `DATE(YEAR([Stay Date]), MONTH([Stay Date]), 1)`
4. Occupancy % = `DIVIDE('Tbl Cal'[Room Booked Count],'Tbl Cal'[Total Rooms])*100`
5. Quarter = "Q" & `FORMAT([Stay Date], "Q")` & " " & `FORMAT([MonthStart], "YYYY")`
6. Revpar = `DIVIDE([TotalRevenue],[Total Rooms])`
7. Season = `SWITCH(`
 `TRUE(),`
 `MONTH([Stay Date]) IN {12, 1, 2}, "Winter",`
 `MONTH([Stay Date]) IN {3, 4, 5}, "Spring",`
 `MONTH([Stay Date]) IN {6, 7, 8}, "Summer",`
 `MONTH([Stay Date]) IN {9, 10, 11}, "Autumn"`
`)`
8. Total Rooms = `208`
9. TotalRevenue =
`CALCULATE(`
 `SUM('Tbl Booking'[Day Revenue]),`
 `FILTER(`
 `'Tbl Booking',`
 `'Tbl Booking'[Stay Date] =('Tbl Cal'[Stay date])`
 `)`
`)`
10. Week = `WEEKNUM([Stay date])`
11. Weekday = `FORMAT([Stay Date], "dddd")`

Table: Tbl Cal (901 rows)

7. Creating a New Table as Master data

MasterData =

VAR CalendarTable =

```

ADDCOLUMNS (
    CALENDAR (DATE(2023,5,1), DATE(2025,11,1)),
    "MonthStart", EOMONTH([Date], -1) + 1,
    "Month", FORMAT(EOMONTH([Date], -1) + 1, "dd-mmm-yy"),
    "DayCount", DAY(EOMONTH([Date], 0)),
    "RoomAvailableCount", DAY(EOMONTH([Date], 0)) * 260
)
RETURN
ADDCOLUMNS (
    SUMMARIZE (
        CalendarTable,
        [MonthStart], [Month], [DayCount], [RoomAvailableCount]
    ),
    "RoomSoldCount",
    CALCULATE (
        SUM ('Booking details'[Room Booked Count]),
        TREATAS ( { [MonthStart] }, 'Booking details'[MonthStart] )
    ),
    "Occupancy %",
    DIVIDE (
        CALCULATE (
            SUM ('Booking details'[Room Booked Count]),
            TREATAS ( { [MonthStart] }, 'Booking details'[MonthStart] )
        ),
        [RoomAvailableCount],
        100
    )
)

```

0
)* 100
)

The screenshot shows the Microsoft Power BI Data Editor interface. The top navigation bar includes File, Home, Help, and Table tools. The Table tools tab is selected, showing options for Name, Manage relationships, New measure, Quick measure, New column, New table, and Mark as date table. The left sidebar shows the structure of the MasterData table, including columns for MonthStart, Month, DayCount, RoomAvailableCount, RoomSoldCount, Occupancy %, ADR, RevPAR, and TotalRevenue. The main area displays the DAX code for generating these measures:

```

1 MasterData =
2 VAR CalendarTable =
3 ADDCOLUMNS (
4     CALENDAR (DATE(2023,5,1), DATE(2025,11,1)),
5     "MonthStart", EOMONTH([Date], -1) + 1,
6     "Month", FORMAT(EOMONTH([Date], -1) + 1, "dd-mmm-yy"),
7     "DayCount", DAY(EOMONTH([Date], 0)),
8     "RoomAvailableCount", DAY(EOMONTH([Date], 0)) * 260
9 )
10 RETURN
11 ADDCOLUMNS (
12     SUMMARIZE (
13         CalendarTable,
14         [MonthStart], [Month], [DayCount], [RoomAvailableCount]
15     ),
16     "RoomSoldCount",
17     CALCULATE (
18         SUM ('Booking details'[Room Booked Count]),
19         TREATAS ( { [MonthStart] }, 'Booking details'[MonthStart] )
20     ),
21     "Occupancy %",
22     DIVIDE (
23         CALCULATE (
24             SUM ('Booking details'[Room Booked Count]),
25             TREATAS ( { [MonthStart] }, 'Booking details'[MonthStart] )
26         ),
27         [RoomAvailableCount],
28         0
29     ) * 100
30 )
31

```

Below the code, a preview table is shown with 31 rows of data. The columns are: MonthStart, Month, DayCount, RoomAvailableCount, RoomSoldCount, Occupancy %, ADR, RevPAR, and TotalRevenue.

MonthStart	Month	DayCount	RoomAvailableCount	RoomSoldCount	Occupancy %	ADR	RevPAR	TotalRevenue
01-05-2023 00:00:00	01-May-23	31	8060	154	19106699751861	₹ 28,756.49	₹ 549.44	4428500
01-06-2023 00:00:00	01-Jun-23	30	7800	822	10,538,461,538,4615	₹ 31,621.05	₹ 3,332.37	25992500
01-07-2023 00:00:00	01-Jul-23	31	8060	889	11,029,776,674,938	₹ 30,482.56	₹ 3,362.16	27099000
01-08-2023 00:00:00	01-Aug-23	31	8060	836	10,372,208,436,7246	₹ 31,447.37	₹ 3,261.79	26290000

Table: MasterData (31 rows)

8.Adding New Columns in the Master Data Using Dax Formula:

1. ADR =

DIVIDE(
 [TotalRevenue],
 'MasterData'[RoomSoldCount]
)
2. RevPAR =
 [ADR] * DIVIDE(MasterData[Occupancy %], 100)
3. TotalRevenue =

CALCULATE(
 SUM('Booking'[Revenue]),
 FILTER('Booking','Booking'[MonthStart] = MasterData[MonthStart])
)

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Search

File Home Help Table tools Column tools

Name ADR Data type Decimal number Format Currency Summation Sum Data category Uncategorized Sort by column Data groups Manage relationships New column

Structure Formatting Properties Sort Groups Relationships Calculations

ADR =

```

1 ADR =
2 DIVIDE(
3     [TotalRevenue],
4     "MasterData"[RoomSoldCount]
5 )

```

MonthStart Month DayCount RoomAvailableCount RoomSoldCount Occupancy ADR RevPAR TotalRevenue

MonthStart	Month	DayCount	RoomAvailableCount	RoomSoldCount	Occupancy	ADR	RevPAR	TotalRevenue
01-05-2023 00:00:00	01-May-23	31	8060	154	1.910669751861	₹ 28,756.49	₹ 549.44	4428500
01-06-2023 00:00:00	01-Jun-23	30	7800	822	10.5384615384615	₹ 31,621.05	₹ 3,332.37	25992500
01-07-2023 00:00:00	01-Jul-23	31	8060	889	11.029776674938	₹ 30,482.56	₹ 3,362.16	27090000
01-08-2023 00:00:00	01-Aug-23	31	8060	836	10.3722084367246	₹ 31,447.37	₹ 3,261.79	26290000
01-09-2023 00:00:00	01-Sep-23	30	7800	879	11.2692307692307	₹ 30,975.50	₹ 3,470.64	27071000
01-10-2023 00:00:00	01-Oct-23	31	8060	826	10.2481389578164	₹ 32,615.01	₹ 3,342.43	26940000
01-11-2023 00:00:00	01-Nov-23	30	7800	833	10.6794871794872	₹ 30,915.97	₹ 3,301.67	25753000
01-12-2023 00:00:00	01-Dec-23	31	8060	850	10.545905707196	₹ 29,634.12	₹ 3,125.19	25189000
01-01-2024 00:00:00	01-Jan-24	31	8060	890	11.0421836228288	₹ 31,894.38	₹ 3,521.84	28386000
01-02-2024 00:00:00	01-Feb-24	29	7540	804	10.663129724748	₹ 31,303.48	₹ 3,337.93	25168000
01-03-2024 00:00:00	01-Mar-24	31	8060	870	10.7940446650124	₹ 30,889.66	₹ 3,334.24	26874000
01-04-2024 00:00:00	01-Apr-24	30	7800	839	10.7564102564102	₹ 30,979.38	₹ 3,312.69	25839000
01-05-2024 00:00:00	01-May-24	31	8060	931	11.5508684063524	₹ 30,678.30	₹ 3,543.61	2851500
01-06-2024 00:00:00	01-Jun-24	30	7800	865	11.0897435897436	₹ 30,865.32	₹ 3,422.88	26698500
01-07-2024 00:00:00	01-Jul-24	31	8060	839	10.4094292030397	₹ 30,204.41	₹ 3,144.11	25341500
01-08-2024 00:00:00	01-Aug-24	31	8060	860	10.6699751861042	₹ 30,628.49	₹ 3,268.05	26340500
01-09-2024 00:00:00	01-Sep-24	30	7800	847	10.859743589744	₹ 31,913.81	₹ 3,465.51	27031000
01-10-2024 00:00:00	01-Oct-24	31	8060	879	10.9057071960298	₹ 29,500.00	₹ 3,217.18	25930500
01-11-2024 00:00:00	01-Nov-24	30	7800	809	10.3717948717949	₹ 31,470.95	₹ 3,264.10	25460000
01-12-2024 00:00:00	01-Dec-24	31	8060	830	10.297667493797	₹ 32,515.06	₹ 3,348.33	26987500
01-01-2025 00:00:00	01-Jan-25	31	8060	818	10.1488833746898	₹ 31,525.67	₹ 3,199.50	25788000
01-02-2025 00:00:00	01-Feb-25	28	7280	788	10.8241758241758	₹ 30,565.99	₹ 3,308.52	24060000
01-03-2025 00:00:00	01-Mar-25	31	8060	829	10.2853598014880	₹ 30,899.28	₹ 3,178.10	25615500
01-04-2025 00:00:00	01-Apr-25	30	7800	837	10.730769230762	₹ 28,440.26	₹ 3,051.86	23804500
01-05-2025 00:00:00	01-May-25	31	8060	846	10.4962779156328	₹ 31,904.26	₹ 3,348.76	26991000
01-06-2025 00:00:00	01-Jun-25	30	7800	866	11.1025641025641	₹ 29,703.81	₹ 3,297.88	25723500
01-07-2025 00:00:00	01-Jul-25	31	8060	857	10.6327543424318	₹ 31,711.04	₹ 3,373.88	27193500

Table: MasterData (31 rows) Column: ADR (31 distinct values)

9. Create a New table as Monthly Booking:

MonthlyBookings =

```

SUMMARIZE(
    'Booking Details',
    'Booking Details'[MonthStart],
    "TotalRoomsBooked", SUM('Booking details'[Room Booked Count])
)

