EDA and Conclusion

We are doing Analysis on the Hospitality domain, and we have the data of the "AtliQ" Hotel who owns multiple five-star hotels across India.

We have **3 months** dataset which includes dates, months, occupancy, online-offline platforms of the booking, hotels ratings, hotel cancellation, total bookings, class of the rooms, their properties city wise, Room types, etc.

As we are going through the analysis, we make some new columns with the help of DAX where we used **"Calculated field"** along with **"New Measures"** which help in detailed analysis.

Here, we used some measures as per client requirements like...

- RevPAR {Revenue Per Available Rooms},

  formula: total Revenue/ Total Rooms available to sell
- Occupancy

formula: Total Rooms Occupied / Total Rooms Available

- ADR {Average Daily Rate}
- DSRN {Daily Sellable Rooms Night}
- URN {Utilized Room Night}
- BRN {Booked Room Nights}

formula: URN + (no-show) + cancellation

- Realization: which is called "Level One Analysis".

  Formula: URN / BRN

Other formulas are already given in the helper documents for the detailed analysis.

Most important thing is we are considering **"Sunday" as 1ˢᵗ day** of the "week" and **Friday, Saturday as "Weekend"**. Here, we need to understand that people prefer to check out on Sunday as Monday will be the working day for most of the people so hotel shouldn't get the new booking on Sundays so its 1ˢᵗ day of the Week, and Friday as weekend as it will be the weekend for them.
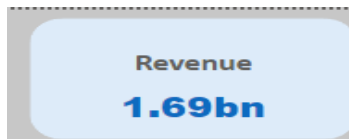
Exploratory Data Analysis (EDA): -

1. What is the Total Revenue of the hotel for the 3 Months of the data?
2. What is the total occupancy?
3. What are the average ratings of the hotel?
4. Calculate the Revenue by the city?
5. What is the ratio of Occupancy by city?
6. How can you show the relationship between average rating and Occupancy by week number and Month?
7. What is the Booking ratio on Weekdays and Weekend?
8. What is the Occupancy ratio on Weekdays and Weekend?
9. Which booking platform is most preferred by people to book the hotel?

10. From which city hotel is getting most of the revenue?
11. Which city is having most occupancy ratio?
12. What is the Occupancy ratio when Delhi has the highest rating (3.8)?
13. What is the RevPAR, Occupancy %, ADR and Realization % on Weekdays and Weekend?
14. What is the Revenue of Hyderabad city in the month of June and from which property of the hotel was getting highest rating?
15. From which class of the hotel is getting more Revenue?
16. What is the trend of the different matrix like RevPAR, ADR and Occupancy %?
17. Check the relationship between Realization ratio and Average Daily Rate (ADR) on the different platform?
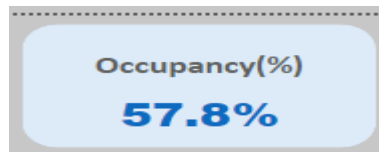
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1) What is the Total Revenue of the hotel for the 3 Months of the data?

Ans) Total Revenue: 1.69bn

2) What is the total occupancy?

Ans) Total Occupancy %: 57.8%

3) What are the average ratings of the hotel?
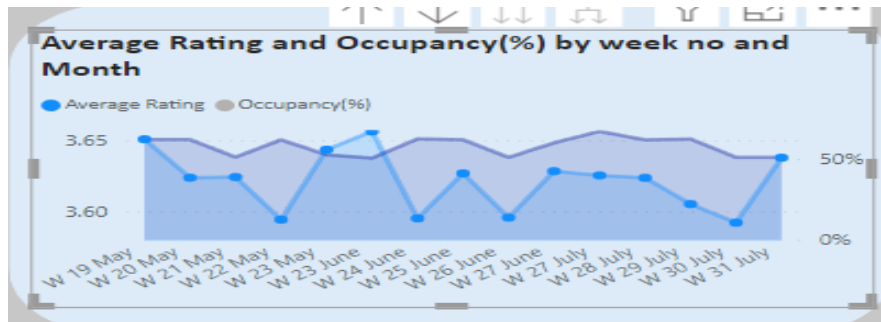
Ans)

4) Calculate the Revenue by the city?

