

Hospitality Project

PROJECT CODE:P728

DATE:14/01/2025



MEET OUR TEAM

TEAM MEMBERS :-

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MENTORS:

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AGENDA



Project Goal &
Hospitality Introduction



Dataset Description



KPI Analysis



Dashboard Design



Recommendations



Conclusion & Closure

INTRODUCTION

Project Overview:

Hospitality Analytics involves the process of collecting, analyzing, and interpreting data specific to the hospitality industry to improve guest experiences, optimize operations, and drive better business decisions. It leverages data to enhance customer satisfaction, manage resources efficiently, increase occupancy rates, and improve revenue management strategies. By analyzing booking trends, customer feedback, and operational metrics, businesses can provide personalized experiences and gain a competitive edge.

OBJECTIVES

1. **Analyze Operational Metrics:** Review key performance metrics such as occupancy rates, average daily rate (ADR), revenue per available room (RevPAR), and guest satisfaction scores.
2. **Identify Guest Trends and Anomalies:** Detect patterns in booking behaviors, seasonal demand shifts, and customer preferences while flagging unusual trends or operational inefficiencies.
3. **Highlight Areas of Excellence and Improvement:** Areas needing enhancement to improve guest experience and operational performance.
4. **Develop Analytical Dashboards:** Create intuitive dashboards using Excel, Power BI, Tableau, and SQL queries to monitor and visualize critical KPIs for decision-makers.

KEY ANALYSIS

The project focuses on analyzing key performance indicators (KPIs) to monitor operations, identify trends, and provide actionable insights. These include:

- Provides insights into workload distribution, efficiency, and staff productivity.

- Highlights performance gaps or successes in metrics like occupancy rates, revenue per available room (RevPAR), and customer satisfaction.

- Evaluates engagement efforts through check-ins, customer feedback responses, and loyalty program touchpoints.

Dashboard Design

TOOLS USED:

1. MS EXCEL
2. POWER BI
3. TABLEAU
4. MY SQL

FEATURES:

1. DATA INTEGRATION AND CENTRALIZATION
2. PREDICTIVE AND PRESCRIPTIVE ANALYTICS
3. PERFORMANCE AND PRODUCTIVITY METRICS



EXCEL DASHBOARD

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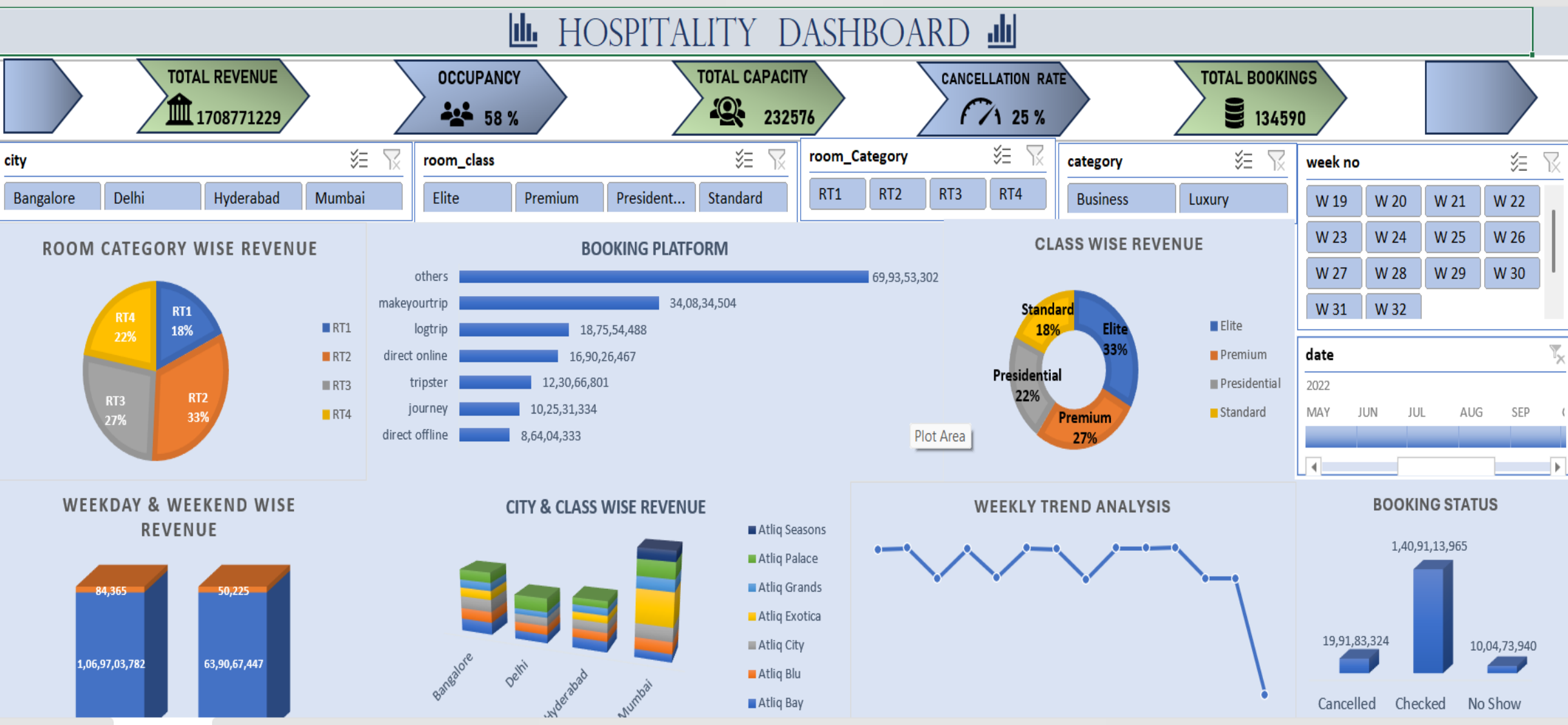


