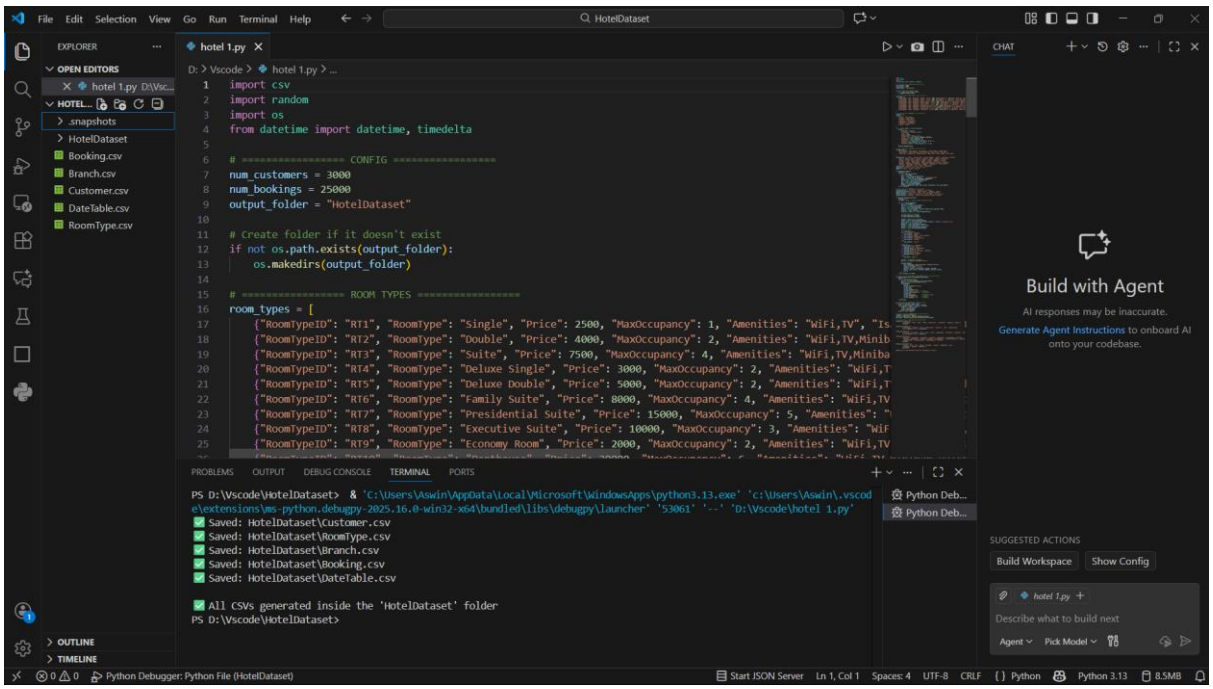
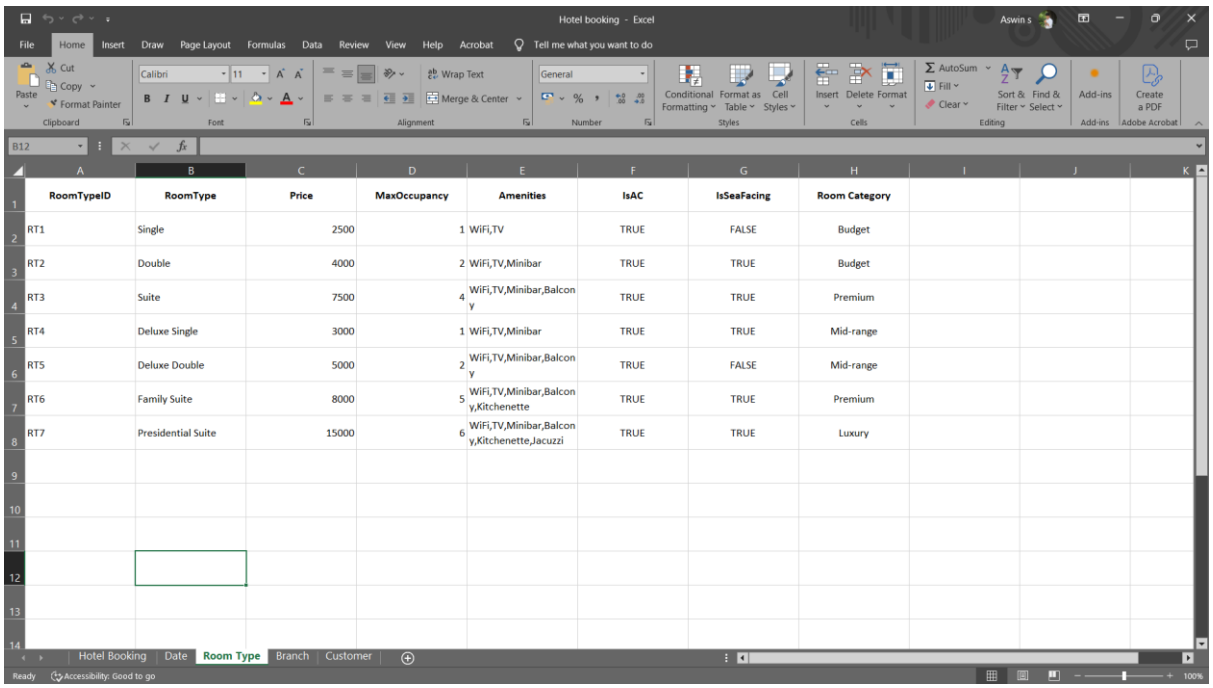
MODULE 1: DATA MODELLING AND INGESTION

1.Download the Dataset Using Python Code:



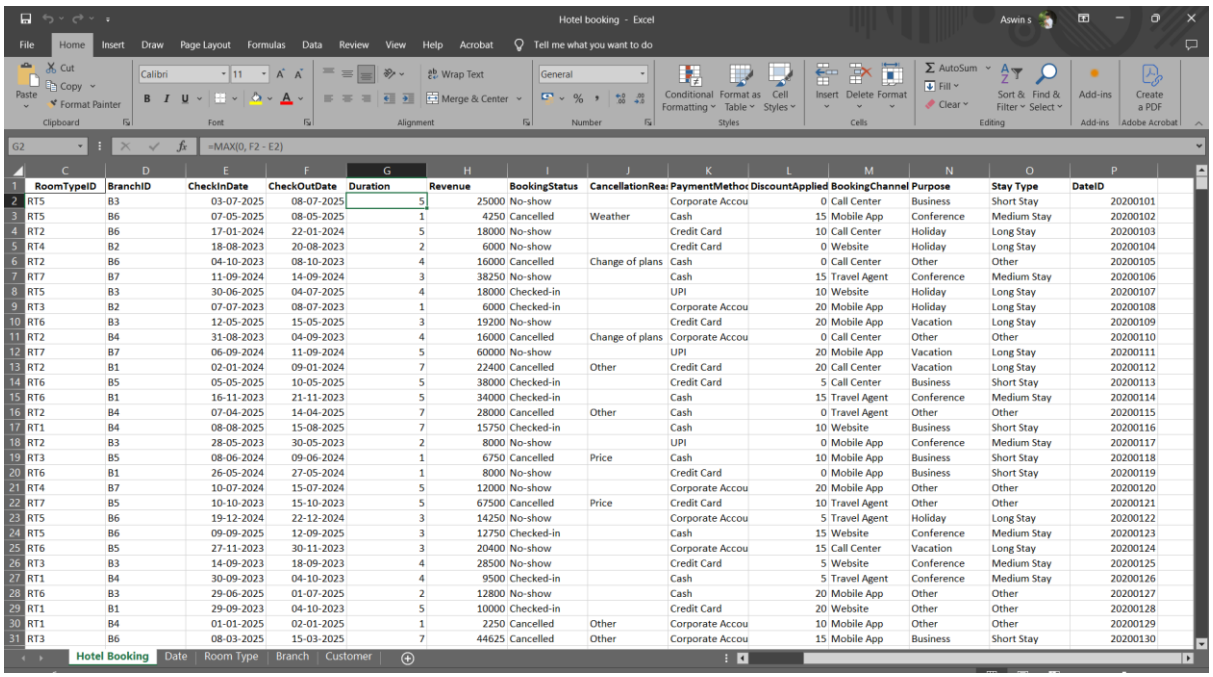
2.Insert All Dataset into Excel:



RoomTypeID	RoomType	Price	MaxOccupancy	Amenities	IsAC	IsSeaFacing	Room Category
RT1	Single	2500	1	WiFi,TV	TRUE	FALSE	Budget
RT2	Double	4000	2	WiFi,TV,Minibar	TRUE	TRUE	Budget
RT3	Suite	7500	4	WiFi,TV,Minibar,Balcony	TRUE	TRUE	Premium
RT4	Deluxe Single	3000	1	WiFi,TV,Minibar	TRUE	TRUE	Mid-range
RT5	Deluxe Double	5000	2	WiFi,TV,Minibar,Balcony	TRUE	FALSE	Mid-range
RT6	Family Suite	8000	5	WiFi,TV,Minibar,Balcony,Kitchenette	TRUE	TRUE	Premium
RT7	Presidential Suite	15000	6	WiFi,TV,Minibar,Balcony,Kitchenette,Jacuzzi	TRUE	TRUE	Luxury

3.Creating Duration Calculation using Formula

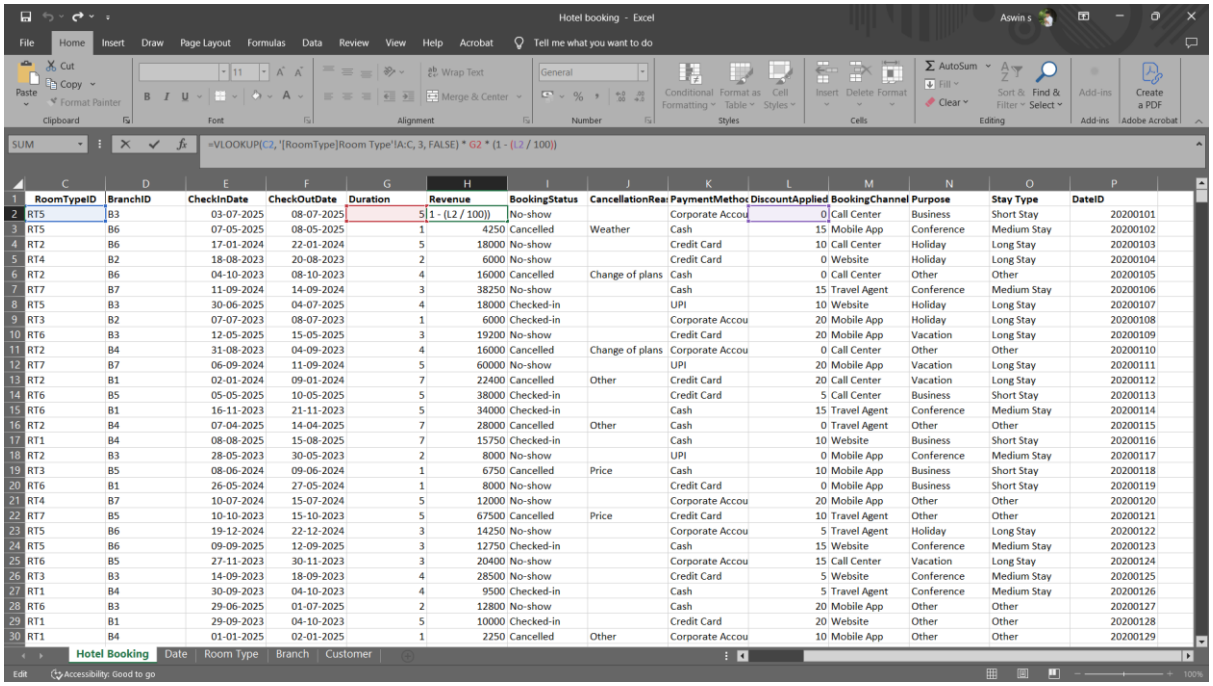
Duration = MAX(0, F2 - E2)



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

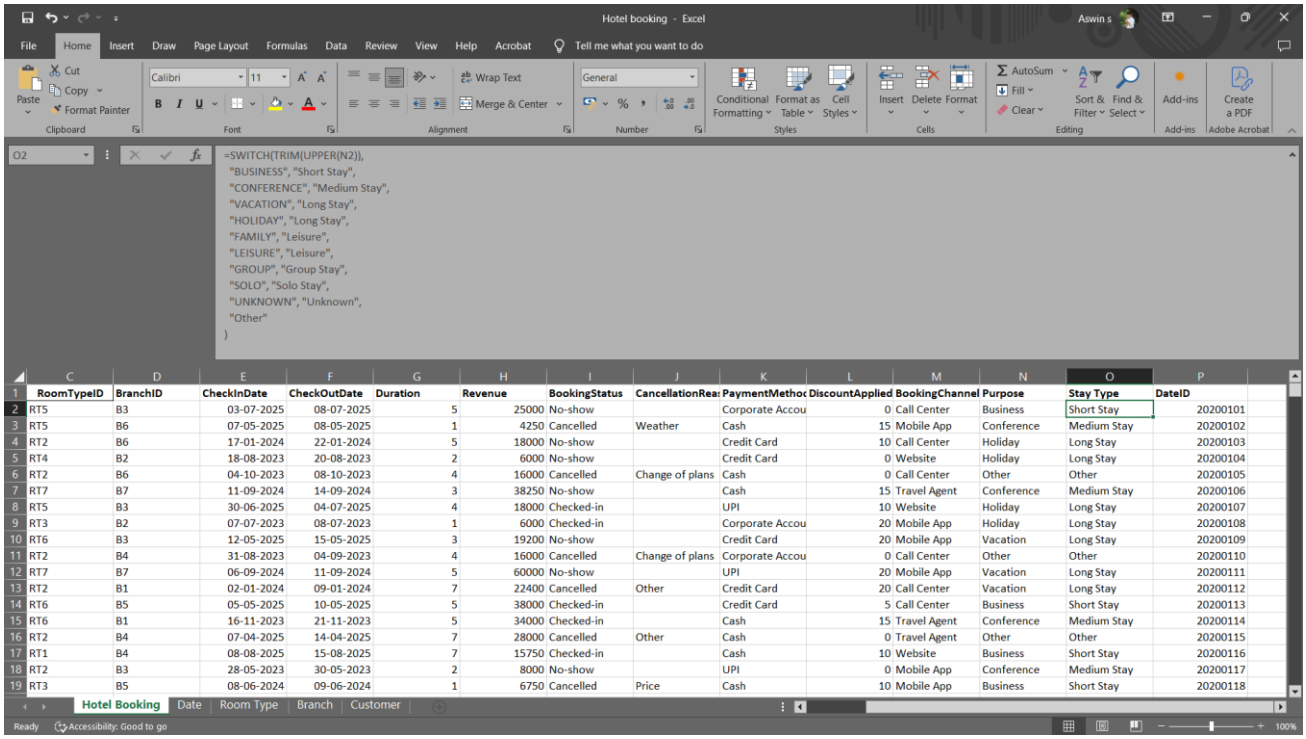
Revenue =VLOOKUP(C2, '[RoomType]Room Type'!A:C, 3, FALSE) * G2 * (1 - (L2 / 100))



