**Business Problem:**

In recent years, City Hotel and Resort Hotel have seen high cancellation rates. Each hotel is now dealing with a number of issues as a result, it leads to fewer revenues and less than ideal hotel room use. Consequently, lowering cancellation rates is both hotels’ primary goal in order to increase their efficiency in generating revenue, and for us to offer thorough business advice to address this problem.

The analysis of hotel booking cancellations as well as other factors that have no bearing on their business and yearly generation are the main topics of this report.

**Assumptions:**

1. No unusual occurrences between 2015 and 2017 will have a substantial impact on the data used.
2. The information is still current can be used to analyze a hotel’s possible plans in an efficient manner.
3. There are no unanticipated negatives to the hotel employing any advised technique.
4. The hotels are not currently using any of the suggested solutions.
5. The biggest factor affecting the effectiveness of the earning income is booking cancellations.
6. Cancellations result in vacant rooms for the booked length of time.
7. Clients make hotel reservations the same year they make cancellations.

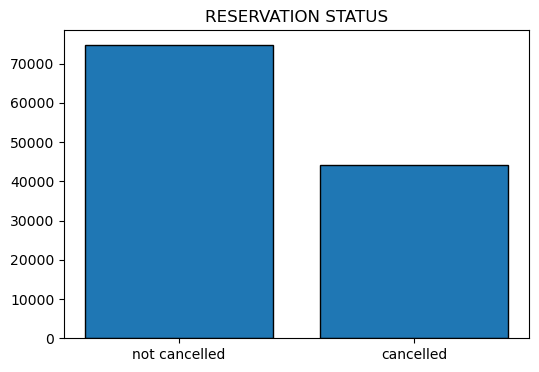
**Research Question:**

1. What are the variables that affect hotel reservations cancellations?
2. How can we make reservations cancellations better?
3. How will the hotels be assisted in making pricing and promotional decisions?

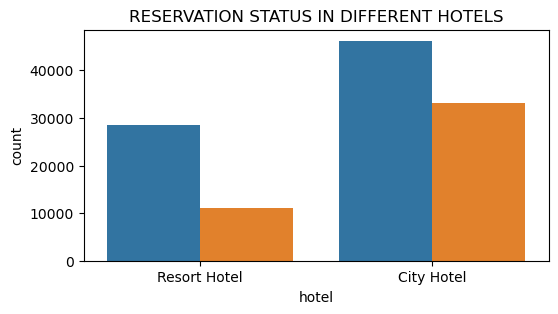
**Hypothesis:**

1. More cancellations occur when the prices are higher.
2. When there is a longer waiting list, customer tend to cancel more frequently.
3. The majority of clients are coming from offline travel agents to make their reservations.

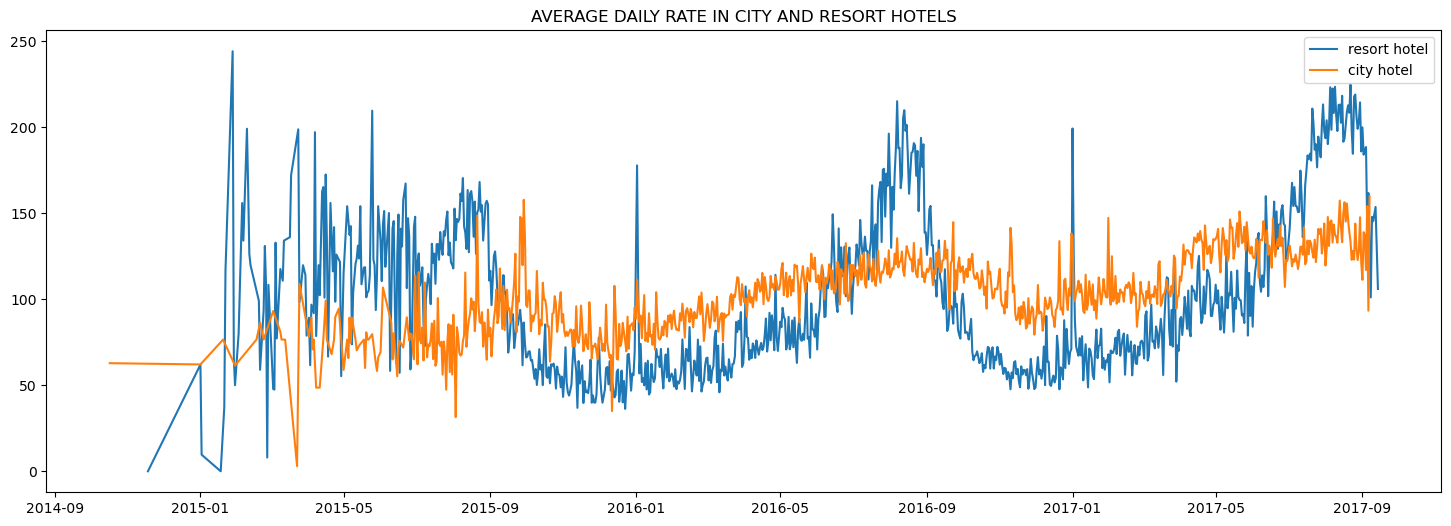
**Analysis and Findings:**



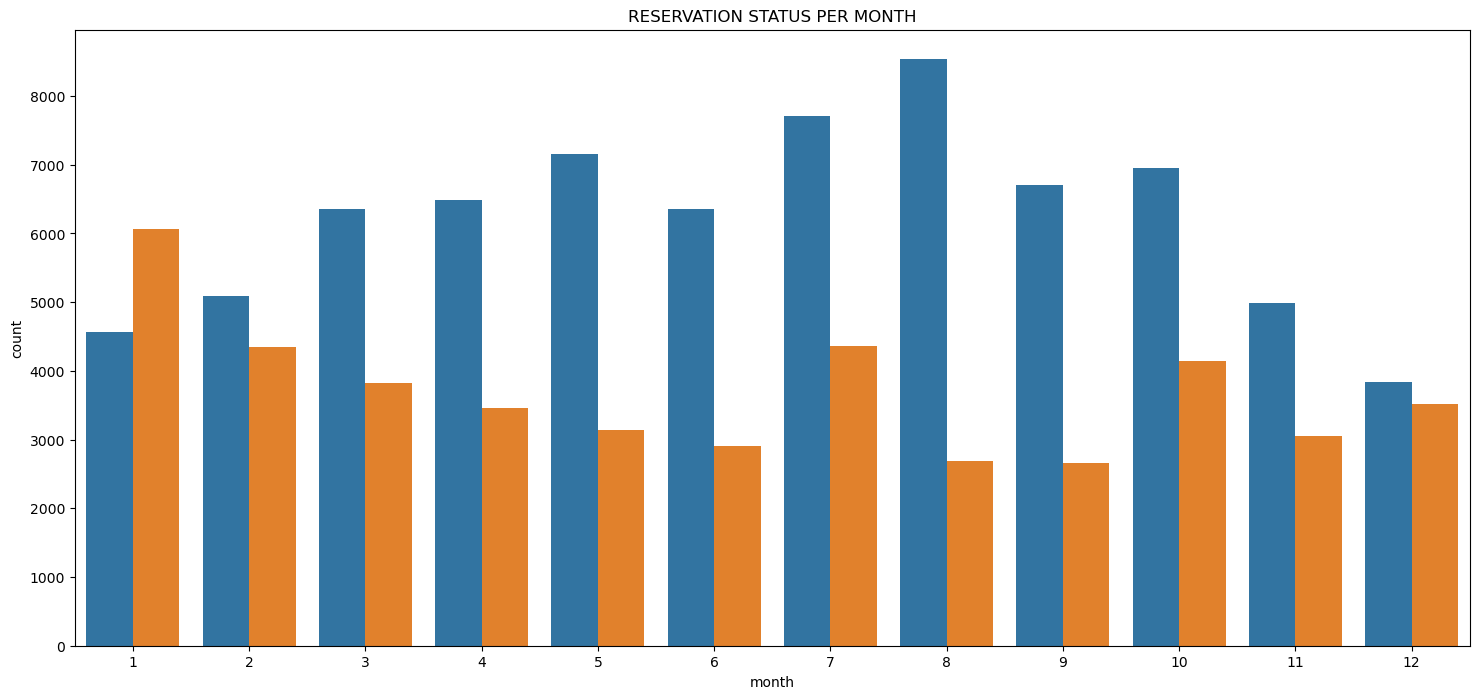
The accompanying bar graph shows the percentage of reservations that are canceled and those that are not. It is noticeable that there are still a significant number of reservations that have not been canceled. There are still 37% of the clients who canceled their reservations, which has a significant impact on hotels’ earnings.



In comparison to resort hotels, city hotels have more bookings. It is possible that resort hotels are more expensive than those in cities.



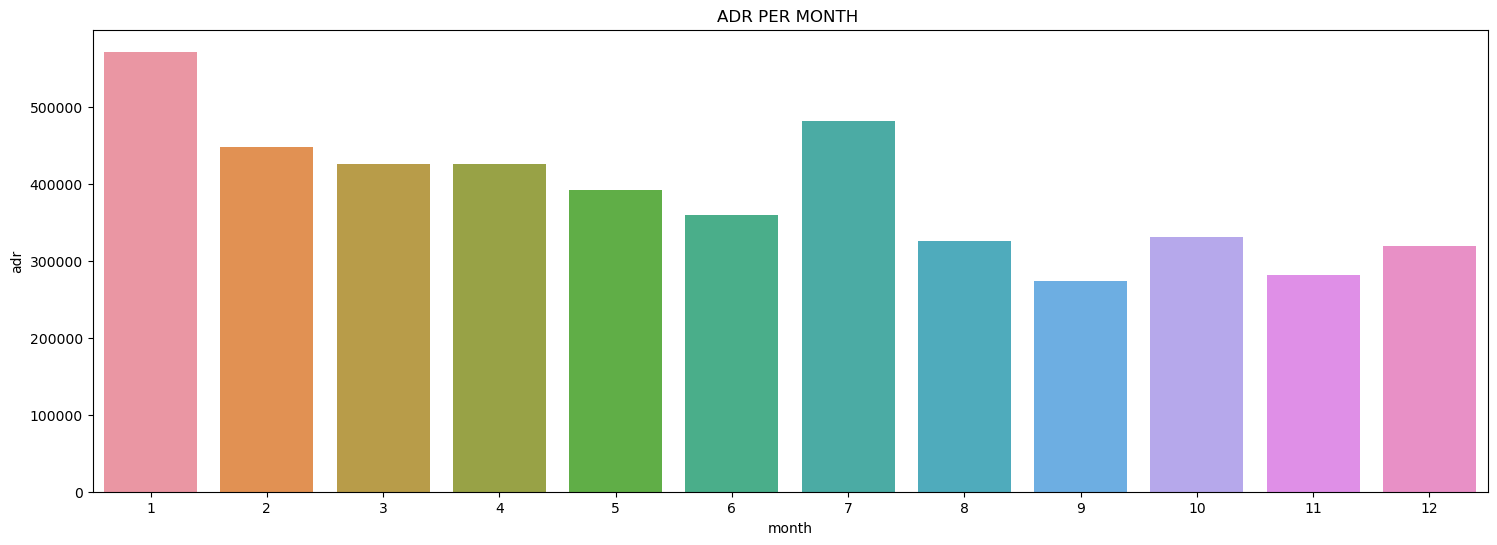
In line graph above shows that, on certain days, the average daily rate for a city hotel is less than that of resort hotel, and on other days, it is even less. It goes without saying that weekends and holidays may see a rise in resort hotel rates.



- canceled

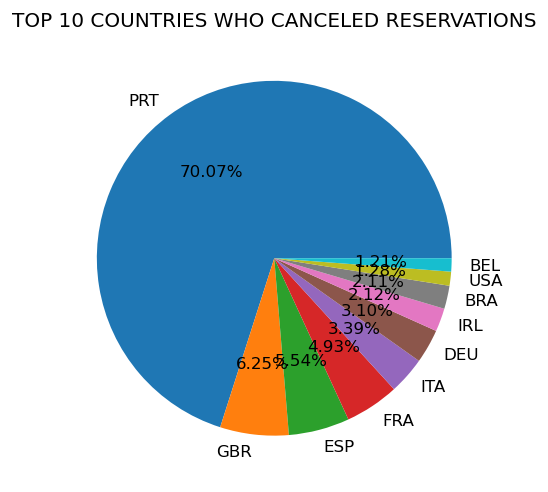
-not canceled

We have developed the grouped bar graph to analyze the months with the highest and lowest reservation levels according to reservation status. It is visible that both the number of confirmed reservations and number of canceled reservations are largest in the month of August. Whereas January is the month with the most canceled reservations.



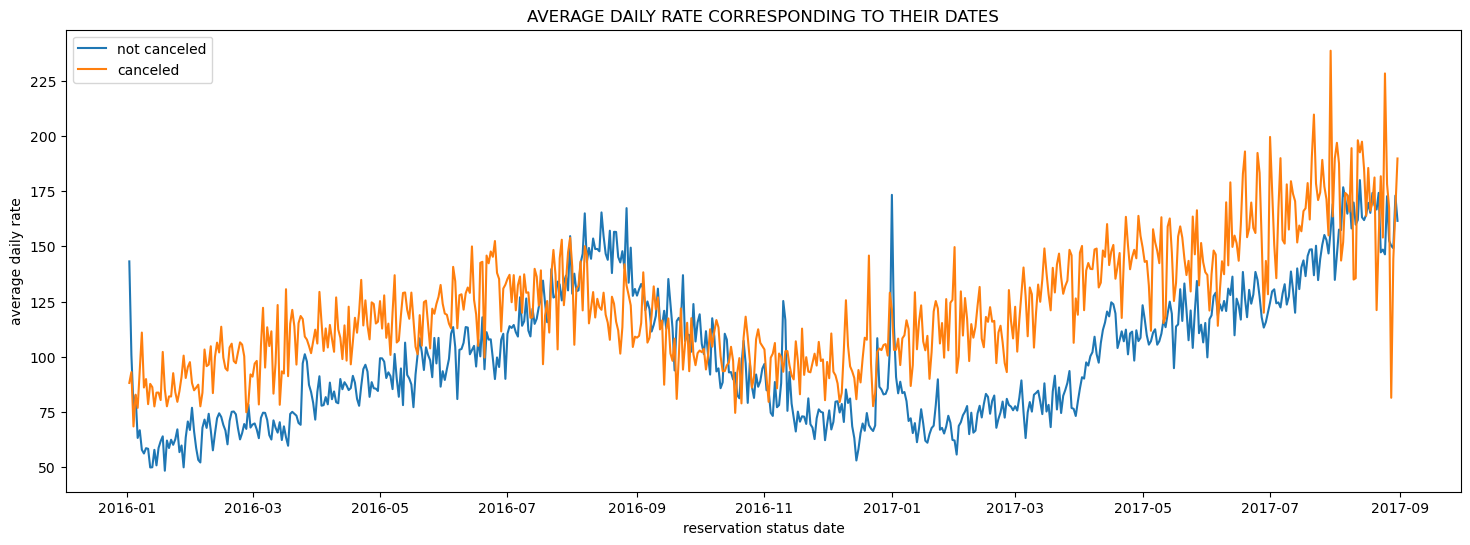
This bar graph demonstrates that cancellations are most common when the prices are greatest and are least common when it is lowest. Therefore, the cost of the accommodation is solely responsible for the cancelation.

Now let’s see which country has the highest reservations canceled. The top country is Portugal with the highest number of cancelations.



Let’s check the area from where the guests are visiting hotels and making reservations. Is it coming from Direct or Groups, Online or Offline Travel Agents?

Around 46% of the clients come from online travel agencies, whereas 27% come from the groups. Only 4% of the clients books hotels by directly visiting them and making reservations.



In the above graph it is evident that reservations are canceled when the average daily rates are higher than when it is not canceled. It clearly proves all the above analysis, that the higher the price leads to higher cancelations.

**Suggestions:**

1. Cancelation rates rise as the price rises. So as to prevent cancelations of reservations, hotels could work on their pricing strategies and try to lower the rates for specific hotels based on locations. They can also provide some discounts to the customers.
2. As the ratio of the cancelation and not cancelations of the resort hotel are higher in the resort hotel than the city hotels. So, the hotels should provide a reasonable discount on the room prices on weekends or on holidays.
3. In the month of January, hotels can start campaigns or marketing with a reasonable amount to increase their revenue as the cancelation is the highest in this month.
4. Thye can also increase the quality of their hotels and their services mainly in Portugal to reduce the cancelation rate