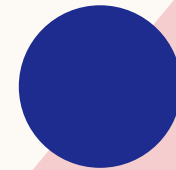# HOTEL BOOKING ANALYSIS

Presented by

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AGENDA

- Introduction of what Data are containing

- Data Wrangling

- EDA(Exploratory Data Analysis)

- Data Visualisation

- Conclusion

INTRODUCTION

This project contains the real world data record of hotel bookings of a city and a resort hotel containing details like bookings, cancellations, guest details etc. from 2015 to 2017.

This data set contains booking information for a city hotel and a resort hotel and includes information such as when the booking was made, length of stay, the number of adults, children, and/or babies, and the number of available parking spaces, among other things. All personally identifying information has from the data.

DATA WRANGLING

Data Cleaning:

1. This data file consist of Null values 'NaN'.

2. Replaced those null values with zeros.

Data Preparation:

1. Data file consist of different type of data type.

2. Data types: Integers, Float, Objects

3. Converted the float data type in integer data type

DATA ANALYSIS

1. Understanding of Data what is Containing.
2. Which Hotel has more bookings.
3. Visitors analysis in different year.
4. Cancellations in both Hotel
5. Analysis of booking across different year, months and days
6. Night stay analysis
7. Market segment analysis
8. Distribution channel analysis
9. Deposit policy of hotel
10. Meal preference analysis
11. Overview of guest
12. Correlations
13. Country wise analysis

ANALYSIS OF HOTEL DATAFRAME

- This Dataset have Containing of 1,19,390 rows and 32 columns of Data.

- The data set has different columns name- (hotel', 'is_canceled', 'lead_time', 'arrival_date_year', 'arrival_date_month', 'arrival_date_week_number', 'arrival_date_day_of_month', 'stays_in_weekend_nights', 'stays_in_week_nights', 'adults', 'children', 'babies', 'meal', 'country', 'market_segment', 'distribution_channel', 'is_repeated_guest', 'previous_cancellations', 'previous_bookings_not_canceled', 'reserved_room_type', 'assigned_room_type', 'booking_changes', 'deposit_type', 'agent', 'company', 'days_in_waiting_list', 'customer_type', 'adr', 'required_car_parking_spaces', 'total_of_special_requests', 'reservation_status', 'reservation_status_date')

DATA VISUALIZATION

1. The pie chart show percentage of booking analysis of hotel ie, in city hotel and resort hotel
2. The no of booking in city hotel is more than resort hotel

Type of Hotel
Percentage of Booking
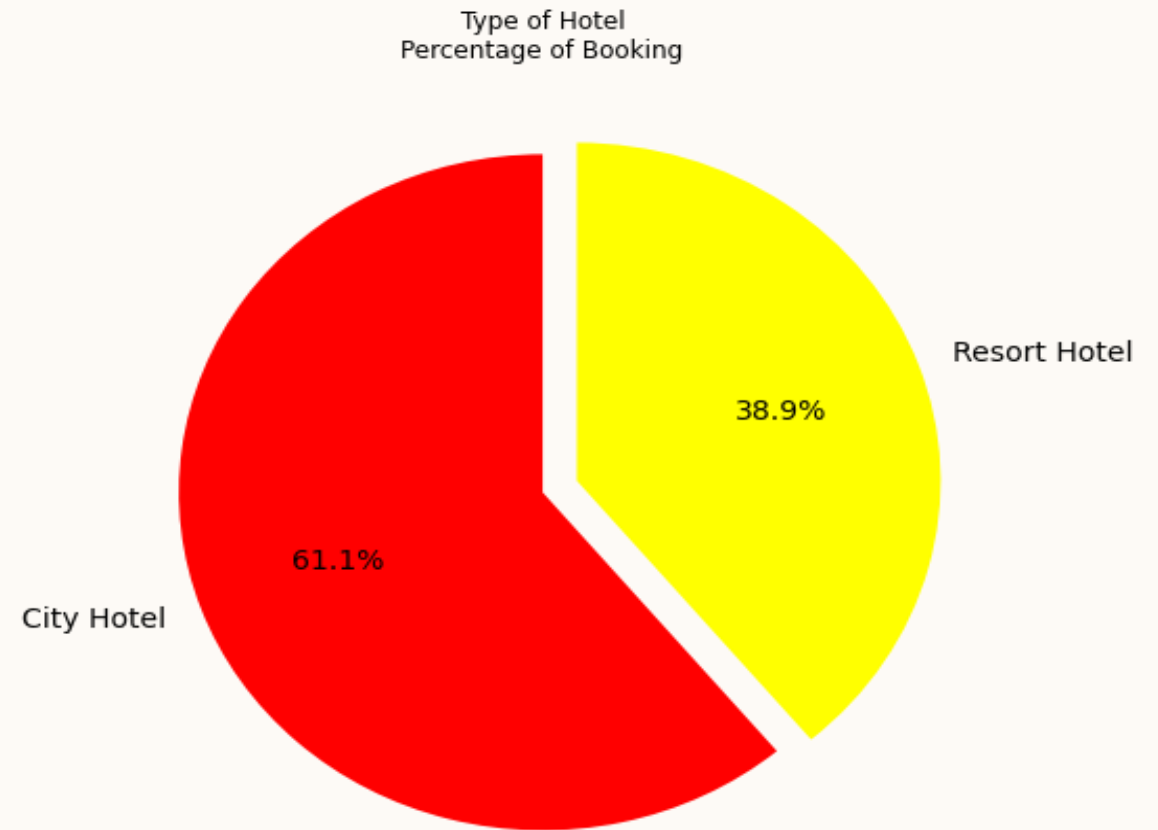
BOOKING ACROSS DIFFERENT YEAR

- In 2015 Both Hotels have Same visitors Around
6,000 - 7,000.
- In 2016 both hotels get More customers
    1. Resort hotel visitors count are around 16,000
   2. City hotel visitors count are around 27,000

It Means City Hotel visitor count takes a massive growth by more than 4 times.

No of arrival Across Different Year
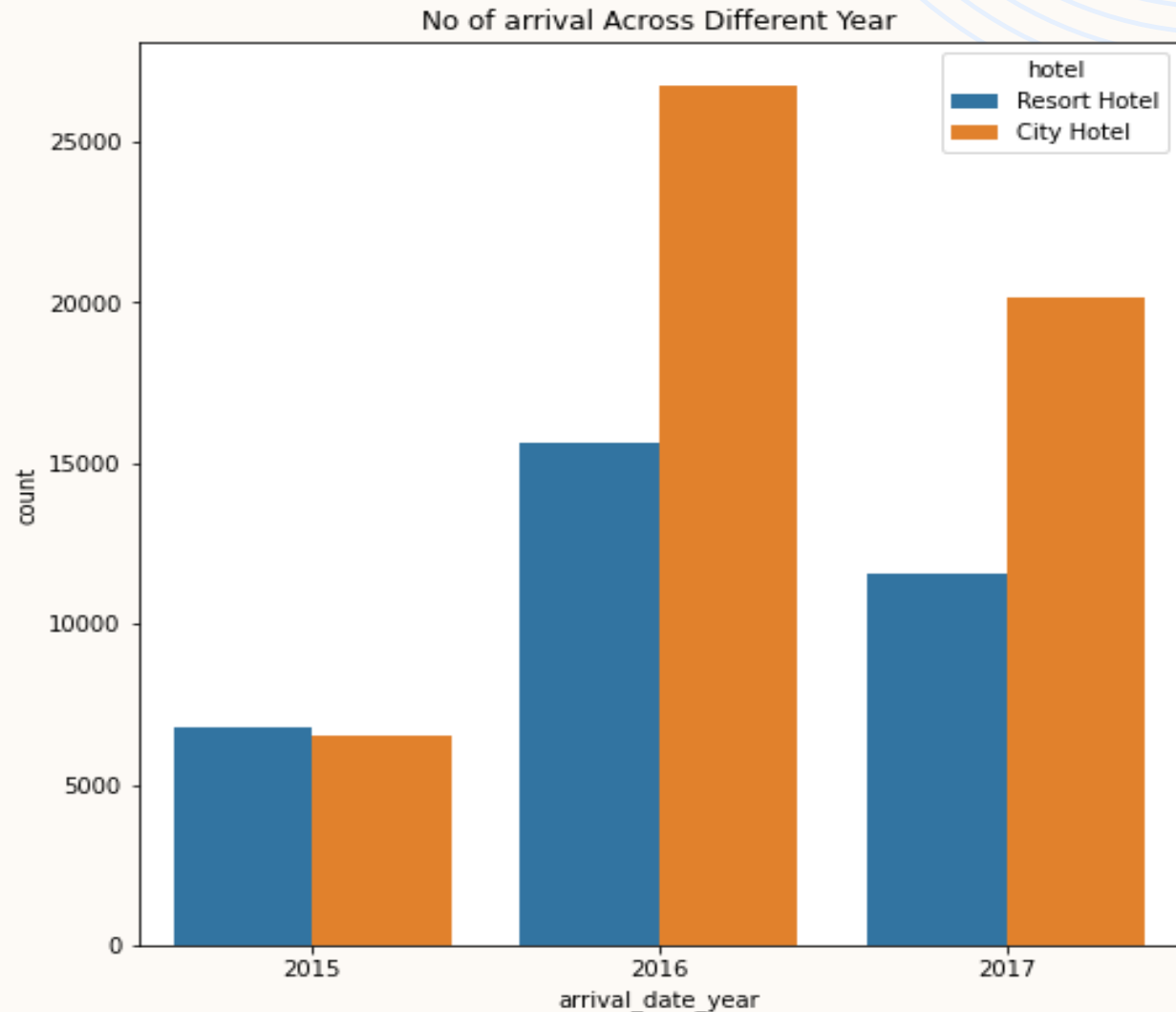
Cancellation Analysis between Hotels

