

BOOKING PAGE ANALYSIS

DATA OVERVIEW

Reading the excel file

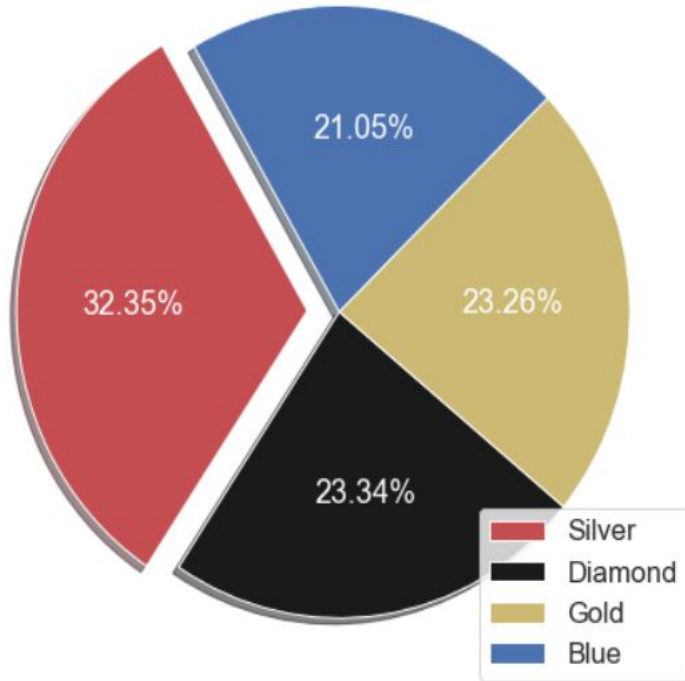
```
In [2]: df = pd.read_excel(r"C:/Users/35387/Desktop/MiQDigital Assessments/Travel_data_set.xlsx")
```

```
In [3]: df.head()
```

Out[3]:

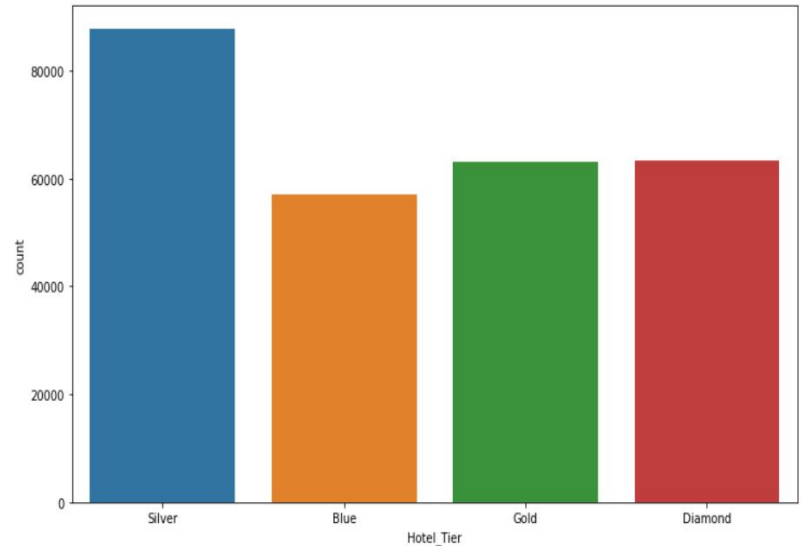
	Date	Cookie ID	Source	Hotel Name	No. of nights	Room Type	Date of Arrival	Hotel location city	Hotel location country	Customer location - city	Customer location - country	Hotel Tier	P:
0	2017-09-25 00:03:54	5814471915578251610	Mozilla/5.0 (Windows NT 10.0; WOW64; Trident/7...	DoubleTree Club by Hilton Hotel Boston Bayside	4	ONE KING BED	2017-11-01	Boston,MA	US	OAK HILL,VA	US	Silver	
1	2017-09-25 00:10:02	1096121688080343035	Mozilla/5.0 (iPhone; CPU iPhone OS 10_3_3 like...	Hilton Garden Inn Pigeon Forge	2	2 QUEEN BEDS	2017-10-06	Pigeon Forge,TN	US	ALBERTVILLE,AL	US	Blue	
2	2017-09-25 00:15:02	8909957529622268233	Mozilla/5.0 (iPhone; CPU iPhone OS 10_3_3 like...	Hilton Los Angeles/Universal City	5	2 QUEEN BEDS	2018-05-13	Universal City,CA	US	SAN JOSE,CA	US	Gold	

