

Module 2: Custom Columns, Pivot Table and Master Data

1. Created Duration Details sheet using Customer_ID, Checkin_Date, Checkout_Date and Duration

	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	C4972	10-09-2025	16-09-2025	6																	
3	C4125	11-09-2025	17-09-2025	6																	
4	C2082	15-10-2023	22-10-2023	7																	
5	C518	08-04-2022	12-04-2022	4																	
6	C2203	26-10-2020	28-10-2020	2																	
7	C2275	13-09-2024	19-09-2024	6																	
8	C637	18-01-2022	20-01-2022	2																	
9	C4174	21-02-2020	25-02-2020	4																	
10	C3722	11-07-2022	12-07-2022	1																	
11	C3823	20-04-2020	27-04-2020	7																	
12	C1927	05-07-2023	10-07-2023	5																	
13	C4097	17-03-2021	20-03-2021	3																	
14	C2594	24-06-2021	30-06-2021	6																	
15	C6419	19-12-2023	26-12-2023	7																	
16	C445	22-12-2022	27-12-2022	5																	
17	C594	12-02-2021	13-02-2021	1																	
18	C3734	04-09-2024	11-09-2024	7																	
19	C1632	16-10-2025	19-10-2025	3																	
20	C5457	10-03-2024	14-03-2024	4																	

2. Created Stay_Date column using Custom Column in the Power Query Editor

Using for Formula:

= if [CheckInDate] <> null and [CheckOutDate] <> null then

List.Dates(Date.From([CheckInDate]), Duration.Days([CheckOutDate] - [CheckInDate]), #duration(1,0,0,0))

else

null

The screenshot shows the Microsoft Power Query Editor interface. A query named 'Table1' is open, displaying a table with the following columns and data:

	Stay_Date	Month_Start	CustomerID	BranchID	RoomTypeID	CheckinDate	CheckoutDate
1	10-09-2025	01-09-2025	C4972	B3	RT1	10-09-2025	
2	11-09-2025	01-09-2025	C4972	B3	RT1	10-09-2025	
3	12-09-2025	01-09-2025	C4972	B3	RT1	10-09-2025	
4	13-09-2025	01-09-2025	C4972	B3	RT1	10-09-2025	
5	14-09-2025	01-09-2025	C4972	B3	RT1	10-09-2025	
6	15-09-2025	01-09-2025	C4972	B3	RT1	10-09-2025	
7	11-09-2025	01-09-2025	C4125	B1	RT3	11-09-2025	
8	12-09-2025	01-09-2025	C4125	B1	RT3	11-09-2025	
9	13-09-2025	01-09-2025	C4125	B1	RT3	11-09-2025	
10	14-09-2025	01-09-2025	C4125	B1	RT3	11-09-2025	
11	15-09-2025	01-09-2025	C4125	B1	RT3	11-09-2025	
12	16-09-2025	01-09-2025	C4125	B1	RT3	11-09-2025	
13	15-10-2023	01-10-2023	C2082	B4	RT1	15-10-2023	
14	16-10-2023	01-10-2023	C2082	B4	RT1	15-10-2023	
15	17-10-2023	01-10-2023	C2082	B4	RT1	15-10-2023	
16	18-10-2023	01-10-2023	C2082	B4	RT1	15-10-2023	
17	19-10-2023	01-10-2023	C2082	B4	RT1	15-10-2023	
18	20-10-2023	01-10-2023	C2082	B4	RT1	15-10-2023	
19	21-10-2023	01-10-2023	C2082	B4	RT1	15-10-2023	
20	08-04-2022	01-04-2022	C518	B3	RT4	08-04-2022	
21	09-04-2022	01-04-2022	C518	B3	RT4	08-04-2022	
22	10-04-2022	01-04-2022	C518	B3	RT4	08-04-2022	
23	11-04-2022	01-04-2022	C518	B3	RT4	08-04-2022	
24	26-10-2020	01-10-2020	C2203	B4	RT2	26-10-2020	
25	27-10-2020	01-10-2020	C2203	B4	RT2	26-10-2020	
26	13-09-2024	01-09-2024	C2275	B2	RT1	13-09-2024	
27	14-09-2024	01-09-2024	C2275	B2	RT1	13-09-2024	

The 'APPLIED STEPS' pane on the right shows the 'Renamed Columns' step.