- Total Booking are Around **1,19,390** and totel Canceled booking are more than 44,000

- City Hotel has 43% Cancellation whereas Resort Hotel has 28% Cancelation.
- It Means City Hotel has Loosing his Kinds more than Resort Hotel
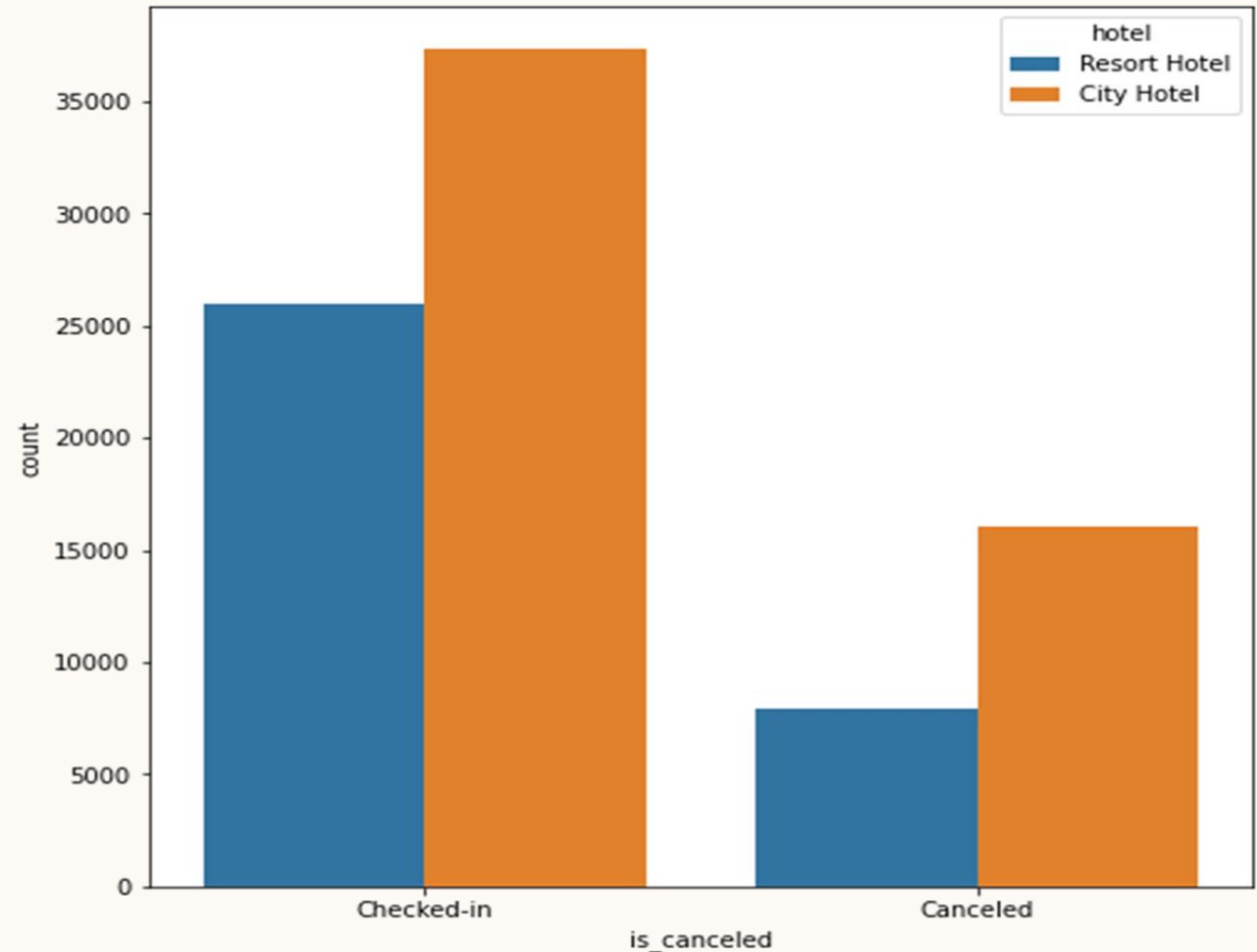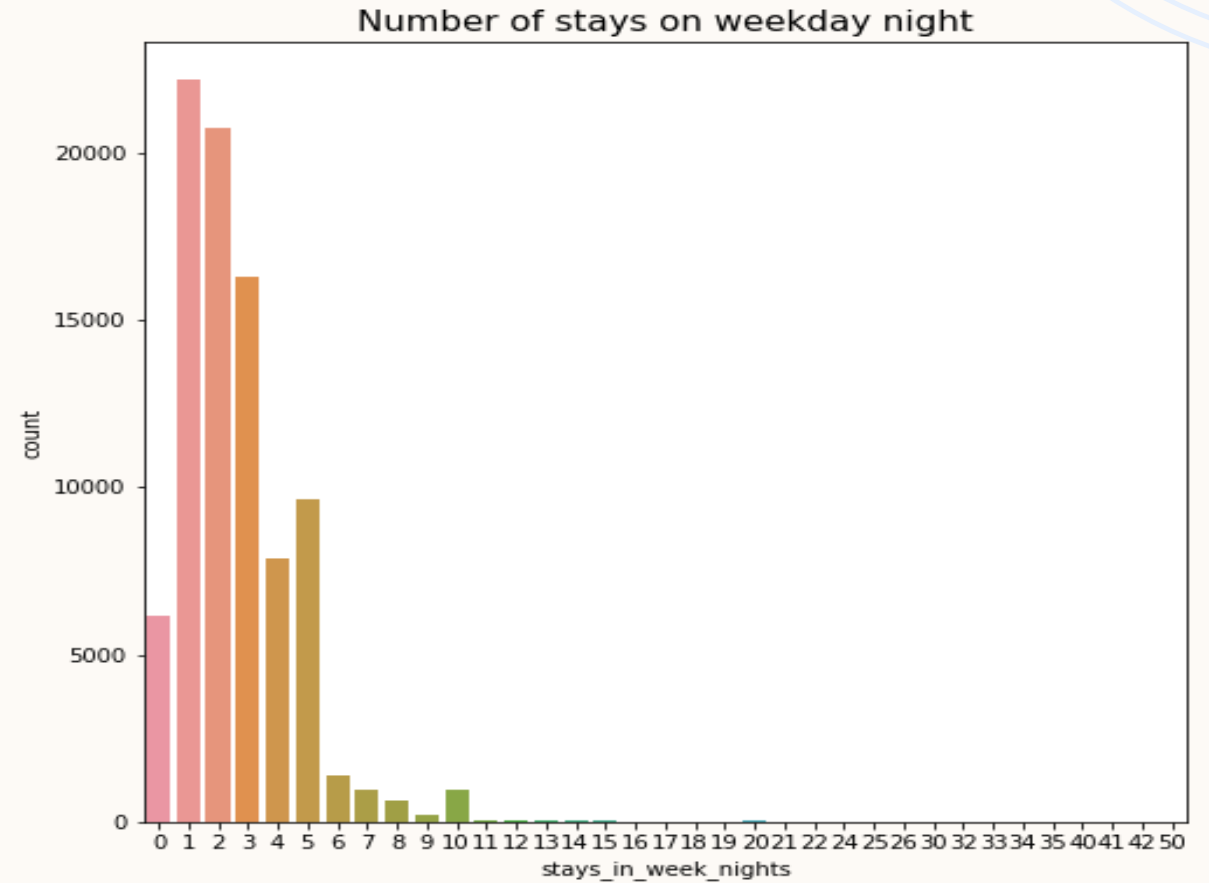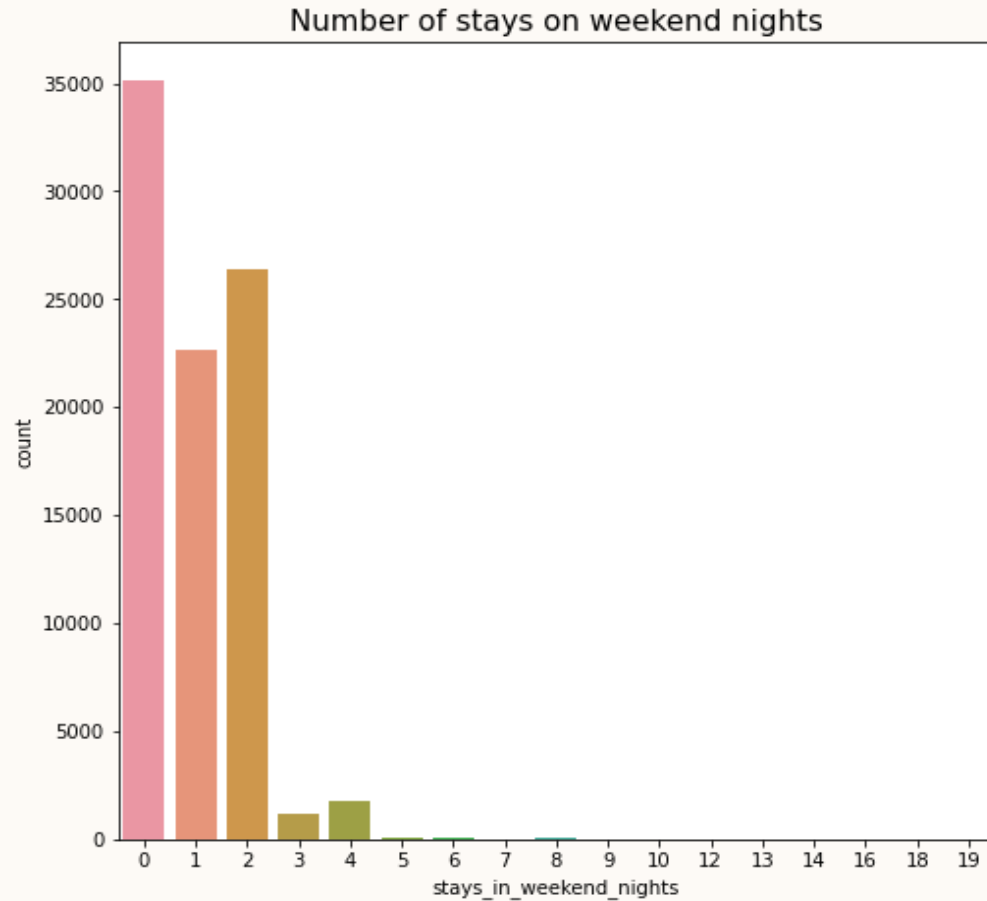
REVENUE DATA FOR HOTELS
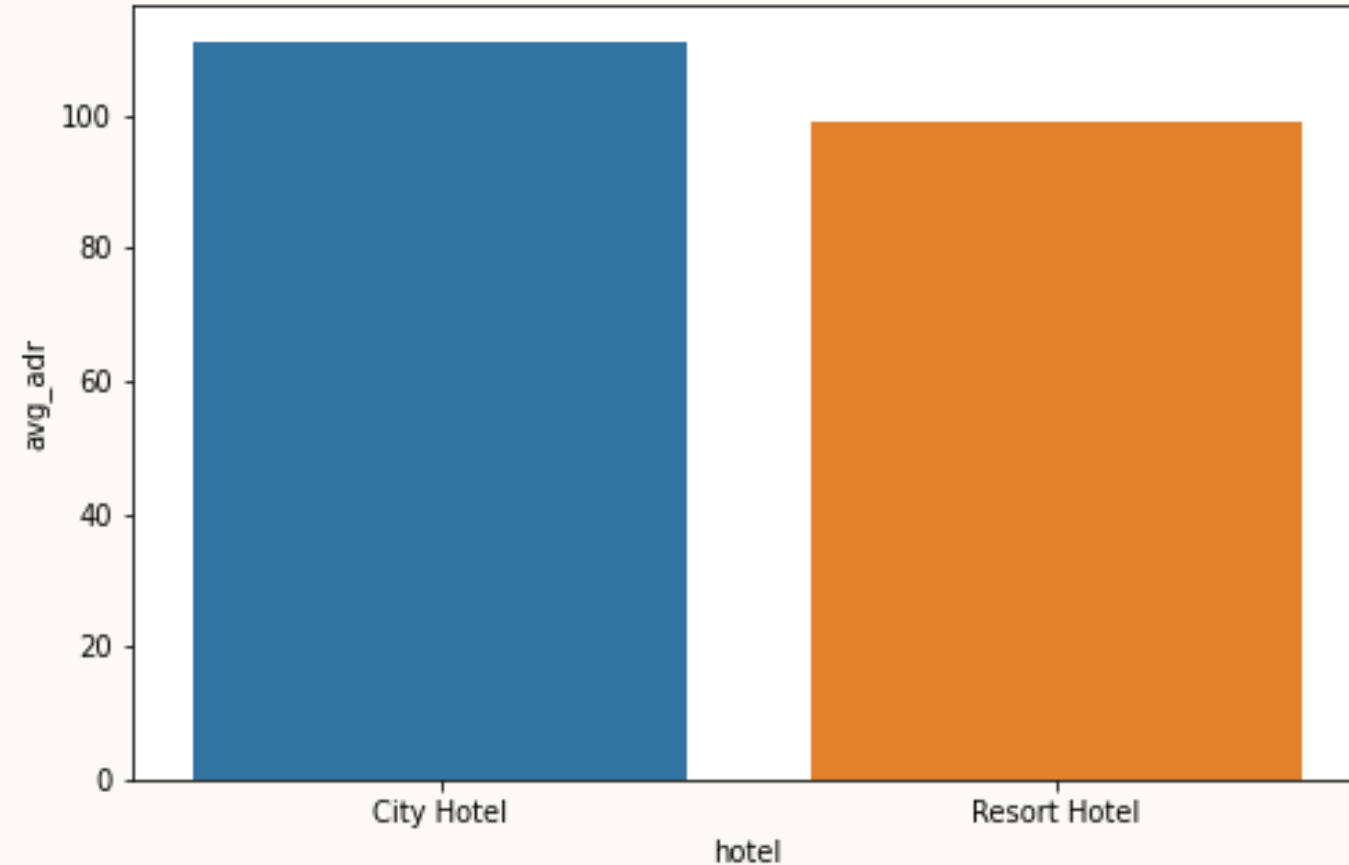
- **As Per ADR Report, Revenue Collection Of The City Hotel Is More Than Resort Hotel.**
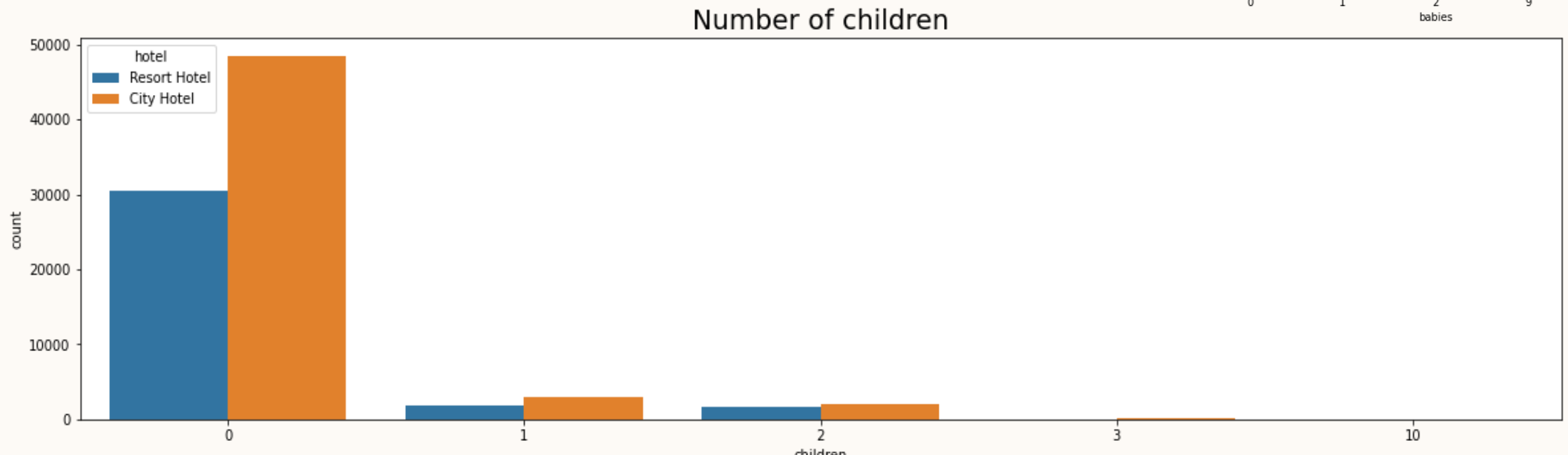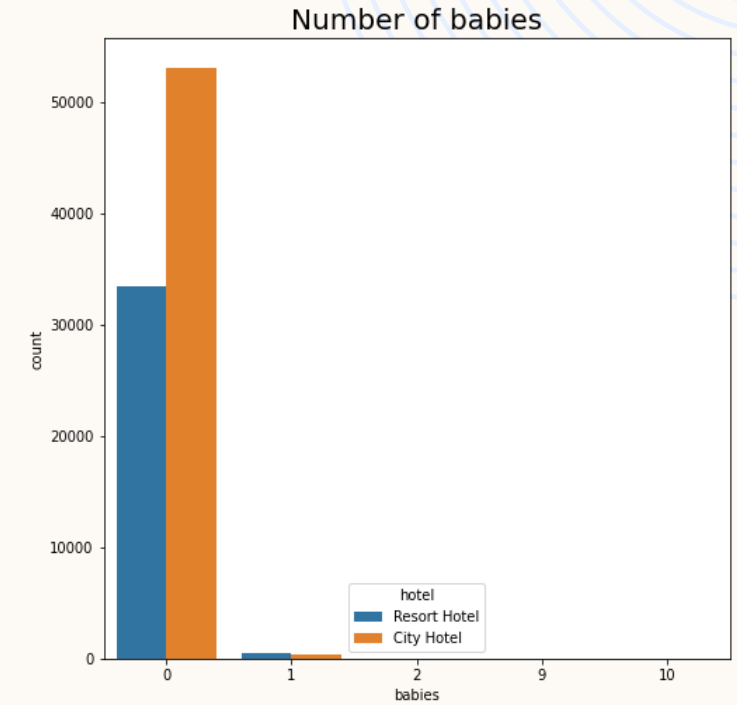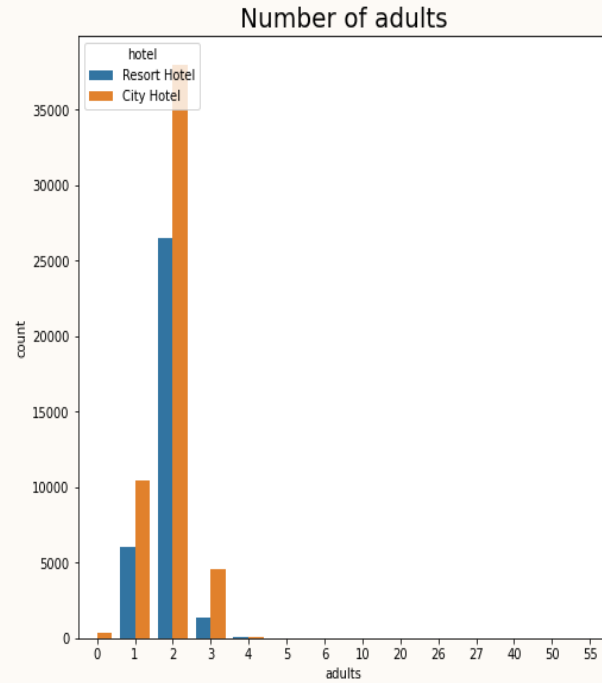
REPEAT CUSTOMER'S PERCENTAGE

- **City Hotel has round 3% Repeat Customers**

- **Resort Hotel has Round 5% Repeat Customers**
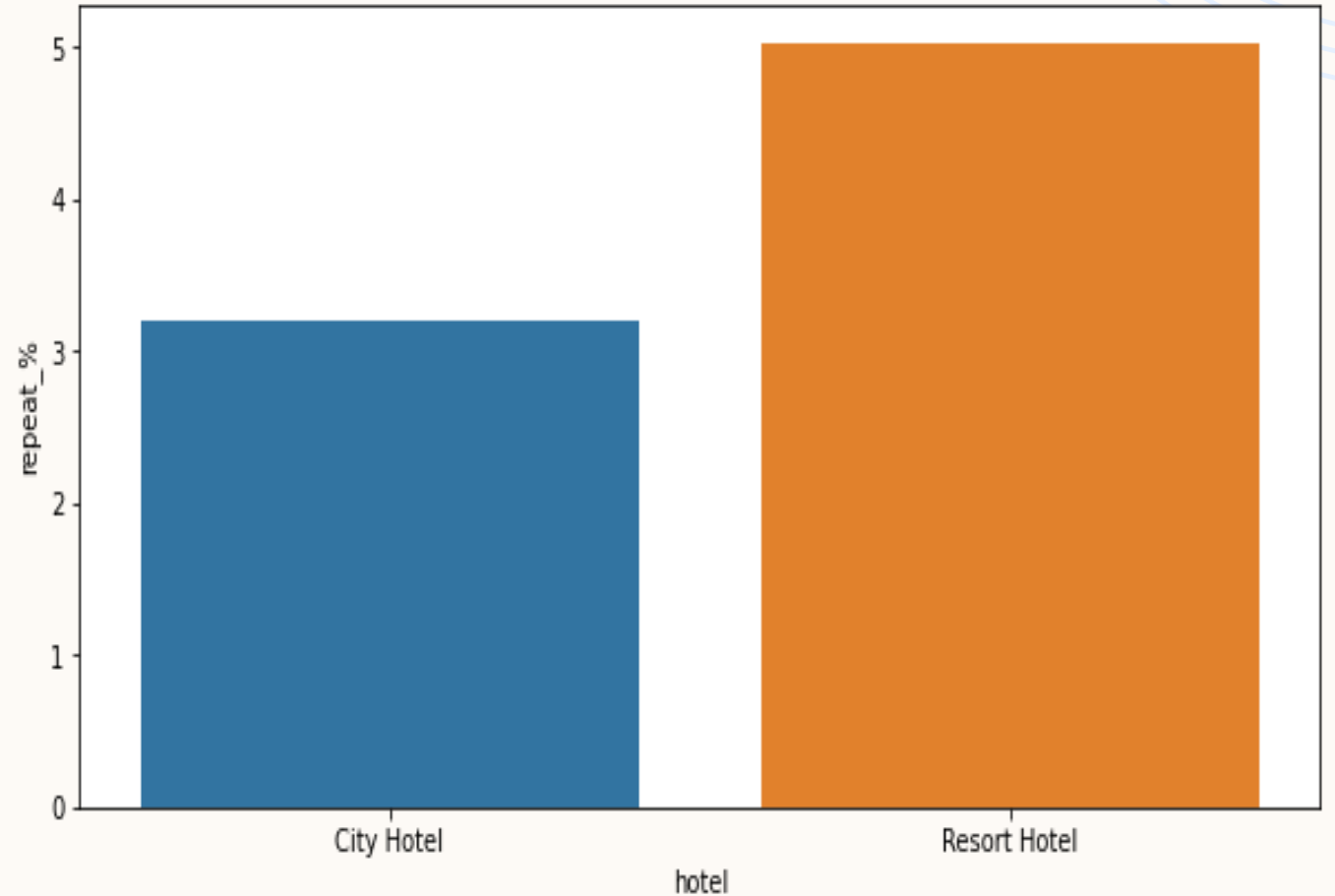
NIGHT STAY DURATION

TYPE OF VISITOR :
Adults, children, babies

Number of adults

Number of babies

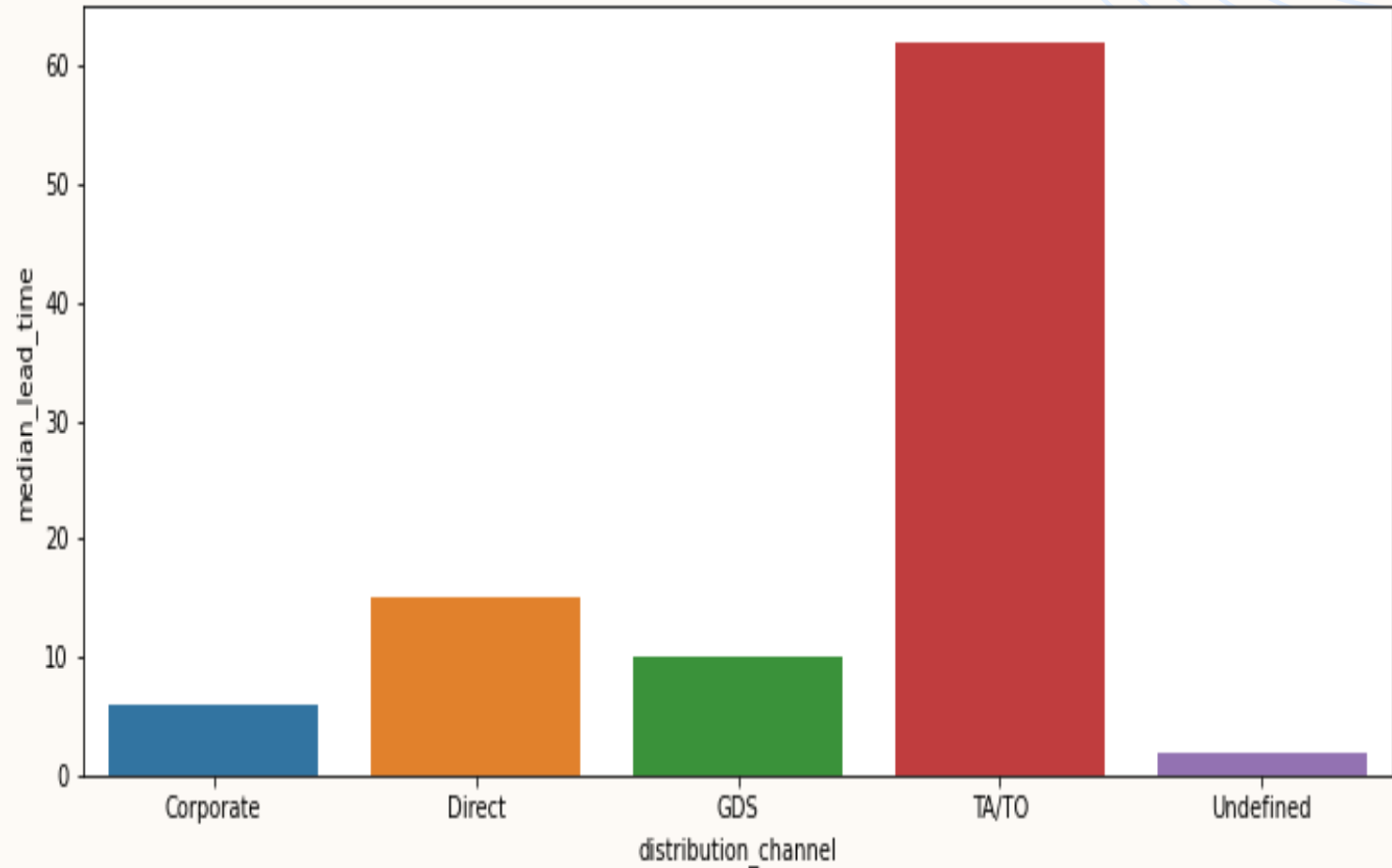Number of children

DISTRIBUTION CHANNEL ANALYSIS BY MEDIAN LEAD TIME
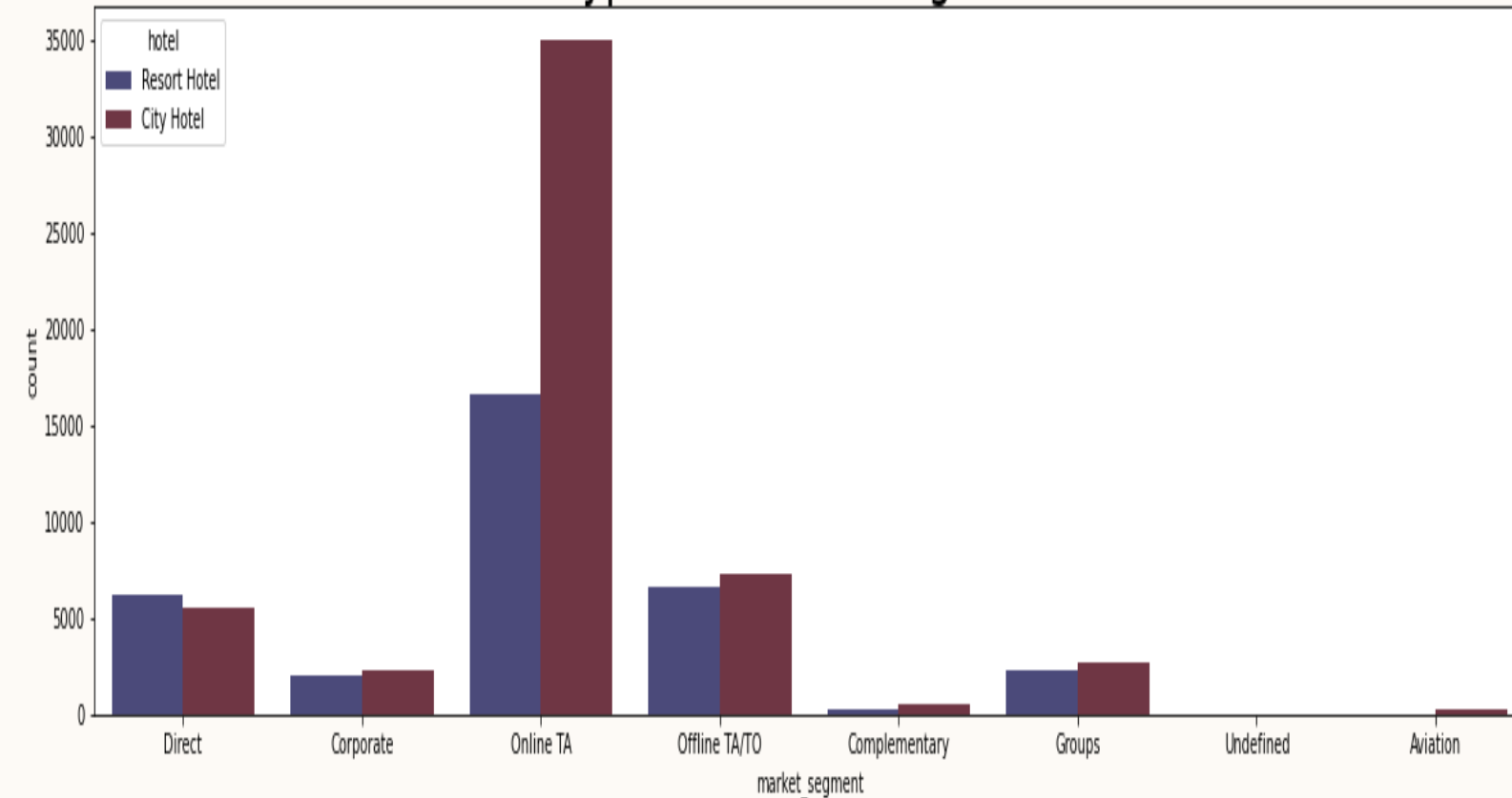
- **Most of Visitors came through Online TA Channel in both hotel.**
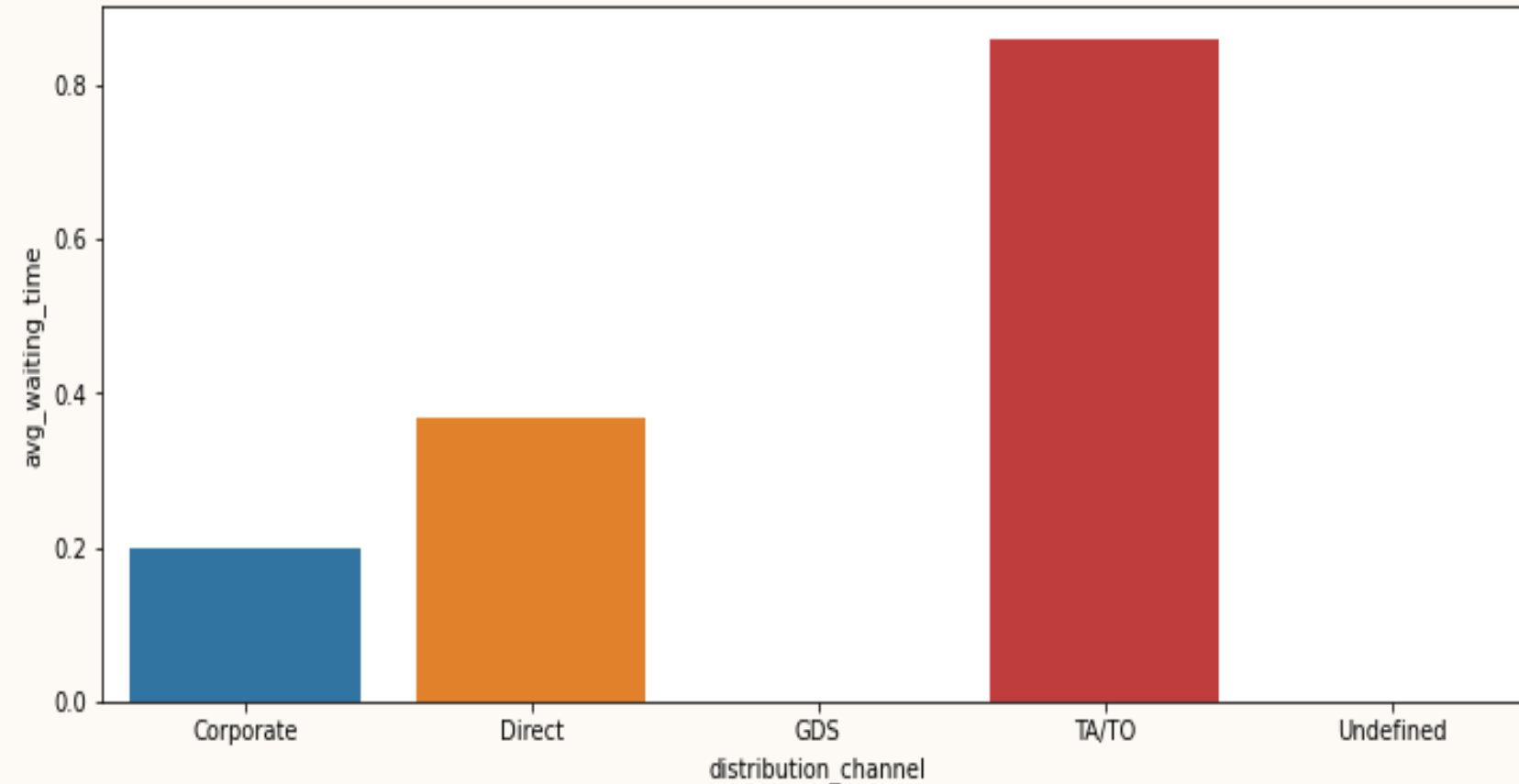
- **2nd Most visitors were from Direct bookings.**

MARKET SEGMENT

Types of market segment

- **High number of visitors among all market segments were from Online TA .**
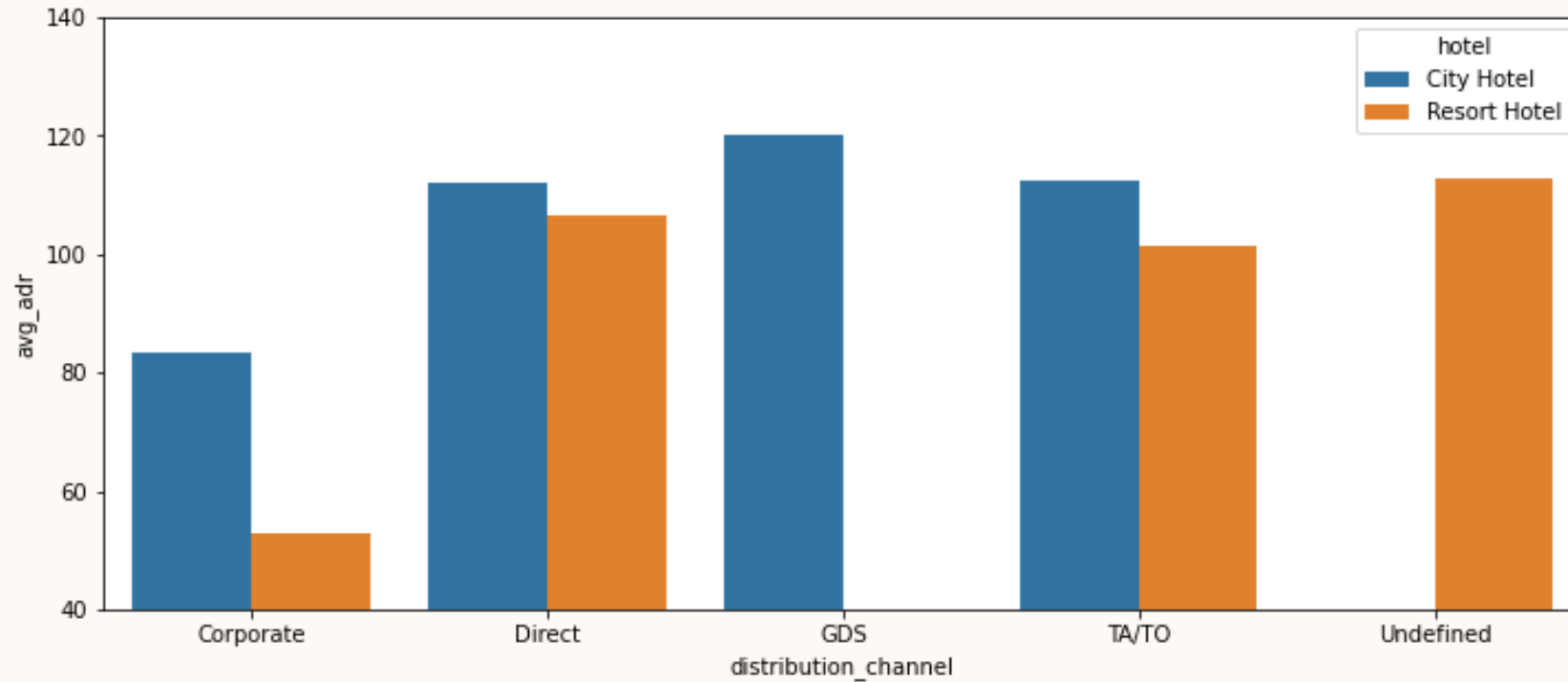- **From Online TA segment, more number of visitors booked city hotel as compared to Resort Hotels.**

Distribution channel analysis by average waiting time

- **There was more waiting time for the visitors who booked hotel from Online TA channel.**

Distribution channel analysis by average ADR

- High revenue was generated to resort hotel through undefined channel.
- High revenue for city hotel was generated through GDS distribution channel.

DEPOSIT POLICIES OF HOTEL

- There were more than 60k bookings under No deposit category where check in was successful.

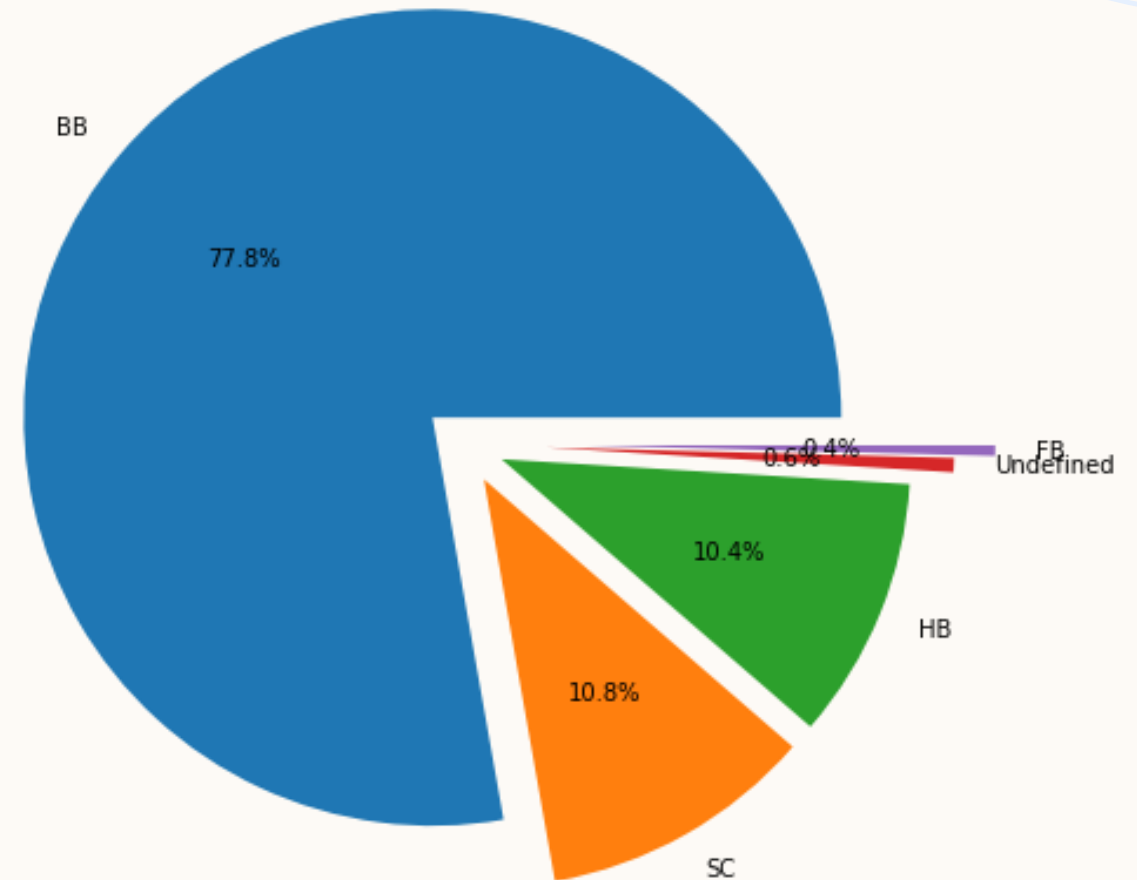- More than 20k bookings were cancelled under no_deposit category.
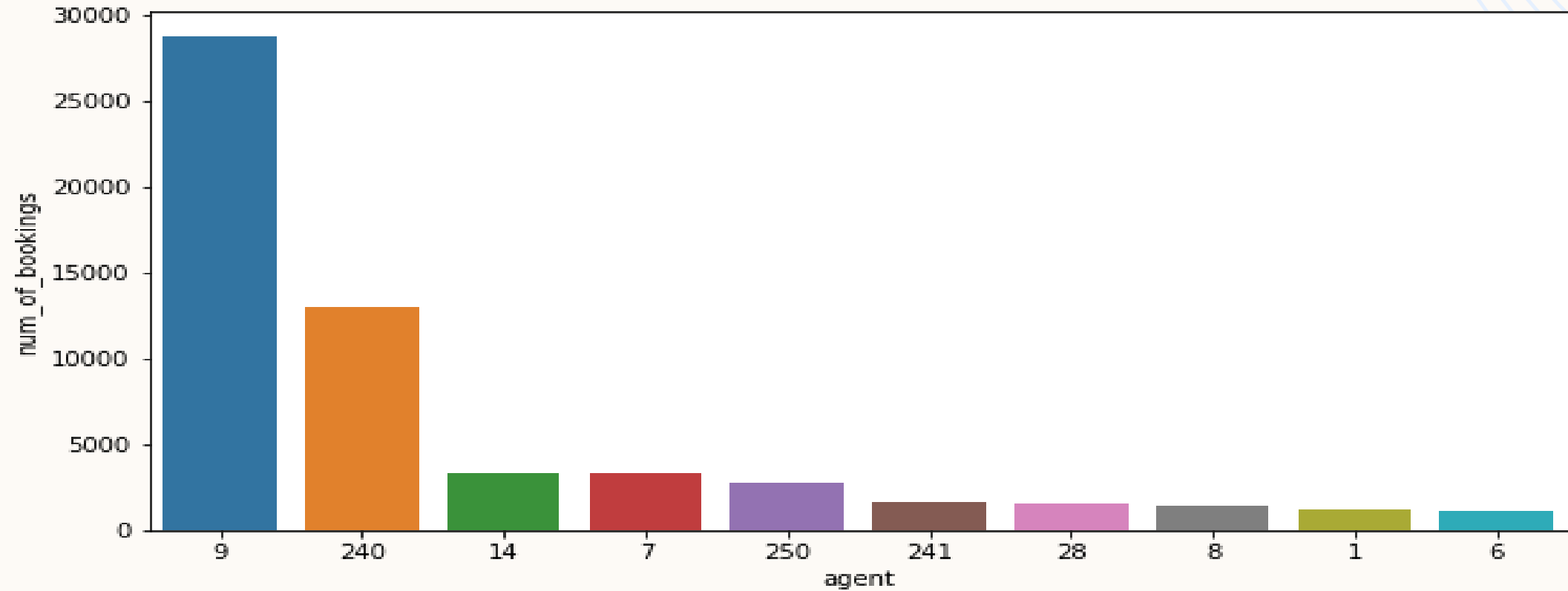

Deposit Policies of Hotel
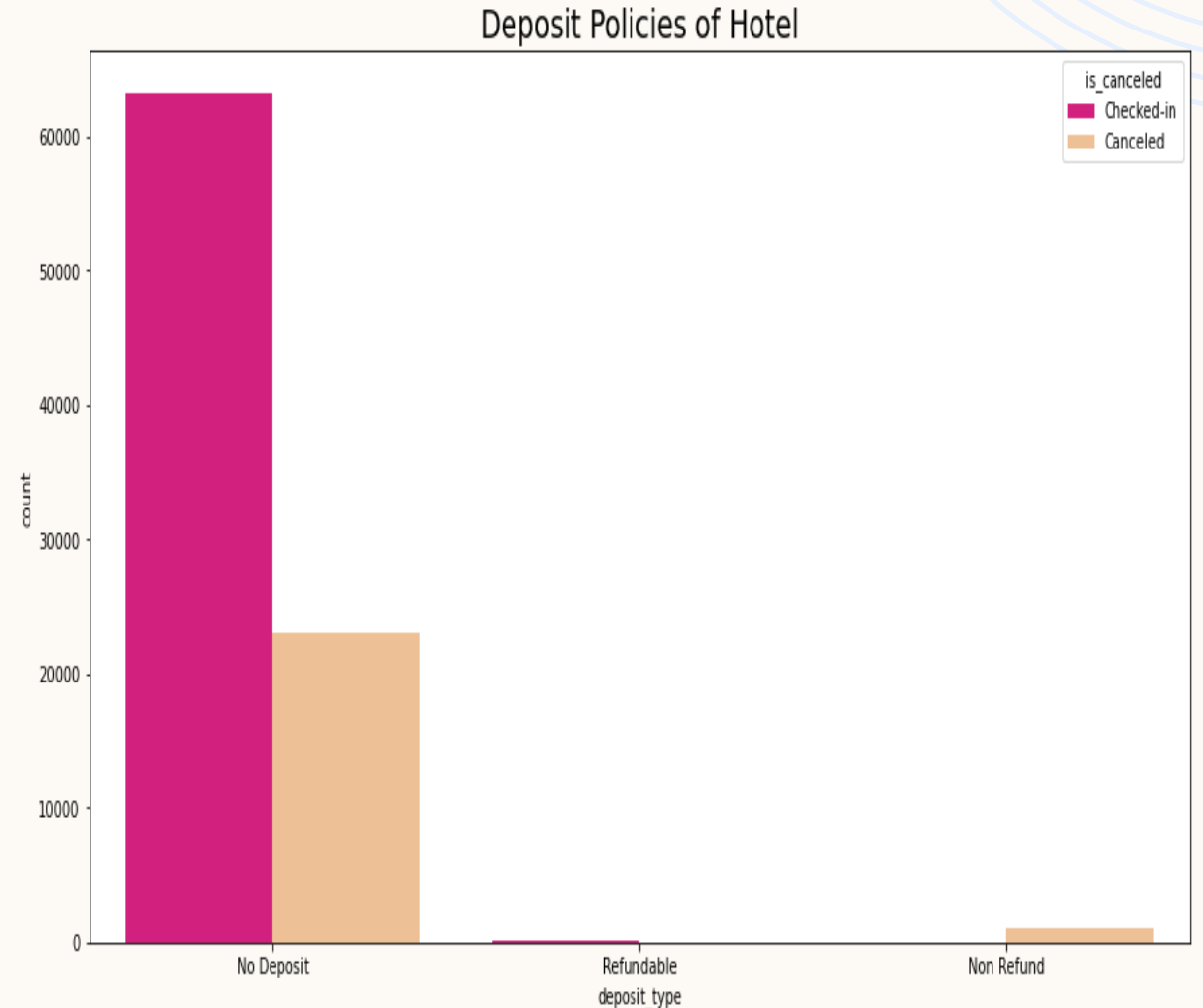
MEAL PREFERENCES

