```
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
import seaborn as sns

df1=pd.read_csv("Financial Data Cleaned.csv")

df1.shape
```

```
(488, 4)
```

```
print("No. of rows:",df1.shape[0])
print("No. of columns:",df1.shape[1])
```

```
No. of rows: 488
No. of columns: 4
```

```
# finding null values in the data
df1.isnull().sum()

#fill null values with 0
df1=df1.fillna(0)

#cross checking again for null values
df1.isnull().sum()
```

```
S.No.                0
Name                 0
Mar Cap - Crore      0
Sales Qtr - Crore    0
dtype: int64
```

```
#check the duplicate values
df1_dup=df1.duplicated().any()
print(df1_dup)
```

```
False
```

```
#data analysis

df1.describe()
```

```
            S.No.  Mar Cap - Crore  Sales Qtr - Crore
count  488.000000       488.000000         488.000000
mean   251.508197     27526.654836        3581.506844
std    145.884078     59033.540015        9729.282622
min      1.000000         0.000000           0.000000
25%    122.750000      4643.832500         459.357500
50%    252.500000      9460.155000         982.300000
75%    378.250000     23400.815000        2580.797500
max    500.000000    583436.720000      110666.930000
```

```
df1.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 488 entries, 0 to 487
Data columns (total 5 columns):
 #   Column               Non-Null Count  Dtype  
---  ------               --------------  -----  
 0   S.No.                488 non-null    int64  
 1   Name                 488 non-null    object 
 2   Mar Cap - Crore      488 non-null    float64
 3   Sales Qtr - Crore    488 non-null    float64
 4   Market Cap Per Sale  479 non-null    float64
dtypes: float64(3), int64(1), object(1)
memory usage: 19.2+ KB
```

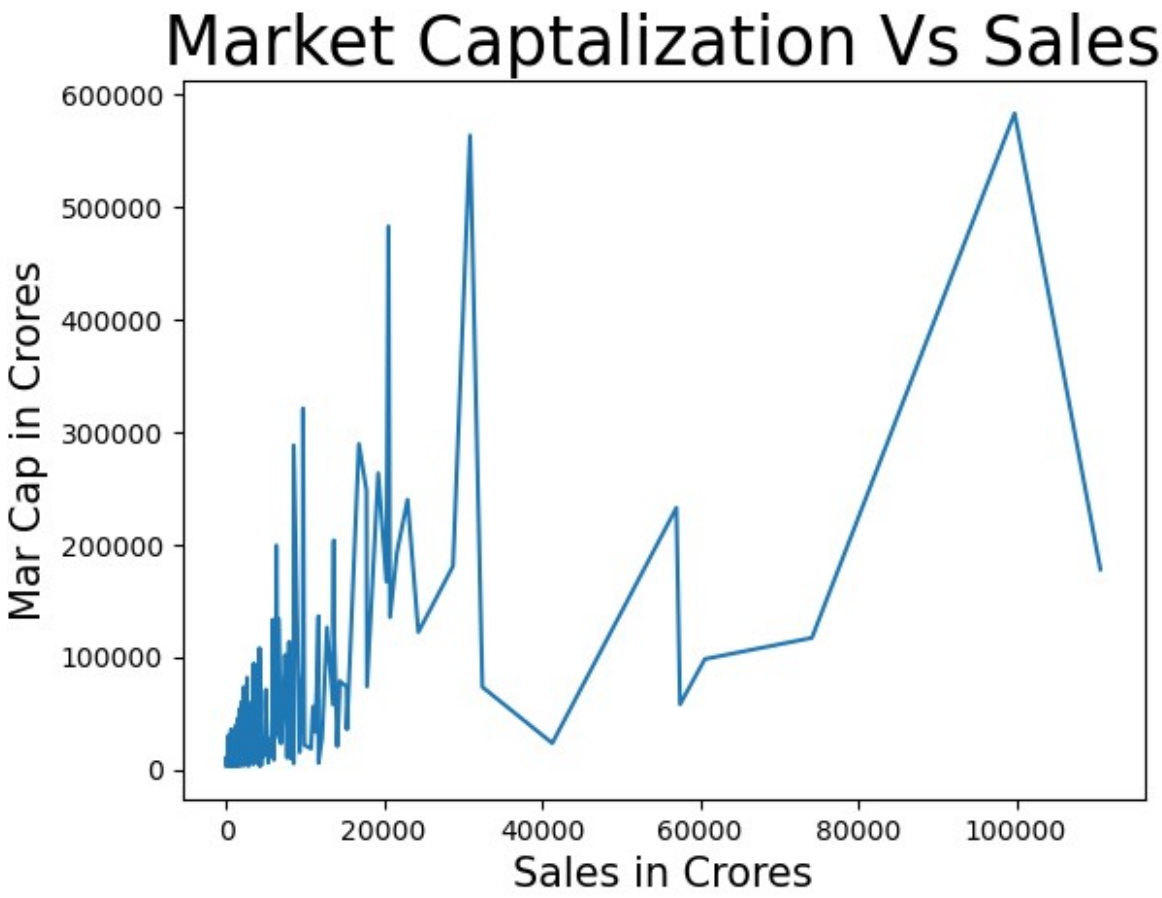
```
df1.columns
```

```
Index(['S.No.', 'Name', 'Mar Cap - Crore', 'Sales Qtr - Crore'],
dtype='object')
```

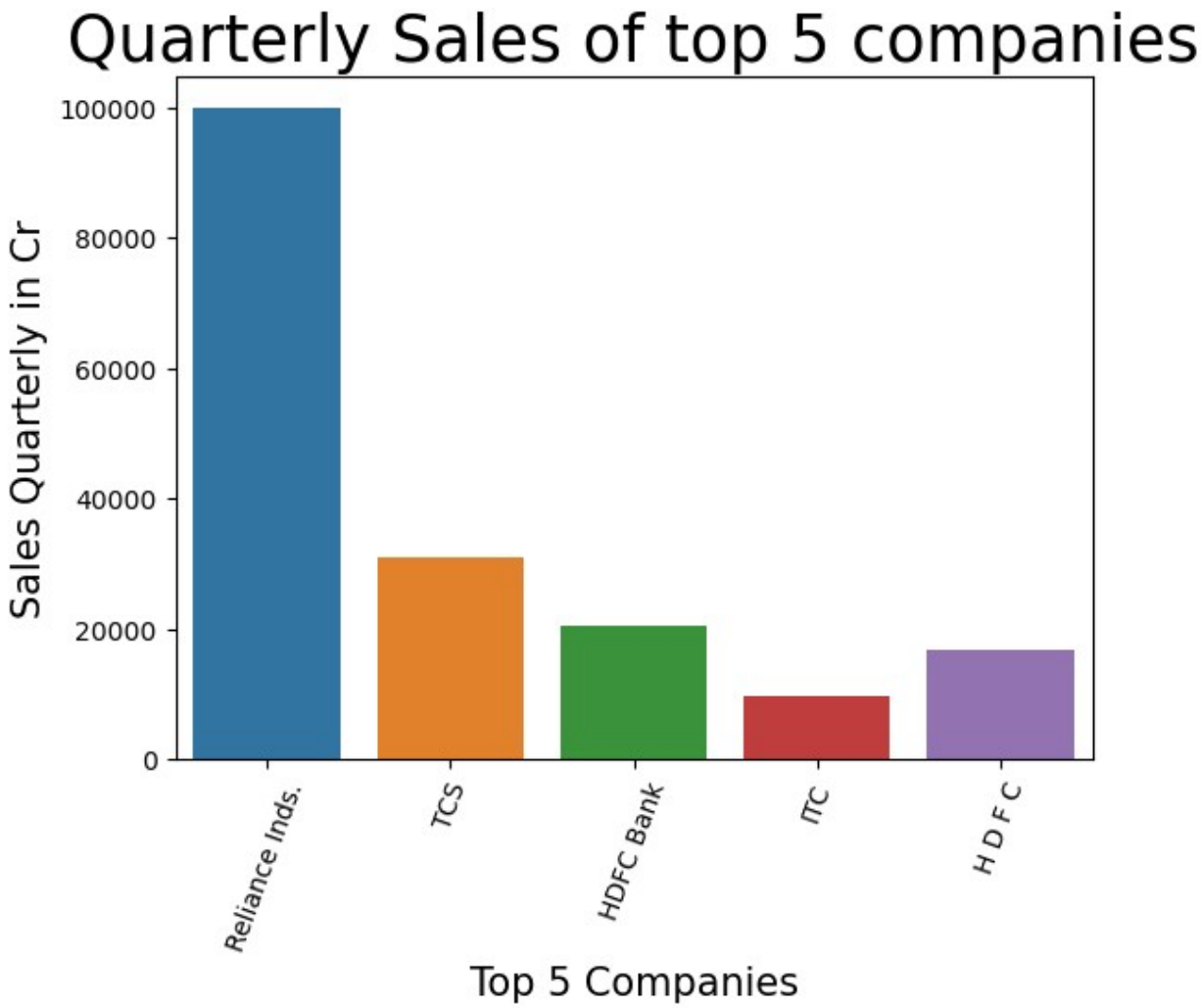
```
#calculating market capitalization per sale

df1["Market Cap Per Sale"]=df1['Mar Cap - Crore']/df1['Sales Qtr -
Crore']
print("Market Cap Per Sale")
print(df1["Market Cap Per Sale"])
```

```
Market Cap Per Sale
0       5.845474
1      18.240676
2      23.465685
3      32.847382
4      17.190535
         ...
483     3.834074
484    12.140490
485     5.912302
486     1.062068
487          NaN
Name: Market Cap Per Sale, Length: 488, dtype: float64
```

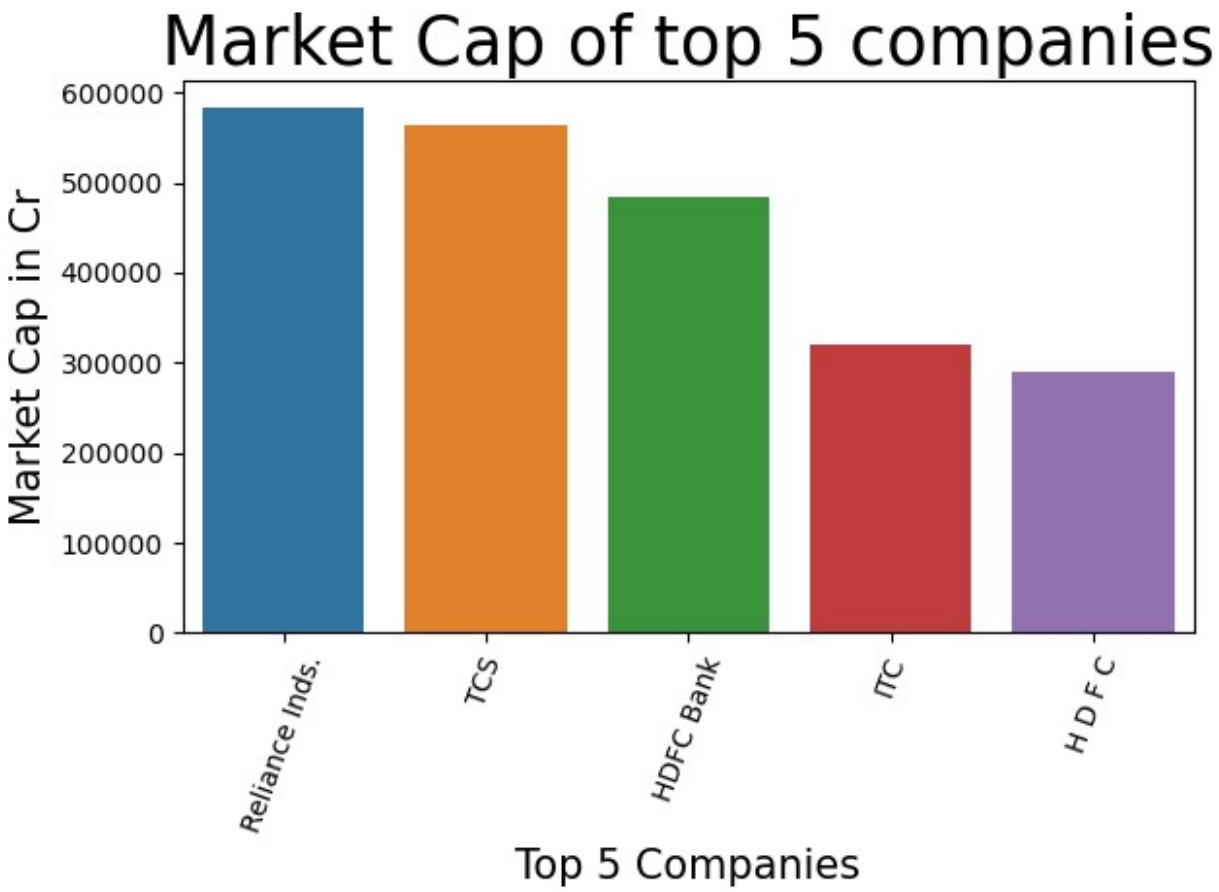
```
#plotting market capitalization vs sale

sns.lineplot(x='Sales Qtr - Crore',y='Mar Cap - Crore',data=df1)
plt.xlabel("Sales in Crores",fontsize=15)
plt.ylabel("Mar Cap in Crores",fontsize=15)
plt.title("Market Captalization Vs Sales",fontsize=25)
plt.show()
```



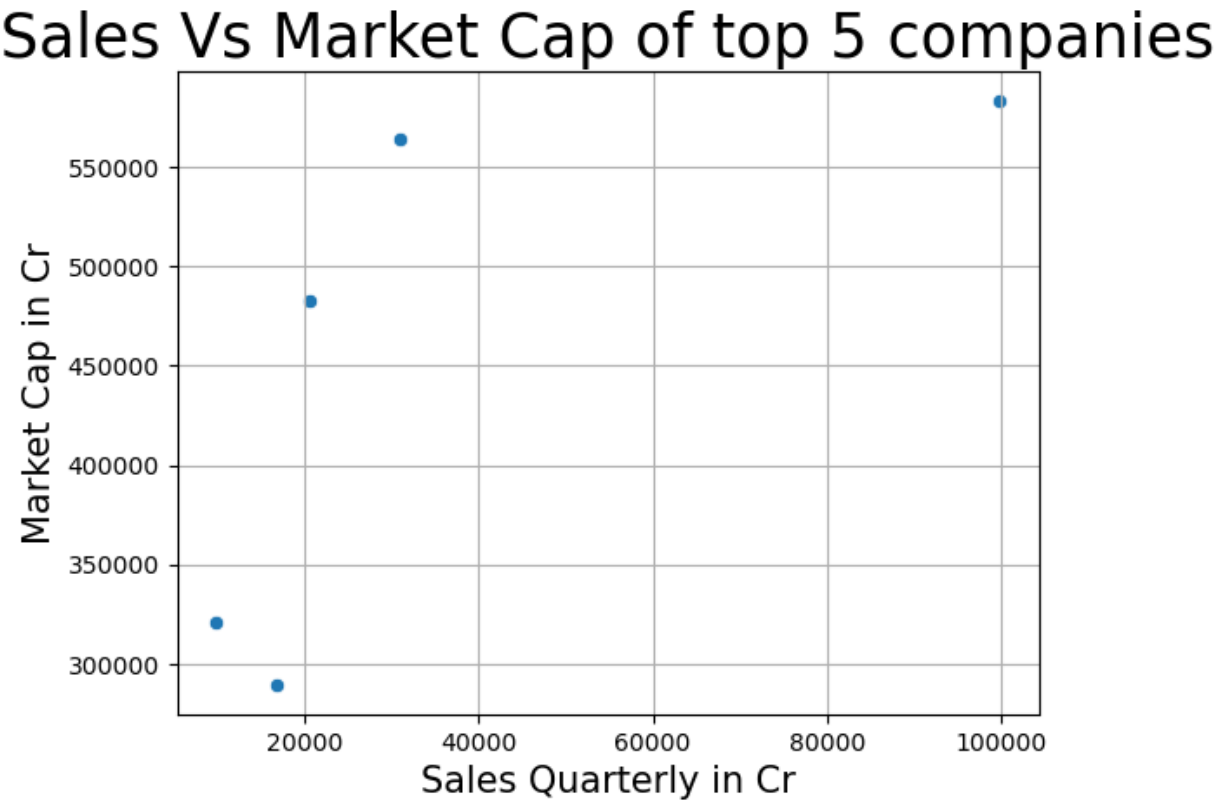

```
#sorting the dataframe by market captalization and selecct top 5
companies

top_5=df1.nlargest(5,'Mar Cap - Crore')

#plotting the sales of top 5 companies