3. Create the Rooms_Booked column using the Group By function in the Power Query Editor and change the data type of Stay_Date column from Text to Date

The screenshot shows the Power Query Editor interface with the following details:

- Queries [4]**: Shows Table8, Table1, Table11, and Table13.
- Table8** is the active query, displaying a table with two columns: Stay_Date and Room_Booked.
- Transform ribbon**: Shows various data transformation tools like Group By, Split Columns, and Data Type.
- Query Settings pane**:
 - PROPERTIES**: Name is set to Table8.
 - APPLIED STEPS**:
 - Source: Changed Type1
 - Changed Type1: Added Custom
 - Expanded Stay_Date
 - Removed Other Columns
 - Changed Type2
 - Grouped Rows** (highlighted in green)
- Preview**: Shows the first 28 rows of the transformed data.

4. Created Pivot Table using the Stay_Date and Rooms_Booked Columns from the Rooms Booked sheet to fetch the Yealy & Monthly Bookings Data

The screenshot shows an Excel spreadsheet with the following details:

- File**: Hotel_dataset - Excel
- Pivot Table** (Range: D11):
 - Row Labels**: Sum of Room_Booked
 - Values**: Sum of Room_Booked (grouped by year: 2020, 2021)
- Data** tab selected.
- Sheet tabs** at the bottom: Duration_details, Room_Booked, **Monthly&yearly_Data**, Master_Data, Table_bookings, Tbl rates.

	A	B
27	Oct	1773
28	Nov	1631
29	Dec	1645
30	2022	19092
31	Jan	1804
32	Feb	1461
33	Mar	1545
34	Apr	1543
35	May	1688
36	Jun	1548
37	Jul	1671
38	Aug	1677
39	Sep	1639
40	Oct	1453
41	Nov	1576
42	Dec	1487
43	2023	19064
44	Jan	1538
45	Feb	1354
46	Mar	1509
47	Apr	1582
48	May	1575
49	Jun	1553
50	Jul	1657
51	Aug	1643
52	Sep	1561
53	Oct	1698
54	Nov	1721

	A	B
55	Dec	1633
56	2024	1826
57	Jan	1632
58	Feb	1580
59	Mar	1535
60	Apr	1437
61	May	1755
62	Jun	1493
63	Jul	1507
64	Aug	1486
65	Sep	1623
66	Oct	1544
67	Nov	1511
68	Dec	1723
69	2025	16215
70	Jan	1632
71	Feb	1504
72	Mar	1496
73	Apr	1590
74	May	1647
75	Jun	1383
76	Jul	1553
77	Aug	1464
78	Sep	1527
79	Oct	1659
80	Nov	760
81	Grand Total	111585

5.Created the Master Data sheet with Month, Day_Count, Rooms_Available, Rooms_Sold and Occupancy_% columns

Formulas:

Day_Count=DAY(EOMONTH(A2,0))

Rooms_available = =B2*200 where 200 is Total Room Count where B2 is DayCount

Occupancy Rate= =(D2/C2)*100 where D2 = Room Sold which taken from Pivot Table and C2 is Rooms_Available

