```python
import numpy as np
import pandas as pd

#Loading the dataset

data=pd.read_csv("/content/Financial Analytics data.csv")


#Dropping the irrelevant column, missing data
data_new = data.drop(columns=['Unnamed: 4'])
data_new = data_new.dropna(subset=['Mar Cap - Crore' , 'Sales


#Dsiplay the cleaned dataset info
print(data_new.info())
```

```
<class 'pandas.core.frame.DataFrame'>
Index: 365 entries, 0 to 486
Data columns (total 4 columns):
 #   Column            Non-Null Count  Dtype
---  ------            --------------  -----
 0   S.No.             365 non-null    int64
 1   Name              365 non-null    object
 2   Mar Cap - Crore   365 non-null    float64
 3   Sales Qtr - Crore 365 non-null    float64
dtypes: float64(2), int64(1), object(1)
memory usage: 14.3+ KB
None
```

```
#Exploratory Data Analysis (EDA)
import matplotlib.pyplot as plt
import seaborn as sns
plt.figure(figsize=(10, 6))
sns.histplot(data_new[ 'Mar Cap - Crore'], bins=30, kde=True)
plt.title('Distribution of Market Capitalization')
plt.xlabel('Market Capitalization (Crores)')
plt.ylabel('Frequency')
plt.show()
```

Distribution of Market Capitalization
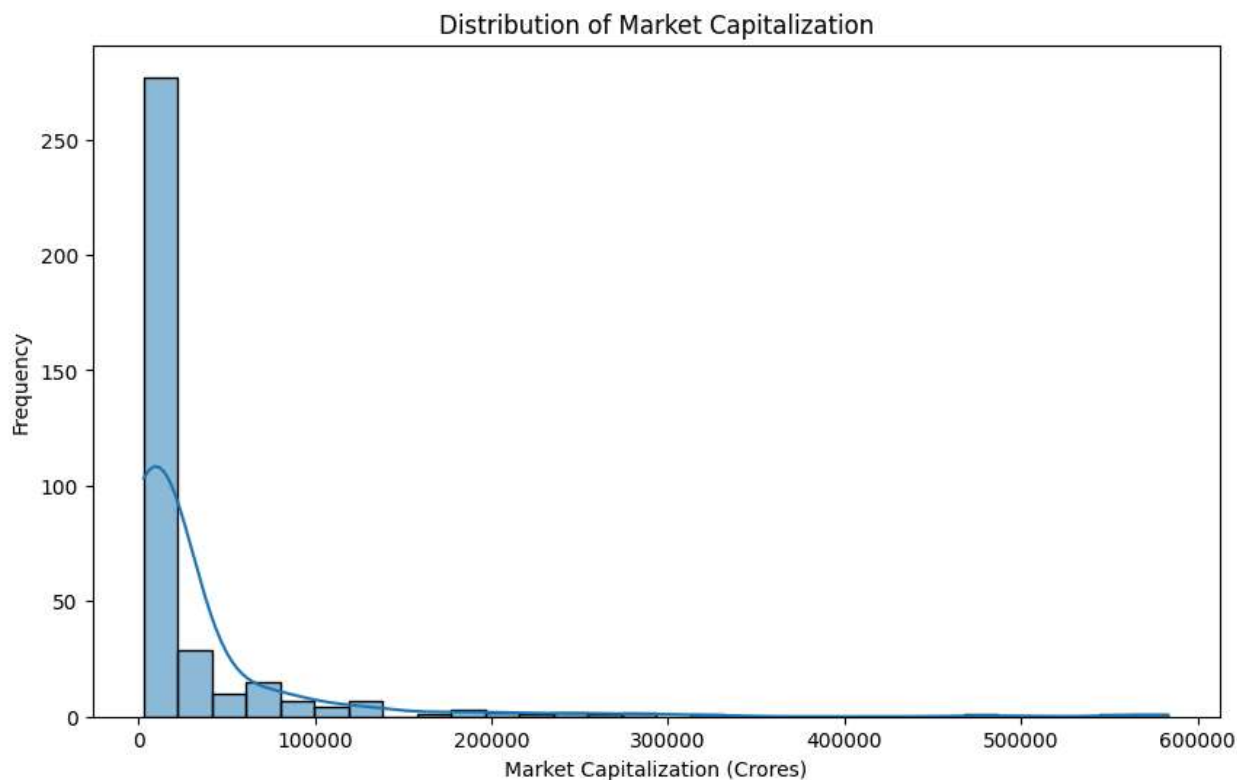

```
plt.figure(figsize=(10, 6))
sns.histplot(data_new['Sales Qtr - Crore'], bins=30, kde=True)
plt.title('Distribution of Quarterly Sales')
plt.xlabel('Quarterly Sales (Crores)')
plt.ylabel('Frequency')
plt.show()
```

Distribution of Quarterly Sales
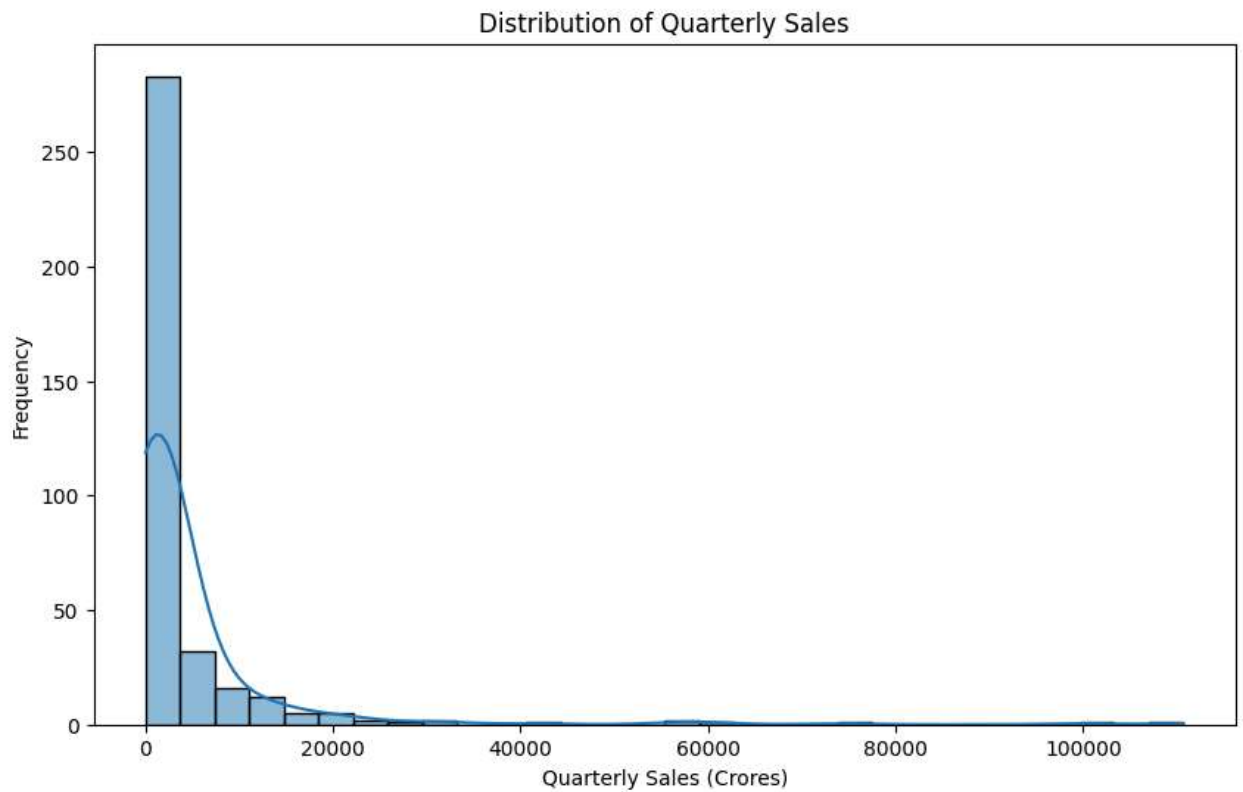

```
plt.figure(figsize=(10, 6))
sns.scatterplot(x='Sales Qtr - Crore', y= 'Mar Cap - Crore', d
plt.title('Market Capitalization vs Quarterly Sales')
plt.xlabel('Quarterly Sales (Crores)')
plt.ylabel('Market Capitalization (Crores)')
plt.show()
```

Market Capitalization vs Quarterly Sales
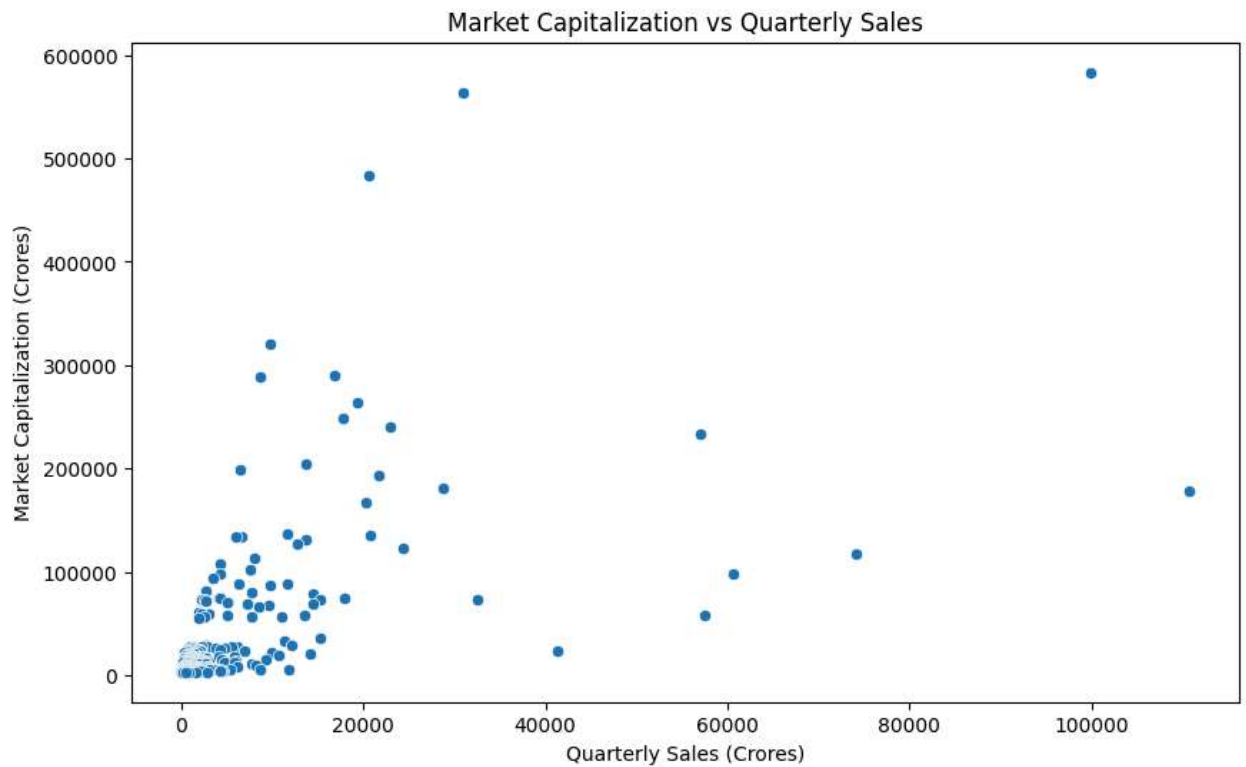
```
#Calculate and display correlation
correlation = data_new [['Mar Cap - Crore', 'Sales Qtr - Crore
print(correlation)
```

	Mar Cap - Crore	Sales Qtr - Crore
Mar Cap - Crore	1.000000	0.620702
Sales Qtr - Crore	0.620702	1.000000

```python
#Key metrics calculation
mean_mar_cap = data_new ['Mar Cap - Crore'].mean()
median_mar_cap = data_new ['Mar Cap - Crore'].median()
std_mar_cap = data_new [ 'Mar Cap - Crore'].std()


mean_sales_qtr = data_new ['Sales Qtr - Crore'].mean()
median_sales_qtr = data_new ['Sales Qtr - Crore'].median()
std_sales_qtr = data_new [ 'Sales Qtr - Crore'].std()


print(f'Mean Market Capitalization: {mean_mar_cap}')
print(f'Median Market Capitalization: {median_mar_cap}')
print(f'Standard Deviation of Market Capitalization: {std_mar_
print(f'Mean Quarterly Sales: {mean_sales_qtr}')
print(f'Median Quarterly Sales: {median_sales_qtr}')
print(f'Standard Deviation of Quarterly Sales: {std_sales_qtr}
```

```
Mean Market Capitalization: 31300.970301369864
Median Market Capitalization: 9097.33
Standard Deviation of Market Capitalization: 67224.6413384
Mean Quarterly Sales: 4395.976849315069
Median Quarterly Sales: 1278.3
Standard Deviation of Quarterly Sales: 11092.206185492805
```

```python
top_companies = data_new.sort_values(by='Mar Cap - Crore', asc
print("Top 10 Companies by Market Capitalization:")
print(top_companies [['Name', 'Mar Cap - Crore']])
```

```
Top 10 Companies by Market Capitalization:
             Name   Mar Cap - Crore
0    Reliance Inds.        583436.72
1              TCS        563709.84
2        HDFC Bank        482953.59
3              ITC        320985.27
4          H D F C        289497.37
5   Hind. Unilever        288265.26
6    Maruti Suzuki        263493.81
```

```
7          Infosys              248320.35
8         O N G C              239981.50
9   St Bk of India            232763.33
```

```python
#Visualization of top 10 companies
plt.figure(figsize=(14, 7))
sns.barplot(x='Mar Cap - Crore', y='Name', data = top_companie
plt.title('Top 10 Companies by Market Capitalization')
plt.xlabel('Market Capitalization (Crores)')
plt.ylabel('Company Name')
plt.show()
```

⇥▾   <ipython-input-51-563e898c7ee5>:3: FutureWarning:

Passing `palette` without assigning `hue` is deprecated an

sns.barplot(x='Mar Cap - Crore', y='Name', data = top_co