TABLEAU DASHBOARD

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Hospitality Dashboard

Total Revenue
1,709M

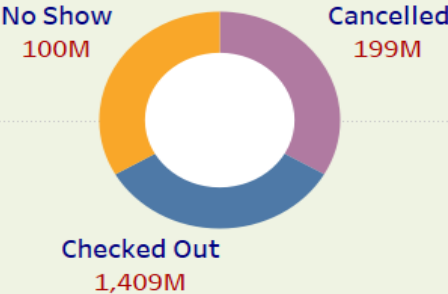
Occupancy Rate
58%

Cancellation Rate
25%

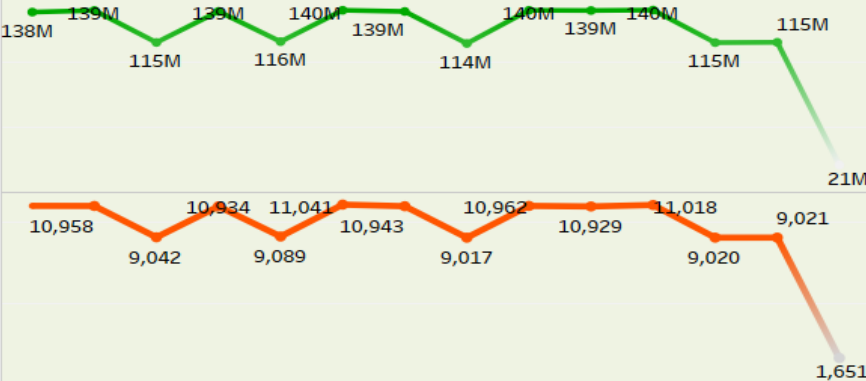
Total Booking
1,34,590

Utilize Capacity
58%

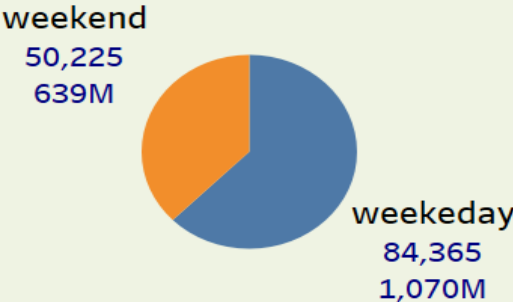
Checked out Cancel No Show



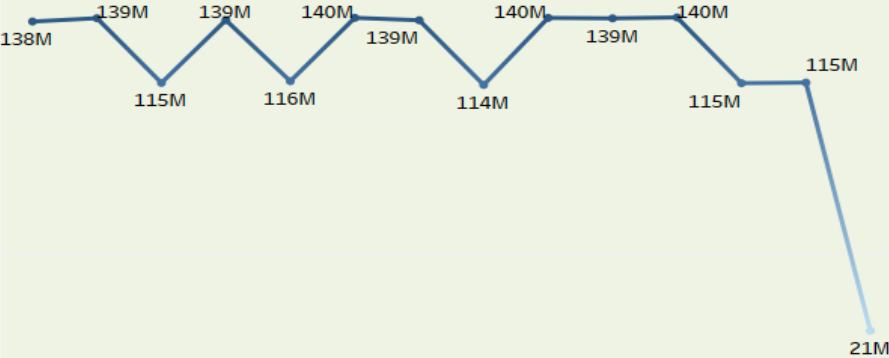
Weekly trend key trend



Weekday & Weekend



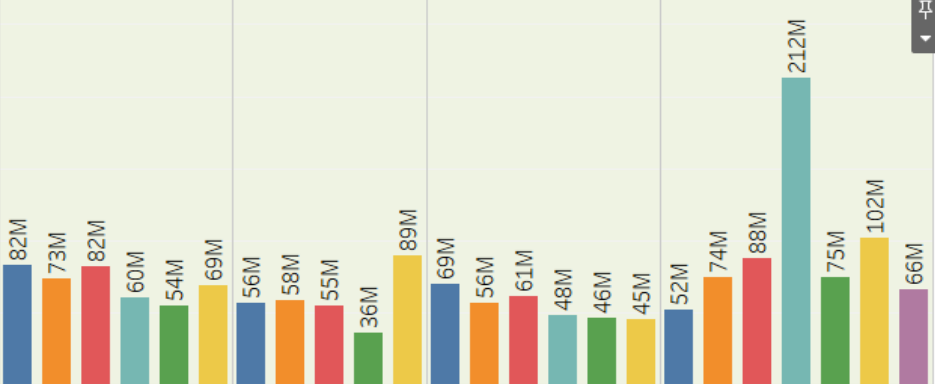
Trend Analysis



Class wise Revenue

Elite	560M
Premium	462M
Presidential	377M
Standard	310M

Revenue by City & Hotel



Booking Status

- ☒ (All)
- ☐ Cancelled
- ☐ Checked Out
- ☐ No Show

Week No

- ☒ (All)
- ☐ W 19
- ☐ W 20
- ☐ W 21
- ☐ W 22
- ☐ W 23
- ☐ W 24
- ☐ W 25
- ☐ W 26
- ☐ W 27
- ☐ W 28
- ☐ W 29
- ☐ W 30
- ☐ W 31
- ☐ W 32

Day Type

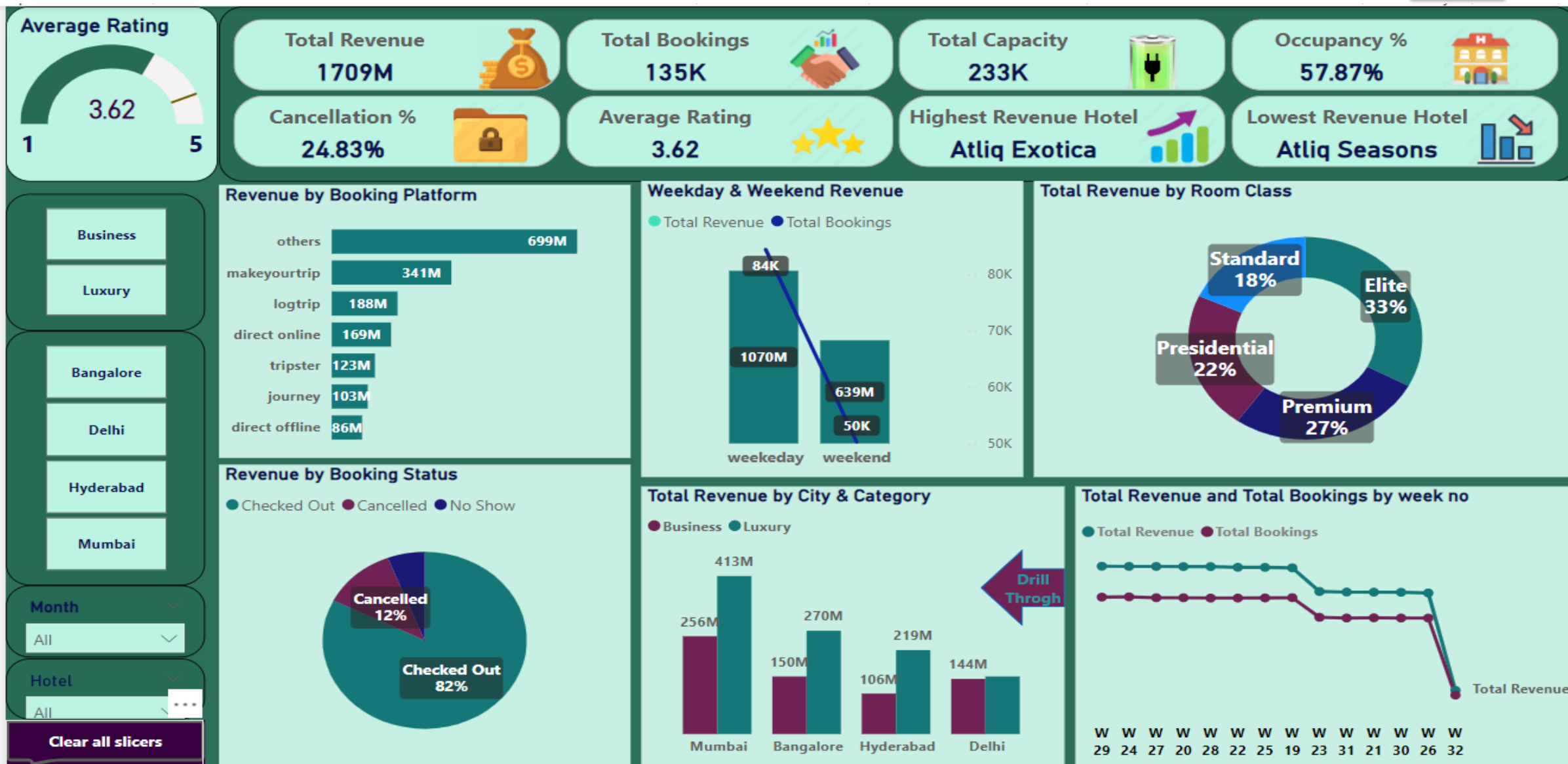
- ☒ (All)
- ☐ weekday
- ☐ weekend

Room Class

- ☒ (All)
- ☐ Elite
- ☐ Premium
- ☐ Presidential
- ☐ Standard

POWER BI DASHBOARD

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SQL QUERIES

22

```
1 • Use hospitality;
2
3 -- Total Revenue
4 • select * from fact_bookings;
5 • SELECT SUM(revenue_realized) AS total_revenue
6   FROM fact_bookings;
7
8 -- Occupancy Rate
9 • Select * from fact_aggregated_bookings;
10 • SELECT property_id, SUM(successful_bookings) / SUM(capacity) * 100 AS occupancy_rate
11   FROM fact_aggregated_bookings
12  group by property_id;
13
14 -- Cancellation Rate
15 • Select * from fact_bookings;
16 • SELECT SUM(CASE WHEN booking_status = 'Cancelled' THEN 1 ELSE 0 END) / COUNT(*) * 100 AS cancellation_rate
17   FROM fact_bookings;
18
19 -- Total Booking
20 • select * from fact_bookings;
21 • SELECT COUNT(booking_id) AS total_bookings
22   FROM fact_bookings;
23
24 -- Utilize Capacity
25 • select * from fact_aggregated_bookings;
26 • select sum(successful_bookings) * 100.0 / sum(capacity) as Utilization_Rate
27   from fact aggregated bookings;
```

```
29 -- Trend Analysis
30 • SELECT DATE_FORMAT(booking_date, '%Y-%m') AS month, SUM(revenue_realized) AS total_revenue
31   FROM fact_bookings
32  GROUP BY DATE_FORMAT(booking_date, '%Y-%m')
33  ORDER BY month;
34
35 -- weekday & weekend Revenue and Booking
36 • SELECT
37   CASE WHEN DAYOFWEEK(STR_TO_DATE(booking_date, '%Y-%m-%d')) IN (1, 7) THEN 'Weekend' ELSE 'Weekday'
38   END AS day_type, COUNT(*) AS total_bookings, SUM(revenue_realized) AS total_revenue
39   FROM fact_bookings
40  GROUP BY day_type
41  ORDER BY FIELD(day_type, 'Weekday', 'Weekend');
42
43 -- Revenue by state & hotel
44 • SELECT h.city, SUM(f.revenue_realized) AS total_revenue
45   FROM dim_hotels h
46  JOIN fact_bookings f
47   ON h.property_id = f.property_id
48  GROUP BY h.city
49  ORDER BY h.city ASC, total_revenue DESC;
50
51 • SELECT h.property_name, SUM(f.revenue_realized) AS total_revenue
52   FROM dim_hotels h
53  JOIN fact_bookings f
54   ON h.property_id = f.property_id
55  GROUP BY h.property name
```

Key Insights

► 1.Revenue & Bookings:

- Total revenue generated is **1709M** with **135K total bookings**.
- The cancellation rate is **24.83%**, indicating a significant loss of potential revenue.
- The occupancy rate is **57.87%**, suggesting underutilization of capacity (233K total capacity).

► 2.Performance by Hotels:

- The **highest revenue-generating hotel** is **Atliq Exotica**, while the **lowest performer** is **Atliq Seasons**.
- Revenue distribution by room class:
 - **Elite (33%)** and **Premium (27%)** categories dominate revenue.
 - Standard (18%) and Presidential (22%) rooms contribute less comparatively.

Key Insights

3.City-wise Revenue Trends:

- **Mumbai** leads in total revenue (413M), followed by Bangalore (270M), Hyderabad (219M), and Delhi (144M).
- Business and luxury segments show variations, with Mumbai excelling in both.

4.Revenue by Booking Platform:

- ▶ Direct booking platforms contribute the most (699M), followed by other platforms.
- ▶ OTA platforms are significantly lower, indicating potential for growth.

Key Insights

5.Booking Status:

- ▶ 82% of bookings result in checkouts, while 12% are canceled. The no-show rate is low.

6.Weekday vs. Weekend Performance:

- ▶ Weekdays generate more revenue (1070M) than weekends (639M), with a much higher volume of bookings.

7.Weekly Trends:

- ▶ A sharp decline in both revenue and bookings is visible after week 27, suggesting possible seasonality or operational issues.

RECOMMENDATIONS

1.Reduce Cancellation Rate:

Introduce stricter cancellation policies or incentivize guests to modify dates instead of canceling outright.

Analyze reasons for cancellations and implement targeted solutions, such as offering flexible pricing or promotions.

2.Optimize Occupancy:

Improve marketing for underperforming hotels like **Atliq Seasons** to boost bookings.

Consider dynamic pricing strategies for low-demand periods to increase occupancy.

3.Focus on High-Performing Categories:

Upsell Elite and Premium room categories through targeted advertising.

RECOMMENDATIONS

4.Leverage City Insights:

- ▶ Focus more resources on cities like Mumbai and Bangalore, which have higher revenue potential.
- ▶ Explore reasons for lower performance in Delhi and consider localized promotions.

5.Expand OTA Platforms:

- ▶ Invest in improving visibility and partnerships with online travel agencies to capture more bookings.
- ▶ Monitor the performance of existing direct booking channels to ensure high ROI.

6.Address Week 27 Decline:

- ▶ Investigate reasons for the sharp fall after week 27 (seasonality, competition, etc.).
- ▶ Plan campaigns and promotional events around this period to revive performance.

RECOMMENDATIONS

7.Boost Weekend Bookings:

- ▶ Introduce weekend packages or exclusive offers to attract more bookings.
- ▶ Partner with local events or tourism boards to enhance demand for leisure travelers.

8.Regular Monitoring:

- ▶ Use dashboards to track KPIs weekly, such as occupancy, revenue per city, and cancellation trends, for proactive decision-making.

CONCLUSION

- ▶ This project showcases the power of data analytics in transforming the hospitality industry. By analyzing key metrics, guest feedback, and booking patterns, we uncovered actionable insights to enhance efficiency, elevate guest experiences, and boost revenue. These data-driven strategies position the business for sustained success, customer loyalty, and competitiveness in a dynamic market.

Thank You...

GROUP NO 6