```

The screenshot shows the Power BI Data Editor interface. A table named 'MonthlyBookings' is being created. The structure pane shows the following DAX code:

```

1 MonthlyBookings =
2 SUMMARIZE(
3   'Booking Details',
4   'Booking Details'[MonthStart],
5   "TotalRoomsBooked", SUM('Booking details'[Room Booked Count])
6 )
7

```

The data pane displays the following data:

MonthStart	TotalRoomsBooked
01-04-2025 00:00:00	837
01-10-2024 00:00:00	879
01-06-2025 00:00:00	866
01-06-2024 00:00:00	865
01-05-2025 00:00:00	846
01-08-2025 00:00:00	871
01-07-2025 00:00:00	857
01-08-2024 00:00:00	860
01-10-2023 00:00:00	826
01-03-2024 00:00:00	870
01-09-2023 00:00:00	879
01-12-2024 00:00:00	830
01-09-2025 00:00:00	846
01-03-2025 00:00:00	829
01-07-2024 00:00:00	839
01-04-2024 00:00:00	839
01-01-2025 00:00:00	818
01-11-2024 00:00:00	809
01-05-2024 00:00:00	931
01-01-2024 00:00:00	890
01-06-2023 00:00:00	822
01-09-2024 00:00:00	847
01-02-2025 00:00:00	788
01-08-2023 00:00:00	836
01-10-2025 00:00:00	824

Table: MonthlyBookings (31 rows)

10.Adding new Columns in Bookings

1. CustomerCluster =

```

SWITCH(
  TRUE(),
  [NumOfBookings] = 1 && [Revenue] < 5000, "First-Timer",
  [NumOfBookings] >= 3 && [Revenue] < 15000, "Loyal Guest",
  [Revenue] >= 15000, "High Spender",
  "Other"
)

```

2. GuestType =

```

SWITCH(TRUE(),
  [Purpose] = "Business" || [BookingChannel] = "Corporate", "Business",
  [Purpose] = "Vacation" && [StayType] = "Extended Stay", "Family",
  [Purpose] = "Holiday" && [StayType] = "Extended Stay", "Family",
  [Purpose] = "Conference" || [StayType] = "Extended Stay", "Corporate",
  "Solo"
)

```

3. MonthStart = DATE(YEAR('Booking'[CheckInDate]), MONTH('Booking'[CheckInDate]), 1)

4. NumOfBookings =

```

CALCULATE(
  COUNT('Booking'[BookingID]),
  ALLEXCEPT('Booking', 'Booking'[CustomerID])
)

```

5. StayLengthGroup =

```

SWITCH(
  TRUE(),
  Booking[Duration] >= 1 && Booking[Duration] <= 5, "1-5 nights",
  ...
)

```

```

Booking[Duration] >= 6 && Booking[Duration]<= 10, "6–10 nights",
Booking[Duration] >= 11 && Booking[Duration] <= 20, "11–20 nights",
Booking[Duration] > 20, "20+ nights",
"Unknown"
)

```

Table: Booking (25,000 rows) Column: StayLengthGroup (2 distinct values)

11. Adding New Columns in Booking Details:

1. MonthStart = DATE(YEAR([Stay Date]), MONTH([Stay Date]), 1)
2. MonthYear = 'Booking Details'[Stay Date]
3. Season =
4. SWITCH(
 TRUE(),
 MONTH('Booking Details'[Stay Date]) IN {12, 1, 2}, "Winter",
 MONTH('Booking Details'[Stay Date]) IN {3, 4, 5}, "Spring",
 MONTH('Booking Details'[Stay Date]) IN {6, 7, 8}, "Summer",
 MONTH('Booking Details'[Stay Date]) IN {9, 10, 11}, "Autumn"
)
5. Weekday = FORMAT('Booking Details'[Stay Date], "dddd")
6. WeekNum = WEEKNUM('Booking Details'[Stay Date])
7. WeekStart = 'Booking Details'[Stay Date] - WEEKDAY('Booking Details'[Stay Date], 2) + 1
8. Year = YEAR('Booking Details'[Stay Date])
9. YearWeek =

```

VAR YearNum = YEAR('Booking Details'[Stay Date])
VAR WeekNum = WEEKNUM('Booking Details'[Stay Date])
RETURN
YearNum & "-W" & FORMAT(WeekNum, "00")

```

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File Home Help Table tools

Name: Booking Details

Manage relationships New measure column New table New table Calculations Mark as date table Calendars

Structure Relationships

Stay Date Room Booked Count Month MonthStart MonthYear Season Weekday WeekNum WeekStart Year YearWeek

Stay Date	Room Booked Count	Month	MonthStart	MonthYear	Season	Weekday	WeekNum	WeekStart	Year	YearWeek
03 April 2025	27	April	01-04-2025	2025-04	Spring	Thursday	14	31-03-2025	2025	2025-W14
18 October 2024	27	October	01-10-2024	2024-10	Autumn	Friday	42	14-10-2024	2024	2024-W42
21 June 2025	27	June	01-06-2025	2025-06	Summer	Saturday	25	16-06-2025	2025	2025-W25
20 June 2024	27	June	01-06-2024	2024-06	Summer	Thursday	25	17-06-2024	2024	2024-W25
27 May 2025	27	May	01-05-2025	2025-05	Spring	Tuesday	22	26-05-2025	2025	2025-W22
04 August 2025	27	August	01-08-2025	2025-08	Summer	Monday	32	04-08-2025	2025	2025-W32
23 July 2025	27	July	01-07-2025	2025-07	Summer	Wednesday	30	21-07-2025	2025	2025-W30
14 August 2024	27	August	01-08-2024	2024-08	Summer	Wednesday	33	12-08-2024	2024	2024-W33
22 June 2025	27	June	01-06-2025	2025-06	Summer	Sunday	26	16-06-2025	2025	2025-W26
07 October 2023	27	October	01-10-2023	2023-10	Autumn	Saturday	40	02-10-2023	2023	2023-W40
23 August 2024	27	August	01-08-2024	2024-08	Summer	Friday	34	19-08-2024	2024	2024-W34
19 October 2023	27	October	01-10-2023	2023-10	Autumn	Thursday	42	16-10-2023	2023	2023-W42
13 October 2024	27	October	01-10-2024	2024-10	Autumn	Sunday	42	07-10-2024	2024	2024-W42
26 March 2024	27	March	01-03-2024	2024-03	Spring	Tuesday	13	25-03-2024	2024	2024-W13
06 September 2023	27	September	01-09-2023	2023-09	Autumn	Wednesday	36	04-09-2023	2023	2023-W36
28 December 2024	27	December	01-12-2024	2024-12	Winter	Saturday	52	23-12-2024	2024	2024-W52
15 September 2025	27	September	01-09-2025	2025-09	Autumn	Monday	38	15-09-2025	2025	2025-W38
05 March 2025	27	March	01-03-2025	2025-03	Spring	Wednesday	10	03-03-2025	2025	2025-W10
07 July 2024	27	July	01-07-2024	2024-07	Summer	Sunday	28	01-07-2024	2024	2024-W28
11 September 2025	27	September	01-09-2025	2025-09	Autumn	Thursday	37	08-09-2025	2025	2025-W37
29 March 2024	27	March	01-03-2024	2024-03	Spring	Friday	13	25-03-2024	2024	2024-W13
28 April 2024	27	April	01-04-2024	2024-04	Spring	Sunday	18	22-04-2024	2024	2024-W18
06 January 2025	27	January	01-01-2025	2025-01	Winter	Monday	2	06-01-2025	2025	2025-W02
08 November 2024	27	November	01-11-2024	2024-11	Autumn	Friday	45	04-11-2024	2024	2024-W45
03 September 2025	27	September	01-09-2025	2025-09	Autumn	Wednesday	36	01-09-2025	2025	2025-W36
27 May 2024	27	May	01-05-2024	2024-05	Spring	Monday	22	27-05-2024	2024	2024-W22
31 August 2025	27	August	01-08-2025	2025-08	Summer	Sunday	36	25-08-2025	2025	2025-W36
07 January 2025	27	January	01-01-2025	2025-01	Winter	Tuesday	2	06-01-2025	2025	2025-W02
31 January 2024	27	January	01-01-2024	2024-01	Winter	Wednesday	5	29-01-2024	2024	2024-W05
11 August 2024	27	August	01-08-2024	2024-08	Summer	Sunday	33	05-08-2024	2024	2024-W33

Table: Booking Details (901 rows)

12. Creating New Measures in Bookings Table:

- ADR =
DIVIDE(
 'Booking'[Revenue],
 'Booking'[Duration],
 0
)
- DailyBookings = COUNT('Booking'[BookingID])
- DailyBookingValue = SUM('Booking'[Revenue])

DailyBookingValue

Format: Whole number

Data category: Uncategorized

Measure tools

Properties

Calculations

Structure

Formatting

1 DailyBookingValue = SUM('Booking'[Revenue])

Revenue Purpose StayType BookingStatus CancellationReason LeadTime PaymentMethod DiscountApplied BookingChannel DateID RoomCategory ADR Duration GuestType LeadTime CheckInDate CheckOutDate BookingChannel BookingID BookingStatus BranchID CancellationReason CustomerCluster CustomerID DailyBookings DateID DiscountApplied Duration GuestType LeadTime MonthStart NumOfBookings PaymentMethod Purpose Revenue RoomCategory RoomTypeID

Booking

ADR

BookingChannel

BookingID

BookingStatus

BranchID

CancellationReason

CheckInDate

CheckOutDate

CustomerCluster

CustomerID

DailyBookings

DateID

DiscountApplied

Duration

GuestType

LeadTime

MonthStart

NumOfBookings

PaymentMethod

Purpose

Revenue

RoomCategory

RoomTypeID

13.Adding New Measures in Booking Details Table:

1. DirectBookings_Daily =


```
CALCULATE(
    SUM('Booking details'[Room Booked Count]),
    FILTER('Booking', 'Booking'[Source Type] = "Direct")
)
```
2. DirectBookings_Weekly =


```
CALCULATE(
    SUM('Booking details'[Room Booked Count]),
    FILTER(
        'Booking',
        'Booking'[Source Type] = "Direct"
    ),
    ALLEXCEPT('Booking details', 'Booking details'[WeekNum])
)
```
3. OTABookings_Daily =


```
CALCULATE(
    SUM('Booking details'[Room Booked Count]),
    FILTER('Booking', 'Booking'[Source Type] = "OTA")
)
```
4. OTABookings_Weekly =


```
CALCULATE(
    SUM('Booking details'[Room Booked Count]),
    FILTER(
        'Booking',
        'Booking'[Source Type] = "OTA"
    ),
)
```

```

        ALLEXCEPT('Booking details', 'Booking details'[WeekNum])
    )
5. Revenue_Daily =
    SUM('Booking'[Revenue])
6. Revenue_Weekly =
    CALCULATE(
        SUM('Booking'[Revenue]),
        ALLEXCEPT('Booking details', 'Booking details'[WeekNum])
    )
7. RoomsBooked_Autumn =
    CALCULATE(
        SUM('Booking details'[Room Booked Count]),
        FILTER('Booking details', 'Booking details'[Season] = "Autumn")
    )
8. RoomsBooked_Daily =
    SUM('Booking details'[Room Booked Count])
9. RoomsBooked_PerMonth =
    CALCULATE(
        SUM('Booking details'[Room Booked Count]),
        ALLEXCEPT('Booking Details', 'Booking Details'[MonthYear])
    )
10. RoomsBooked_Spring =
    CALCULATE(
        SUM('Booking details'[Room Booked Count]),
        FILTER('Booking details', 'Booking details'[Season] = "Spring")
    )
11. RoomsBooked_Summer =
    CALCULATE(
        SUM('Booking details'[Room Booked Count]),
        FILTER('Booking details', 'Booking details'[Season] = "Summer")
    )
12. RoomsBooked_Weekly =
    CALCULATE(
        SUM('Booking details'[Room Booked Count]),
        ALLEXCEPT('Booking details', 'Booking details'[WeekNum])
    )
13. RoomsBooked_Winter =
    CALCULATE(
        SUM('Booking details'[Room Booked Count]),
        FILTER('Booking details', 'Booking details'[Season] = "Winter")
    )
14. RoomsBookedPerMonth =
    CALCULATE(
        SUM('Booking details'[Room Booked Count]),
        GROUPBY(
            'Booking details',
            'Booking details'[Stay Date]
        ))

```

Table: Booking Details (901 rows)

14. Creating New Measures in Master Data:

1. MADR =

$$\text{DIVIDE}(\text{SUM('Booking'[Revenue])}, \text{SUM('Booking'[Duration]))})$$
2. MOccupancy % =

$$\text{DIVIDE}(\text{SUM('MasterData'[RoomSoldCount])}, \text{SUM('MasterData'[RoomAvailableCount])), 0} * 100$$
3. MonthlyADR =

$$\text{CALCULATE}([\text{MADR}], \text{ALLEXCEPT}(\text{MasterData}, \text{MasterData}[MonthStart]))$$
4. MonthlyRevPAR =

$$\text{CALCULATE}([\text{MRevPAR}], \text{ALLEXCEPT}(\text{MasterData}, \text{MasterData}[MonthStart]))$$
5. MRevPAR =

$$\text{DIVIDE}(\text{SUM('Booking'[Revenue])}, \text{SUM('MasterData'[RoomAvailableCount])), 0}$$

)

The screenshot shows the Power BI Data Editor interface. On the left, the DAX code for the 'MasterData' table is displayed:

```
1 MasterData =  
2 VAR CalendarTable =  
3 ADDCOLUMNS (  
4     CALENDAR (DATE(2023,5,1), DATE(2025,11,1)),  
5     "MonthStart", EOMONTH([Date], -1) + 1,  
6     "Months", FORMAT(EOMONTH([Date], -1) + 1, "dd-mmm-yy"),  
7     "DayCount", DAY(EOMONTH([Date], 0)),  
8     "RoomAvailableCount", DAY(EOMONTH([Date], 0)) * 260  
9 )  
10 RETURN  
11 ADDCOLUMNS (  
12     SUMMARIZE (  
13         CalendarTable,  
14         [MonthStart], [Month], [DayCount], [RoomAvailableCount]  
15     ),  
16     "RoomSoldCount",  
17     CALCULATE (  
18         SUM ('Booking details'[Room Booked Count]),  
19         TREATAS ( { [MonthStart] }, 'Booking details'[MonthStart] )  
20     ),  
21     "Occupancy %",  
22     DIVIDE (  
23         CALCULATE (  
24             SUM ('Booking details'[Room Booked Count]),  
25             TREATAS ( { [MonthStart] }, 'Booking details'[MonthStart] )  
26         ),  
27         [RoomAvailableCount],  
28         0  
29     ) * 100  
30 )  
31
```

The preview table below shows data for four months from May 2023 to August 2023. The columns include MonthStart, Month, DayCount, RoomAvailableCount, RoomSoldCount, Occupancy %, ADR, RevPAR, and TotalRevenue.

MonthStart	Month	DayCount	RoomAvailableCount	RoomSoldCount	Occupancy %	ADR	RevPAR	TotalRevenue
01-05-2023 00:00:00	01-May-23	31	8060	154	1.9106699751861	₹ 28,756.49	₹ 549.44	4428500
01-06-2023 00:00:00	01-Jun-23	30	7800	822	10.5384615304615	₹ 31,621.05	₹ 3,332.37	25992500
01-07-2023 00:00:00	01-Jul-23	31	8060	889	11.029776674938	₹ 30,462.56	₹ 3,362.16	27099000
01-08-2023 00:00:00	01-Aug-23	31	8060	836	10.3722084367246	₹ 31,447.37	₹ 3,261.79	26290000

The right pane shows the data model structure with tables like MasterData, Branch, Customer, Date, Duration, etc.

15.Adding New Measures in Table calculations:

1. ADR (Measure) =

```
DIVIDE(  
    SUM('Tbl Cal'[TotalRevenue]),  
    SUM('Tbl Cal'[Room Booked Count]),  
    0  
)
```

2. ADR YY Change =

```
VAR CurrentADR = [ADR (Measure)]  
VAR LastYearADR =  
    CALCULATE(  
        [ADR (Measure)],  
        SAMEPERIODLASTYEAR('Tbl Cal'[Stay date])  
)
```

RETURN

```
DIVIDE(  
    CurrentADR - LastYearADR,  
    LastYearADR,  
    0  
)
```

3. Occupancy % per Month =

```
DIVIDE(  
    CALCULATE(  
        SUM('Tbl Cal'[Room Booked Count]),  
        ALLEXCEPT('Tbl Cal', 'Tbl Cal'[Month]))
```

```

),
CALCULATE(
    SUM('Tbl Cal'[Total Rooms]),
    ALLEXCEPT('Tbl Cal', 'Tbl Cal'[Month])
),
0
)
4. RevPAR (measure) =
DIVIDE(
    SUM('Tbl Cal'[TotalRevenue]),
    SUM('Tbl Cal'[Total Rooms]),
    0
)
5. RevPAR YY Change =
VAR CurrentRevPAR = [RevPAR (measure)]
VAR LastYearRevPAR =
    CALCULATE(
        [RevPAR (measure)],
        SAMEPERIODLASTYEAR('Tbl Cal'[Stay date])
    )
RETURN
DIVIDE(
    CurrentRevPAR - LastYearRevPAR,
    LastYearRevPAR,
    0
)

```

Module 2 Final • Last saved: Today at 10:02 PM

File Home Help Table tools

Name Tbl Cal

Manage relationships New measure column New table Mark as date table

Structure Relationships Calculations Calendars

Stay Date Room Booked Count ADR Month MonthStart Occupancy % Quarter Revpar Season Total Rooms TotalRevenue Week Weekday

03 April 2025 27 ₹ 7,481.48 April 01-04-2025 1298.08% Q2 2025 ₹ 977.15 Spring 208 202000 14 Thursday
18 October 2024 27 ₹ 8,370.37 October 01-10-2024 1298.08% Q4 2024 ₹ 956.73 Autumn 208 199000 42 Friday
21 June 2025 27 ₹ 8,203.70 June 01-06-2025 1298.08% Q2 2025 ₹ 1,064.90 Summer 208 221500 25 Saturday
20 June 2024 27 ₹ 7,277.78 June 01-06-2024 1298.08% Q2 2024 ₹ 944.71 Summer 208 196500 25 Thursday
27 May 2025 27 ₹ 5,592.59 May 01-05-2025 1298.08% Q2 2025 ₹ 725.96 Spring 208 151000 22 Tuesday
04 August 2025 27 ₹ 8,037.04 August 01-08-2025 1298.08% Q3 2025 ₹ 1,043.27 Summer 208 217000 32 Monday
23 July 2025 27 ₹ 7,611.11 July 01-07-2025 1298.08% Q3 2025 ₹ 987.98 Summer 208 205500 30 Wednesday
14 August 2024 27 ₹ 6,388.89 August 01-08-2024 1298.08% Q3 2024 ₹ 829.33 Summer 208 172500 33 Wednesday
22 June 2025 27 ₹ 7,592.59 June 01-06-2025 1298.08% Q2 2025 ₹ 985.58 Summer 208 205000 26 Sunday
07 October 2023 27 ₹ 6,795.30 October 01-10-2023 1298.08% Q4 2023 ₹ 882.21 Autumn 208 183500 40 Saturday
23 August 2024 27 ₹ 7,111.11 August 01-08-2024 1298.08% Q3 2024 ₹ 923.08 Summer 208 192000 34 Friday
19 October 2023 27 ₹ 6,962.96 October 01-10-2023 1298.08% Q4 2023 ₹ 1,163.46 Autumn 208 242000 42 Thursday
13 October 2024 27 ₹ 6,685.19 October 01-10-2024 1298.08% Q4 2024 ₹ 1,127.40 Autumn 208 234500 42 Sunday
26 March 2024 27 ₹ 6,628.63 March 01-03-2024 1298.08% Q1 2024 ₹ 1,120.19 Spring 208 233000 13 Tuesday
06 September 2023 27 ₹ 7,666.67 September 01-09-2023 1298.08% Q3 2023 ₹ 995.19 Autumn 208 207000 36 Wednesday
28 December 2024 27 ₹ 9,407.41 December 01-12-2024 1298.08% Q4 2024 ₹ 1,221.15 Winter 208 254000 52 Saturday
15 September 2025 27 ₹ 7,370.37 September 01-09-2025 1298.08% Q3 2025 ₹ 956.73 Autumn 208 199000 38 Monday
05 March 2025 27 ₹ 5,481.48 March 01-03-2025 1298.08% Q1 2025 ₹ 711.54 Spring 208 148000 10 Wednesday
07 July 2024 27 ₹ 9,814.81 July 01-07-2024 1298.08% Q3 2024 ₹ 1,274.04 Summer 208 265000 28 Sunday
11 September 2025 27 ₹ 5,962.96 September 01-09-2025 1298.08% Q3 2025 ₹ 774.04 Autumn 208 161000 37 Thursday
29 March 2024 27 ₹ 7,055.56 March 01-03-2024 1298.08% Q1 2024 ₹ 915.87 Spring 208 196500 13 Friday
28 April 2024 27 ₹ 9,685.19 April 01-04-2024 1298.08% Q2 2024 ₹ 1,257.21 Spring 208 261500 18 Sunday
06 January 2025 27 ₹ 6,000.00 January 01-01-2025 1298.08% Q1 2025 ₹ 1,038.46 Winter 208 216000 2 Monday
08 November 2024 27 ₹ 7,129.63 November 01-11-2024 1298.08% Q4 2024 ₹ 925.48 Autumn 208 192500 45 Friday
03 September 2025 27 ₹ 7,666.67 September 01-09-2025 1298.08% Q3 2025 ₹ 995.19 Autumn 208 207000 36 Wednesday
27 May 2024 27 ₹ 6,962.96 May 01-05-2024 1298.08% Q2 2024 ₹ 903.85 Spring 208 188000 22 Monday
31 August 2025 27 ₹ 10,370.37 August 01-08-2025 1298.08% Q3 2025 ₹ 1,346.15 Summer 208 280000 36 Sunday
07 January 2025 27 ₹ 7,055.56 January 01-01-2025 1298.08% Q1 2025 ₹ 915.87 Winter 208 190500 2 Tuesday
31 January 2024 27 ₹ 5,259.26 January 01-01-2024 1298.08% Q1 2024 ₹ 682.69 Winter 208 142000 5 Wednesday
11 August 2024 27 ₹ 7,407.41 August 01-08-2024 1298.08% Q3 2024 ₹ 961.54 Summer 208 200000 33 Sunday