HOTEL TIER ANALYSIS



```
In [12]: plt.figure(figsize=(12, 7))  
sns.countplot(x='Hotel_Tier', data=df)
```

```
Out[12]: <AxesSubplot: xlabel='Hotel_Tier', ylabel='count'>
```



CREATED A DICTIONARY AND CONVERTED CURRENCIES TO USD

```
In [94]: t = []  
         for i in df["Currency"]:  
             for key, value in list1.items():  
                 if i == key:  
                     t.append(value)
```

```
In [23]: df["New"] = t
```

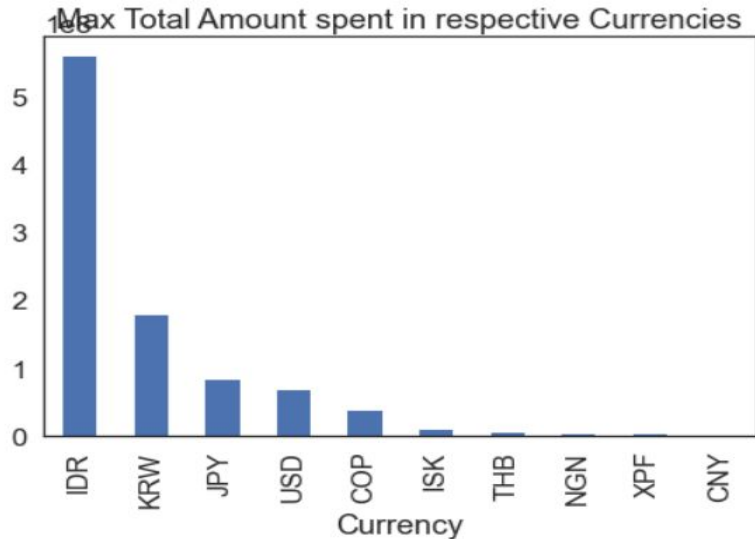
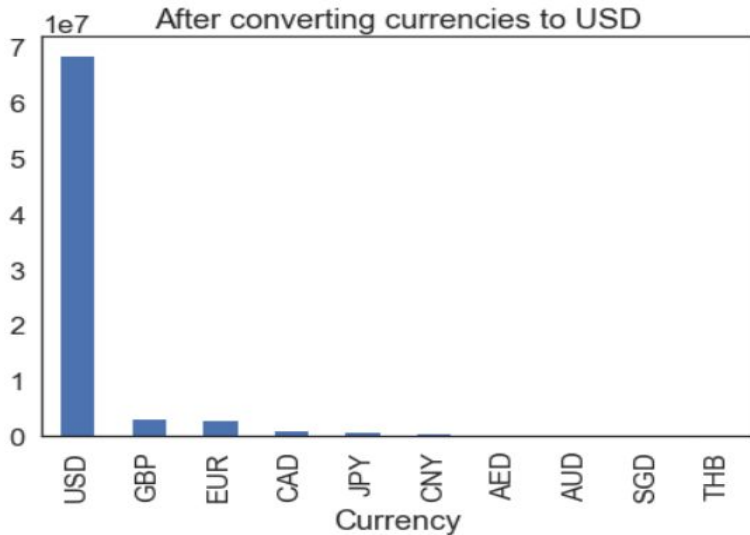
```
In [24]: df["Price_In_USD"] = df["Total_Price"]/df["New"]
```

Used the given currency rates excel sheet and created a dictionary by copying the exchange rates and have written a code to generate a new data column consisting of price in usd as a standard. So that there is distinguishment between the values in total price column