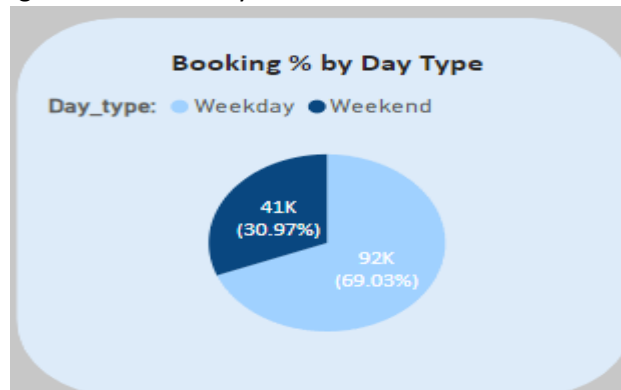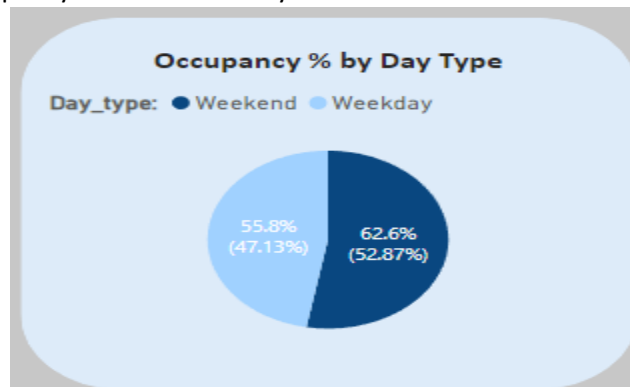**Ans)**

5) What is the ratio of Occupancy by city?

City	Occupancy
Delhi	60.4%
Hyderabad	58.0%
Mumbai	57.8%
Bangalore	55.7%

6) How can you show the relationship between average rating and Occupancy by week number and Month?

Average Rating and Occupancy(%) by week no and Month

7) What is the Booking ratio on Weekdays and Weekend?

Booking % by Day Type

Day_type: Weekday Weekend

41K (30.97%)

92K (69.03%)

8) What is the Occupancy ratio on Weekdays and Weekend?

Occupancy % by Day Type

Day_type: Weekend Weekday

55.8% (47.13%)

62.6% (52.87%)

9) Which booking platform is most preferred by people to book the hotel?

Booking % by Platform

10) From which city hotel is getting most of the revenue?

Ans) from Mumbai Atliq hotel is getting most of the revenue which is around 660.6M rs.
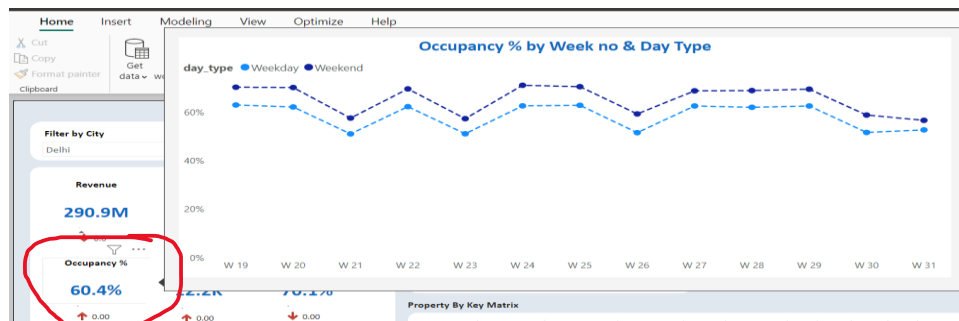

11) Which city is having most occupancy ratio?

Ans) Delhi is having most Occupancy ratio which is 60.44%.

12) What is the Occupancy ratio when Delhi has the highest rating (3.8)?

Ans) When Delhi has 3.8* rating atb that time it is having 60.4% Occupancy by week no and Day type

13) What is the RevPAR, Occupancy %, ADR and Realization % on Weekdays and Weekend?

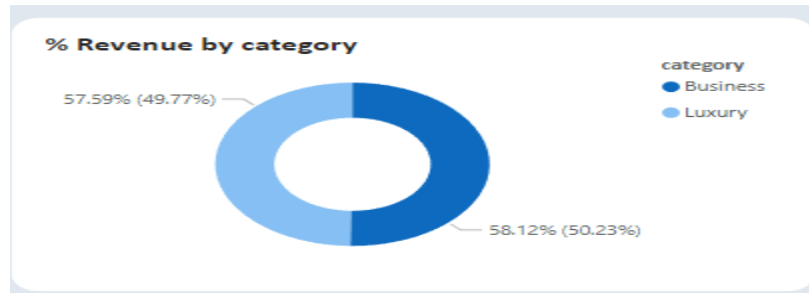|	RevPAR	Occupancy(%)	ADR	Realization %
Weekend	7,990.08	65.43%	12,211.86	70.38%
Weekday	7,093.00	58.45%	12,134.96	69.95%
Total	7,349.31	60.44%	12,158.75	70.08%