Table: Tbl Cal (901 rows)

16.Creating a New Table Using DAX Formula and Add new Columns :

```
Tbl_Guests =  
SUMMARIZE(  
    'Tbl Booking',  
    'Tbl Booking'[CustomerID],  
    "FirstStay", MIN('Tbl Booking'[CheckInDate]),  
    "LastStay", MAX('Tbl Booking'[CheckOutDate])  
)  
  
1. FrequencyScore =  
    CALCULATE(  
        COUNTROWS('Tbl Booking'),  
        FILTER('Tbl Booking', 'Tbl Booking'[CustomerID] = 'Tbl_Guests'[CustomerID])  
    )  
  
2. RecencyScore =  
    DATEDIFF(  
        CALCULATE(  
            MAX('Tbl Booking'[CheckOutDate]),  
            FILTER('Tbl Booking', 'Tbl Booking'[CustomerID] = 'Tbl_Guests'[CustomerID])  
        ),  
        TODAY(),  
        DAY  
    )  
  
3. SpendScore =  
    CALCULATE(  
        SUM('Tbl Booking'[Day Revenue]),  
        FILTER('Tbl Booking', 'Tbl Booking'[CustomerID] = 'Tbl_Guests'[CustomerID])  
    )
```

The screenshot shows the Power BI Desktop interface with the 'Table tools' ribbon selected. The 'Structure' tab is active, displaying the DAX formula for creating the 'Tbl_Guests' table. The formula uses the 'SUMMARIZE' function to group by 'CustomerID' and calculate three measures: 'FirstStay' (MIN of 'CheckInDate'), 'LastStay' (MAX of 'CheckOutDate'), and 'SpendScore' (SUM of 'Day Revenue'). The 'Data' pane on the right shows the resulting table structure with columns: CustomerID, FirstStay, LastStay, RecencyScore, FrequencyScore, and SpendScore. The data preview shows 3,000 rows of guest booking information.

CustomerID	FirstStay	LastStay	RecencyScore	FrequencyScore	SpendScore
C1381	23-09-2023	14-01-2025	372	8	59000
C1776	09-09-2023	05-11-2025	17	9	84000
C1749	05-06-2023	28-06-2024	512	7	61500
C3625	28-09-2023	06-08-2025	108	9	68000
C2648	26-12-2023	24-09-2025	59	9	71000
C2530	06-11-2023	05-11-2024	382	6	59000
C3063	19-11-2023	18-09-2025	65	9	93500
C3787	15-07-2023	25-09-2025	58	15	82500
C3045	25-10-2023	15-10-2025	38	8	43000
C3502	01-11-2023	23-09-2025	60	11	75500
C1978	19-06-2023	30-09-2025	53	10	61500
C1754	15-08-2023	18-01-2025	308	5	41000
C1968	19-11-2023	08-03-2025	259	6	57000
C1024	14-06-2023	29-11-2024	358	10	85500
C1807	24-06-2023	22-10-2025	31	10	76000
C1819	11-11-2023	20-09-2025	63	11	102500
C1277	07-09-2023	02-09-2025	81	9	99500
C2034	23-06-2023	09-08-2025	105	8	47000
C3613	04-06-2023	25-08-2025	89	7	72500
C1264	29-10-2023	08-09-2025	75	4	29500
C3609	01-09-2023	30-09-2025	53	12	107500
C1225	07-06-2023	24-08-2025	90	18	118500
C1008	25-06-2023	15-09-2025	68	10	75500
C2406	28-08-2023	05-09-2025	78	7	52000

17. Creating Visuals in Power BI

This report visualizes monthly hotel performance by calculating and plotting the Average ADR, RevPAR, and Occupancy% using aggregated room availability, room sold, and revenue data, supported by KPI cards and a detailed summary table.

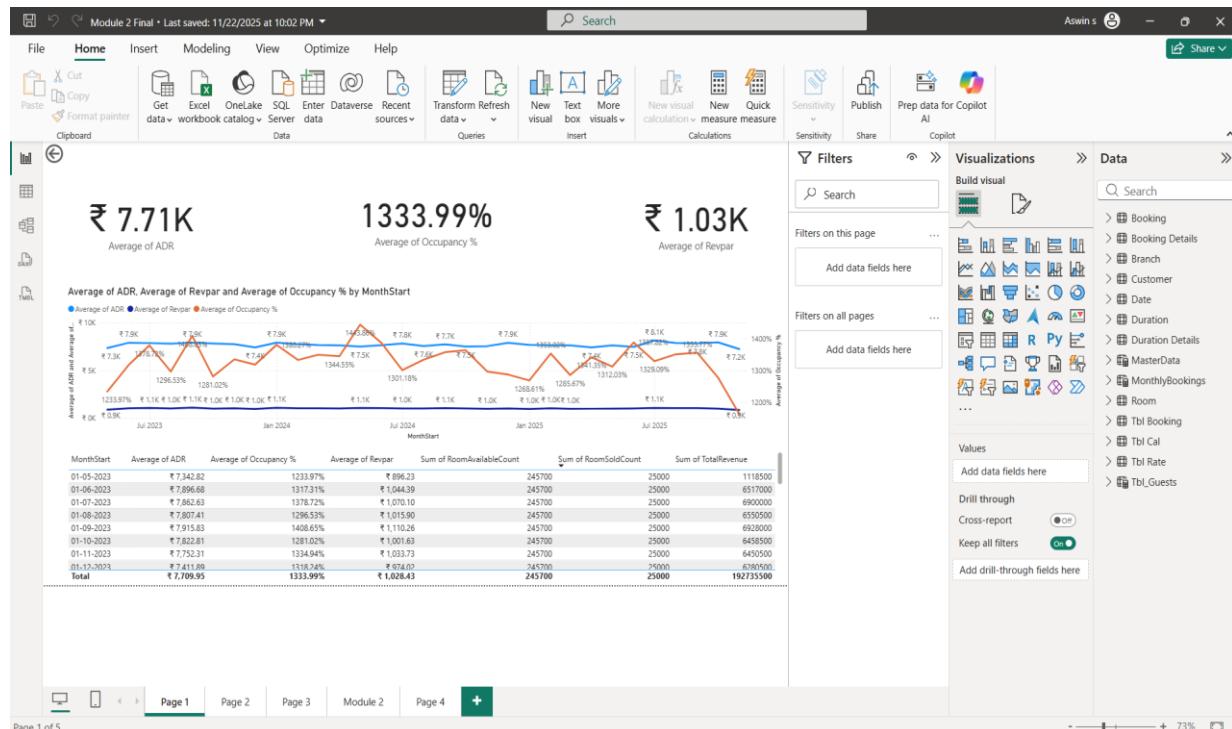
Average ADR - Displays the overall Average Daily Rate (ADR) calculated from the aggregated revenue and room-sold data.

Average Occupancy % - Shows the overall Occupancy Percentage derived by dividing rooms sold by rooms available across all selected months.

Average RevPAR - Presents the overall Revenue per Available Room (RevPAR) calculated from total revenue and room-availability data.

Multi-Line Chart - Plots monthly trends of ADR, RevPAR, and Occupancy% on a combined line chart to compare performance patterns over time.

Table - Displays a tabular breakdown of each month's ADR, Occupancy%, RevPAR, rooms available, rooms sold, and total revenue for detailed analysis.



18.Create visualization for Room Booked

Column Chart – RoomsBookedPerMonth by Year, Quarter, Month, and Day

Shows the number of rooms booked on each day across different months.

Helps identify daily booking patterns, peak periods, and low-demand days.