sns.barplot(x=top_5["Name"],y=top_5['Sales Qtr - Crore'])
plt.xlabel("Top 5 Companies",fontsize=15)
plt.ylabel("Sales Quarterly in Cr",fontsize=15)
plt.title("Quarterly Sales of top 5 companies",fontsize=25)
plt.xticks(rotation=70)
plt.show()
```



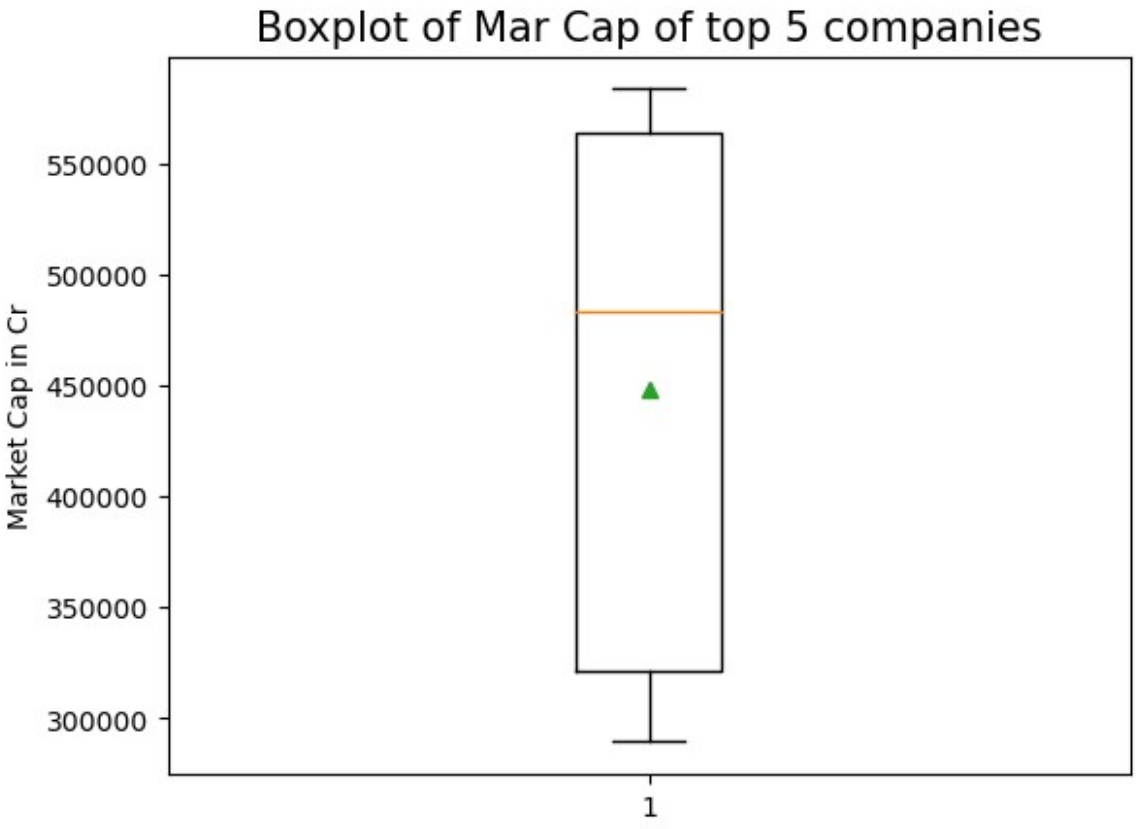

```
#plotting market captalization of top 5 companies

sns.barplot(x=top_5["Name"],y=top_5['Mar Cap - Crore'])
plt.xlabel("Top 5 Companies",fontsize=15)
plt.ylabel("Market Cap in Cr",fontsize=15)
plt.title("Market Cap of top 5 companies",fontsize=25)
plt.xticks(rotation=70)
plt.tight_layout()
plt.show()
```