AMOUNT SPENT IN DIFFERENT CURRENCIES

```
In [99]: fig, ax = plt.subplots(nrows=1, ncols=2, figsize=(16,5))
td.plot(kind="bar", ax = ax[1], title = "Max Total Amount spent in respective Currencies")
te.plot(kind="bar", ax=ax[0], title = "After converting currencies to USD")
```

```
Out[99]: <AxesSubplot:title={'center':'After converting currencies to USD'}, xlabel='Currency'>
```



EXPLANATION FOR AMOUNT SPENT IN DIFF. CURRENCIES

By taking the insights from the previous slide we can observe that:

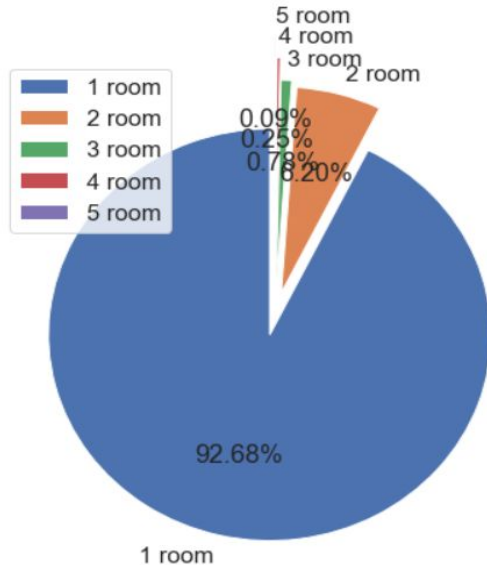
- The plot before the conversion and after the conversion into Usd creates a big difference.
- We can see from the first plot that the IDR that is indonesian rupiah is the max amount spent just doesn't mean its more money or higher value because 1 USD equals 14,339.85 IDR (the value even though looks big is not actually big)
- Also from the first plot it does make sense as i have converted currency into 1 standard unit (USD in this example). We can see the top currencies as USD, GBP and EUR where exactly the cost of living is higher than other countries containing other currencies.
- Also taking USD as a standard makes sense as the highest money made by these hotels are in the US. There are more number of branches in US also suggests that there are more people visiting these cities and there is higher need.

THE FREQUENCY OF NO. OF ROOMS BOOKING

```
In [103]: No_of_rooms = ["1 room", "2 room", "3 room", "4 room", "5 room"]
          values = df.No_of_rooms.value_counts().head()

          plt.figure(figsize = (10, 7))
          plt.pie(values, labels = No_of_rooms, explode = (0.1, 0.11, 0.14, 0.25, 0.350), autopct = "%.2f%%", startangle = 90)
          plt.legend()

          plt.show();
```

