1.What is the total number of leads generated by Each Associate

Associate ABC	Associate KLM	Associate XYZ
390	1207	616

2. What is the total number of leaves taken by each associate (considering Saturday and Sunday as holidays)?

: We can attempt a variety of methods to discover employee leaves, but we don't know the company's leave policies, and leave taken by each associate therefore we can't obtain accurate data regarding associate leaves. that's why I haven't been able to locate employee leaves.

3.What is the average number of leads generated by each associate?

:

Associate ABC	Associate KLM	Associate XYZ
7	10	11

4. Which associate has been the most consistent in lead generation?

: By Analysing Average Lead generated by each Associate, Associate XYZ have more numbers of Leads.

Therefore, XYZ Associate is more consistent about the Lead Generation.

5. Do you remove missing values from the data-set for analysis? Provide rationale for your answer.

: No, While Treating and Analysing the Dataset, I checked with the missing values for the dataset, and I found to be missing for the categorical columns,

I made a record of missing values for each particular column and further I checked for the existence of the outliers with boxplot and with the help of IQR Method, I have collected the whole outlier and dropped them.

Then I checked with the Data Distribution(skewness) so that I could get an idea about the methods of missing data treatment.

While examining and analysing the skewness graph, I came across that the dataset are skewed and Numerical, so we can use median for treating /replacing missing values.

Hence, I filled all the missing values with median and made the data suitable for further treatment.

Recommendations for the Business Development Team

- **Findings:** Sum of the Leads generated per hour for Associate ABC is getting influenced as the Time Spent (in hours) increasing,
  As the Time spent by Associate ABC getting more the 5.38 hours, there is a huge decline in Lead generation.
- **Recommendations: a.)** Reschedule or shift the timings

- **Findings:** Total Numbers of Lead generated by ‘January’ and ‘February’ are almost equal, but in march there is a decline in lead generation.
- **Recommendations:** Check whether the ‘Associate ABC’ is on leave, or other factors influencing.

- **Findings:** Sum of Leads generated in Feb 2023, March 2023 are shown in the line chart graph
- **Recommendations:** Forecasting is done for March 2023 to April 2023 as 8 with varying upper and lower bound.

- **Findings:** Sum of the Leads generated in hours for Associate KLM, is varying from 5^{th} hour to 8^{th} hour
- **Recommendations:** For a certain interval hours Associate KLM requires a break, and is inconsistent about time management,
  Get the maximum of the peak lead generation per day of last 3 months and get average, and ask user to maintain the daily average leads per day.

- **Findings:** On the basis of Market Conditions, lead generation is varying.
- **Recommendations:** As per the bar graph, we can see uncertain ups and downs in Lead generation, so overcome this problem we need to invest on Marketing Team to promote and Advertise about the product.
- **Findings:** Associate XYZ is consistent for one hours in the initial hours and half n hour for the second period of slot.
- **Recommendations:** Ask user to be consistent at the whole working hours.
- **Findings:** Staring of the year, sum of Lead generation with maximum value as 15, and falling on 7 at the end of the Month march, Thereby Forecasting is done for the next month considering upper and lower bond as shown in Forecast Graph.
- **Recommendation:** Need to evaluate the past ’ March’ month Leads considering all aspects to maintain and grow.

Appendix

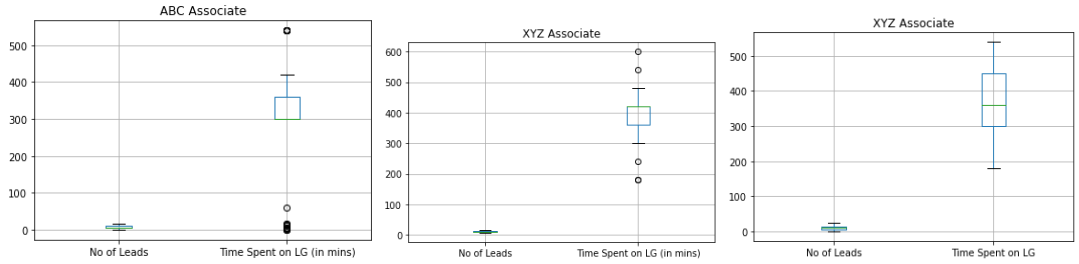
Libraries used in Python:

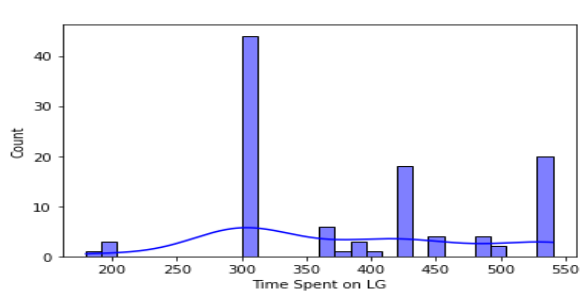
- **Pandas**
- **NumPy**
- **Matplotlib**
- **Seaborn**
- **scipy**

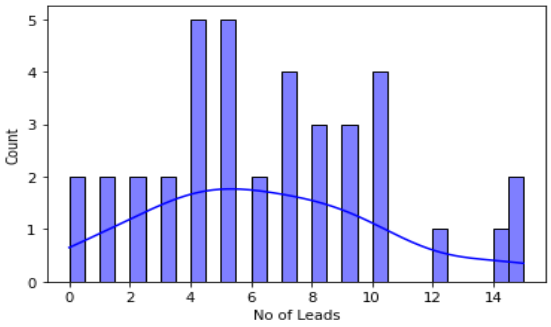
Functions used:

- **read**
- **concat**
- **detect_outliers_iqr [I.Q.R Method]**
- **drop**
- **describe**

Visuals of Findings:








```
xyz.describe()
```

	No of Leads	Time Spent on LG (in mins)
count	56.000000	56.000000
mean	11.000000	402.321429
std	1.981735	43.858909
min	7.000000	300.000000
25%	10.000000	412.500000
50%	11.000000	420.000000
75%	11.250000	420.000000
max	15.000000	480.000000

```
abc.describe()
```

	No of Leads	Time Spent on LG (in mins)
count	62.000000	62.000000
mean	6.421053	314.032258
std	3.027912	31.853130
min	0.000000	300.000000
25%	5.000000	300.000000
50%	6.421053	300.000000
75%	7.000000	300.000000
max	15.000000	420.000000

```
klm.describe()
```

	No of Leads	Time Spent on LG
count	124.000000	124.000000
mean	9.736364	381.370968
std	4.099727	92.730352
min	0.000000	180.000000
25%	6.000000	300.000000
50%	9.736364	360.000000
75%	13.000000	420.000000
max	23.000000	540.000000