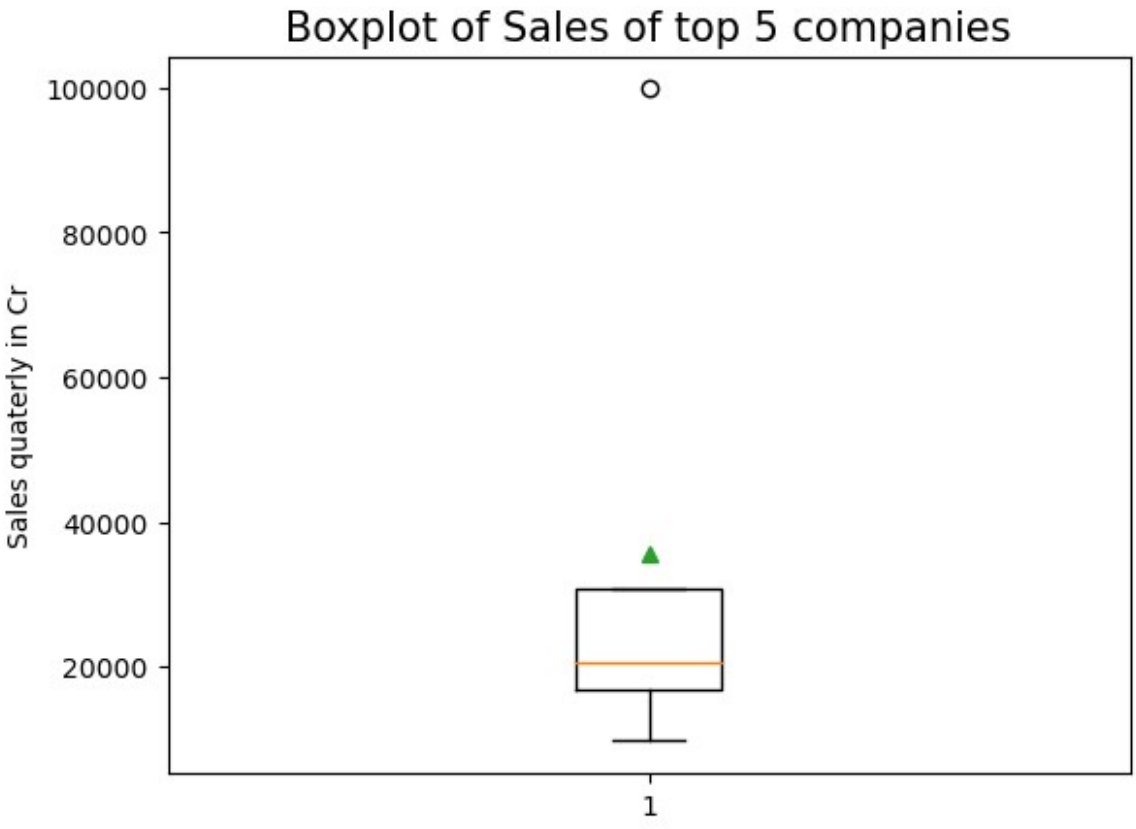



```
#sorting the dataframe by market captalization and selecct top 5
companies

top_5=df1.nlargest(5,'Mar Cap - Crore')

#creating the scatter plot for top 5 companies

sns.scatterplot(x=top_5['Sales Qtr - Crore'],y=top_5['Mar Cap -
Crore'])
plt.xlabel("Sales Quarterly in Cr",fontsize=15)
plt.ylabel("Market Cap in Cr",fontsize=15)
plt.title("Sales Vs Market Cap of top 5 companies",fontsize=25)
plt.grid(True)
plt.show()
```




```
#boxplots of market capitalization and quaterly sales

plt.boxplot(top_5['Mar Cap - Crore'],showmeans=True)
plt.ylabel("Market Cap in Cr")
plt.title("Boxplot of Mar Cap of top 5 companies",fontsize=15)
plt.show()

plt.boxplot(top_5['Sales Qtr - Crore'],showmeans=True)
plt.ylabel("Sales quaterly in Cr")
plt.title("Boxplot of Sales of top 5 companies",fontsize=15)
plt.show()
```


Boxplot of Mar Cap of top 5 companies
Market Cap in Cr
550000
500000
450000
400000
350000
300000
1


Boxplot of Sales of top 5 companies
Sales quaterly in Cr
100000
80000
60000
40000
20000
1

```
#correlation between mar cap and sales of top 5 companies

corr_matrix=top_5[['Mar Cap - Crore','Sales Qtr - Crore']].corr()

sns.heatmap(corr_matrix,annot=True)
plt.title("corr b/w mar cap and sales of top 5 companies",fontsize=20)
plt.show()
```