Line Chart – Sum of Duration by Revenue and Source Type

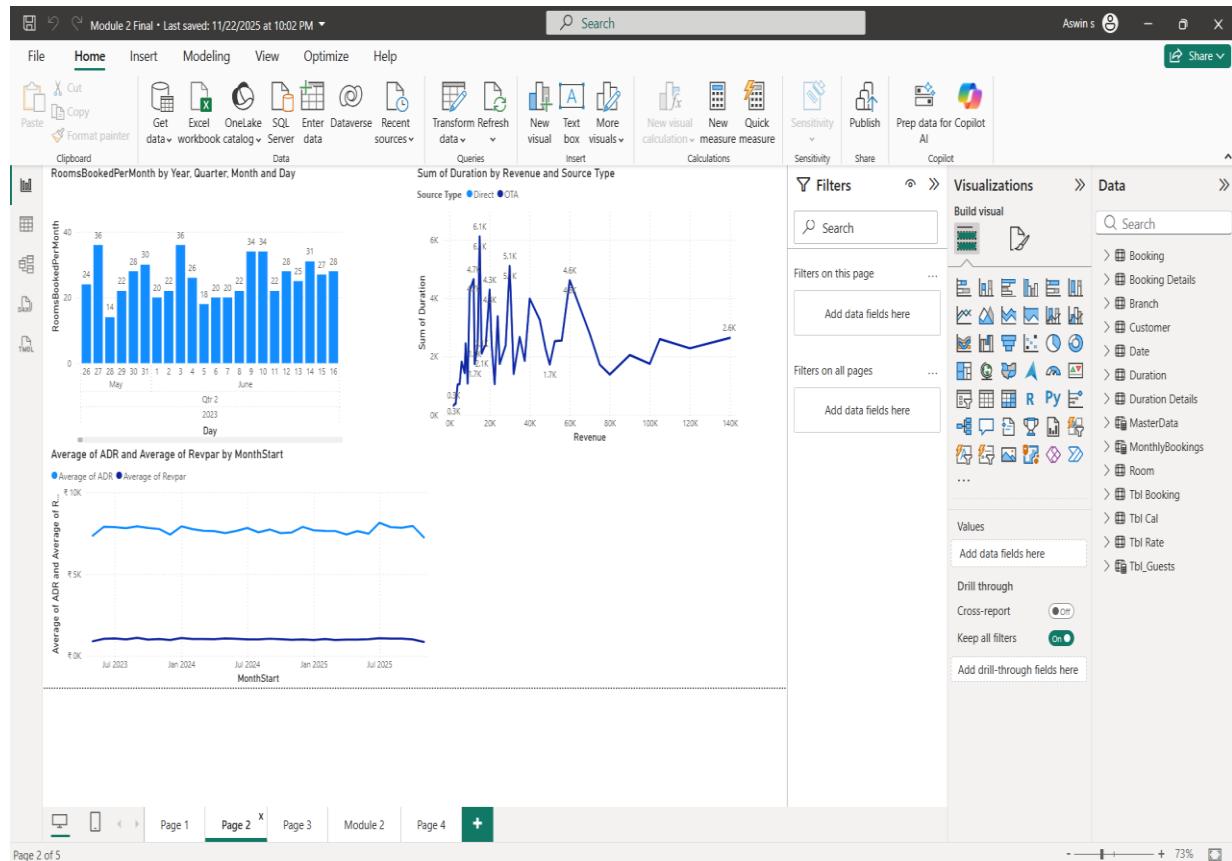
Plots total stay duration against revenue, categorized by booking source (Direct/OTA).

Useful for comparing how stay length changes with revenue across channels.

Line Chart – Average of ADR and Average of RevPAR by MonthStart

Displays month-wise trends for ADR and RevPAR.

Helps track pricing performance and revenue efficiency over time.



Branch-wise Room Type (Matrix Table)

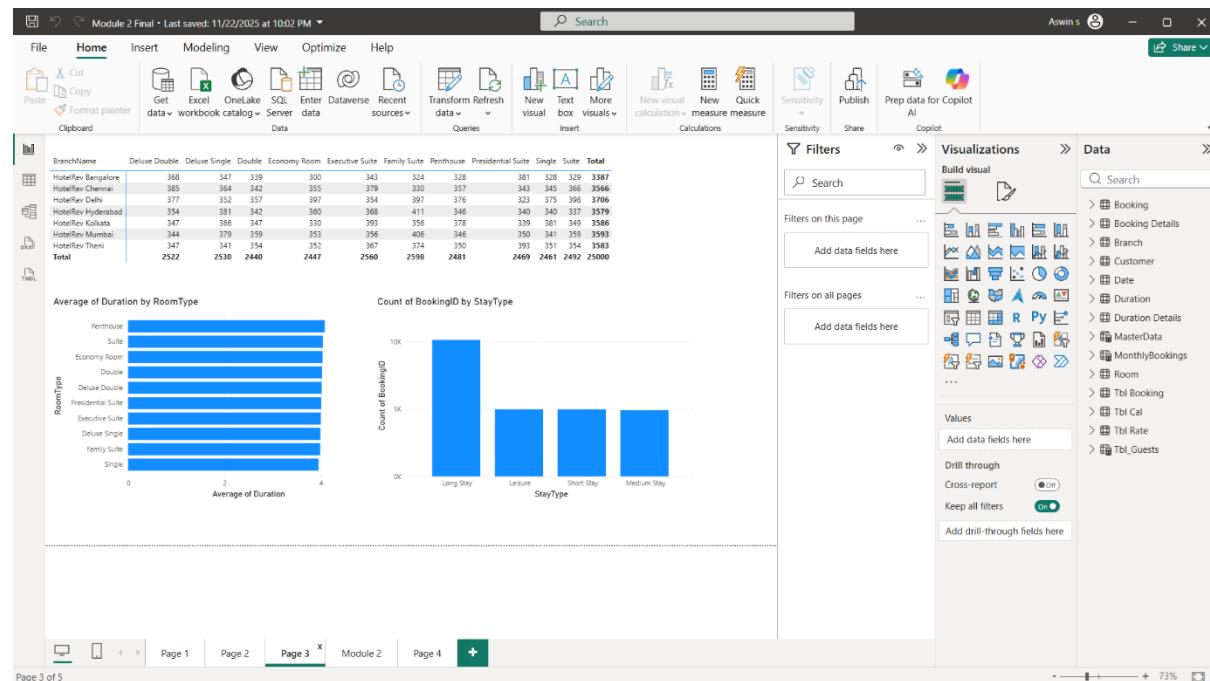
- Shows booking counts for each **RoomType** across all branches.
- Helps compare performance between branches.
- Useful to identify top-performing room types.
- Gives a complete overview of total bookings branch-wise.

Average Duration by RoomType (Bar Chart)

- Displays the **average stay duration** for every room type.
- Helps understand which room types attract longer stays.
- Useful for pricing and stay-pattern analysis.
- Shows clear duration differences between budget and premium rooms.

Count of BookingID by StayType (Column Chart)

- Shows the **number of bookings** for each **StayType** category.
- Helps identify the most common type of stay (e.g., Long Stay, Leisure).
- Useful for understanding guest purpose and stay behavior.
- Supports planning for promotions or seasonal packages.



Daily Performance (Line chart)

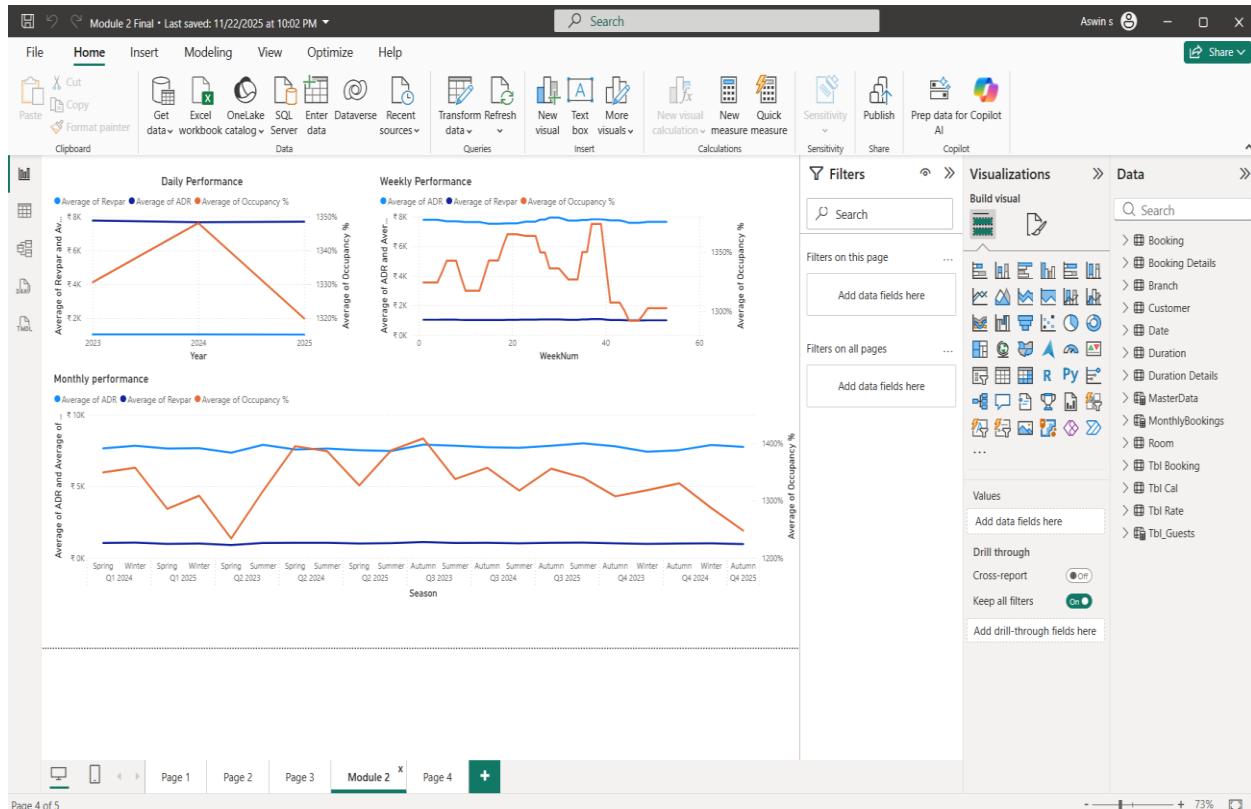
Shows ADR, RevPAR, and Occupancy % by Year

Weekly Performance (Line chart)

Shows ADR, RevPAR, and Occupancy % by Week Number

Monthly/Seasonal Performance (Line chart)