- The most preferred
meal is 'BB'

-The least preferred
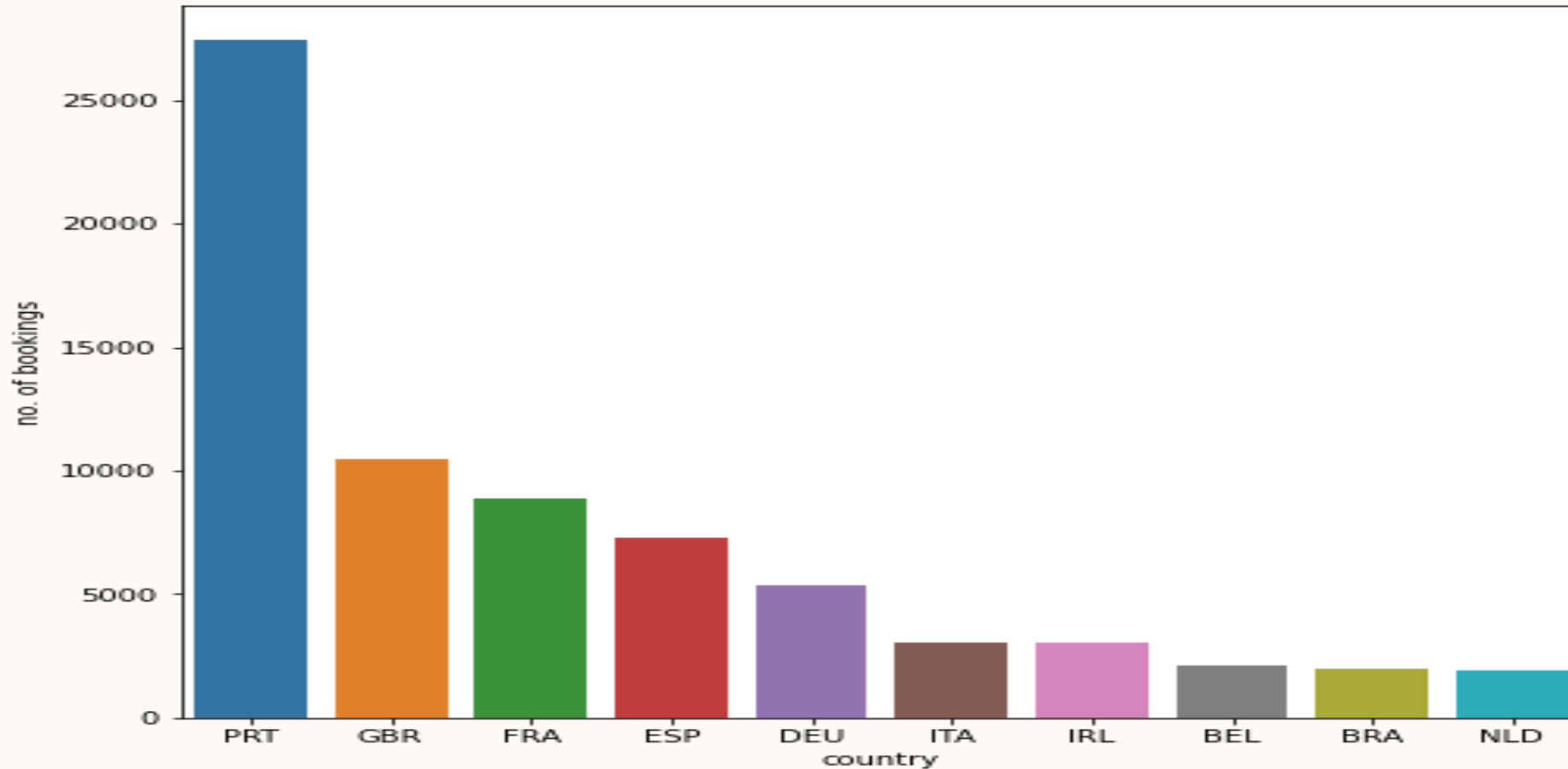Meal is 'FB'

Percentage of meal preference

NO OF BOOKING ACCORDING TO AGENT

- Most Active Agent no. is 9
- Sencond Most Active Agent no. is 240
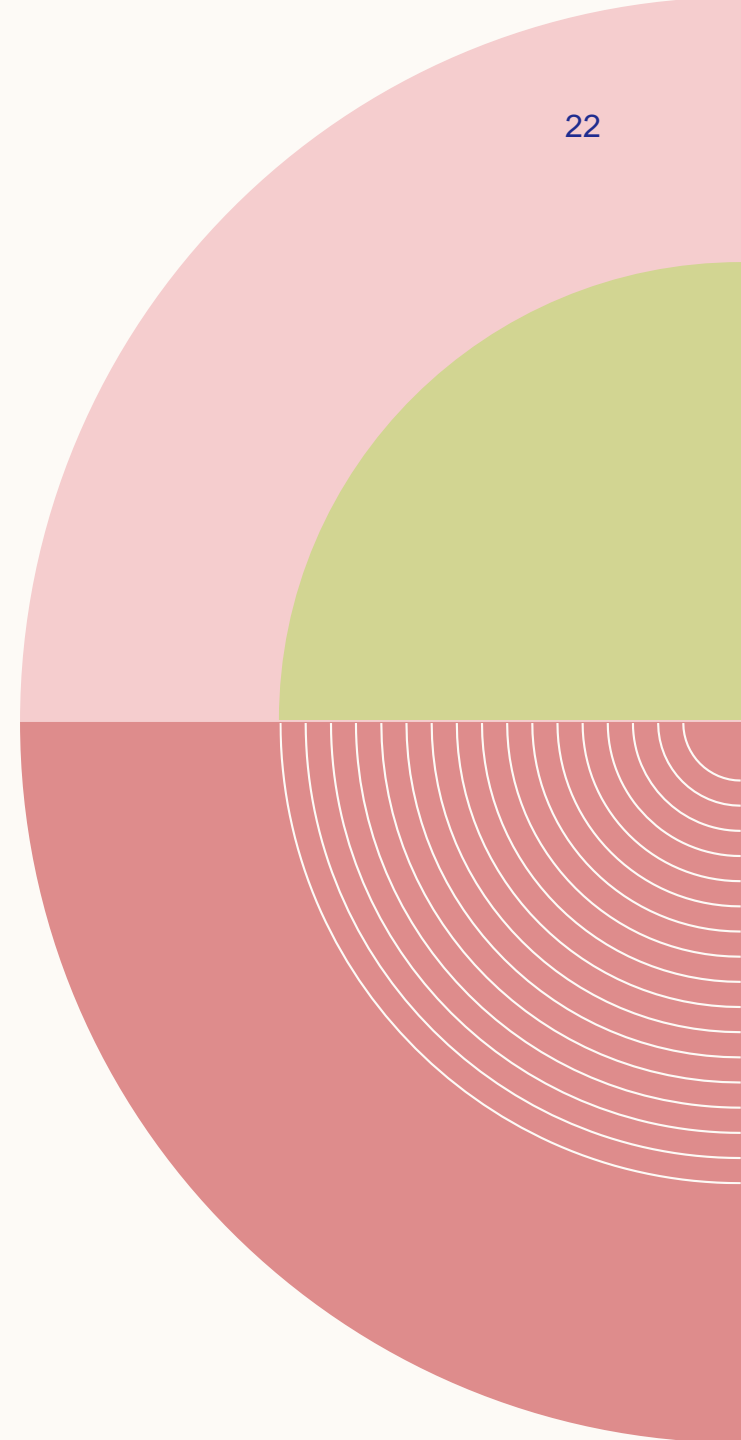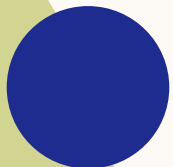
COUNTRY WISE DATA ANALYSIS

Maximum booking came from PRT country

SUMMARY

• Majority of the hotels booked are city hotel. Definitely need to spend the most targeting fund on those hotel.

• We also realise that the high rate of cancellations can be due high no deposit policies.

• We should also target months between May to Aug. Those are peak months due to the summer period.

• Majority of the guests are from Western Europe. We should spend a significant amount of our budget on those area.

• Given that we do not have repeated guests, we should target our advertisement on guests to increase returning guests

THANK YOU