RoomTypeID	BranchID	CheckInDate	CheckOutDate	Duration	Revenue	BookingStatus	CancellationRea	PaymentMethod	DiscountApplied	BookingChannel	Purpose	Stay Type	DateID
RT5	B3	03-07-2025	08-07-2025	5	1 - (L2 / 100))	No-show		Corporate Accou	0	Call Center	Business	Short Stay	20200101
RT5	B6	07-05-2025	08-05-2025	1	4250	Cancelled	Weather	Cash	15	Mobile App	Conference	Medium Stay	20200102
RT2	B6	17-01-2024	22-01-2024	5	18000	No-show		Credit Card	10	Call Center	Holiday	Long Stay	20200103
RT4	B2	18-08-2023	20-08-2023	2	6000	No-show		Credit Card	0	Website	Holiday	Long Stay	20200104
RT2	B6	04-10-2023	08-10-2023	4	16000	Cancelled	Change of plans	Cash	0	Call Center	Other	Other	20200105
RT7	B7	11-09-2024	14-09-2024	3	38250	No-show		Cash	15	Travel Agent	Conference	Medium Stay	20200106
RT5	B3	30-06-2025	04-07-2025	4	18000	Checked-in		UPI	10	Website	Holiday	Long Stay	20200107
RT3	B2	07-07-2023	08-07-2023	1	6000	Checked-in		Corporate Accou	20	Mobile App	Holiday	Long Stay	20200108
RT6	B3	12-05-2025	15-05-2025	3	19200	No-show		Credit Card	20	Mobile App	Vacation	Long Stay	20200109
RT2	B4	31-08-2023	04-09-2023	4	16000	Cancelled	Change of plans	Corporate Accou	0	Call Center	Other	Other	20200110
RT7	B7	06-09-2024	11-09-2024	5	60000	No-show		UPI	20	Mobile App	Vacation	Long Stay	20200111
RT2	B1	02-01-2024	09-01-2024	7	22400	Cancelled	Other	Credit Card	20	Call Center	Vacation	Long Stay	20200112
RT6	B5	05-05-2025	10-05-2025	5	38000	Checked-in		Credit Card	5	Call Center	Business	Short Stay	20200113
RT6	B1	16-11-2023	21-11-2023	5	34000	Checked-in		Cash	15	Travel Agent	Conference	Medium Stay	20200114
RT2	B4	07-04-2025	14-04-2025	7	28000	Cancelled	Other	Cash	0	Travel Agent	Other	Other	20200115
RT1	B4	08-08-2025	15-08-2025	7	15750	Checked-in		Cash	10	Website	Business	Short Stay	20200116
RT2	B3	28-05-2023	30-05-2023	2	8000	No-show		UPI	0	Mobile App	Conference	Medium Stay	20200117
RT3	B5	08-06-2024	09-06-2024	1	6750	Cancelled	Price	Cash	10	Mobile App	Business	Short Stay	20200118
RT6	B1	26-05-2024	27-05-2024	1	8000	No-show		Credit Card	0	Mobile App	Business	Short Stay	20200119
RT4	B7	10-07-2024	15-07-2024	5	12000	No-show		Corporate Accou	20	Mobile App	Other	Other	20200120
RT7	B5	10-10-2023	15-10-2023	5	67500	Cancelled	Price	Credit Card	10	Travel Agent	Other	Other	20200121
RT5	B6	19-12-2024	22-12-2024	3	14250	No-show		Corporate Accou	5	Travel Agent	Holiday	Long Stay	20200122
RT5	B6	09-09-2025	12-09-2025	3	12750	Checked-in		Cash	15	Website	Conference	Medium Stay	20200123
RT6	B5	27-11-2023	30-11-2023	3	20400	No-show		Corporate Accou	15	Call Center	Vacation	Long Stay	20200124
RT3	B3	14-09-2023	18-09-2023	4	28500	No-show		Credit Card	5	Website	Conference	Medium Stay	20200125
RT1	B4	30-09-2023	04-10-2023	4	9500	Checked-in		Cash	5	Travel Agent	Conference	Medium Stay	20200126
RT6	B3	29-06-2025	01-07-2025	2	12800	No-show		Cash	20	Mobile App	Other	Other	20200127
RT1	B1	29-09-2023	04-10-2023	5	10000	Checked-in		Credit Card	20	Website	Other	Other	20200128
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:

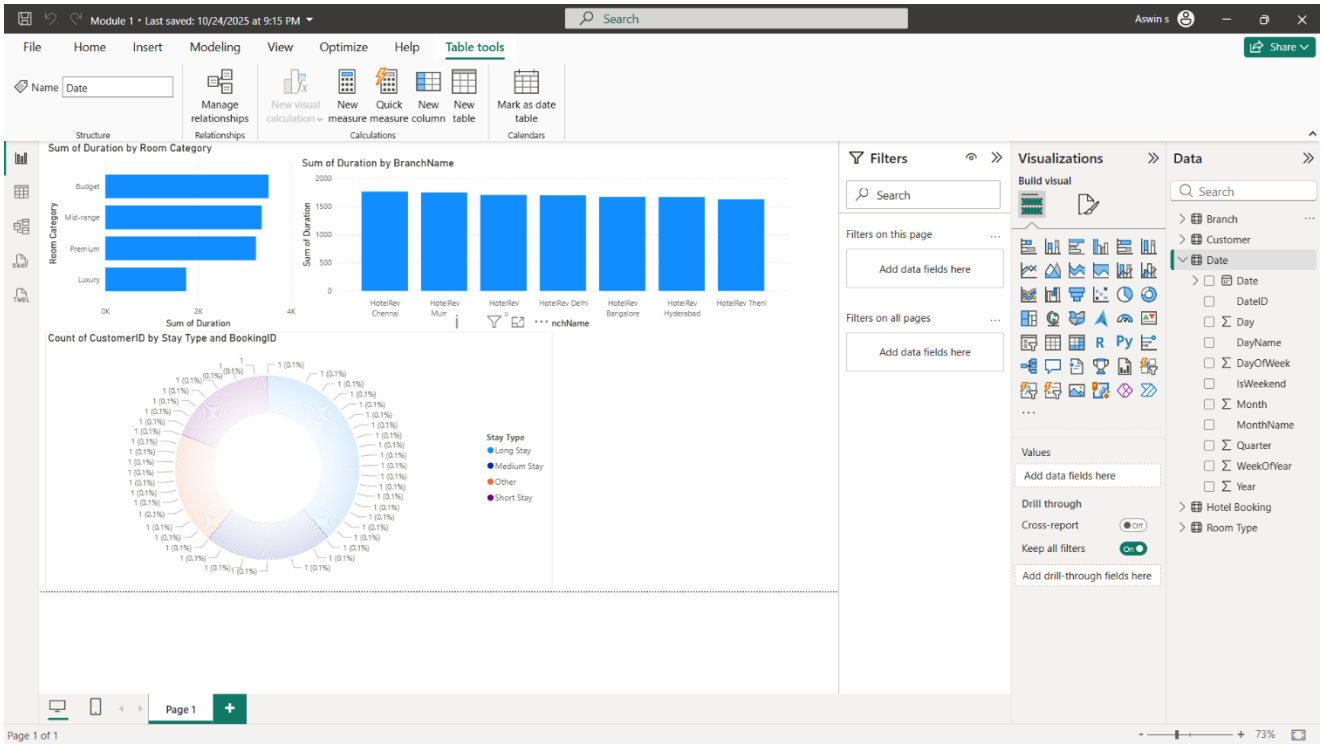
```
StayType =SWITCH(TRIM(UPPER(N2)),
  "BUSINESS", "Short Stay",
  "CONFERENCE", "Medium Stay",
  "VACATION", "Long Stay",
  "HOLIDAY", "Long Stay",
  "FAMILY", "Leisure",
  "LEISURE", "Leisure",
  "GROUP", "Group Stay",
  "SOLO", "Solo Stay",
  "UNKNOWN", "Unknown",
  "Other"
)
```



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

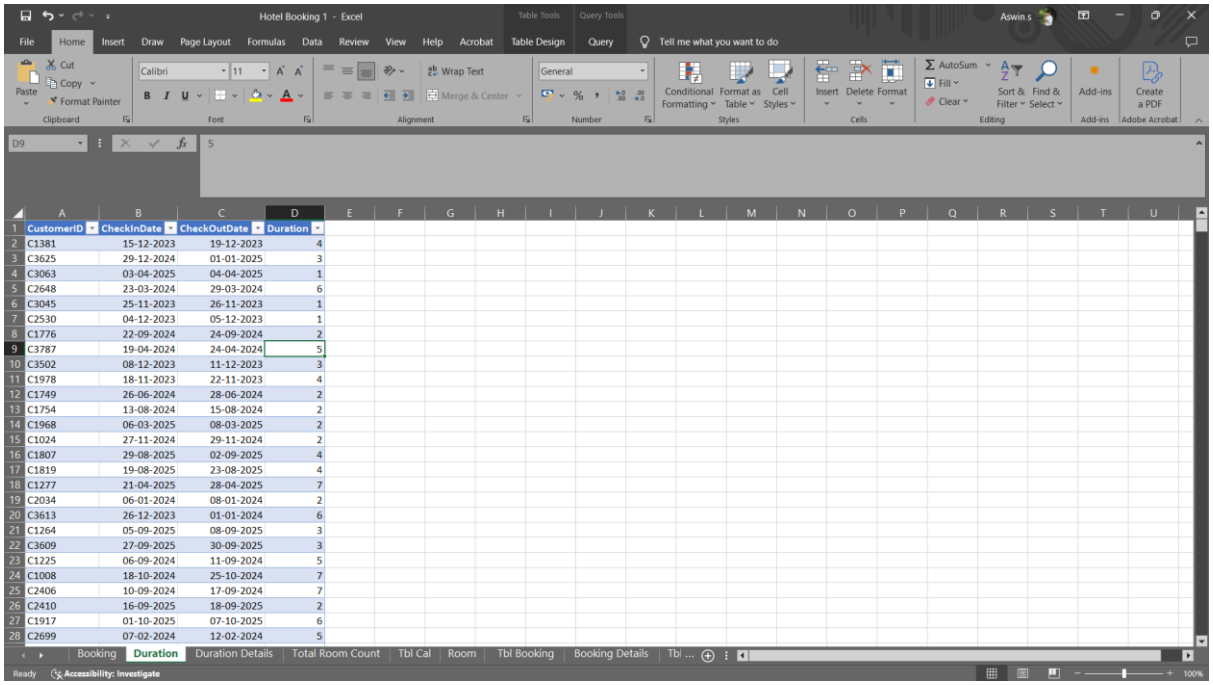
- Duration by Room Category
- Duration by Branch Name
- Count of Customer ID by Stay Type and Booking ID



Module 1 documentation has been successfully completed.