Hotel_dataset - Excel

Month	Day_count	Rooms_Available	Room_Sold	Occupancy%
01-Jan-20	31	6200	1551	25.02
01-Feb-20	29	5800	1572	27.10
01-Mar-20	31	6200	1560	25.16
01-Apr-20	30	6000	1545	25.75
01-May-20	31	6200	1573	25.37
01-Jun-20	30	6000	1513	25.22
01-Jul-20	31	6200	1696	27.35
01-Aug-20	31	6200	1485	23.95
01-Sep-20	30	6000	1433	23.88
01-Oct-20	31	6200	1576	25.42
01-Nov-20	30	6000	1632	27.20
01-Dec-20	31	6200	1619	26.11
01-Jan-21	31	6200	1762	28.42
01-Feb-21	28	5600	1390	24.82
01-Mar-21	31	6200	1616	26.06
01-Apr-21	30	6000	1550	25.83
01-May-21	31	6200	1889	30.47
01-Jun-21	30	6000	1590	26.50
01-Jul-21	31	6200	1620	26.13
01-Aug-21	31	6200	1662	26.81
01-Sep-21	30	6000	1505	25.08
01-Oct-21	31	6200	1773	28.60
01-Nov-21	30	6000	1631	27.18
01-Dec-21	31	6200	1645	26.53
01-Jan-22	31	6200	1804	29.10
01-Feb-22	28	5600	1461	26.09

6. Create Table Rates Table

Hotel_dataset - Excel

RoomTypeID	Price
RT1	2500
RT2	4000
RT3	7500
RT4	5500
RT5	3800
RT6	5000

7. Create Table_bookings table by taking information from Fact table Calculate DayRevenue From StayDate by merges queries by taking help of table rates

The screenshot shows an Excel spreadsheet titled "Hotel_dataset - Excel". The ribbon is visible at the top, with "Home" selected. The table "Table_bookings" is currently active, indicated by the green selection bar at the bottom.

The table structure is as follows:

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Stay_Date	Month_Start	CustomerID	BranchID	RoomTypeID	CheckInDate	CheckOutDate	Duration	Revenue	DayRevenue				
2	10-09-2025	01-09-2025	C4972	B3	RT1	10-09-2025	16-09-2025	6	15000	2500				
3	11-09-2025	01-09-2025	C4972	B3	RT1	10-09-2025	16-09-2025	6	15000	2500				
4	12-09-2025	01-09-2025	C4972	B3	RT1	10-09-2025	16-09-2025	6	15000	2500				
5	13-09-2025	01-09-2025	C4972	B3	RT1	10-09-2025	16-09-2025	6	15000	2500				
6	14-09-2025	01-09-2025	C4972	B3	RT1	10-09-2025	16-09-2025	6	15000	2500				
7	15-09-2025	01-09-2025	C4972	B3	RT1	10-09-2025	16-09-2025	6	15000	2500				
8	11-09-2025	01-09-2025	C4125	B1	RT3	11-09-2025	17-09-2025	6	45000	7500				
9	12-09-2025	01-09-2025	C4125	B1	RT3	11-09-2025	17-09-2025	6	45000	7500				
10	13-09-2025	01-09-2025	C4125	B1	RT3	11-09-2025	17-09-2025	6	45000	7500				
11	14-09-2025	01-09-2025	C4125	B1	RT3	11-09-2025	17-09-2025	6	45000	7500				
12	15-09-2025	01-09-2025	C4125	B1	RT3	11-09-2025	17-09-2025	6	45000	7500				
13	16-09-2025	01-09-2025	C4125	B1	RT3	11-09-2025	17-09-2025	6	45000	7500				
14	15-10-2023	01-10-2023	C2082	B4	RT1	15-10-2023	22-10-2023	7	17500	2500				
15	16-10-2023	01-10-2023	C2082	B4	RT1	15-10-2023	22-10-2023	7	17500	2500				
16	17-10-2023	01-10-2023	C2082	B4	RT1	15-10-2023	22-10-2023	7	17500	2500				
17	18-10-2023	01-10-2023	C2082	B4	RT1	15-10-2023	22-10-2023	7	17500	2500				
18	19-10-2023	01-10-2023	C2082	B4	RT1	15-10-2023	22-10-2023	7	17500	2500				
19	20-10-2023	01-10-2023	C2082	B4	RT1	15-10-2023	22-10-2023	7	17500	2500				
20	21-10-2023	01-10-2023	C2082	B4	RT1	15-10-2023	22-10-2023	7	17500	2500				
21	08-04-2022	01-04-2022	C618	B3	RT4	08-04-2022	12-04-2022	4	22000	5500				
22	09-04-2022	01-04-2022	C618	B3	RT4	08-04-2022	12-04-2022	4	22000	5500				
23	10-04-2022	01-04-2022	C618	B3	RT4	08-04-2022	12-04-2022	4	22000	5500				
24	11-04-2022	01-04-2022	C618	B3	RT4	08-04-2022	12-04-2022	4	22000	5500				
25	26-10-2020	01-10-2020	C2203	B4	RT2	26-10-2020	28-10-2020	2	8000	4000				
26	27-10-2020	01-10-2020	C2203	B4	RT2	26-10-2020	28-10-2020	2	8000	4000				
27	13-09-2024	01-09-2024	C2275	B2	RT1	13-09-2024	19-09-2024	6	15000	2500				
28	14-09-2024	01-09-2024	C2275	B2	RT1	13-09-2024	19-09-2024	6	15000	2500				