14) What is the Revenue of Hyderabad city in the month of June and from which property of the hotel was getting highest rating?
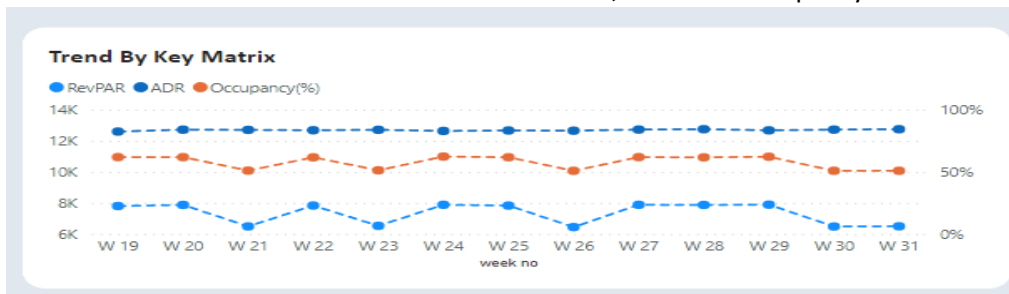
Ans)

a) Rs. 104.9M is the revenue of Hyderabad city in the month of June.
b) And at that point "AtliQ Bay" property had 4.34* rating.

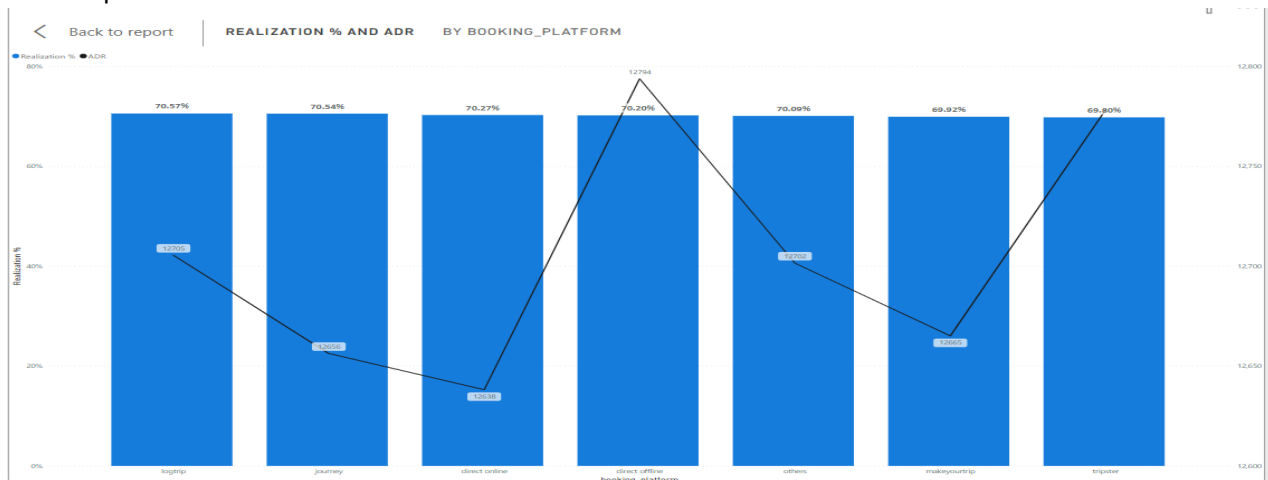15) From which class of the hotel is getting more Revenue?
Ans) Luxury Class is getting more revenue (58.12%) than Business class.

16) What is the trend of the different matrix like RevPAR, ADR and Occupancy %?

17) Check the relationship between Realization ratio and Avrage Daily Rate (ADR) on the different platform?

Conclusion

❑ **Revenue: -**

- While overall revenue showed a **decrease** from **May to July** (from **$581.9M to $551.9M**), this aligns with expected seasonal trends in the hospitality industry. **May and June**, with their abundance of **school holidays**, typically see a surge in travel and hotel bookings, while **July** often reverts to a more regular, **non-peak** pattern.
- Therefore, the slight dip in revenue during July isn't necessarily cause for concern. Further analysis would be beneficial to determine if specific factors beyond seasonality, such as local events or marketing initiatives, influenced the July figures.