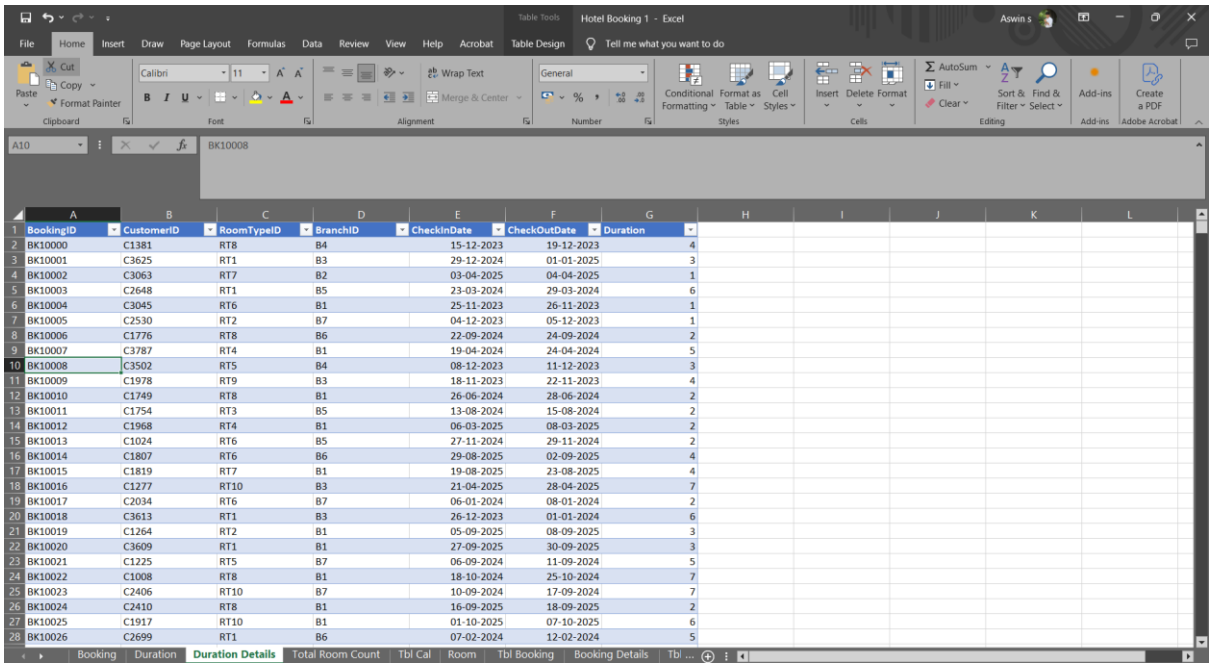
MODULE 2: ANALYZING METRICS OVERTIME

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



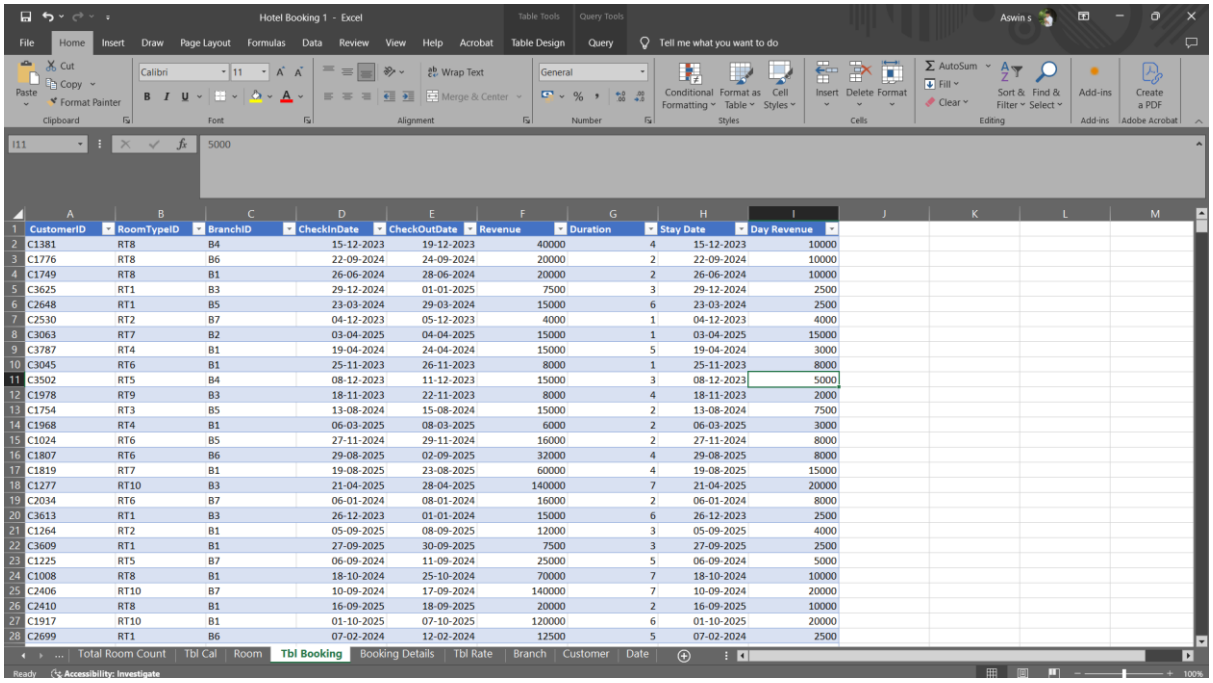
CustomerID	CheckInDate	CheckOutDate	Duration
C1381	15-12-2023	19-12-2023	4
C3625	29-12-2024	01-01-2025	3
C3063	03-04-2025	04-04-2025	1
C2648	23-03-2024	29-03-2024	6
C3045	25-11-2023	26-11-2023	1
C2530	04-12-2023	05-12-2023	1
C1776	22-09-2024	24-09-2024	2
C3787	19-04-2024	24-04-2024	5
C3502	08-12-2023	11-12-2023	3
C1978	18-11-2023	22-11-2023	4
C1749	26-06-2024	28-06-2024	2
C1754	13-08-2024	15-08-2024	2
C1968	06-03-2025	08-03-2025	2
C1024	27-11-2024	29-11-2024	2
C1807	29-08-2025	02-09-2025	4
C1819	19-08-2025	23-08-2025	4
C1277	21-04-2025	28-04-2025	7
C2034	06-01-2024	08-01-2024	2
C3613	26-12-2023	01-01-2024	6
C1264	05-09-2025	08-09-2025	3
C3609	27-09-2025	30-09-2025	3
C1225	06-09-2024	11-09-2024	5
C1008	18-10-2024	25-10-2024	7
C2406	10-09-2024	17-09-2024	7
C2410	16-09-2025	18-09-2025	2
C1917	01-10-2025	07-10-2025	6
C2699	07-02-2024	12-02-2024	5

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



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

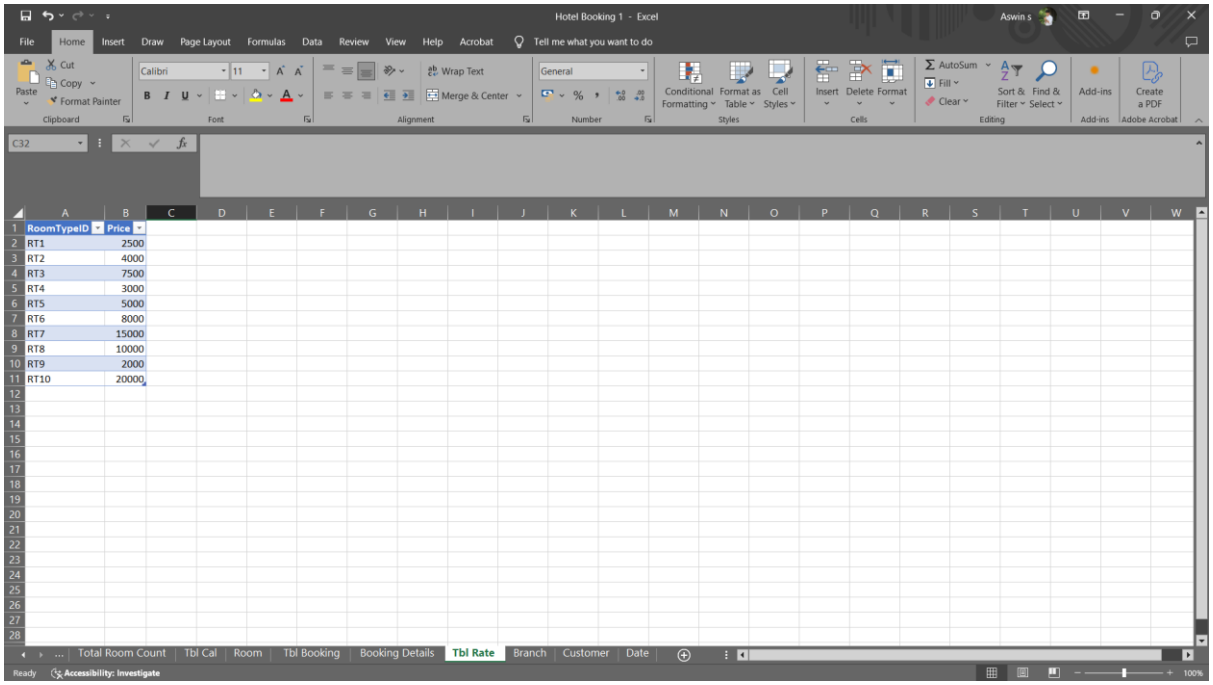
3.Creating a new Table as Table Bookings:



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
C3625	RT1	B3	29-12-2024	01-01-2025	7500	3	29-12-2024	2500
C2648	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
C3613	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:

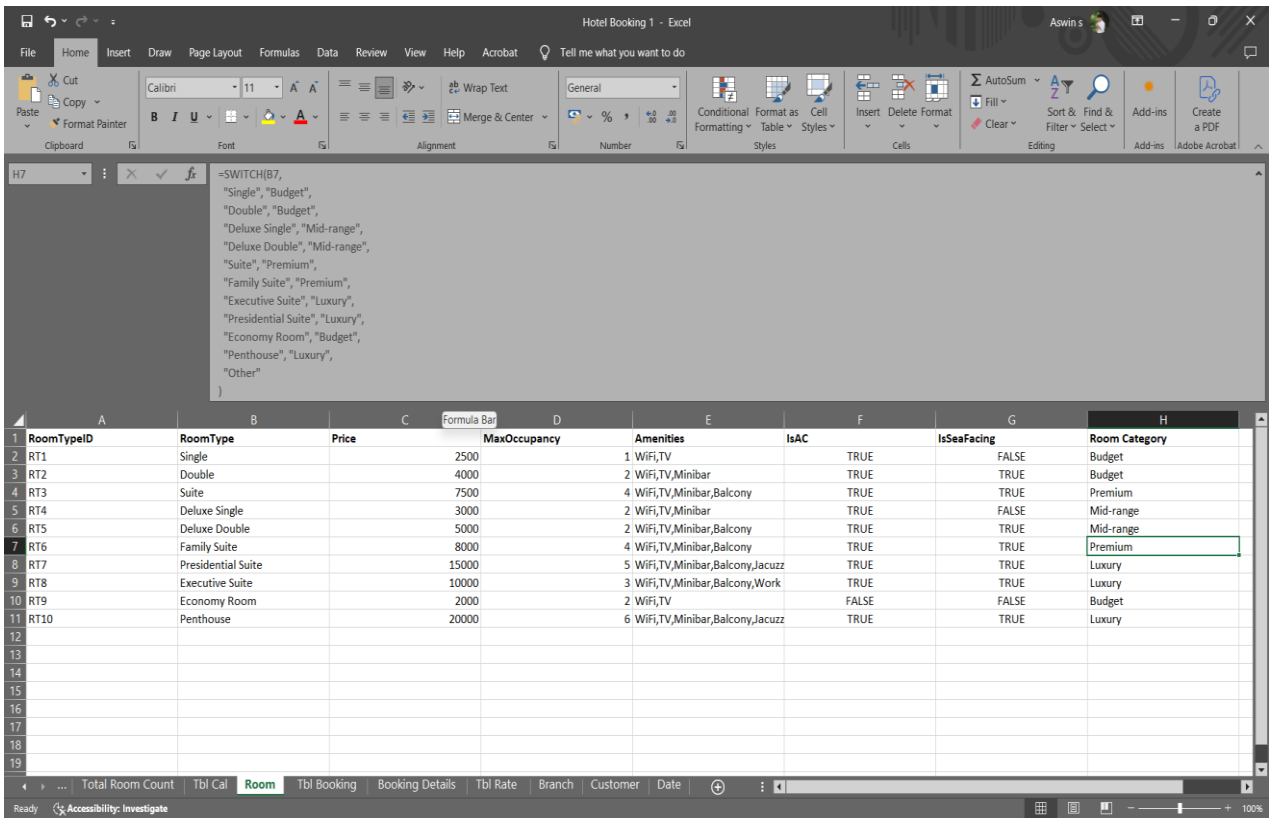
Only Choosing Columns RoomTypeID and Price



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

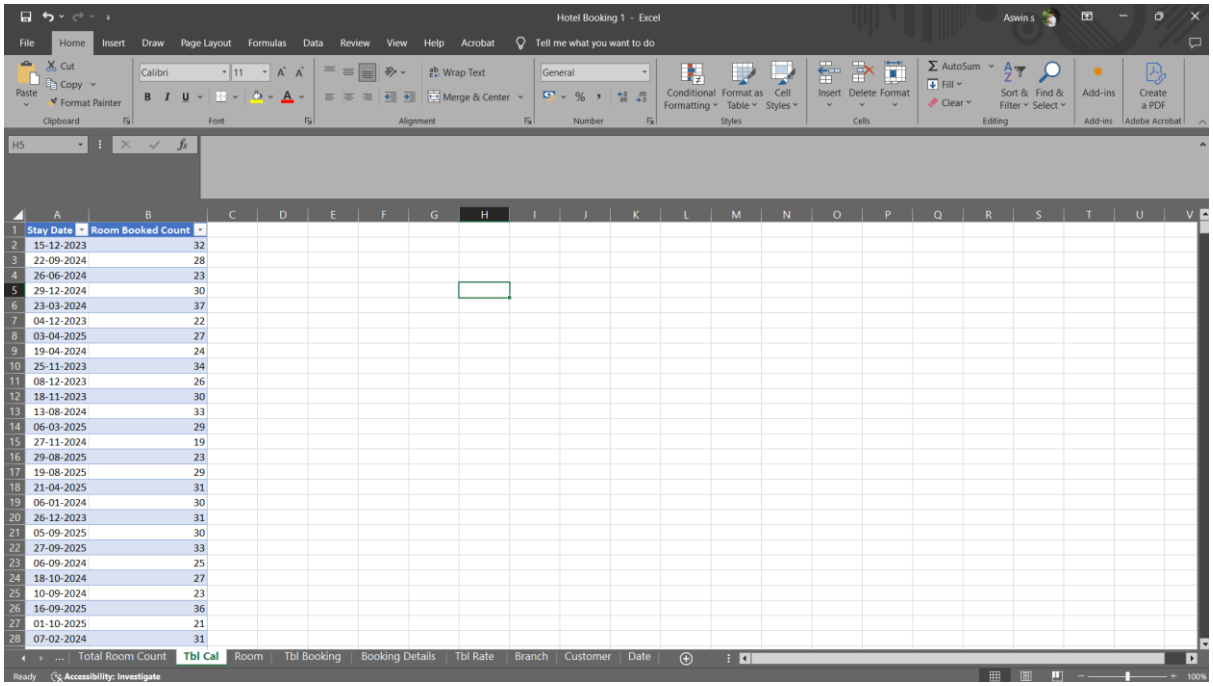
3.Creating Room Category Calculation in Room Table:

```
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"
)
```



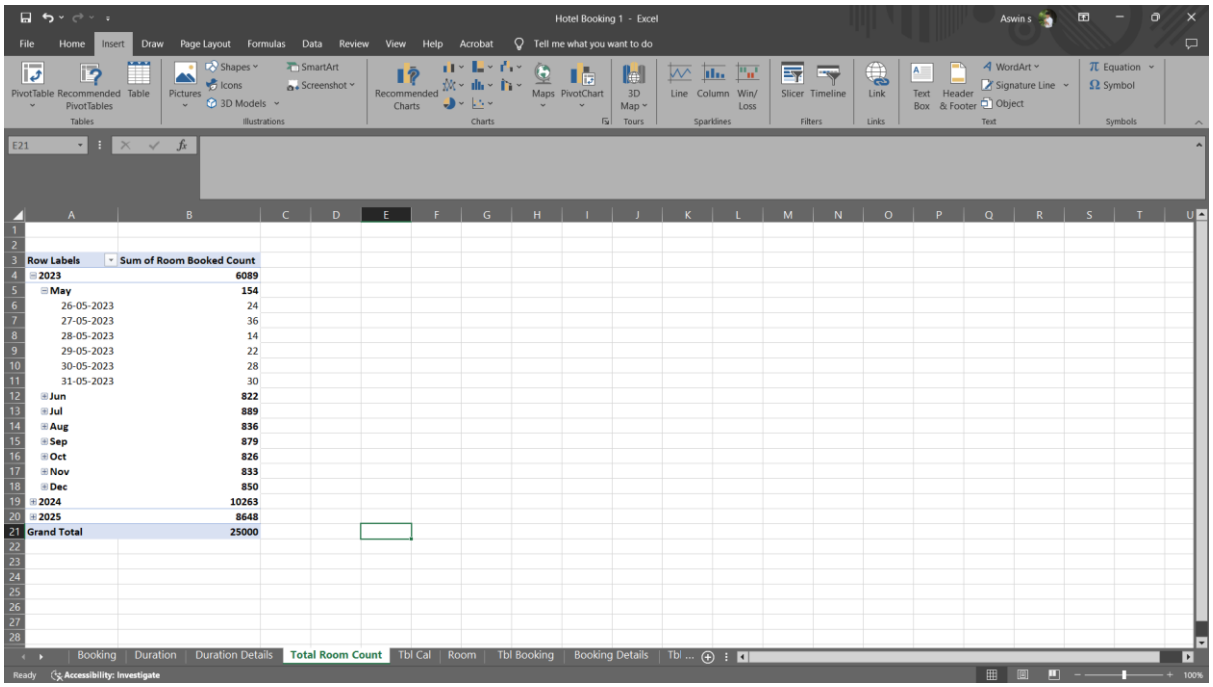
RoomTypeID	RoomType	Price	MaxOccupancy	Amenities	IsAC	IsSeaFacing	Room Category
RT1	Single	2500	1	WiFi,TV	TRUE	FALSE	Budget
RT2	Double	4000	2	WiFi,TV,Minibar	TRUE	TRUE	Budget
RT3	Suite	7500	4	WiFi,TV,Minibar,Balcony	TRUE	TRUE	Premium
RT4	Deluxe Single	3000	2	WiFi,TV,Minibar	TRUE	FALSE	Mid-range
RT5	Deluxe Double	5000	2	WiFi,TV,Minibar,Balcony	TRUE	TRUE	Mid-range
RT6	Family Suite	8000	4	WiFi,TV,Minibar,Balcony	TRUE	TRUE	Premium
RT7	Presidential Suite	15000	5	WiFi,TV,Minibar,Balcony,Jacuzz	TRUE	TRUE	Luxury
RT8	Executive Suite	10000	3	WiFi,TV,Minibar,Balcony,Work	TRUE	TRUE	Luxury
RT9	Economy Room	2000	2	WiFi,TV	FALSE	FALSE	Budget
RT10	Penthouse	20000	6	WiFi,TV,Minibar,Balcony,Jacuzz	TRUE	TRUE	Luxury