Shows ADR, RevPAR, and Occupancy % by Season / Month



Daily Performance Line Chart

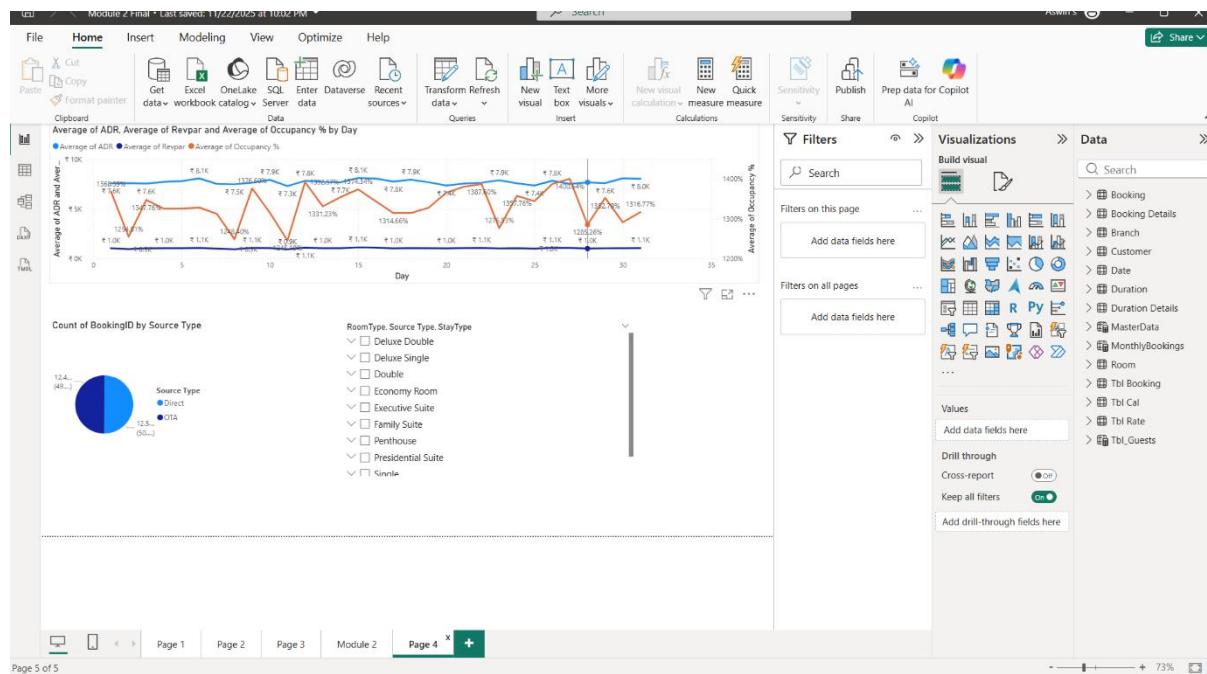
- Shows ADR, RevPAR, and Occupancy %
- Visualized day-by-day
- Helps track short-term performance trends

Booking Count by Source Type (Pie Chart)

- Shows **Direct vs OTA booking share**
- Helps understand which booking channel performs better

Room Type + Source Type + Stay Type Slicer (Multi-level Filter)

- Interactive slicer with **RoomType, SourceType, StayType**
- Helps filter visuals dynamically based on selections
- Useful to analyze specific room behaviour per source/stay type



MODULE 3: GUEST ANALYSIS

1. Creating New Visualization for Guest Analysis

Map Visualization (CustomerID by Nationality and CustomerCluster)

- This map visual shows **where customers come from across the world**.
- Each point represents a nationality grouped by **CustomerCluster** (First-Timer, High Spender, Loyal Guest, Other).
- Helps identify **customer geography, target markets, and cluster-based demand patterns**.

Stacked Bar Chart

- Displays the **number of customers** classified by **GuestType** (Family, Business, Solo, Corporate).
- Bars are split into **Direct** vs **OTA** booking channels.

Slicer

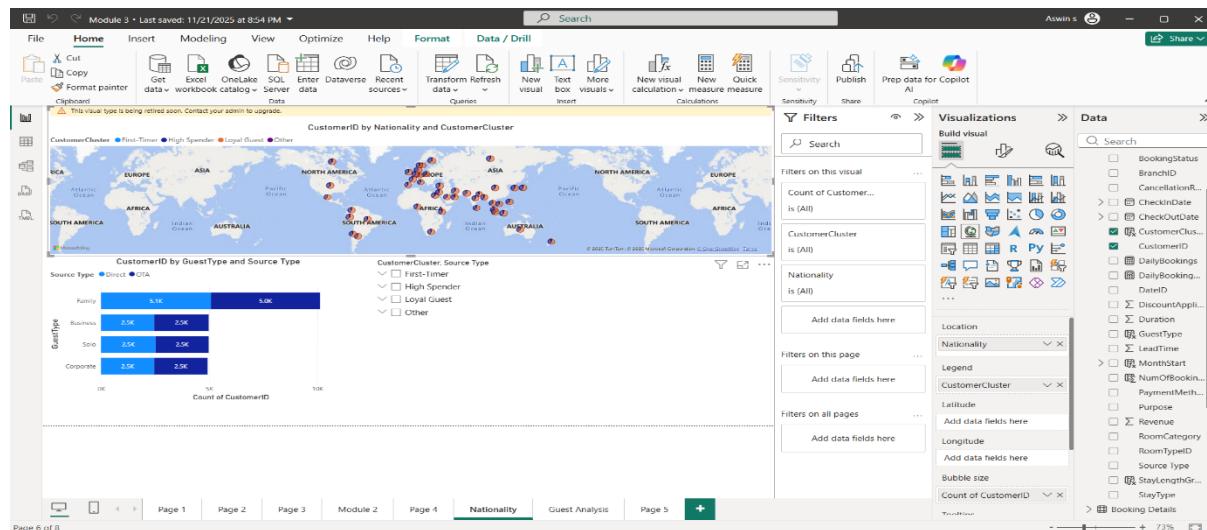
- An interactive slicer that allows filtering visuals based on customer type and booking source.
- Makes analysis more flexible by allowing drill-down for:

First-Timer

High Spender

Loyal Guest

Other



Nationality Distribution (Bar chart)

- Shows **booking count** by nationality and **GuestType** (Business, Corporate, Family, Solo).
- Helps identify which guest types are more common from specific countries.
- Useful for **targeted marketing** and understanding international booking patterns.

Booking Source by GuestType (Clustered Bar Chart)

- Displays **booking count** by booking channel (Website, Call Center, Mobile App, Travel Agent).
- Split by **GuestType** for comparison.
- Helps analyze which channels different guest categories prefer.

Average Duration by GuestType (Bar Chart)

- Shows **average stay duration** for each GuestType.
- Helps identify which guest groups stay longer (e.g., Corporate vs Family).
- Useful for improving pricing, promotions, and occupancy planning.

Appointment Status by Gender (Pie Chart)

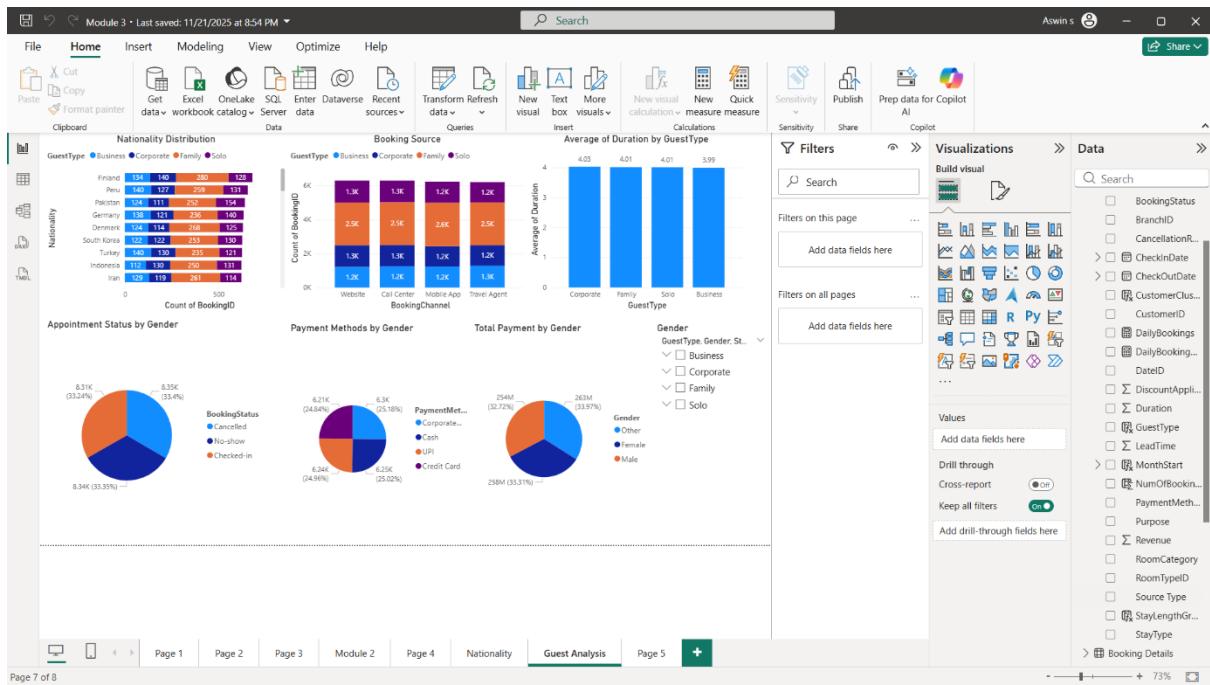
- Shows distribution of booking statuses (Checked-in, Cancelled, No-show) by **Gender**.
- Helps identify behavioral patterns and reliability of different gender groups.

Payment Methods by Gender (Pie Chart)

- Displays the usage of payment methods (Cash, UPI, Credit Card, Corporate).
- Split by **Gender** to show preference differences.
- Useful for optimizing payment options and financial policies.

Total Payment by Gender (Pie Chart)

- Shows **total revenue contribution** from each gender group.
- Helps understand which gender group contributes more to hotel revenue.
- Useful for personalized promotions and loyalty strategies.



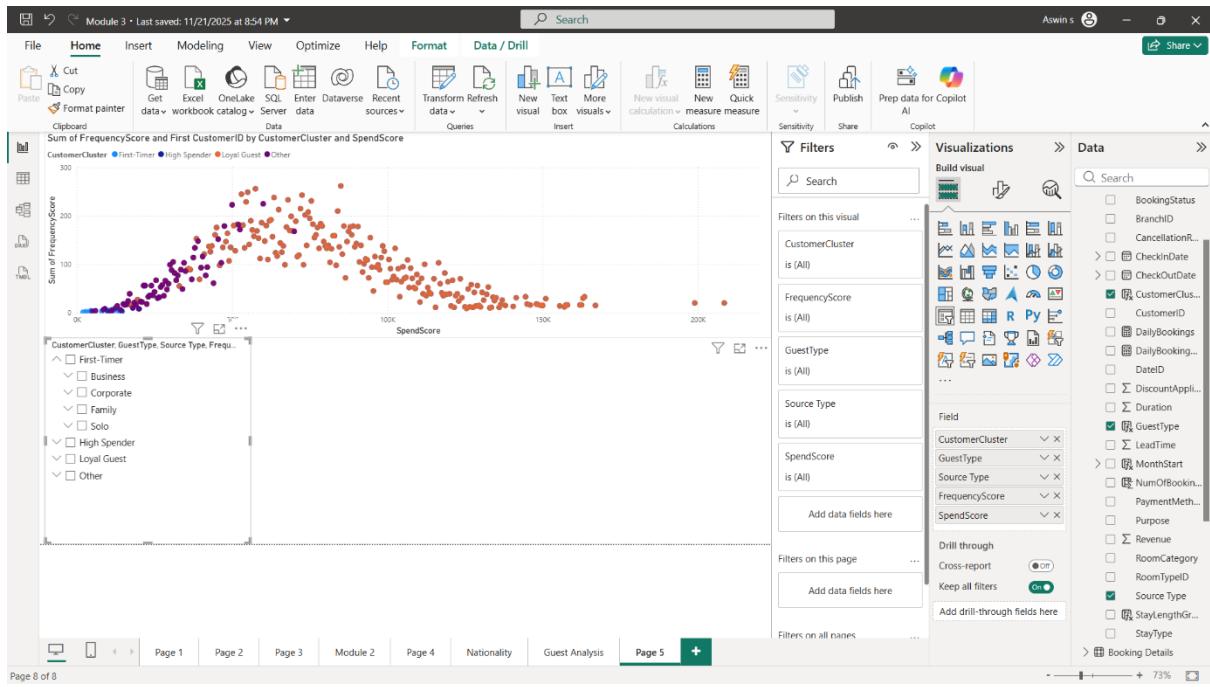
Scatter Plot: FrequencyScore vs SpendScore

- This scatter plot shows the relationship between **SpendScore** (total spending by customer) and **FrequencyScore** (number of visits or bookings),
- Each dot represents a customer. The color of each dot indicates the **CustomerCluster**:

Slicer

Allows filtering the scatter plot by:

- CustomerCluster**
- GuestType**
- Source Type**
- FrequencyScore**
- SpendScore**

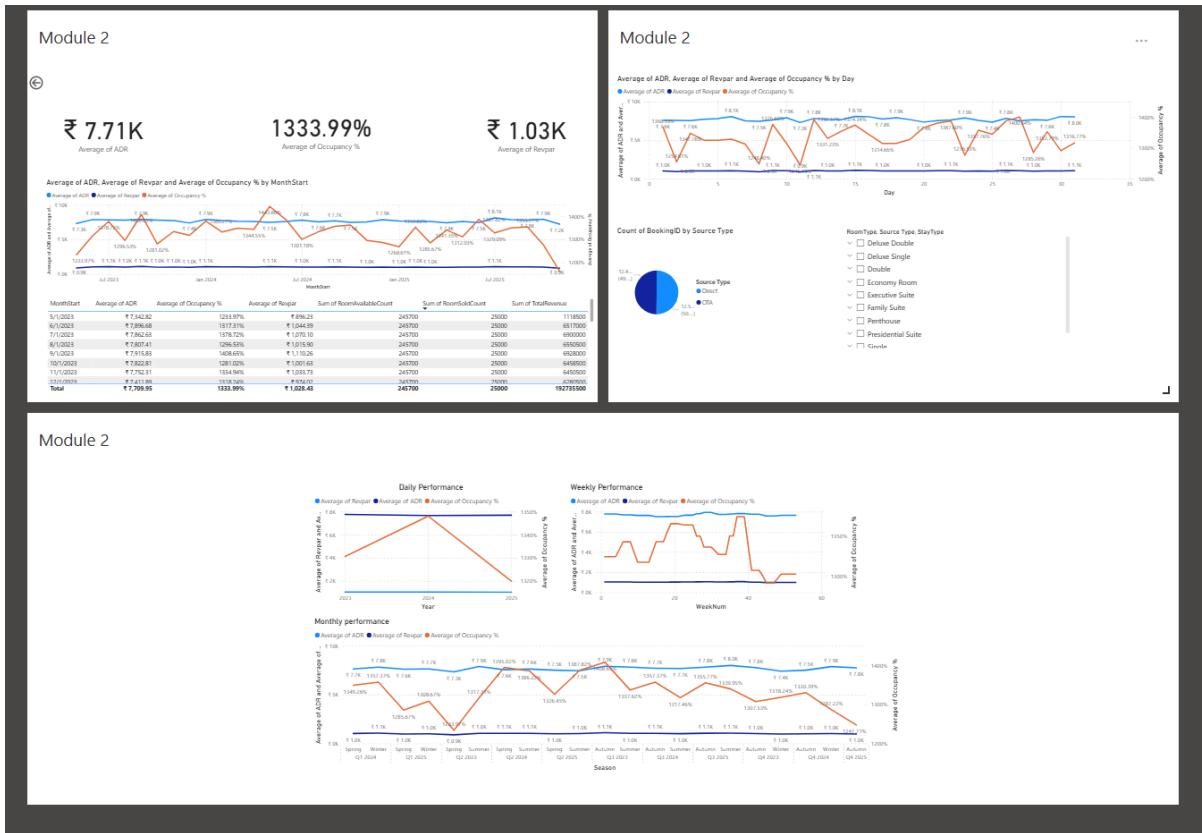


2. Publish data into Power BI and Create Dashboard for each Module

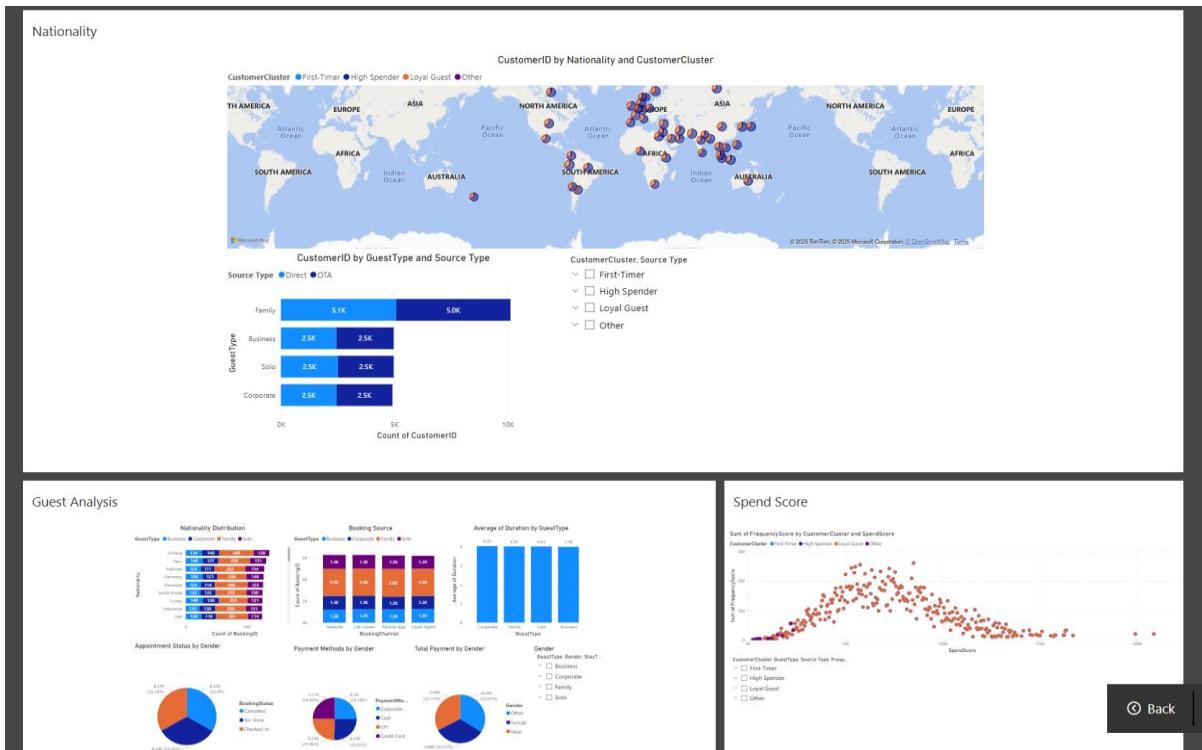
Module 1



Module 2



Module 3



MODULE 4: FORECASTING & CANCELLATION TRENDS

This module focuses on future occupancy trends, guest cancellation behavior, and refund/no-show patterns. The visuals help hotel management make proactive operational and pricing decisions.

Predicting Future Occupancy (Trend Lines)

Purpose

To estimate upcoming occupancy using historical booking data and visual trend lines.

What the Visual Shows

- Line chart of past occupancy levels
- Projected trend based on rolling averages / simple forecasting
- Seasonal patterns (weekends, holidays)

Key Insights Provided

- Expected occupancy for next 7 / 30 days
- Identification of low-demand periods for discounting
- Identification of high-demand periods for rate increases

Cancellation Rate & Lead-Time Distribution

Purpose

To understand how often guests cancel and how far in advance they cancel.

What the Visual Shows

- Monthly/weekly cancellation percentages
- Lead-time histogram (days between booking & cancellation)
- Channels or room types with the highest cancellations

Key Insights Provided

- Channels causing most revenue leakage
- Ideal cancellation policy windows
- Behaviour patterns of last-minute cancellers

No-Show & Refund Trend Visuals

Purpose

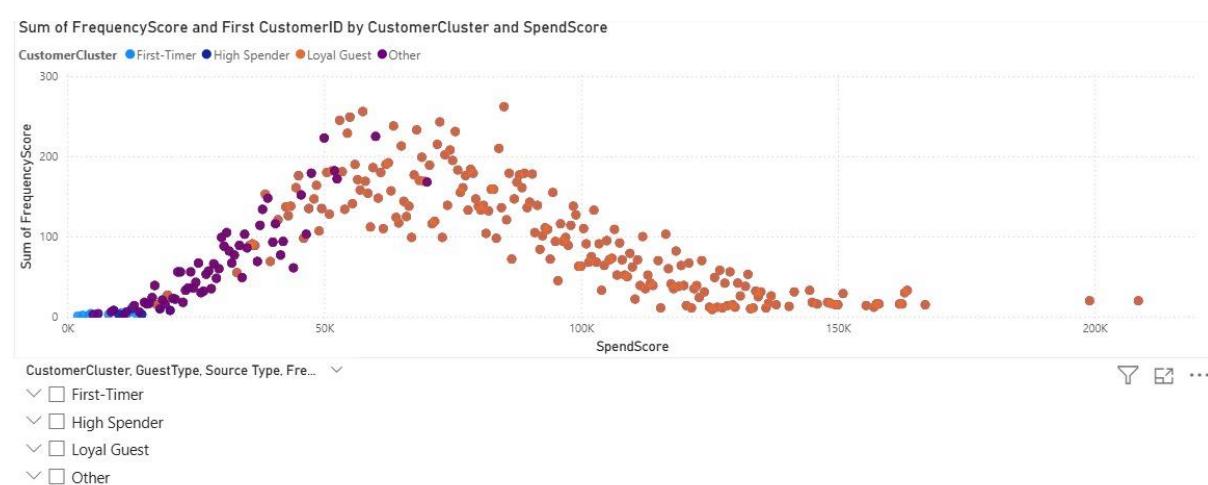
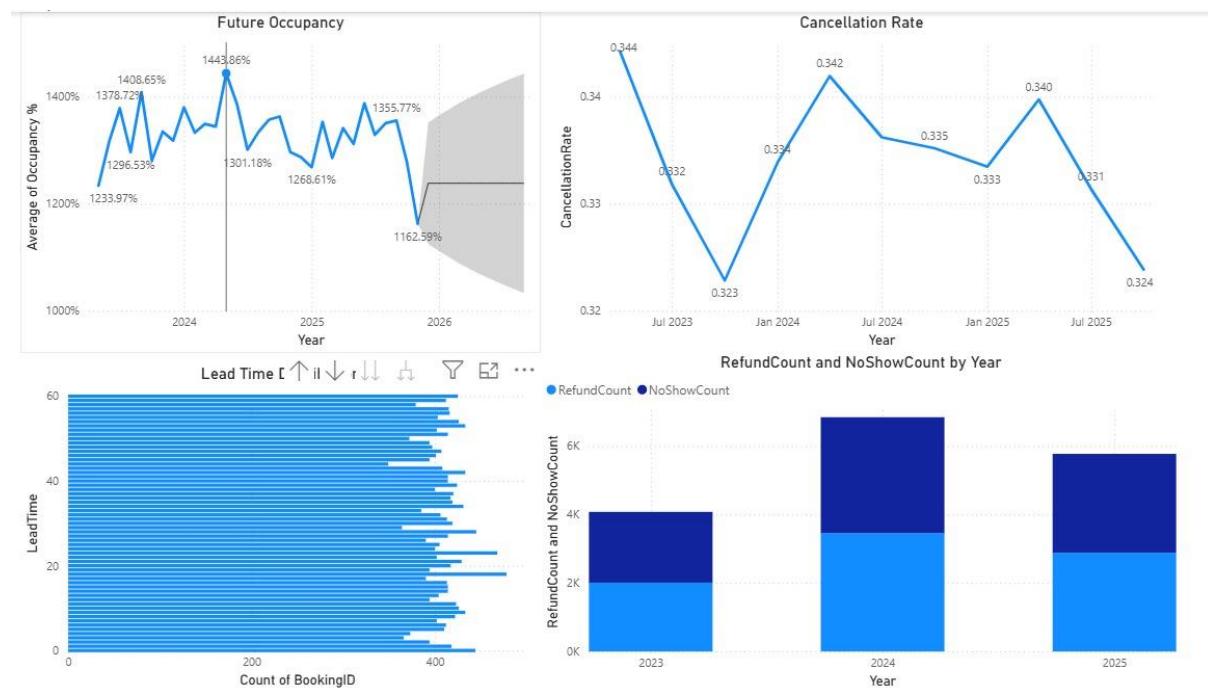
To analyse guests who booked but did not arrive, and bookings that were refunded.

What the Visual Shows

- Monthly no-show trend
- Refund rate and reasons
- Combined operational losses due to no-show/refund

Key Insights Provided

- Identify periods or channels with high no-shows
- Evaluate refund policy effectiveness
- Support decisions for enforcing deposits or prepayment



MODULE 5:REVENUE STRATEGY DASHBOARD

This module translates hotel performance data into pricing and upsell recommendations.

Upsell Potential (Spa, Dining, Services)

Purpose

To identify which guests or segments are most likely to buy ancillary services.

How the Data Is Generated

You created *Ancillary_Transactions* using Power Query (M-code) that:

- Assigns random ancillary service categories (Spa / Dining / Services)
- Adds transaction amount, quantity, and date during stay
- Generates customer-level upsell behaviour insights

What the Visual Shows

- Attach rate (percentage of bookings with ancillary purchase)
- Top-performing services (e.g., Spa > Dining > Service)
- High-value guest segments

Key Insights Provided

- Which services to promote more
- Which guests should receive upsell campaigns
- Timing of promotions (pre-arrival / during stay)

Pricing Tier Recommendations (Season & Room Type)

Purpose

To determine optimal pricing tiers based on seasonality and room type performance.

What the Visual Shows

- Peak, shoulder, and low seasons
- ADR, occupancy, and revenue patterns by room type
- Recommended rate ranges/tiered pricing structure

Key Insights Provided

- When to increase or decrease prices
- Which room types can be pushed to premium pricing
- Seasonal demand-based pricing strategy

Final Interactive Dashboard (For GMs & Revenue Managers)

Purpose

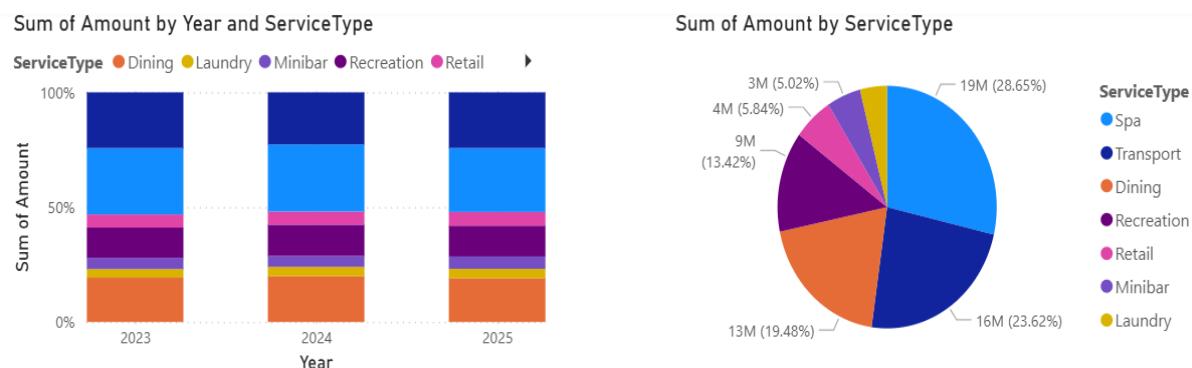
To give hotel leadership a single page to monitor performance and take decisions.

What the Dashboard Includes

- **Top KPIs:** Occupancy, ADR, RevPAR, Cancellations, No-shows
- **Forecast View:** Next 30-day occupancy curve
- **Cancellation Patterns:** Lead-time + high-risk channels
- **Revenue Strategy:** Upsell performance + pricing tiers
- **Filters:** Date, room type, channel, customer segment

Why It's Useful

- Quick operational overview for GMs
- Actionable revenue insights for Revenue Managers
- Single source for daily decision-making



ServiceType	Year	2023		2024		2025		Total		
		Sum of Amount	First TransID	Sum of Amount						
Dining	2023	3214660	ANC000001	5498498	ANC000002	4399641	ANC000015	13112799	ANC000001	13112799
Laundry	2023	627104	ANC000019	1129996	ANC000008	926450	ANC000016	2683550	ANC000008	2683550
Minibar	2023	820316	ANC000037	1313557	ANC000012	1243118	ANC000013	3376991	ANC000012	3376991
Recreation	2023	2191342	ANC000028	3754436	ANC000024	3087575	ANC000003	9033353	ANC000003	9033353
Retail	2023	959861	ANC000005	1587594	ANC000023	1381849	ANC000051	3929304	ANC000005	3929304
Spa	2023	4817133	ANC000065	8066499	ANC000027	6404988	ANC000017	19288620	ANC000017	19288620
Transport	2023	4049652	ANC000040	6265752	ANC000004	5589139	ANC000025	15904543	ANC000004	15904543
Total		16680068	ANC000001	27616332	ANC000002	23032760	ANC000003	67329160	ANC000001	67329160

HOTEL REVENUE MANAGEMENT

25K

Arrivals

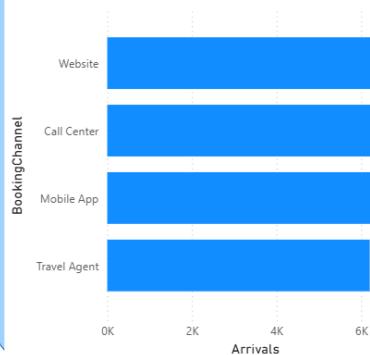
4.01

Avg Days of Stay

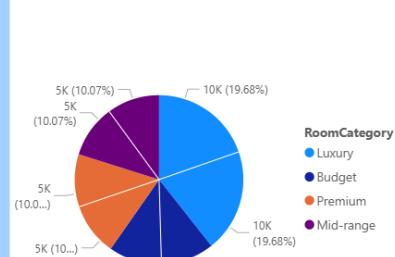
748K

Sum of LeadTime

Arrivals by BookingChannel



Arrivals and Departures by RoomCategory



Arrivals by Month



Sum of TotalRevenue

775M

Room Nights

100K

Sum of Occupancy %

315.51

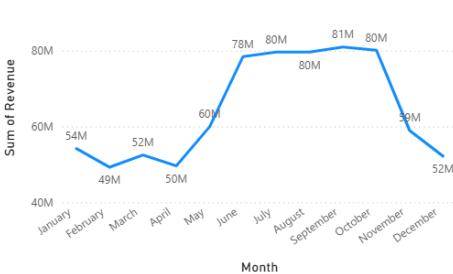
Sum of ADR

192.74M

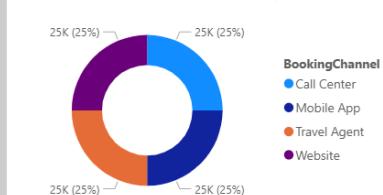
Sum of RevPAR

₹ 97.84K

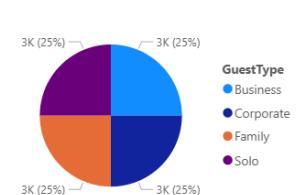
Sum of Revenue by Month



Sum of TotalRoomsBooked by BookingChannel



Count of CustomerID by GuestType



Room Type

RoomCategory	Sum of Revenue	Sum of ADR	Sum of Occupancy %
Budget	158879000	3,93,76,000.00	315.51
Luxury	302320500	7,52,18,500.00	315.51
Mid-range	157658000	3,93,04,000.00	315.51
Premium	156520000	3,88,37,000.00	315.51
Total	775377500	19,27,35,500.00	315.51

Sum of TotalRevenue by Month

