In [1]:
```
import pandas as pd
```

In [2]:
```
import seaborn as sns
```

In [3]:
```
import numpy as np
```

In [4]:
```
import matplotlib.pyplot as plt
```

In [5]:
```
import matplotlib.pyplot as plt
```

In [6]:
```
df = pd.read_csv("C:\\Users\\wwwsa\\Downloads\\sel. Projects\\Financial Analy
```

In [7]:
```
df
```

Out[7]:

	S.No.	Name	Mar Cap - Crore	Sales Qtr - Crore
0	1	Reliance Inds.	583436.72	99810.00
1	2	TCS	563709.84	30904.00
2	3	HDFC Bank	482953.59	20581.27
3	4	ITC	320985.27	9772.02
4	5	H D F C	289497.37	16840.51
...	...	...	...	...
483	496	Lak. Vilas Bank	3029.57	790.17
484	497	NOCIL	3026.26	249.27
485	498	Orient Cement	3024.32	511.53
486	499	Natl.Fertilizer	3017.07	2840.75
487	500	L T Foods	NaN	NaN

488 rows × 4 columns

In [8]:
```
df.shape
```

Out[8]:
```
(488, 4)
```

In [9]:
```
df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 488 entries, 0 to 487
Data columns (total 4 columns):
 #   Column             Non-Null Count  Dtype  
---  ------             --------------  -----  
 0   S.No.              488 non-null    int64  
 1   Name               488 non-null    object 
 2   Mar Cap - Crore    479 non-null    float64
 3   Sales Qtr - Crore  459 non-null    float64
dtypes: float64(2), int64(1), object(1)
memory usage: 15.4+ KB
```

In [10]:
```
df.isnull().sum()
```

Out[10]:
```
S.No.                0
Name                 0
Mar Cap - Crore      9
Sales Qtr - Crore    29
dtype: int64
```

In [11]:
```
df.head()
```

Out[11]:

	S.No.	Name	Mar Cap - Crore	Sales Qtr - Crore
0	1	Reliance Inds.	583436.72	99810.00
1	2	TCS	563709.84	30904.00
2	3	HDFC Bank	482953.59	20581.27
3	4	ITC	320985.27	9772.02
4	5	H D F C	289497.37	16840.51

In [12]:
```
df.tail()
```

Out[12]:

	S.No.	Name	Mar Cap - Crore	Sales Qtr - Crore
483	496	Lak. Vilas Bank	3029.57	790.17
484	497	NOCIL	3026.26	249.27
485	498	Orient Cement	3024.32	511.53
486	499	Natl.Fertilizer	3017.07	2840.75
487	500	L T Foods	NaN	NaN

In [13]:
```
fresh=df.fillna(method='ffill')
```

In [14]:
```
fresh
```

Out[14]:

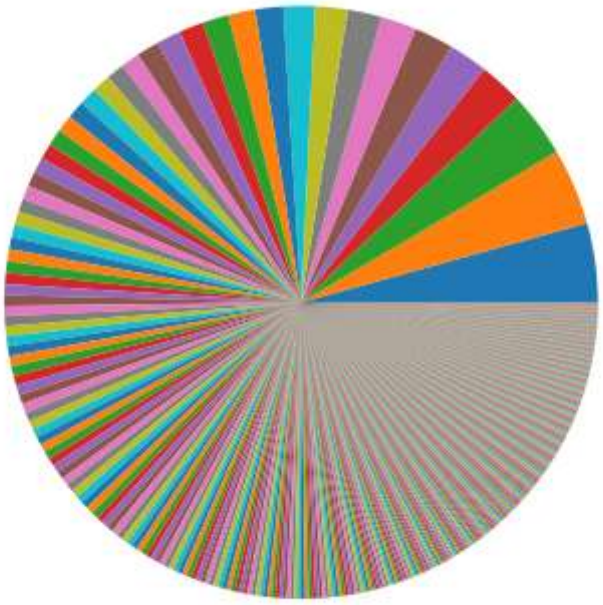
	S.No.	Name	Mar Cap - Crore	Sales Qtr - Crore
0	1	Reliance Inds.	583436.72	99810.00
1	2	TCS	563709.84	30904.00
2	3	HDFC Bank	482953.59	20581.27
3	4	ITC	320985.27	9772.02
4	5	H D F C	289497.37	16840.51
...	...	...	...	...
483	496	Lak. Vilas Bank	3029.57	790.17
484	497	NOCIL	3026.26	249.27
485	498	Orient Cement	3024.32	511.53
486	499	Natl.Fertilizer	3017.07	2840.75
487	500	L T Foods	3017.07	2840.75