4. Creating Table Calculation Using Power Query Editor :



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

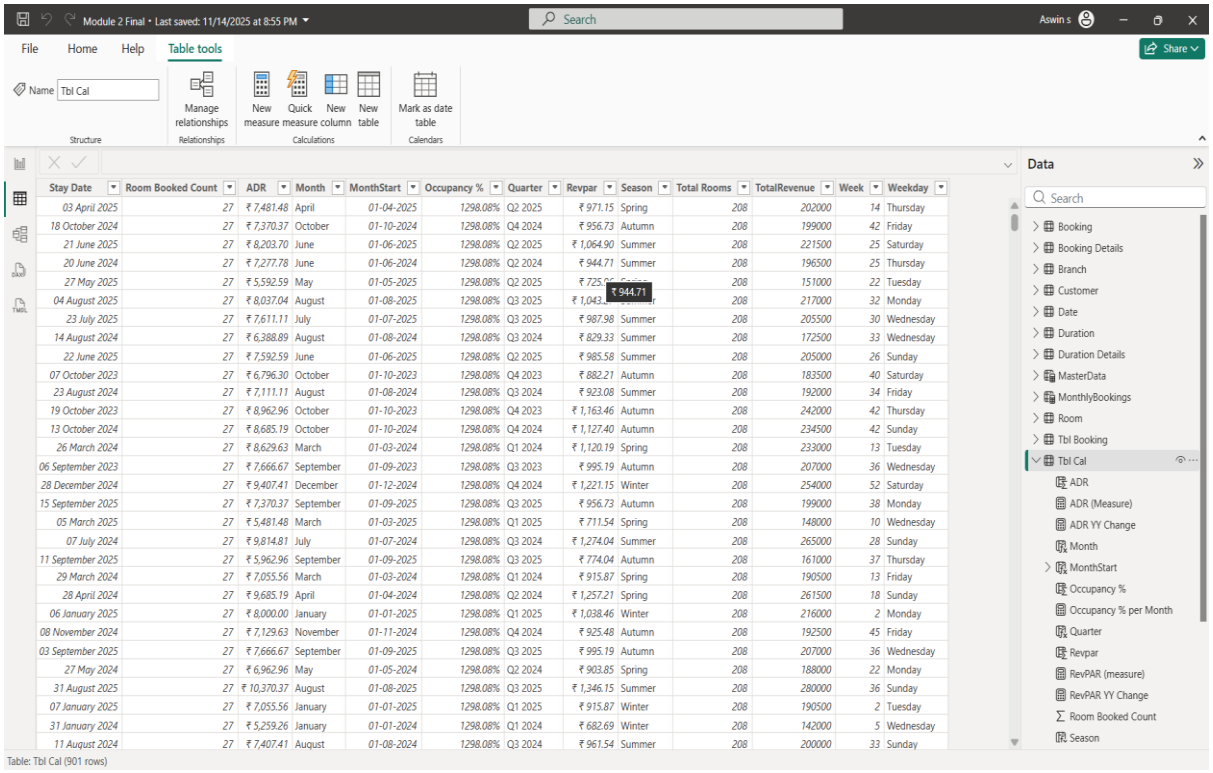
5.By using Pivot table Create the Sum of Room Booked Count:



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")

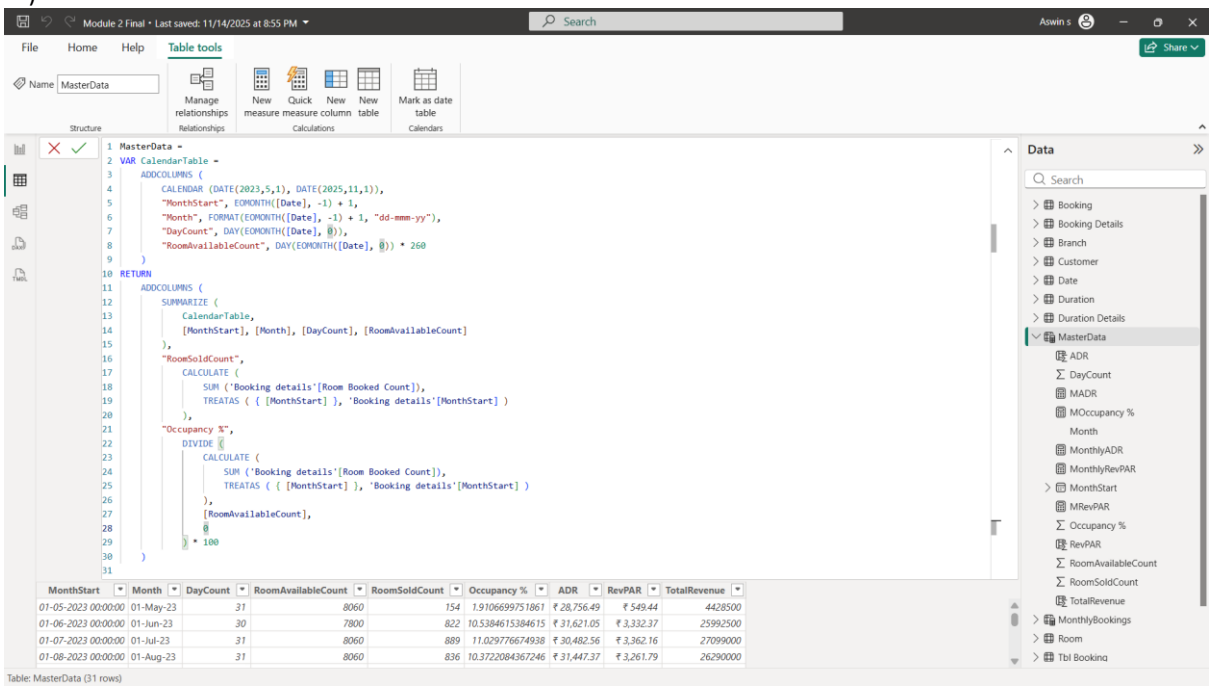


Stay Date	Room Booked Count	ADR	Month	MonthStart	Occupancy %	Quarter	Revpar	Season	Total Rooms	TotalRevenue	Week	Weekday
03 April 2025	27	₹ 7,481.48	April	01-04-2025	1298.08%	Q2 2025	₹ 971.15	Spring	208	202000	14	Thursday
18 October 2024	27	₹ 7,370.37	October	01-10-2024	1298.08%	Q4 2024	₹ 956.73	Autumn	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		208	151000	22	Tuesday
04 August 2025	27	₹ 8,037.04	August	01-08-2025	1298.08%	Q3 2025	₹ 1,043		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	₹ 6,796.30	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	₹ 8,962.96	October	01-10-2023	1298.08%	Q4 2023	₹ 1,163.46	Autumn	208	242000	42	Thursday
13 October 2024	27	₹ 8,685.19	October	01-10-2024	1298.08%	Q4 2024	₹ 1,127.40	Autumn	208	234500	42	Sunday
26 March 2024	27	₹ 8,629.63	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	190500	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	₹ 8,000.00	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

7.Creating a New Table as Master data

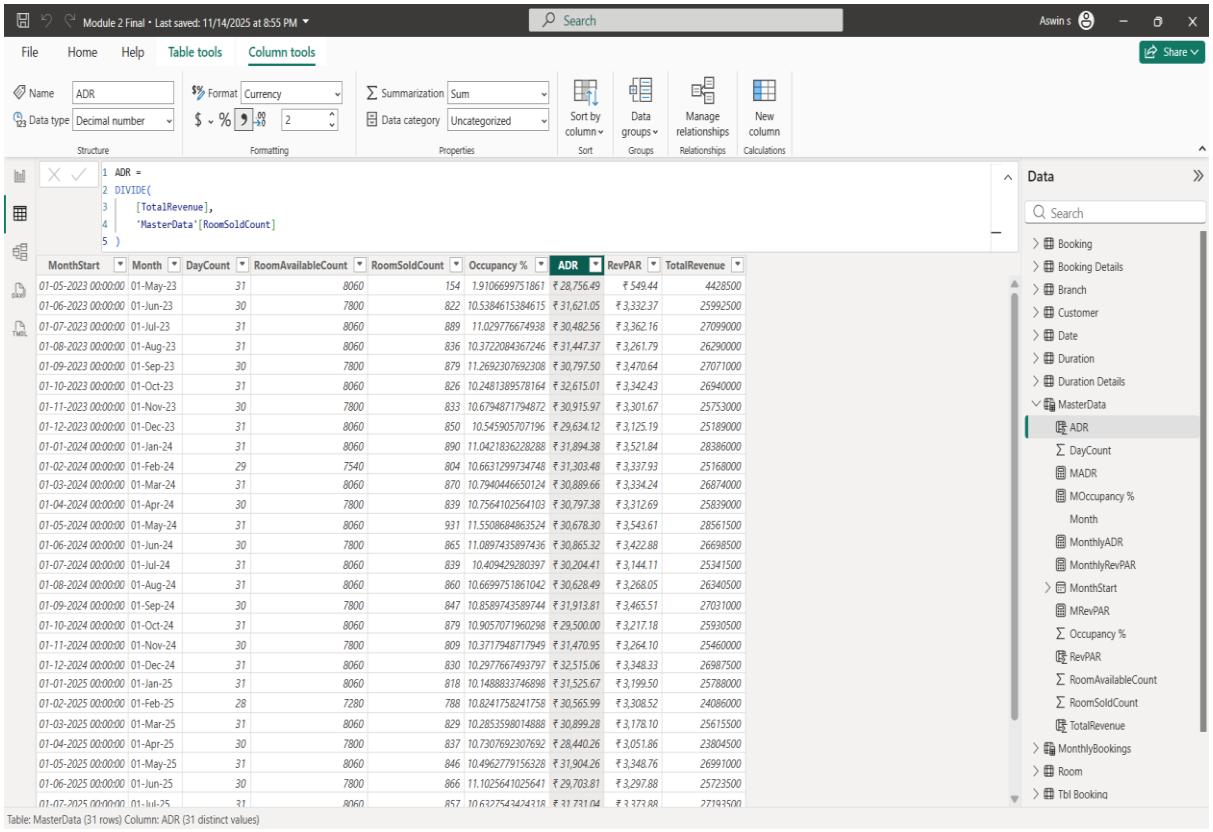
```
MasterData =
VAR CalendarTable =
  ADDCOLUMNS (
    CALENDAR (DATE(2023,5,1), DATE(2025,11,1)),
    "MonthStart", EOMONTH([Date], -1) + 1,
    "Month", FORMAT(EOMONTH([Date], -1) + 1, "dd-mmm-yy"),
    "DayCount", DAY(EOMONTH([Date], 0)),
    "RoomAvailableCount", DAY(EOMONTH([Date], 0)) * 260
  )
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],
```

```
        0
    ) * 100
)
```



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

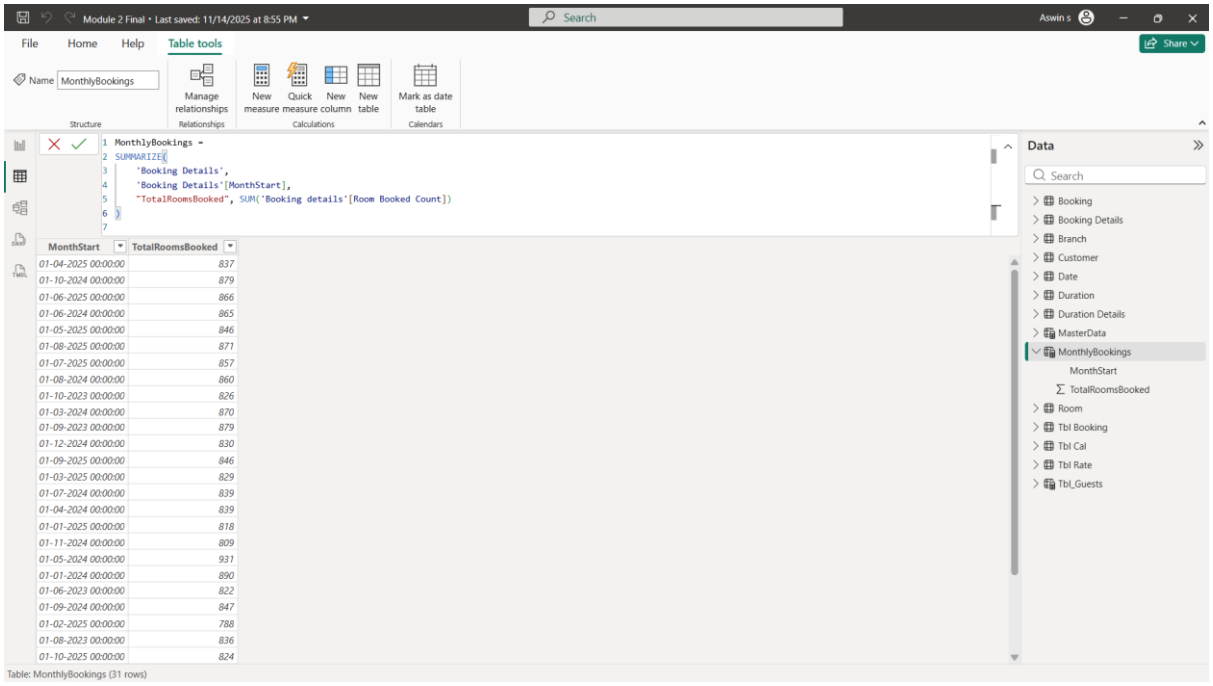
1. ADR =
   DIVIDE(
   [TotalRevenue],
   'MasterData'[RoomSoldCount]
)
2. RevPAR =
   [ADR] * DIVIDE(MasterData[Occupancy %], 100)
3. TotalRevenue =
   CALCULATE(
   SUM('Booking'[Revenue]),
   FILTER('Booking','Booking'[MonthStart] = MasterData[MonthStart])
)



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	10.5384615384615	₹ 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	27099000
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	11.2692307692308	₹ 30,797.50	₹ 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	10.6631299734748	₹ 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	10.7564102564103	₹ 30,797.38	₹ 3,312.69	25839000
01-05-2024 00:00:00	01-May-24	31	8060	931	11.5508684863524	₹ 30,678.30	₹ 3,543.61	28561500
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	10.409429280397	₹ 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	10.8589743589744	₹ 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	10.2977667493797	₹ 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	24086000
01-03-2025 00:00:00	01-Mar-25	31	8060	829	10.2853598014888	₹ 30,899.28	₹ 3,178.10	25615500
01-04-2025 00:00:00	01-Apr-25	30	7800	837	10.7307692307692	₹ 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	₹ 31,731.04	₹ 3,373.88	27193500