8. Create the Table_Calculations table

The screenshot shows a Microsoft Excel interface with the following details:

- File Tab:** Hotel_dataset - Excel
- Home Tab:** Selected
- Clipboard:** Contains the text "Stay_date" and "Room_Booked".
- Font Group:** Calibri, Size 11, Bold (B), Italic (I), Underline (U).
- Font Color:** Red (A), Green (A), Blue (A).
- Font Style:** Wrap Text, Merge & Center.
- Number Group:** General, Percentage (%), Text (text), Comma (,00), Decimal (,00).
- Conditional Formatting:** Conditional Formatting.
- Format as Table:** Format as Table.
- Cell Styles:** Cell Styles.
- Insert:** Insert, Delete, Format.
- Cells:** Cells.
- Editing:** AutoSum, Fill, Sort & Filter, Find & Select, Clear.

The worksheet contains the following data:

Stay_date	Room_Booked
10-09-2025	64
11-09-2025	61
12-09-2025	60
13-09-2025	56
14-09-2025	59
15-09-2025	55
16-09-2025	52
15-10-2023	59
16-10-2023	55
17-10-2023	49
18-10-2023	50
19-10-2023	47
20-10-2023	47
21-10-2023	48
08-04-2022	53
09-04-2022	49
10-04-2022	53
11-04-2022	49
26-10-2020	42
27-10-2020	50
13-09-2024	47
14-09-2024	52
15-09-2024	52
16-09-2024	57
17-09-2024	56
18-09-2024	50
19-01-2023	57

The ribbon tabs shown are: Room_Booked, Monthly&yearly_Data, Master_Data, Table_bookings, Tbl_rates, and Tbl_calculations (selected). The status bar indicates "Ready" and "Accessibility: Investigate".

9.In Power BI Create columns as Monthstart, MonthYear, Year, Season, WeekDay, WeekNum, WeekStart, YeatWeek Using Following Formulas

MonthYear = Booking_Details[Stay_Date].[Date]

MonthStart = DATE(YEAR([Stay_Date]), MONTH([Stay_Date]), 1)

Year = YEAR('Booking_details'[Stay_Date])

Month = FORMAT('Booking_details'[Stay_Date], "MMMM")

Season =

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",

"Unknown"

)

Weekday = FORMAT('Booking_details'[Stay_Date], "dddd")

WeekNum = WEEKNUM('Booking_details'[Stay_Date], 2)

WeekStart = 'Booking_details'[Stay_Date] - WEEKDAY('Booking_details'[Stay_Date], 2) + 1

YearWeek = VAR YearNum = YEAR('Booking_details'[Stay_Date])

VAR WeekNum = WEEKNUM('Booking_details'[Stay_Date], 2)

RETURN

YearNum & "-W" & FORMAT(WeekNum, "00")

Visualisation_Module_3 * Last saved: 11/18/2025 at 9:13 PM

File Home Help Table tools

Name: Booking_details

Structure

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

Stay_Date Room_Booked MonthStart MonthYear RoomsBookedPerMonth Year Month Season Weekday WeekNum WeekStart YearWeek