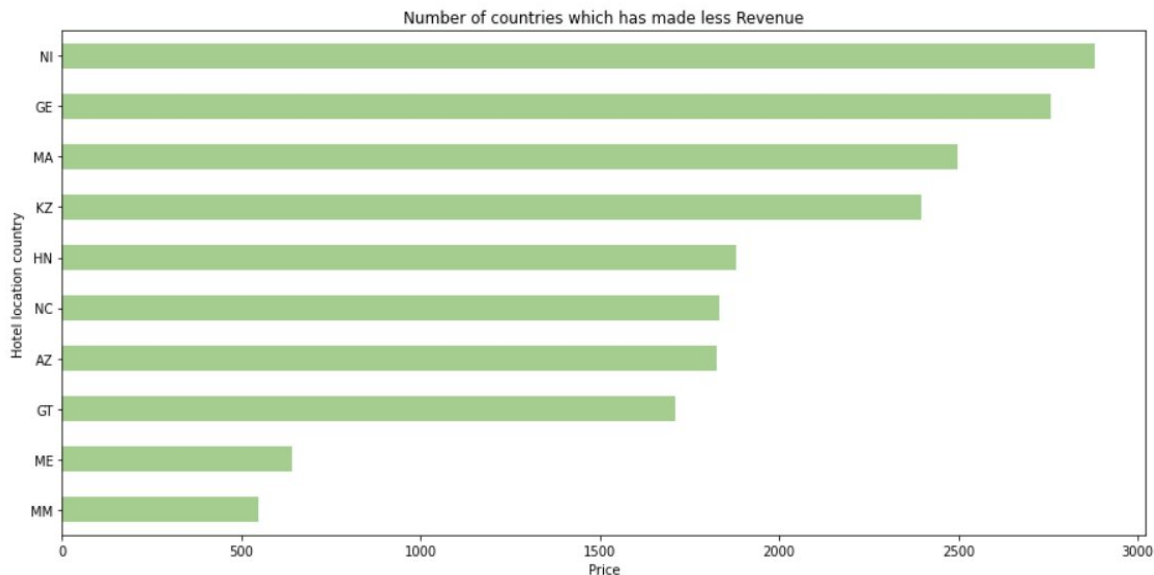


It is as obvious as it seems as usually people book rooms as per their needs and most of the times it's just one room that they might opt for unless they have bigger families or friends and next comes the booking of 2 rooms quite possibly because of the kids, parents or small groups people usually like to hangout with (basically their closed one's).

COUNTRIES THAT MADE LESS REVENUE

```
In [64]: plt.figure(figsize=(15,7))
ee = df.groupby(["Hotel location country"])[ "Price_In_USD"].sum().sort_values().head(10).plot(kind="barh", cmap="crest")
plt.xlabel("Price")
plt.title("Number of countries which has made less Revenue")
```

```
Out[64]: Text(0.5, 1.0, 'Number of countries which has made less Revenue')
```

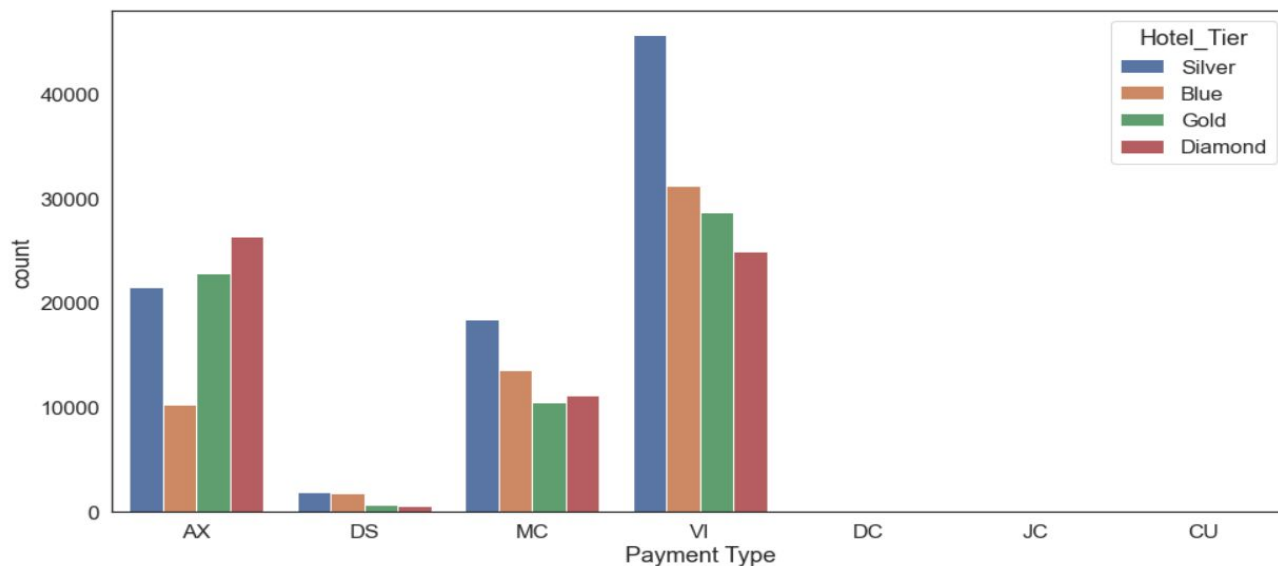


Highlighted the countries that were responsible for low revenue which might consist of multiple factors such as tourism, country's economy, country's security and climate conditions and many more. Which in turn influences whether or not people tend to go there or not.

DIFFERENT PAYMENT MODES FOR DIFF. TIERS

```
In [89]: plt.figure(figsize=(16,8))  
sns.countplot(x = "Payment Type", data=df, hue = "Hotel_Tier")
```

```
Out[89]: <AxesSubplot:xlabel='Payment Type', ylabel='count'>
```

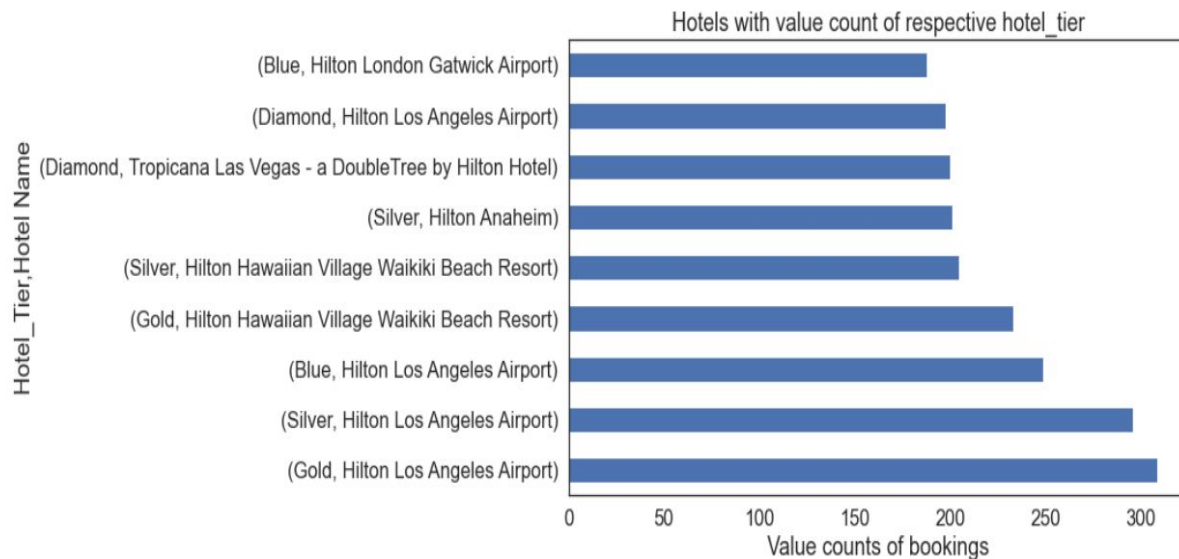


Can observe from this plot that for diamond tier people mainly go for visa and american express and also the use of visa is the most for silver and gold. The use of mastercard is also quite average whereas all the other modes have rarely been used.

THE HOTELS WITH DIFFERENT HOTEL TIERS (MOST BOOKING)

```
In [105]: plt.figure(figsize=(10,6))
df.groupby(["Hotel_Tier"])[["Hotel Name"]].agg("value_counts").sort_values(ascending=False).head(9).plot(kind="barh")
plt.title("Hotels with value count of respective hotel_tier")
plt.xlabel("Value counts of bookings")
```

```
Out[105]: Text(0.5, 0, 'Value counts of bookings')
```



Can be observed that the most number of bookings of different tiers as diamond, gold, silver and blue are from the US and mostly from the Los Angeles. Can also mean that the people also have a good amount to spend there and also they have good premium number of options for accommodation and also that it's such a happening place

LEARNINGS AND IMPROVEMENTS (IF REQUIRED)

- We can see the highest revenue or business is made from the hotels in the US (LA and other cities). Either it's because of the work industries or the tourism attractiveness that has regularly brought in so many people and henceforth the hotel end up making money.
- The key to any hotel business might also lie in the service from the staff, good meals and clean rooms. Which gives them a good rating on the internet which encourages new people to dive in.
- Have highlighted the countries that made least money and it is very important to look on how to improve things and make the business better or if the traffic of customers is actually low then it is better to cut off few staff (if they are no more a necessity) so that the business can be maintained.
- Also maintaining a good relationship with the customer is also a key to any business it can be hotel tier, loyalty rewards, offers and discounts for regular customers and a good price for long stays which also ends up satisfying the customer and helps the hotel by increasing the repeat rate of the regular customer to the arrival of new customers as the hotel has maintained its reputation.

THANK YOU