9. Create a New table as Monthly Booking:

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



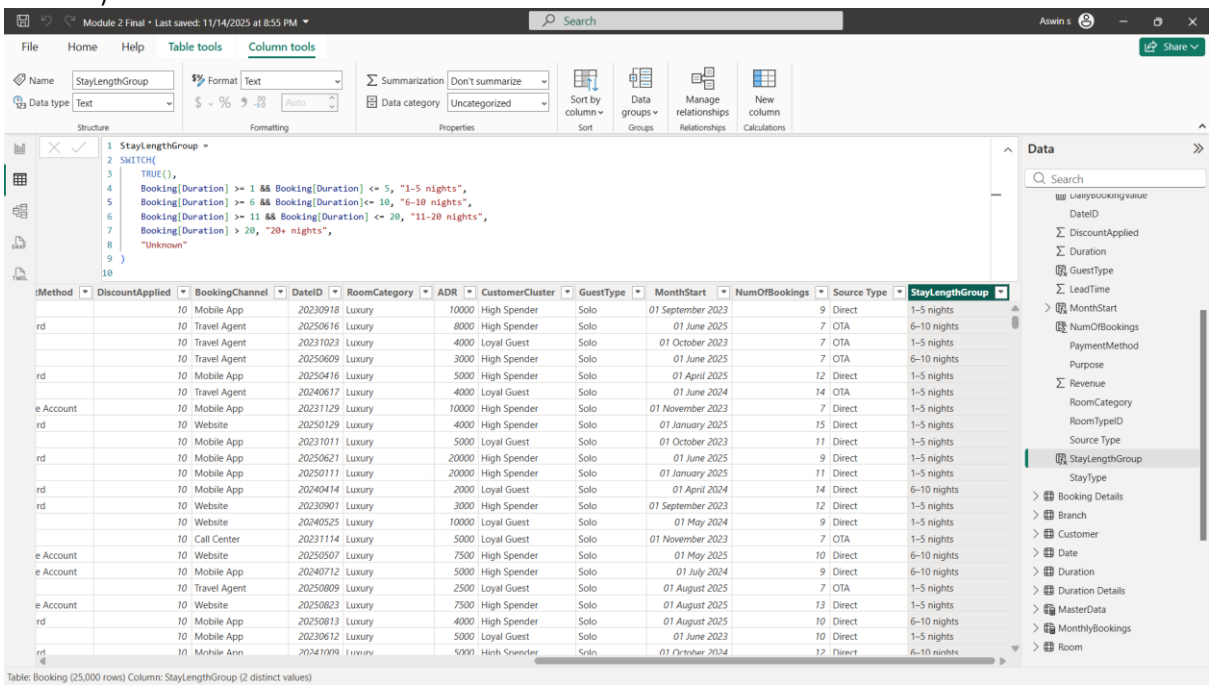
10.Adding new Columns in Bookings

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)

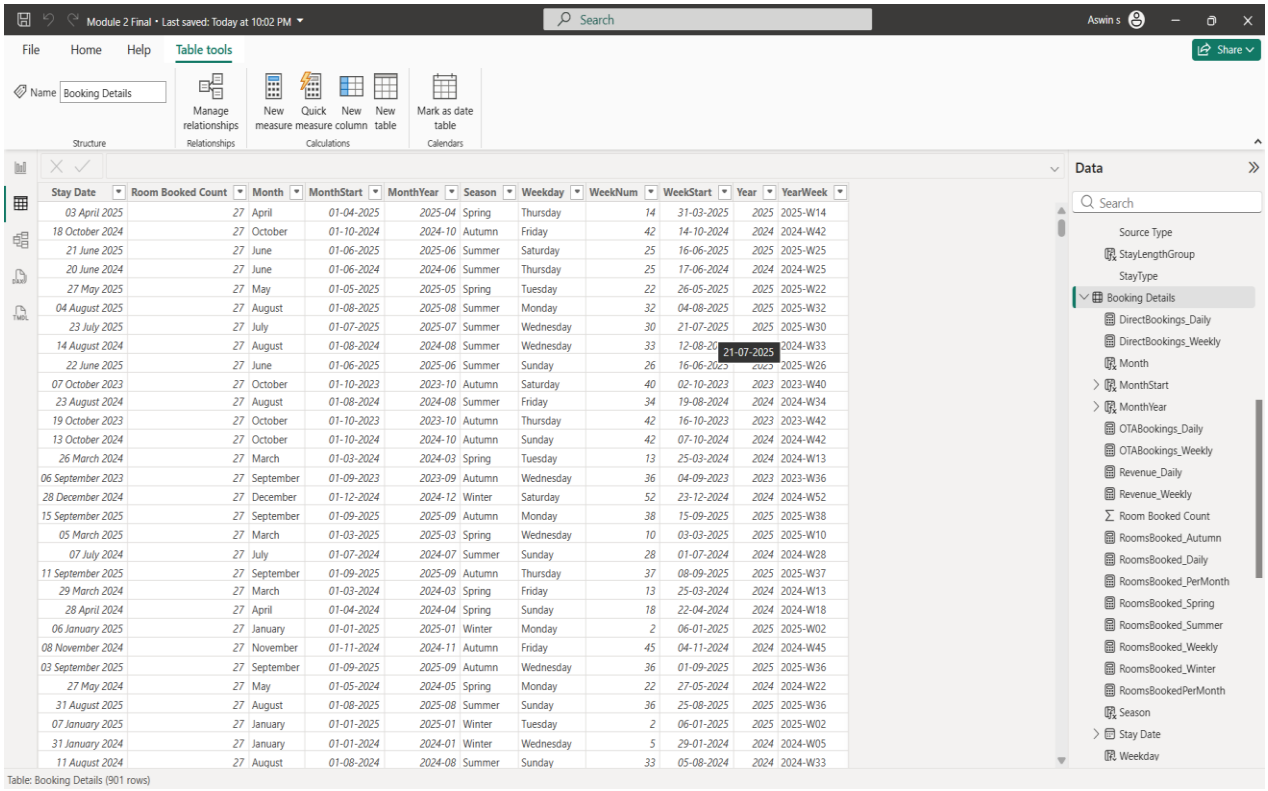
4. NumOfBookings =
```
CALCULATE(
    COUNT('Booking'[BookingID]),
    ALLEXCEPT('Booking', 'Booking'[CustomerID])
)
```
5. StayLengthGroup =
```
SWITCH(
    TRUE(),
    Booking[Duration] >= 1 && Booking[Duration] <= 5, "1–5 nights",
```

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



11. Adding New Columns in Booking Details:

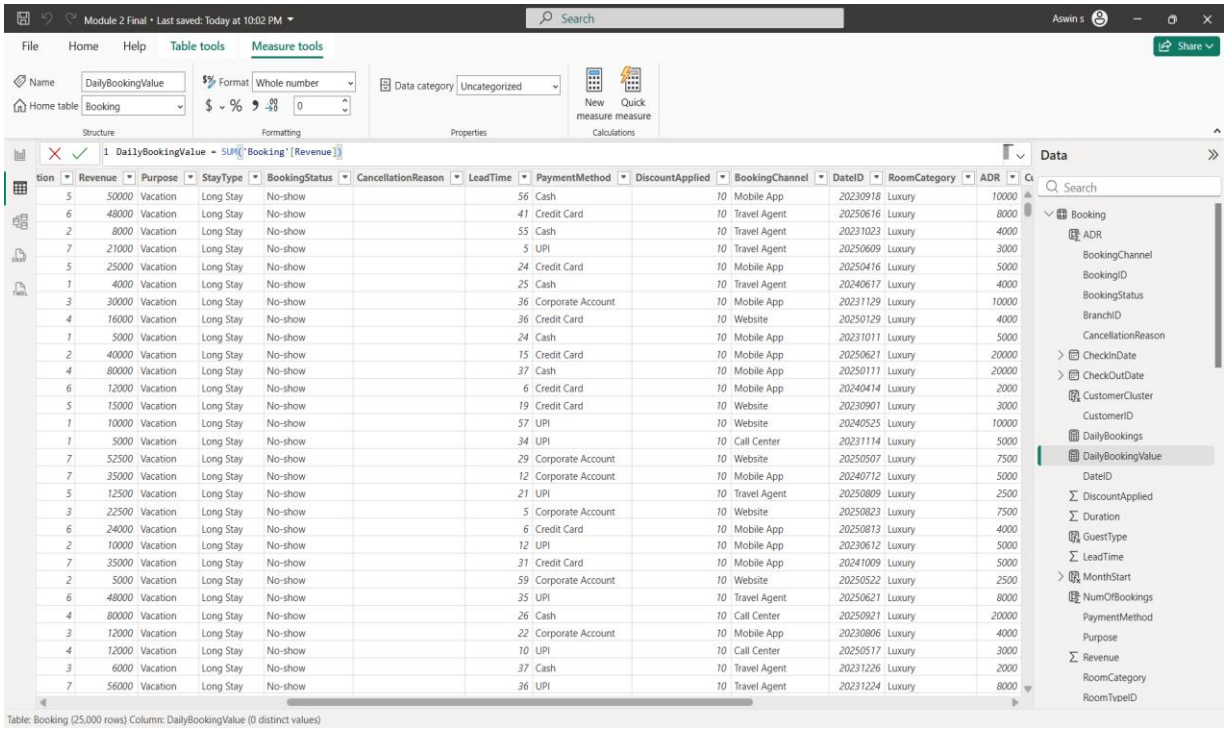
1. MonthStart = DATE(YEAR([Stay Date]), MONTH([Stay Date]), 1)
2. MonthYear = 'Booking Details'[Stay Date]
3. Season =
4. SWITCH(
   TRUE(),
   MONTH('Booking Details'[Stay Date]) IN {12, 1, 2}, "Winter",
   MONTH('Booking Details'[Stay Date]) IN {3, 4, 5}, "Spring",
   MONTH('Booking Details'[Stay Date]) 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")



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	12-08-20		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

12.Creating New Measures in Bookings Table:

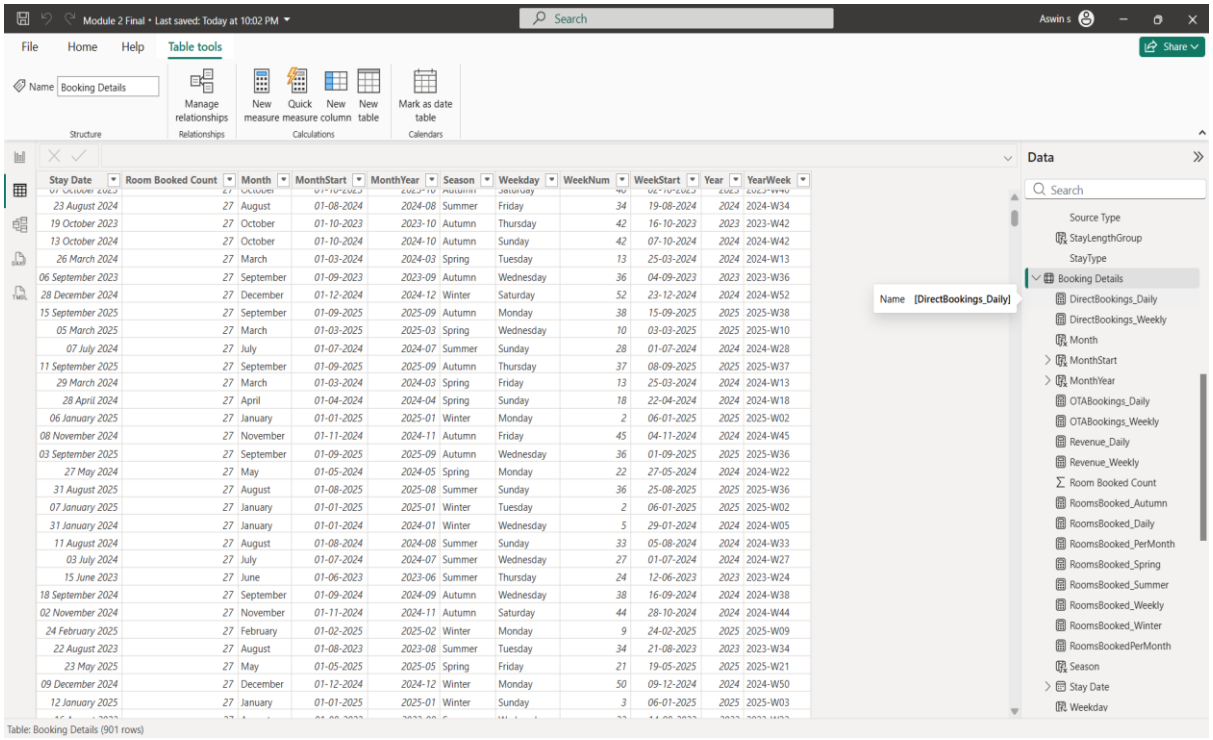
1. ADR =
   ```
   DIVIDE(
      'Booking'[Revenue],
      'Booking'[Duration],
      0
   )
   ```
2. DailyBookings = COUNT('Booking'[BookingID])
3. DailyBookingValue = SUM('Booking'[Revenue])



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"
   ),

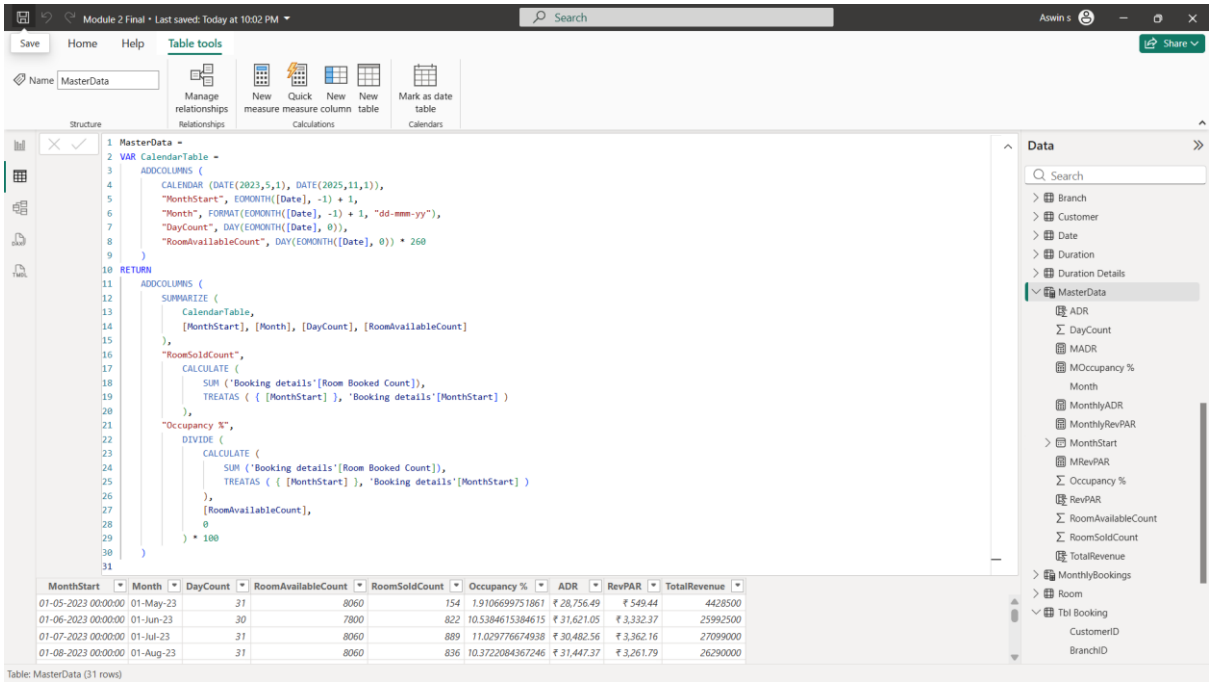
```
    ALLEXCEPT('Booking details', 'Booking details'[WeekNum])
  )
5. Revenue_Daily =
  SUM('Booking'[Revenue])
6. Revenue_Weekly =
  CALCULATE(
    SUM('Booking'[Revenue]),
    ALLEXCEPT('Booking details', 'Booking details'[WeekNum])
  )
7. RoomsBooked_Autumn =
  CALCULATE(
    SUM('Booking details'[Room 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]
   ))
```