Stay_Date	Room_Booked	MonthStart	MonthYear	RoomsBookedPerMonth	Year	Month	Season	Weekday	WeekNum	WeekStart	YearWeek
08 April 2022	53	01-04-2022	2022-04	53	2022	April	Spring	Friday	15	04-04-2022	2022-W15
10 April 2022	53	01-04-2022	2022-04	53	2022	April	Spring	Sunday	15	04-04-2022	2022-W15
19 January 2022	53	01-01-2022	2022-01	53	2022	January	Winter	Wednesday	4	17-01-2022	2022-W04
11 July 2022	53	01-07-2022	2022-07	53	2022	July	Summer	Monday	29	11-07-2022	2022-W29
08 July 2023	53	01-07-2023	2023-07	53	2023	July	Summer	Saturday	28	03-07-2023	2023-W28
18 March 2021	53	01-03-2021	2021-03	53	2021	March	Spring	Thursday	12	15-03-2021	2021-W12
21 December 2023	53	01-12-2023	2023-12	53	2023	December	Winter	Thursday	52	18-12-2023	2023-W52
26 December 2022	53	01-12-2022	2022-12	53	2022	December	Winter	Monday	53	26-12-2022	2022-W53
20 August 2022	53	01-08-2022	2022-08	53	2022	August	Summer	Saturday	34	15-08-2022	2022-W34
20 July 2022	53	01-07-2022	2022-07	53	2022	July	Summer	Wednesday	30	18-07-2022	2022-W30
11 January 2022	53	01-01-2022	2022-01	53	2022	January	Winter	Tuesday	3	10-01-2022	2022-W03
17 September 2021	53	01-09-2021	2021-09	53	2021	September	Autumn	Friday	38	13-09-2021	2021-W38
26 October 2023	53	01-10-2023	2023-10	53	2023	October	Autumn	Thursday	44	23-10-2023	2023-W44
29 October 2023	53	01-10-2023	2023-10	53	2023	October	Autumn	Sunday	44	23-10-2023	2023-W44
17 February 2023	53	01-02-2023	2023-02	53	2023	February	Winter	Friday	8	13-02-2023	2023-W08
19 February 2023	53	01-02-2023	2023-02	53	2023	February	Winter	Sunday	8	13-02-2023	2023-W08
19 July 2021	53	01-07-2021	2021-07	53	2021	July	Summer	Monday	30	19-07-2021	2021-W30
28 October 2025	53	01-10-2025	2025-10	53	2025	October	Autumn	Tuesday	44	27-10-2025	2025-W44
23 June 2024	53	01-06-2024	2024-06	53	2024	June	Summer	Sunday	25	17-06-2024	2024-W25
24 June 2024	53	01-06-2024	2024-06	53	2024	June	Summer	Monday	26	24-06-2024	2024-W26
11 January 2020	53	01-01-2020	2020-01	53	2020	January	Winter	Saturday	2	06-01-2020	2020-W02
07 November 2022	53	01-11-2022	2022-11	53	2022	November	Autumn	Monday	46	07-11-2022	2022-W46
25 April 2025	53	01-04-2025	2025-04	53	2025	April	Spring	Friday	17	21-04-2025	2025-W17
05 March 2025	53	01-03-2025	2025-03	53	2025	March	Spring	Wednesday	10	03-03-2025	2025-W10
27 June 2024	53	01-06-2024	2024-06	53	2024	June	Summer	Thursday	26	24-06-2024	2024-W26
01 April 2025	53	01-04-2025	2025-04	53	2025	April	Spring	Tuesday	14	31-03-2025	2025-W14
10 March 2025	53	01-03-2025	2025-03	53	2025	March	Spring	Monday	11	10-03-2025	2025-W11
20 February 2020	53	01-02-2020	2020-02	53	2020	February	Winter	Saturday	0	24-02-2020	2020-W00

Table: Booking_Details (2,149 rows)

High UV Now Search

10. Create Nationality Column in Customer_data table

Using Formula:

=CHOOSE(RANDBETWEEN(1,45),"India",

"United States",

"United Kingdom",

"Canada",

"Australia",

"Germany",

"France",

"Italy",

"Spain",

"Brazil",

"Mexico",

"China",

"Japan",

"South Korea",

"Russia",

"South Africa",

"Nigeria",

"Egypt",

"Kenya",

"Argentina",

"Chile",

"Colombia",

"Peru",

"Netherlands",

"Sweden",

"Norway",

"Denmark",

"Finland",

"Poland",

"Turkey",

"Saudi Arabia",

"United Arab Emirates",

"Israel",

"Thailand",

"Vietnam",

"Indonesia",

"Malaysia",

"Singapore",

"Philippines",

"New Zealand",

"Pakistan",

"Bangladesh",

"Sri Lanka",

"Nepal",

"Iran")

The screenshot shows a Microsoft Excel spreadsheet titled "Hotel_dataset - Excel". In cell G3, the formula `=CHOOSE(RANDBETWEEN(1,45),"India", "United States", "United Kingdom", "Canada", "Australia", "Germany", "France", "Italy", "Spain",` is displayed, indicating a dropdown menu. Below the formula, a table of customer data is shown with columns: CustomerID, Name, Email, Phone, City, State, Nationality, LoyaltyTier, AgeGroup, and Gender. The data includes various entries from different countries and cities.

11. Create Visuals for Monthly trends: KPI Cards: Average of ADR, average of occupancy%, Average of RevPAR and Monthly and Yearly Performance

The screenshot shows a Power BI dashboard titled "Visualisation_module_3". It features a KPI card with three metrics: "₹ 4.87K" (Average of ADR), "25.81" (Average of Occupancy%), and "₹ 1.26K" (Average of RevPAR). Below the KPI card is a line chart titled "Monthly ADR, RevPAR & Occupancy Trends" showing the trend of these metrics over the months from January to December. To the right of the chart is a "Visualizations" pane listing various chart types like bar charts, line charts, and maps. At the bottom, there is a "Yearly Performance Summary" table:

Year	Sum of Rooms_Available	Sum of Room_Sold	Average of RevPAR	Sum of TotalRevenue	Average of Occupancy%	Average of ADR
2020	72900	16755	₹ 1,290.55	9254000	26.63	₹ 4,200.98
2021	73000	19633	₹ 1,294.14	94699500	26.87	₹ 4,050.68
2022	73000	19097	₹ 1,264.19	92416000	26.15	₹ 4,038.91
2023	73000	19954	₹ 1,274.10	94682000	26.11	₹ 4,050.48
2024	73000	18826	₹ 1,257.97	92825000	25.72	₹ 4,050.15
2025	66800	16215	₹ 1,177.38	78280000	24.27	₹ 4,014.74
Total	432200	111045	₹ 1,258.09	543765500	25.81	₹ 4,871.29

12. Room & Stay Type Performance Overview

Branch-wise Room Type Summary

BranchName	Deluxe	Double	Premium	Single	Standard	Suite	Total
HotelRev Bengaluru	1351	1442	3	1363	1	1441	5691
HotelRev Delhi	1426	1417	3	1397	1	1397	5641
HotelRev Kolkata	1416	1337	2	1408	1	1365	5528
HotelRev Mumbai	1428	1442	3	1400	2	1387	5682
HotelRev Theli	1381	1409	1	1381	1	1446	5568
Total	6852	7047	12	6949	4	7038	28000

Bookings by Room Type

Bookings by Stay Type

13. Create Visuals Based Performance Summary specifying by Yearly, Weekly, Quarterly Performance

Yearly Performance

Weekly Performance

Quarterly Performance

Data

- Booking_details
 - Month
 - MonthStart
 - MonthYear
 - Σ Room_Booked
 - Season
 - Stay_Date
 - Weekday
 - WeekNum
 - WeekStart
 - Year
 - YearWeek
 - Customer_data
 - Date
 - Duration_details
 - Hotel_Bookings
 - Hotel_Branch
 - Master_Data
 - Monthly&yearly_Da
 - MonthlyBookings
 - Room_Booked
 - Rvnm_Tune

13. Create Annual Trends