❑ **Occupancy: -**

- **Drill down:** Compare occupancy rates across different room types, segments, or locations to identify specific areas affecting the overall figure.
- **Benchmarking:** Analyze industry averages or compare your occupancy with previous years' data for the same period to understand if the July figure falls within standard expectations.
- **Identify influencing factors:** Investigate potential reasons for the decline, such as room rate adjustments, changes in marketing strategies, or shifts in guest preferences.

❑ **Realization: -**

- AtliQ hotel's realization rate has **steadily increased** for three consecutive months, reaching a positive high of 70.6% in July.
- Consistent growth in realization rate indicates effective booking and guest management strategies, maximizing revenue potential.

❑ **Room Categories: -**

Business Class is Holds the top spot with a commanding **58.12% occupancy**, indication strong demand for its blend of **comfort, convenience, and competitive pricing**. Where **Luxury class** Follows closely with a respectable **57.59% occupancy**, suggesting continued **interest in high-end experiences.**

In **Business Class** guest demographics and preferences to **refine offerings** and maximize appeal. And in **Luxury Rooms** guests seek **lavish amenities, personalized service, and an exclusive atmosphere.**

Strategies:-

- **Targeted marketing:** Tailor campaigns to highlight the unique selling points of both categories, attracting the right clientele for each.
- **Dynamic pricing:** Consider strategic adjustments to optimize revenue while maintaining competitiveness within each category.
- **Enhancing guest experience:** Elevate offerings in both Business and Luxury categories to ensure exceptional service, amenities, and value that exceed guest expectations.

❏ Ratings: -

The **AtliQ Exotica** hotel in Mumbai emerges as a **double crown winner** from the dashboard data. Not only does it bask in the warm glow of being the most highly rated hotel across all AtliQ chains, but it also reigns supreme in the revenue category, claiming a dazzling **117 million**, the highest amongst its peers. AtliQ Exotica might cater to a segment willing to pay **higher rates for luxurious experiences.**

While there is a correlation between high ratings and increased revenue in the hospitality industry, it's important to be cautious about making a causal claim like "high ratings *always* increase revenue." Here's why:

- **Correlation vs. Causation:** Just because two things are related (correlation) doesn't mean one causes the other (causation). Other factors could **influence** both **ratings** and **revenue**, such as **location, seasonality, marketing, or amenities.**
- **Direction of causality:** It's also possible that high revenue could lead to higher ratings, as guests with a more **positive experience** are more likely to leave **good reviews.**

Instead of stating that high ratings *always* increase revenue, it's more accurate to say that there is a **positive correlation** between the two.

→ Analyzing the Average Daily Rate alongside Realization Ratio can reveal deeper connections between booking platforms and revenue per room.
→ **Offline bookings** through direct channels are gaining traction, exhibiting a **rising trend** and reaching a **Realization Ratio of 70.88%**.
→ Continue strengthening direct booking channels through **targeted marketing and convenient booking options.**
→ Understanding factors like **marketing efforts, promotions, and booking costs** for each platform could provide more insights into the trends.
→ The occupancy rate is 57.8%. This is a good occupancy rate for a hotel, and it suggests that the hotel can fill its rooms.

→ The average daily rate (ADR) is $12,605.75. This is a high ADR, and it suggests that the hotel can charge premium prices for its rooms.

→ The hotel should continue to focus on the factors that are driving its **revenue growth**, such as the **popularity of the hotel**, the **location of the hotel**, and the **number of guests** who have stayed at the hotel.

→ The hotel should also look for ways to improve its occupancy rate, ADR, and RevPAR. This could be done by **targeting new markets, offering special promotions, or improving the guest experience.**

→ The hotel should continue to **monitor its booking platforms and make sure that it is getting the best possible deals from them.**

→ The comparison of **Week 24 and 26** clearly illustrates the interconnectedness of **RevPAR, ADR,** and **occupancy rate**. This emphasizes the importance of considering all three metrics for a **comprehensive understanding of the hotel's revenue performance**.

→ Optimize **pricing strategies** to balance **maximizing ADR** potential while maintaining competitive rates that **attract guests and boost occupancy**.

→ Consider analyzing data by **room type** or **guest segments** to **understand** any specific **trends or correlations** unique to different categories.