14.Creating New Measures in Master Data:

1. MADR =
   DIVIDE(
   SUM('Booking'[Revenue]),
   SUM('Booking'[Duration])
)
2. MOccupancy % =
   DIVIDE(
   SUM('MasterData'[RoomSoldCount]),
   SUM('MasterData'[RoomAvailableCount]),
   0
) * 100
3. MonthlyADR =
   CALCULATE(
   [MADR],
   ALLEXCEPT(MasterData,'MasterData'[MonthStart])
)
4. MonthlyRevPAR =
   CALCULATE(
   [MRevPAR],
   ALLEXCEPT(MasterData, MasterData[MonthStart])
)
5. MRevPAR =
   DIVIDE(
   SUM('Booking'[Revenue]),
   SUM('MasterData'[RoomAvailableCount]),
   0

)



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])
```

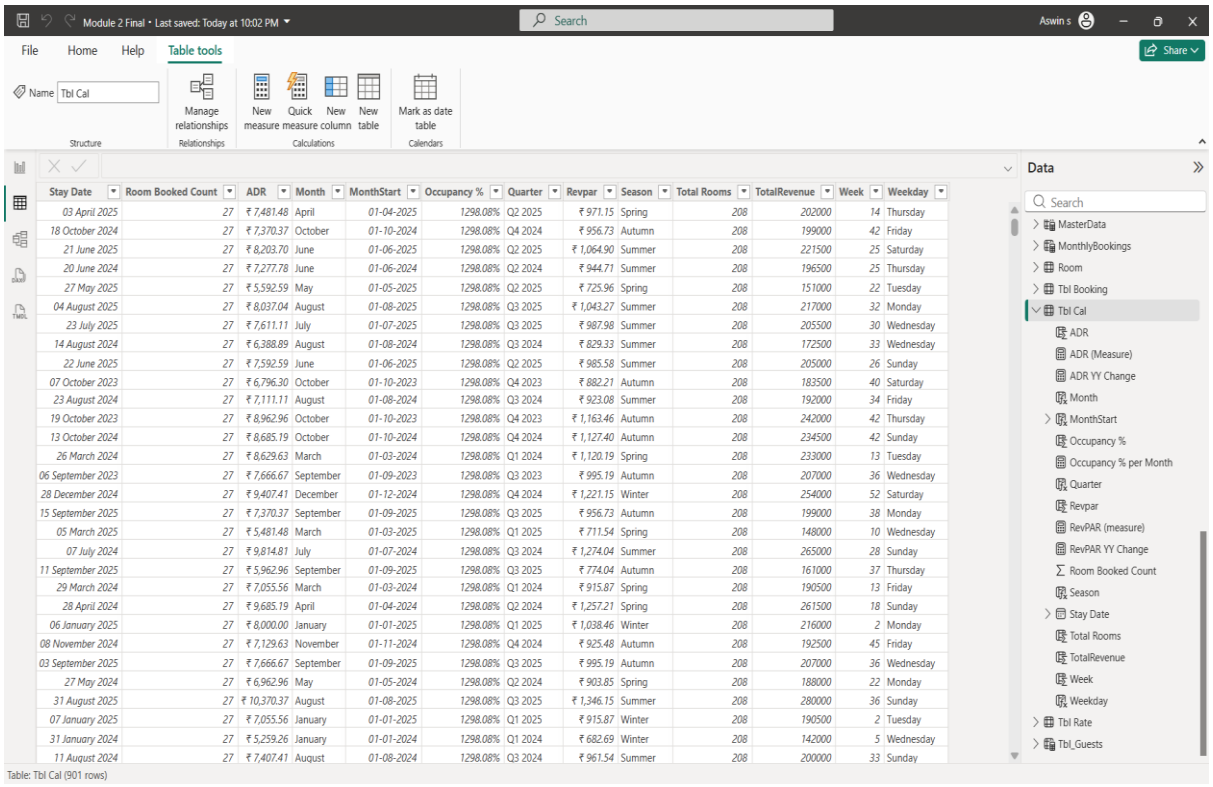
```
    ),
    CALCULATE(
      SUM('Tbl Cal'[Total Rooms]),
      ALLEXCEPT('Tbl Cal', 'Tbl Cal'[Month])
    ),
    0
  )
```

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
)
```

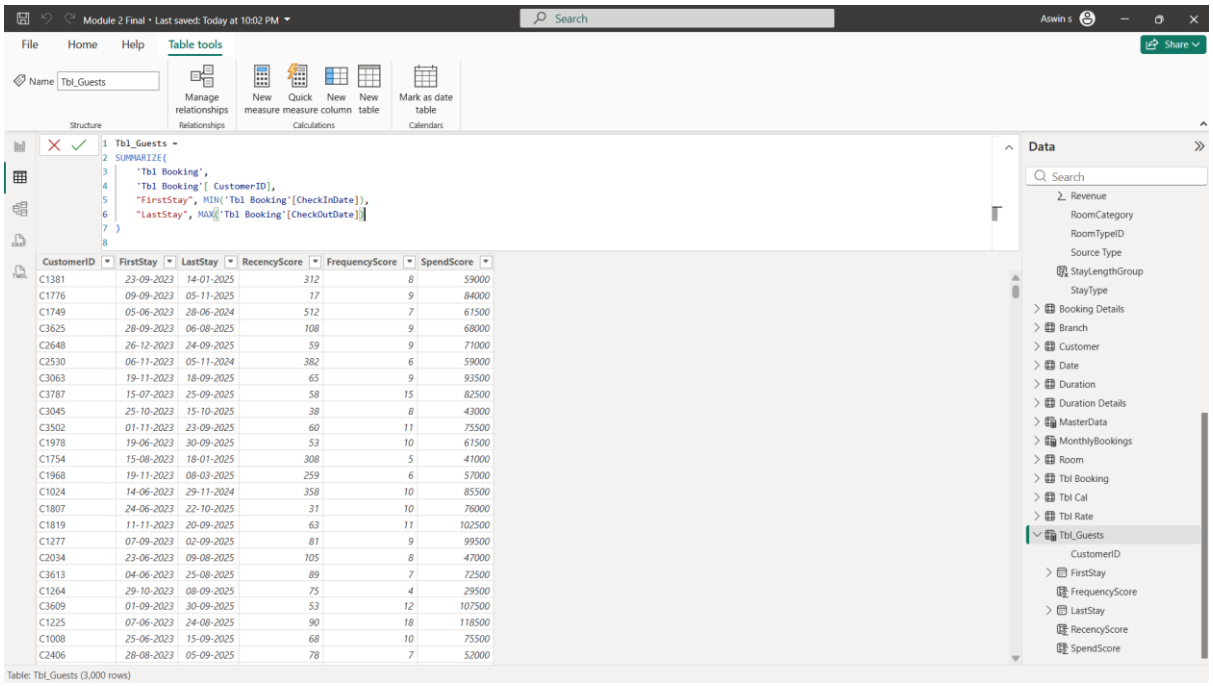


Stay Date	Room Booked Count	ADR	Month	MonthStart	Occupancy %	Quarter	Revpar	Season	Total Rooms	TotalRevenue	Week	Weekday
03 April 2025	27	₹ 7,481.48	April	01-04-2025	1298.08%	Q2 2025	₹ 971.15	Spring	208	202000	14	Thursday
18 October 2024	27	₹ 7,370.37	October	01-10-2024	1298.08%	Q4 2024	₹ 956.73	Autumn	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	₹ 6,796.30	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	₹ 8,962.96	October	01-10-2023	1298.08%	Q4 2023	₹ 1,163.46	Autumn	208	242000	42	Thursday
13 October 2024	27	₹ 8,685.19	October	01-10-2024	1298.08%	Q4 2024	₹ 1,127.40	Autumn	208	234500	42	Sunday
26 March 2024	27	₹ 8,629.63	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	190500	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	₹ 8,000.00	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