488 rows × 4 columns

In [15]:
```
fresh.isnull().sum()
```

Out[15]:
```
S.No.               0
Name                0
Mar Cap - Crore     0
Sales Qtr - Crore   0
dtype: int64
```

In [16]:
```
plt.pie(fresh['Mar Cap - Crore'])
plt.show()
```



In [17]:
```
# Sort DataFrame by Market Cap in descending order
df_sorted = df.sort_values(by='Mar Cap - Crore', ascending=False)
```

In [18]:
```
df_sorted
```

Out[18]:

	S.No.	Name	Mar Cap - Crore	Sales Qtr - Crore
0	1	Reliance Inds.	583436.72	99810.00
1	2	TCS	563709.84	30904.00
2	3	HDFC Bank	482953.59	20581.27
3	4	ITC	320985.27	9772.02
4	5	H D F C	289497.37	16840.51
...	...	...	...	...
287	300	Bajaj Corp	NaN	NaN
337	350	ISGEC Heavy	NaN	NaN
387	400	BSE	NaN	NaN
437	450	Force Motors	NaN	NaN
487	500	L T Foods	NaN	NaN

488 rows × 4 columns

In [19]:
```
# Select top 10 companies
top_10 = df_sorted.head(10)
```

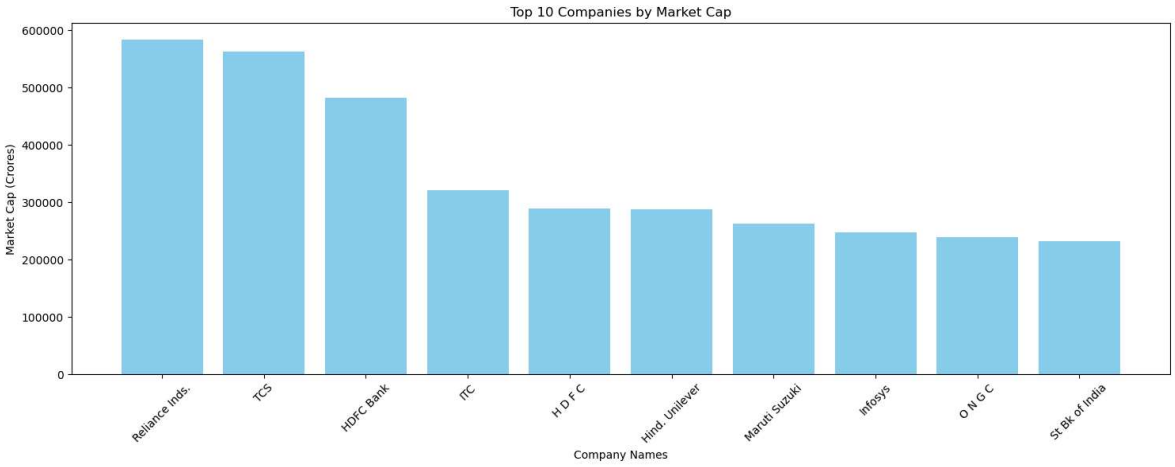
In [20]:
```
top_10
```

Out[20]:

	S.No.	Name	Mar Cap - Crore	Sales Qtr - Crore
0	1	Reliance Inds.	583436.72	99810.00
1	2	TCS	563709.84	30904.00
2	3	HDFC Bank	482953.59	20581.27
3	4	ITC	320985.27	9772.02
4	5	H D F C	289497.37	16840.51
5	6	Hind. Unilever	288265.26	8590.00
6	7	Maruti Suzuki	263493.81	19283.20
7	8	Infosys	248320.35	17794.00
8	9	O N G C	239981.50	22995.88
9	10	St Bk of India	232763.33	57014.08