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])
)
```



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.

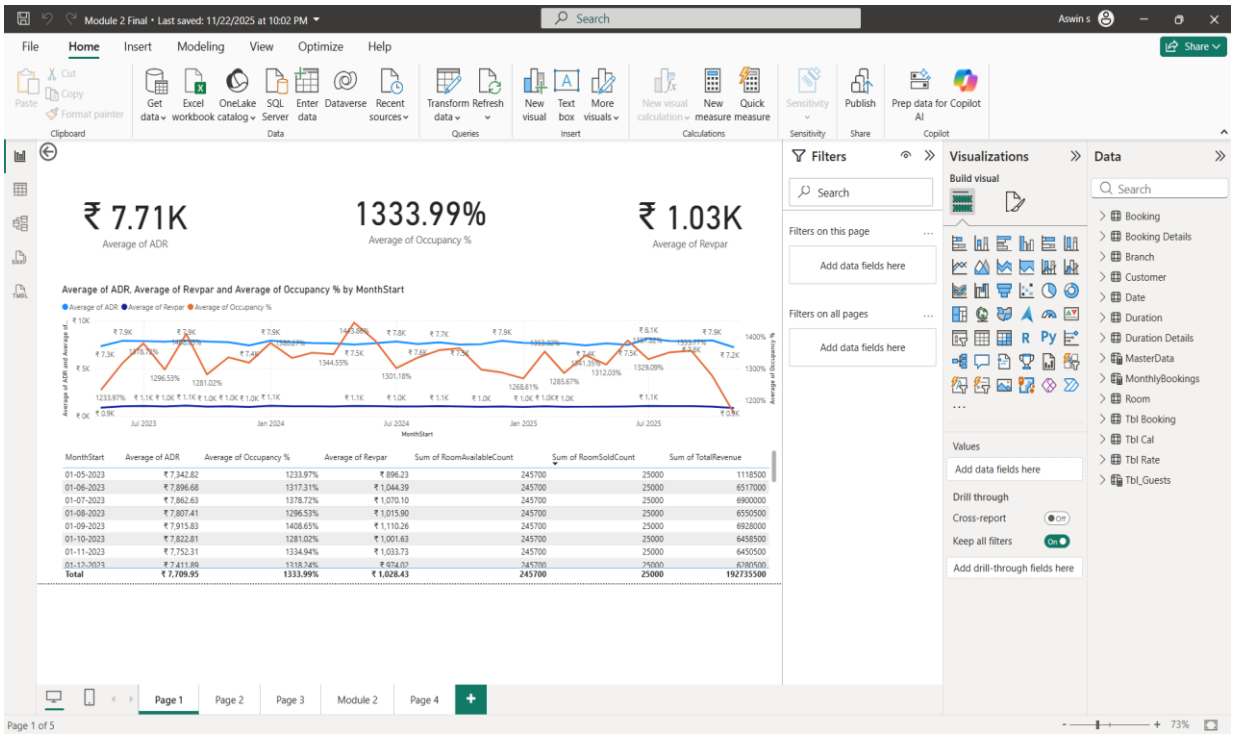
Average ADR - Displays the overall Average Daily Rate (ADR) calculated from the aggregated revenue and room-sold data.

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.

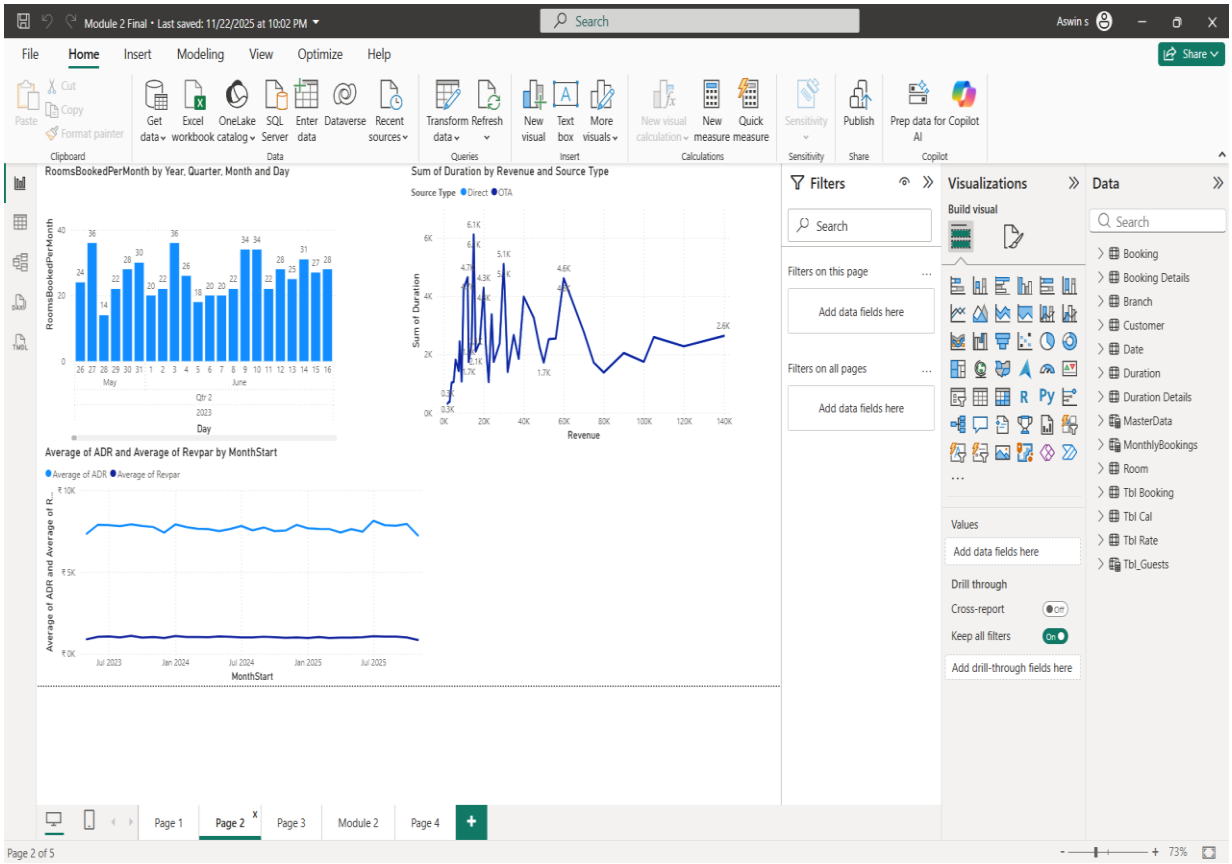


18.Create visualization for Room Booked

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)

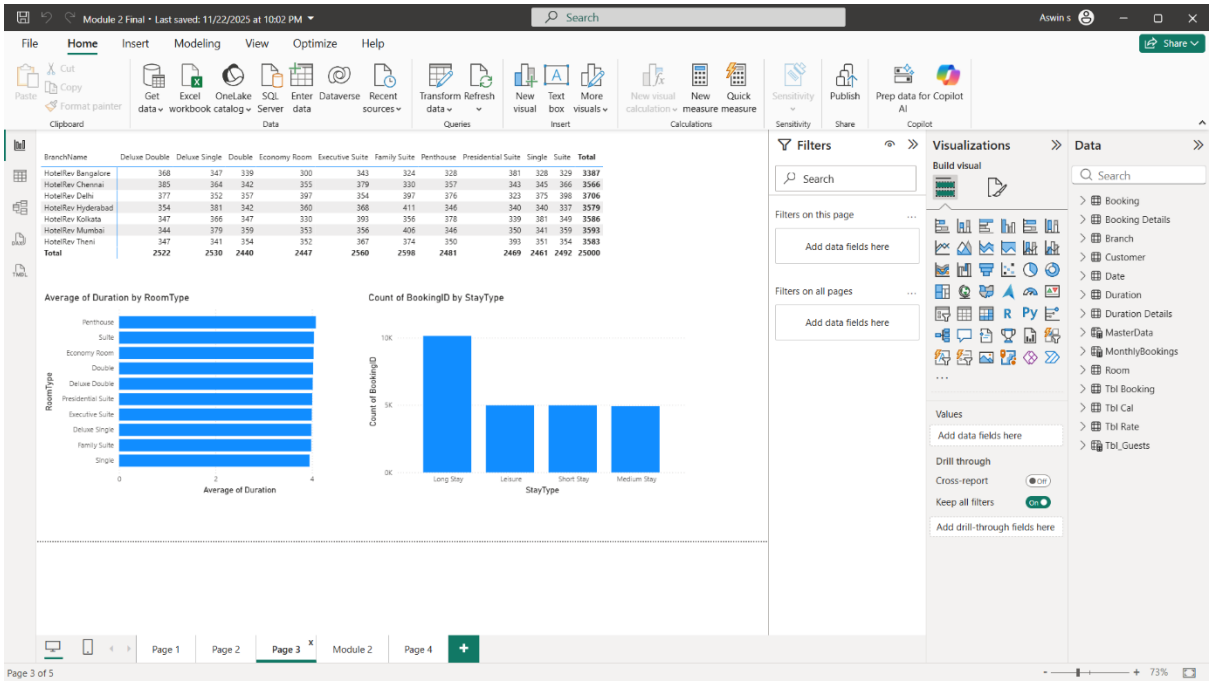
- Shows booking counts for each **RoomType** across all branches.
- Helps compare performance between branches.
- Useful to identify top-performing room types.
- Gives a complete overview of total bookings branch-wise.

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)

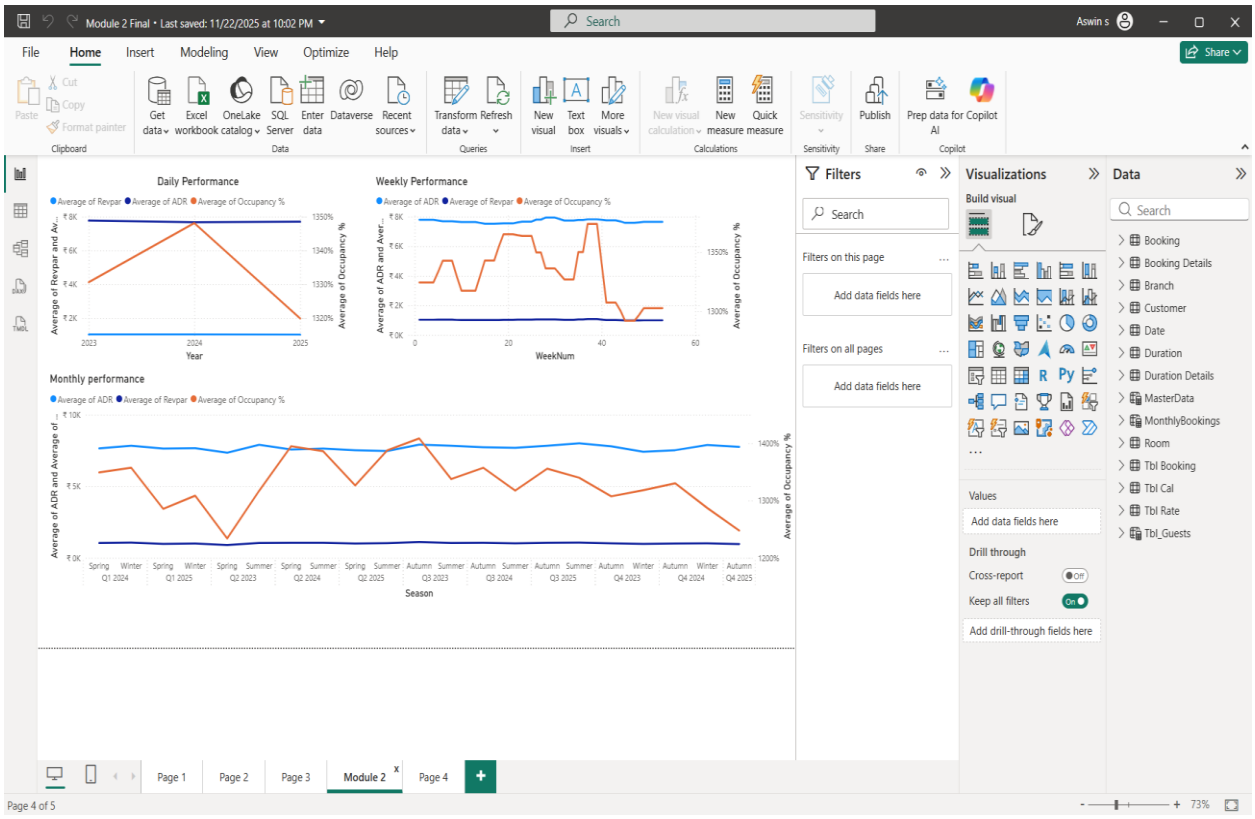
Shows **ADR**, **RevPAR**, and **Occupancy %** by **Year**

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

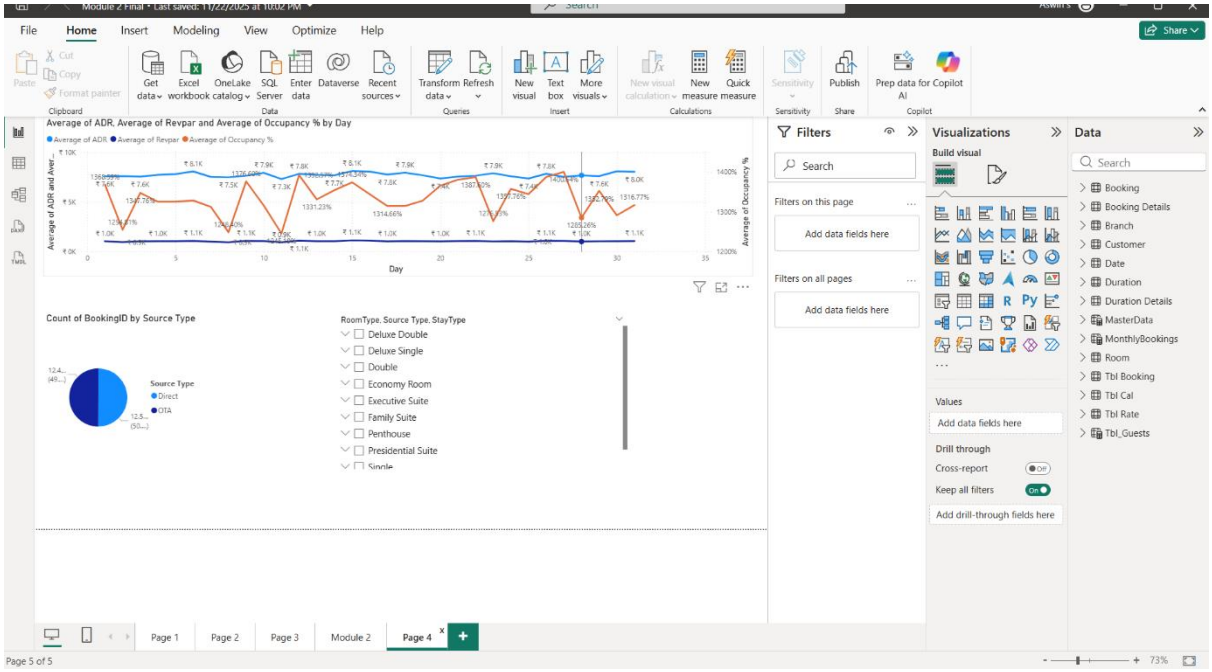
- Shows **ADR**, **RevPAR**, and **Occupancy %**
- Visualized **day-by-day**
- Helps track short-term performance trends

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

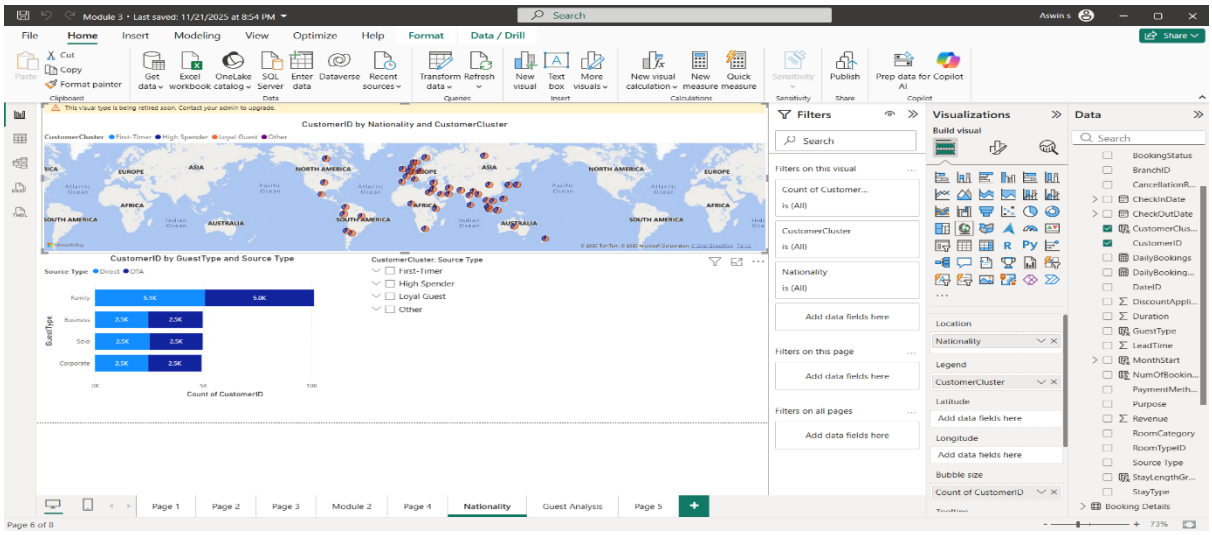
- An interactive slicer that allows filtering visuals based on customer type and booking source.
- Makes analysis more flexible by allowing drill-down for:

  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)

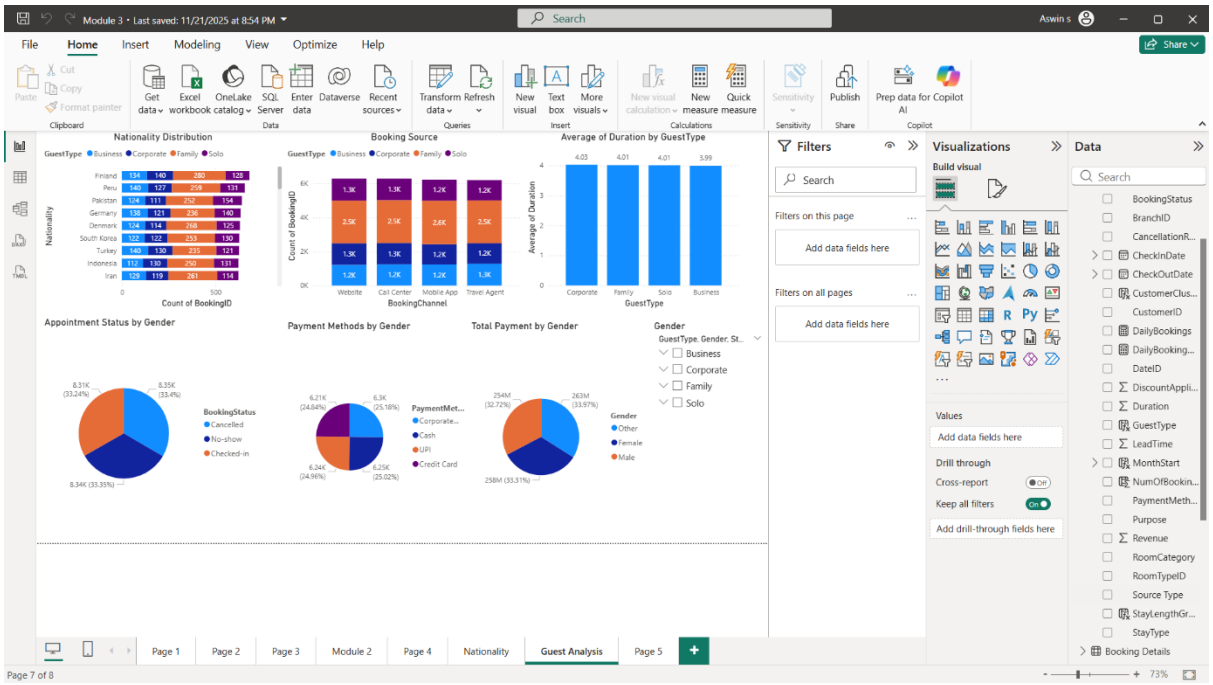
- Shows distribution of booking statuses (Checked-in, Cancelled, No-show) by **Gender**.
- Helps identify behavioral patterns and reliability of different gender groups.

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.



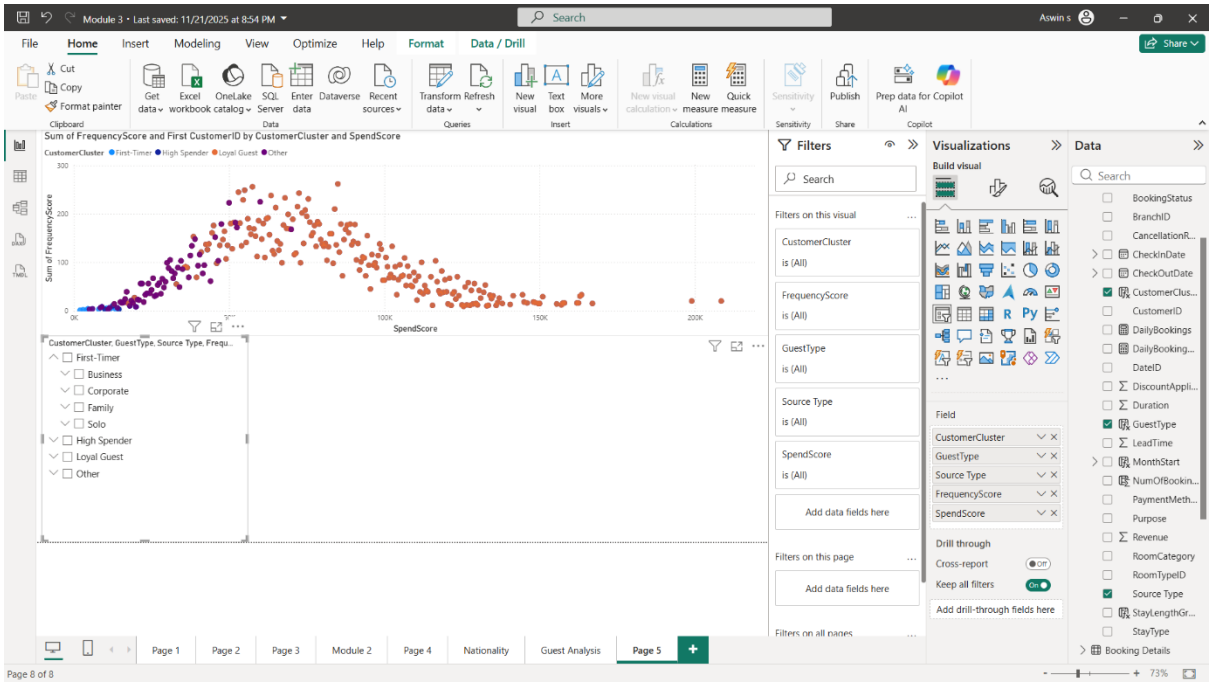
Scatter Plot: FrequencyScore vs SpendScore

- 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

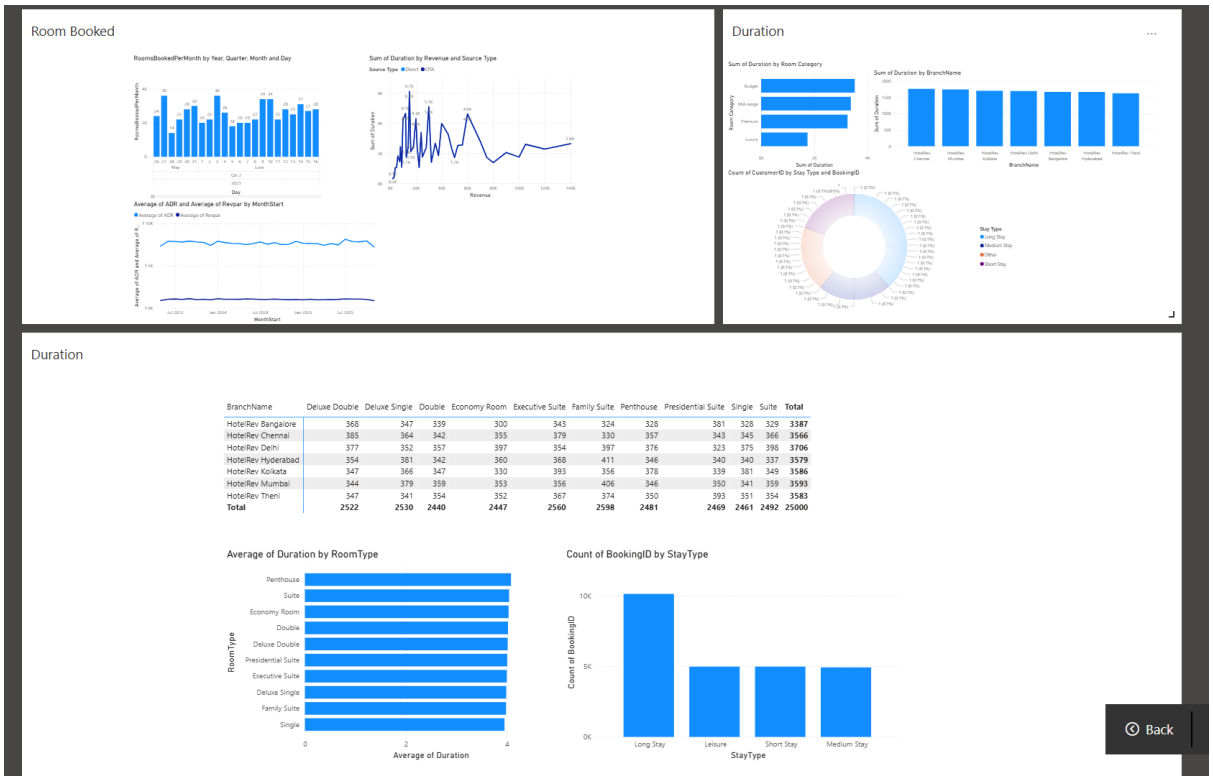
Allows filtering the scatter plot by:

- **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

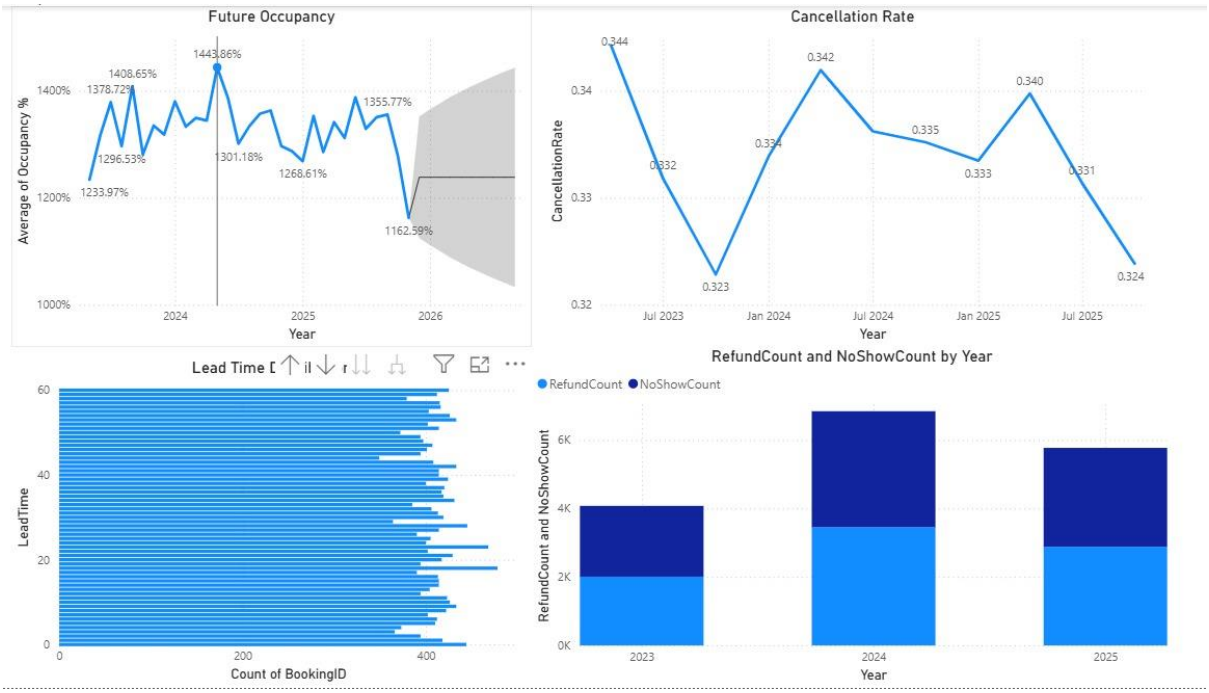
To analyse guests who booked but did not arrive, and bookings that were refunded.

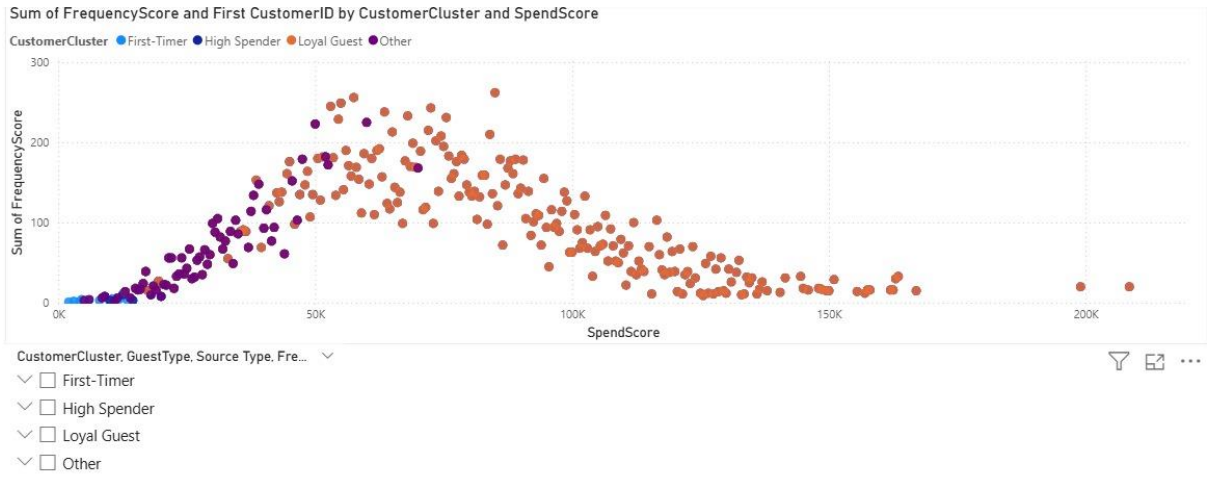
What the Visual Shows

- 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

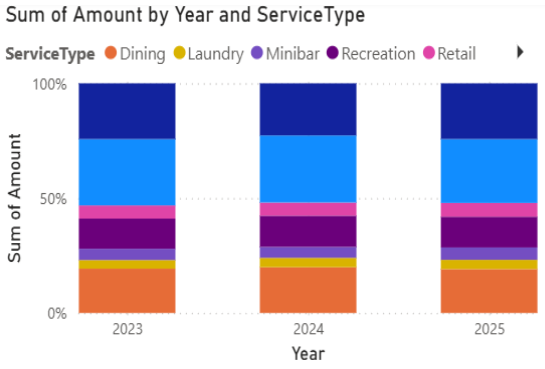
To give hotel leadership a single page to monitor performance and take decisions.

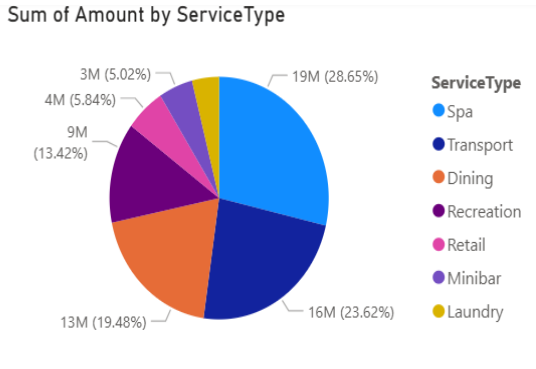
What the Dashboard Includes

- **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

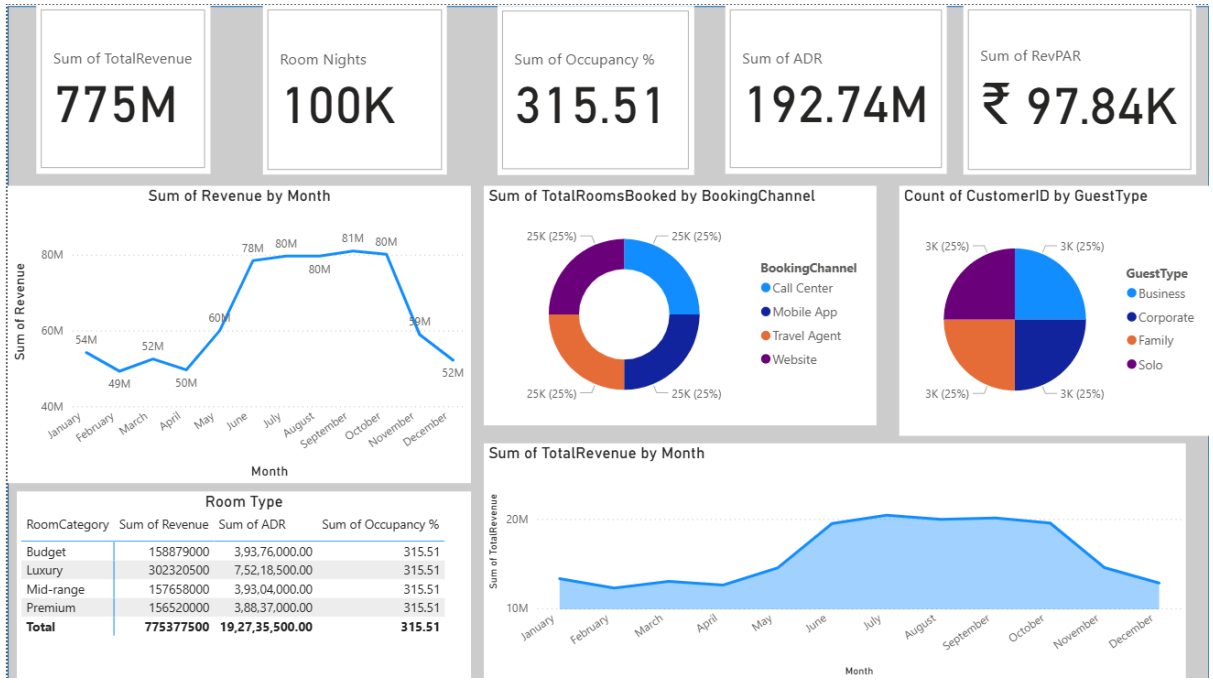
- Quick operational overview for GMs
- Actionable revenue insights for Revenue Managers
- Single source for daily decision-making





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


HOTEL REVENUE MANAGEMENT
25K
Arrivals
4.01
Avg Days of Stay
748K
Sum of LeadTime
Arrivals by BookingChannel
Website
Call Center
Mobile App
Travel Agent
BookingChannel
0K
2K
4K
6K
Arrivals
Arrivals and Departures by RoomCategory
5K (10.07%)
10K (19.68%)
5K (10.07%)
5K (10.0...)
10K (19.68%)
5K (10...)
5K (10.18%)
5K (10.18%)
RoomCategory
Luxury
Budget
Premium
Mid-range
Arrivals by Month
January 1742
February 1596
March 1696
April 1661
May 1807
June 2589
July 2591
August 2530
Septemb... 2591


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 Revenue
80M
60M
40M
54M
52M
49M
50M
60M
78M
80M
80M
81M
80M
59M
52M
January
February
March
April
May
June
July
August
September
October
November
December
Month
Sum of TotalRoomsBooked by BookingChannel
25K (25%)
25K (25%)
25K (25%)
25K (25%)
BookingChannel
Call Center
Mobile App
Travel Agent
Website
Count of CustomerID by GuestType
3K (25%)
3K (25%)
3K (25%)
3K (25%)
GuestType
Business
Corporate
Family
Solo
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
Sum of TotalRevenue
20M
10M
January
February
March
April
May
June
July
August
September
October
November
December
Month