In [21]:
```
# Plotting the bar chart
plt.figure(figsize=(15, 6))
plt.bar(top_10['Name'], top_10['Mar Cap - Crore'], color='skyblue')
plt.title("Top 10 Companies by Market Cap")
plt.xlabel('Company Names')
plt.ylabel('Market Cap (Crores)')
plt.xticks(rotation=45)  # Rotate x-axis labels for better readability
plt.tight_layout()  # Adjust layout for better fit

plt.show()
```



In [28]:
```
# Sort DataFrame by Market Cap in ascending order
df_sorted = df.sort_values(by='Mar Cap - Crore', ascending=True)
```

In [29]:
```
df_sorted
```

Out[29]:

	S.No.	Name	Mar Cap - Crore	Sales Qtr - Crore
486	499	Natl.Fertilizer	3017.07	2840.75
485	498	Orient Cement	3024.32	511.53
484	497	NOCIL	3026.26	249.27
483	496	Lak. Vilas Bank	3029.57	790.17
482	495	Prime Focus	3031.50	609.61
...	...	...	...	...
287	300	Bajaj Corp	NaN	NaN
337	350	ISGEC Heavy	NaN	NaN
387	400	BSE	NaN	NaN
437	450	Force Motors	NaN	NaN
487	500	L T Foods	NaN	NaN

488 rows × 4 columns

In [30]:
```
# Select bottom 10 companies
top_10 = df_sorted.tail(10)
```

In [31]:
```
top_10
```

Out[31]:

	S.No.	Name	Mar Cap - Crore	Sales Qtr - Crore
0	1	Reliance Inds.	583436.72	99810.0
99	100	Colgate-Palm.	NaN	NaN
147	150	Endurance Tech.	NaN	NaN
193	200	Natl. Aluminium	NaN	NaN
243	250	Mahanagar Gas	NaN	NaN
287	300	Bajaj Corp	NaN	NaN
337	350	ISGEC Heavy	NaN	NaN
387	400	BSE	NaN	NaN
437	450	Force Motors	NaN	NaN
487	500	L T Foods	NaN	NaN

In [27]:
```
# Sort DataFrame by sales quarter in descending order
df_sorted1 = df.sort_values(by='Sales Qtr - Crore', ascending=False)
```

In [23]:
```
df_sorted1
```

Out[23]:

	S.No.	Name	Mar Cap - Crore	Sales Qtr - Crore
14	15	I O C L	178017.48	110666.93
0	1	Reliance Inds.	583436.72	99810.00
23	24	Tata Motors	117071.87	74156.07
27	28	B P C L	98278.00	60616.36
54	55	H P C L	58034.78	57474.25
...	...	...	...	...
437	450	Force Motors	NaN	NaN
446	459	JP Power Ven.	3597.60	NaN
451	464	Amber Enterp.	3529.87	NaN
459	472	Hind.Construct.	3452.57	NaN
487	500	L T Foods	NaN	NaN

488 rows × 4 columns

In [24]:
```
# Select top 10 companies
top_10 = df_sorted1.head(10)
```

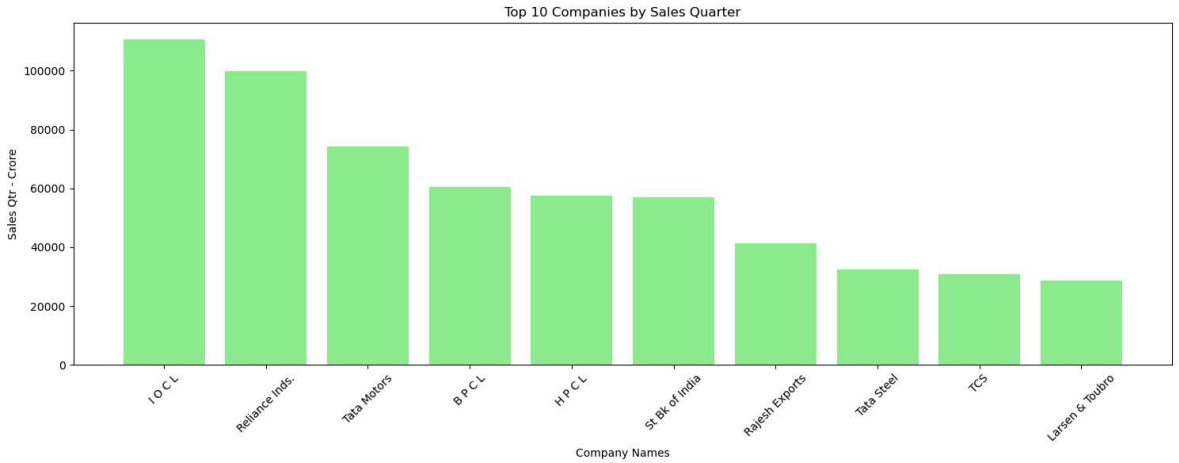
In [25]:
```
top_10
```

Out[25]:

	S.No.	Name	Mar Cap - Crore	Sales Qtr - Crore
14	15	I O C L	178017.48	110666.93
0	1	Reliance Inds.	583436.72	99810.00
23	24	Tata Motors	117071.87	74156.07
27	28	B P C L	98278.00	60616.36
54	55	H P C L	58034.78	57474.25
9	10	St Bk of India	232763.33	57014.08
122	123	Rajesh Exports	23495.54	41304.84
40	41	Tata Steel	73376.14	32464.14
1	2	TCS	563709.84	30904.00
13	14	Larsen & Toubro	180860.74	28747.45

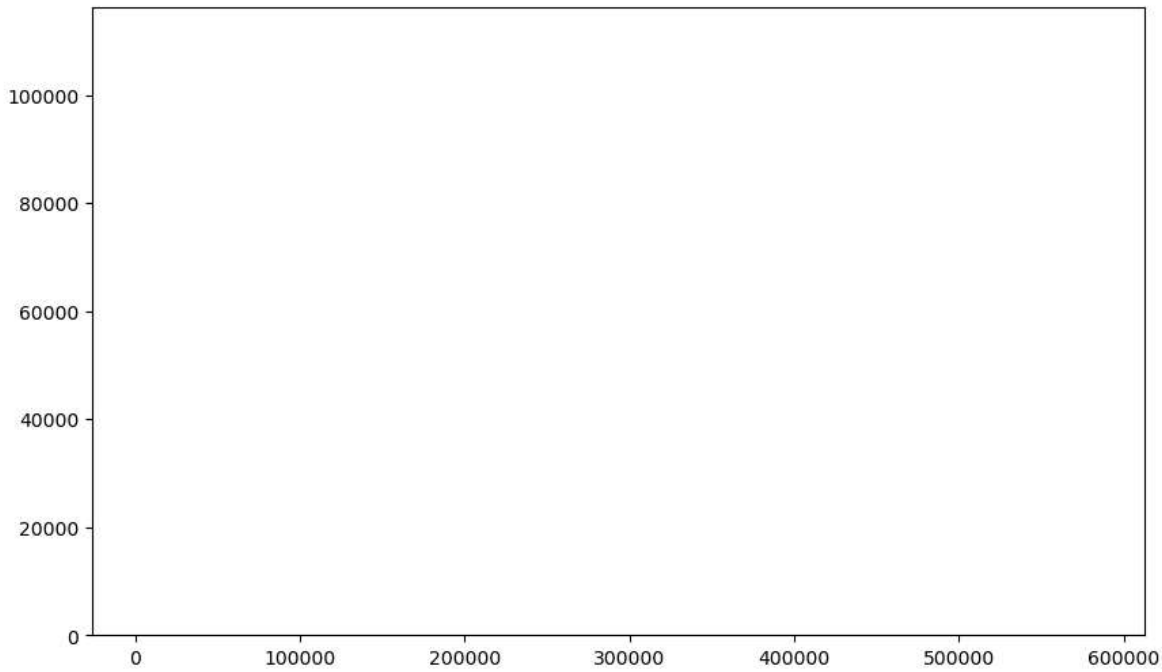
In [26]:
```
# Plotting the bar chart
plt.figure(figsize=(15, 6))
plt.bar(top_10['Name'], top_10['Sales Qtr - Crore'], color='lightgreen')
plt.title("Top 10 Companies by Sales Quarter")
plt.xlabel('Company Names')
plt.ylabel('Sales Qtr - Crore')
plt.xticks(rotation=45)
plt.tight_layout()

plt.show()
```



In [41]:
```
plt.figure(figsize=(10, 6))
plt.bar(df['Mar Cap - Crore'], df['Sales Qtr - Crore'], color='blue')
```

Out[41]: <BarContainer object of 488 artists>



In [ ]: