data-visualisation

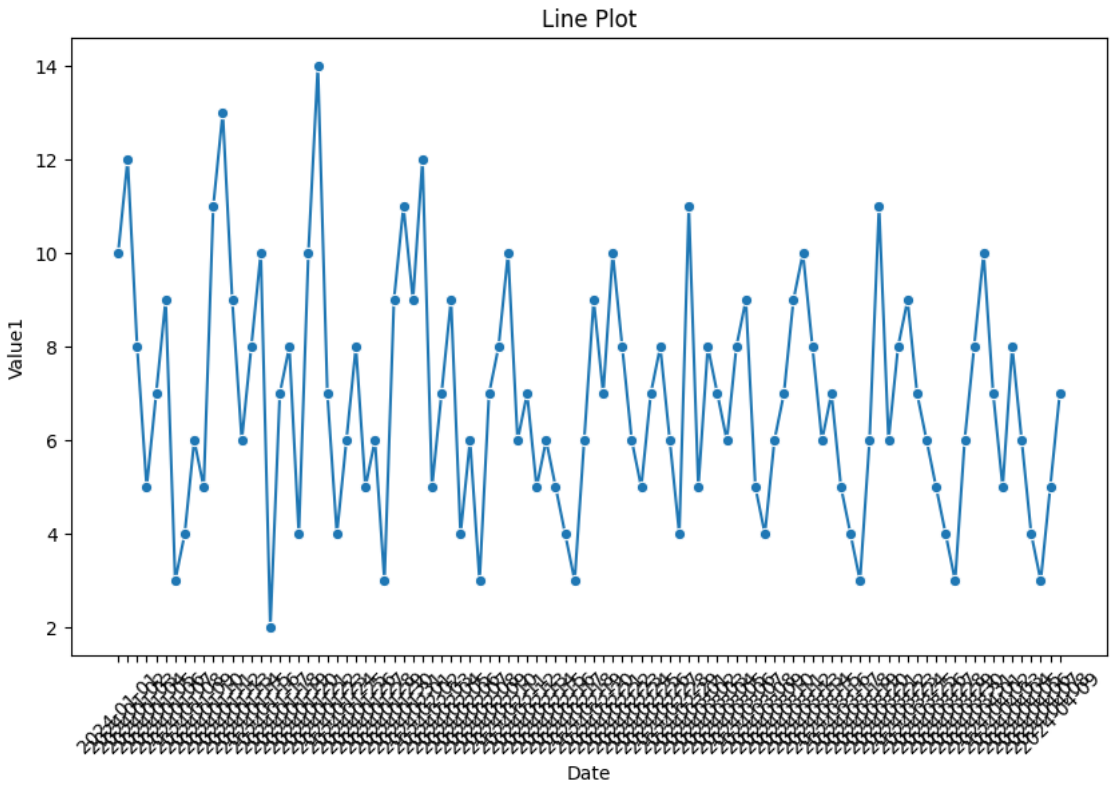
February 13, 2024

[32]:
```
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
```

[33]:
```
df = pd.read_csv('/content/data.csv.txt')
```

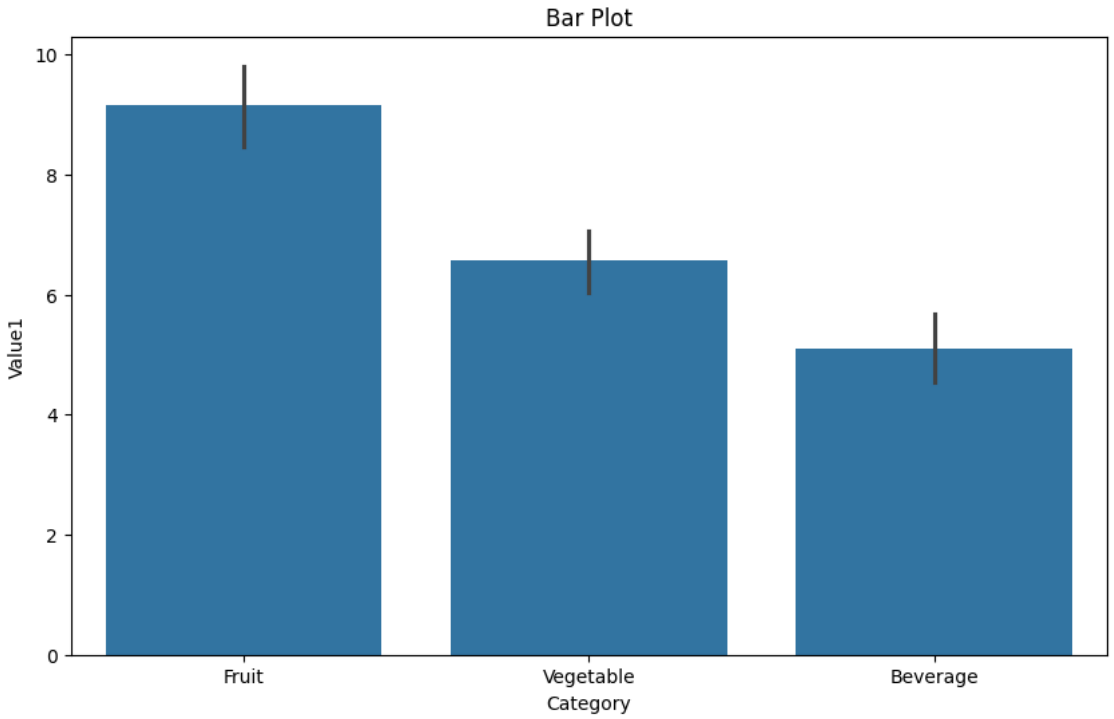
#1. Line Plot

[34]:
```
plt.figure(figsize=(10, 6))
sns.lineplot(x='Date', y='Value1', data=df, marker='o')
plt.title('Line Plot')
plt.xlabel('Date')
plt.ylabel('Value1')
plt.xticks(rotation=45)
plt.show()
```



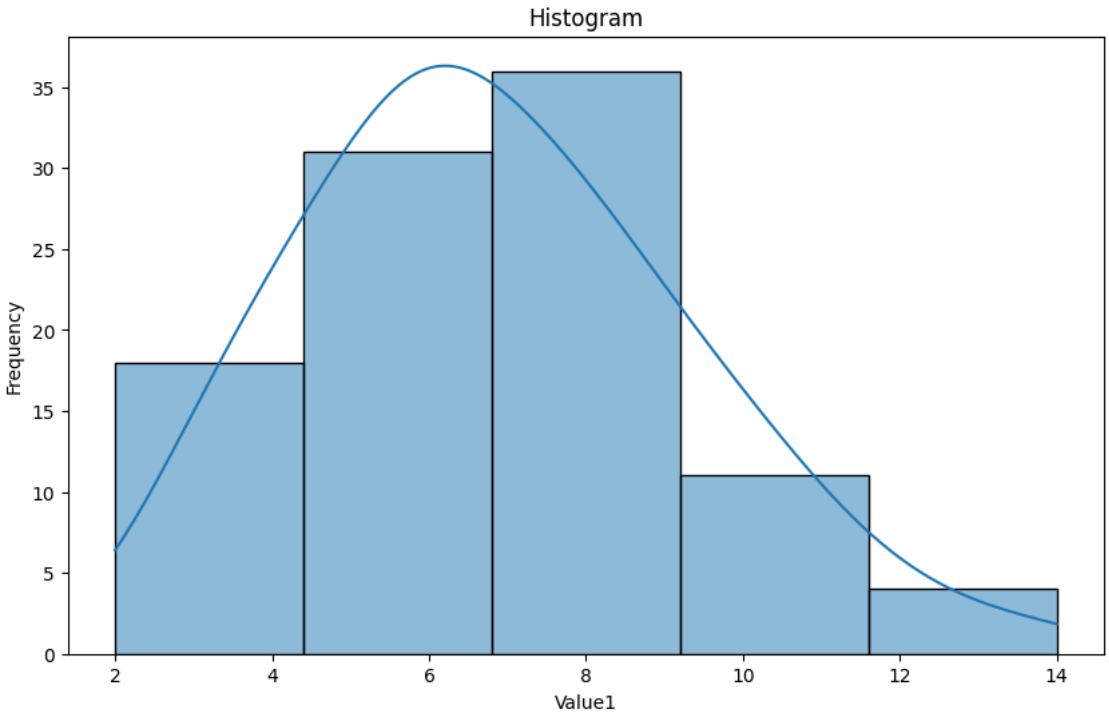
#2. Bar Plot

[35]:
```
plt.figure(figsize=(10, 6))
sns.barplot(x='Category', y='Value1', data=df)
plt.title('Bar Plot')
plt.xlabel('Category')
plt.ylabel('Value1')
plt.show()
```



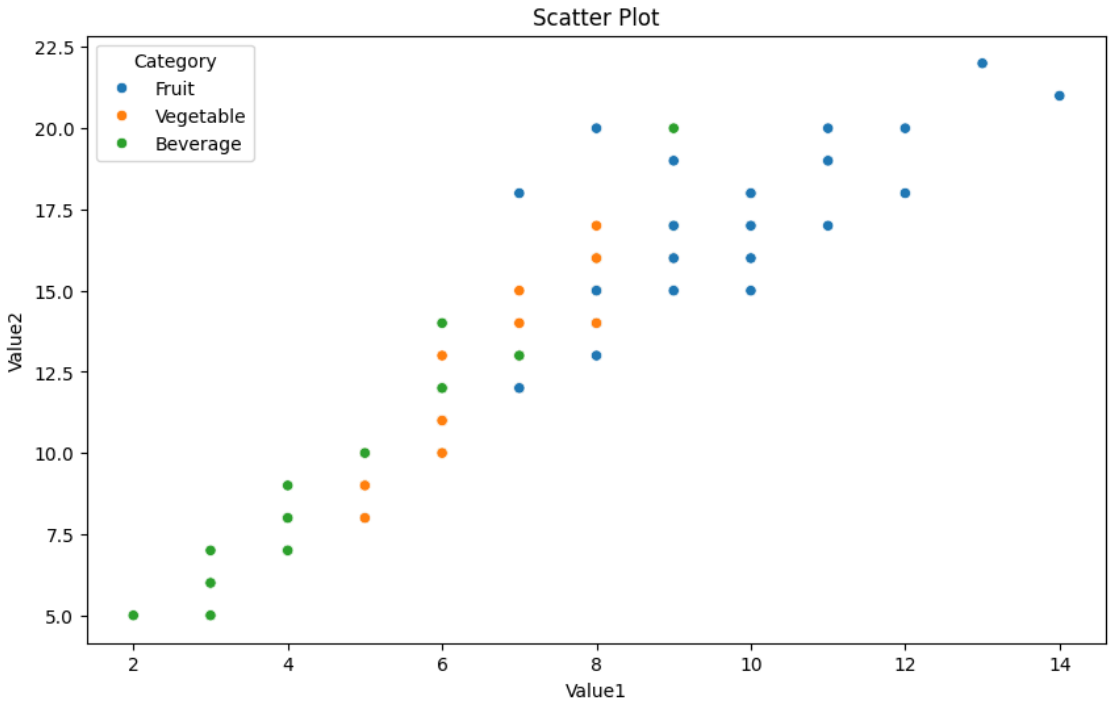
#3. Histogram

[36]:
```
plt.figure(figsize=(10, 6))
sns.histplot(df['Value1'], bins=5, kde=True)
plt.title('Histogram')
plt.xlabel('Value1')
plt.ylabel('Frequency')
plt.show()
```



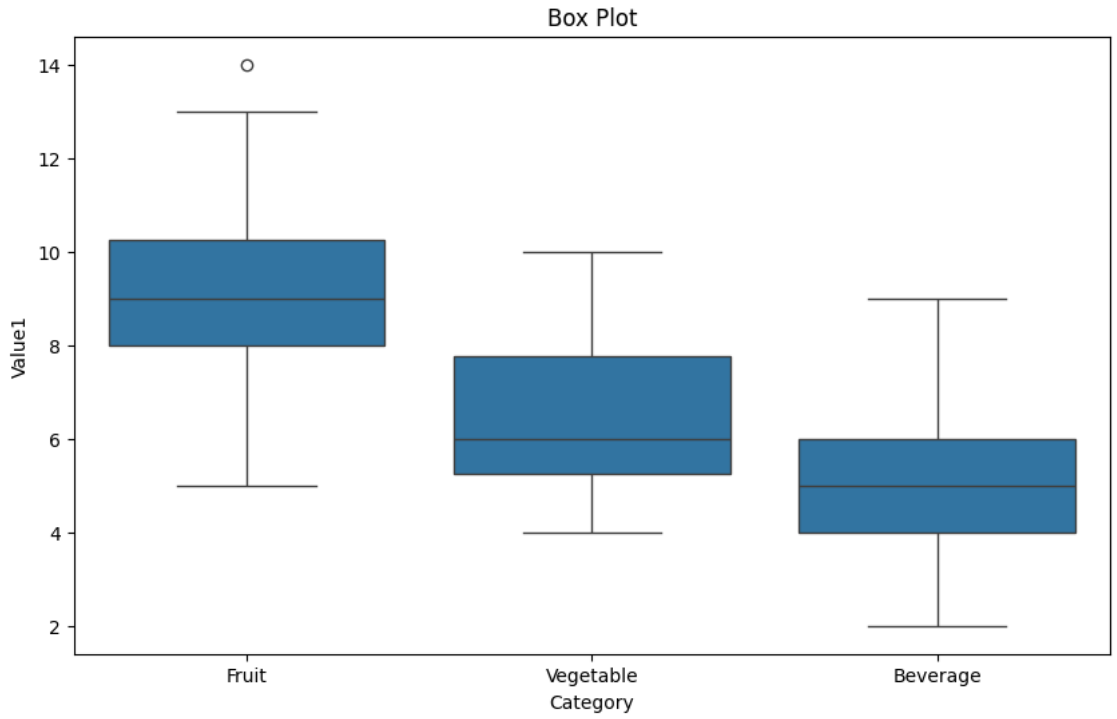
#4. Scatter Plot

[37]:
```
plt.figure(figsize=(10, 6))
sns.scatterplot(x='Value1', y='Value2', data=df, hue='Category')
plt.title('Scatter Plot')
plt.xlabel('Value1')
plt.ylabel('Value2')
plt.show()
```



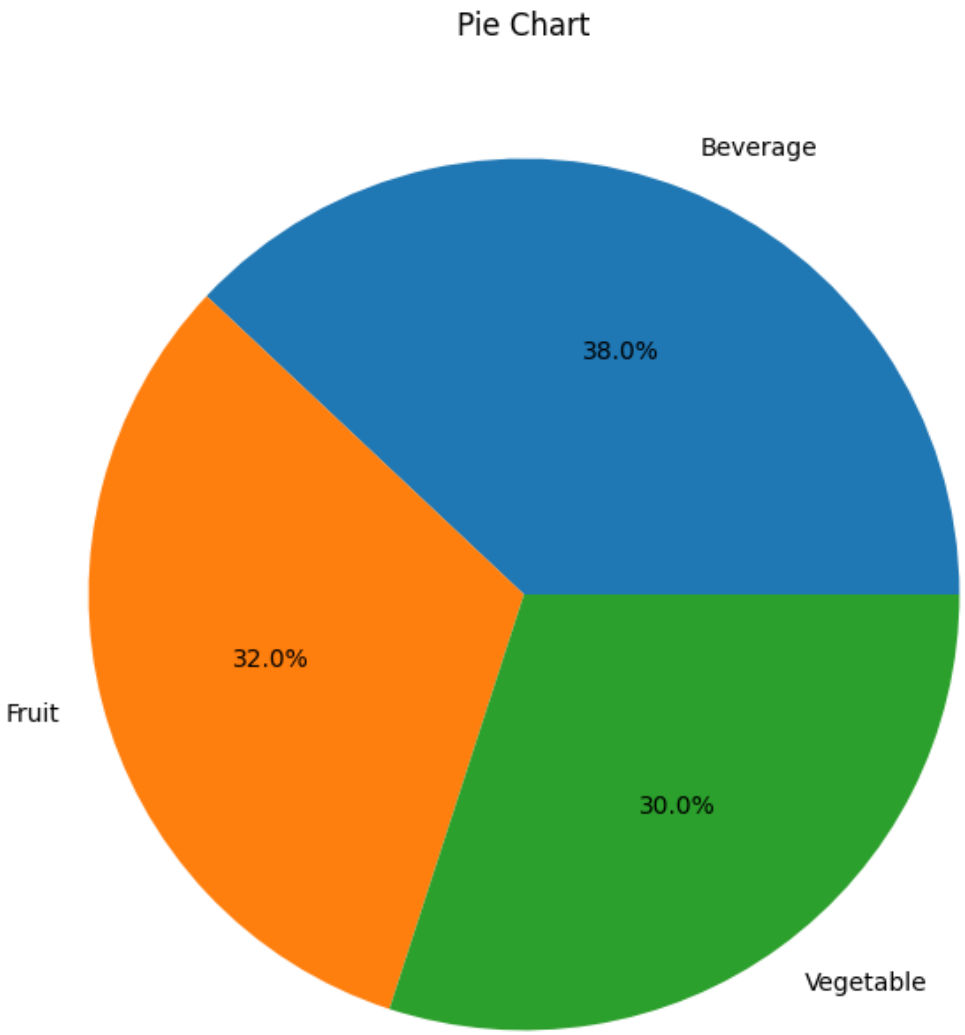
1 5. Box Plot

[38]:
```
plt.figure(figsize=(10, 6))
sns.boxplot(x='Category', y='Value1', data=df)
plt.title('Box Plot')
plt.xlabel('Category')
plt.ylabel('Value1')
plt.show()
```



#6. Pie Chart

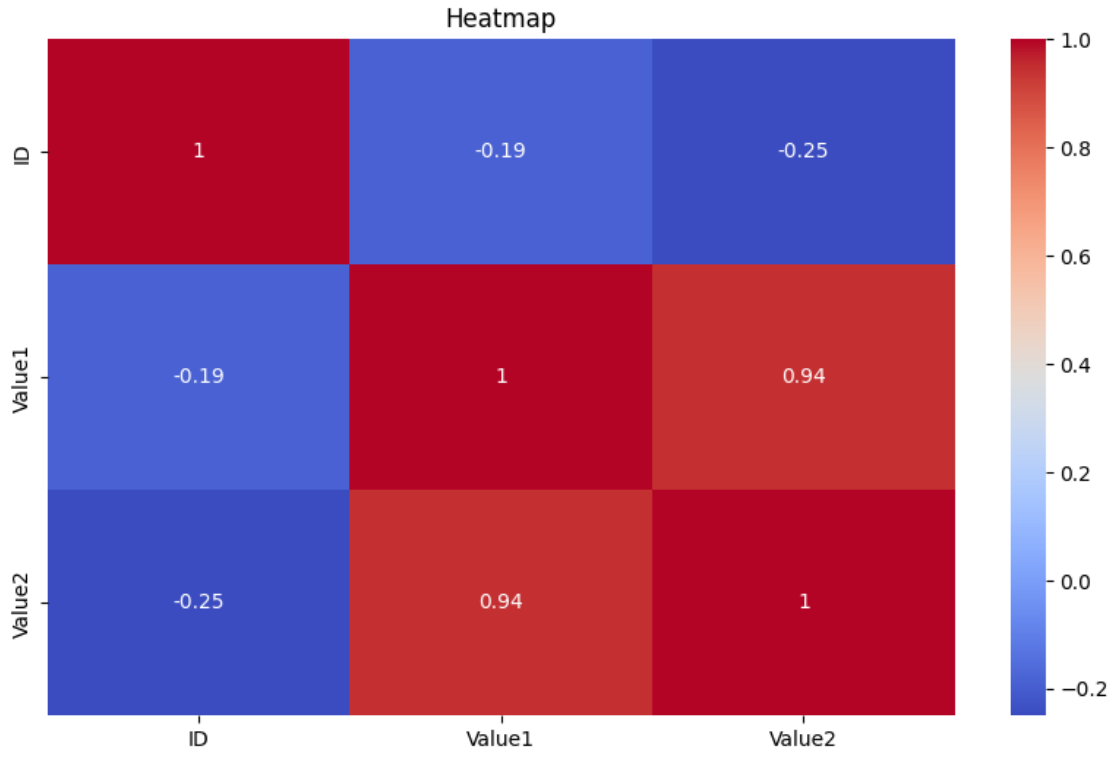
[39]:
```
plt.figure(figsize=(8, 8))
df['Category'].value_counts().plot.pie(autopct='%1.1f%%')
plt.title('Pie Chart')
plt.ylabel('')
plt.show()
```



#7. Heat Map

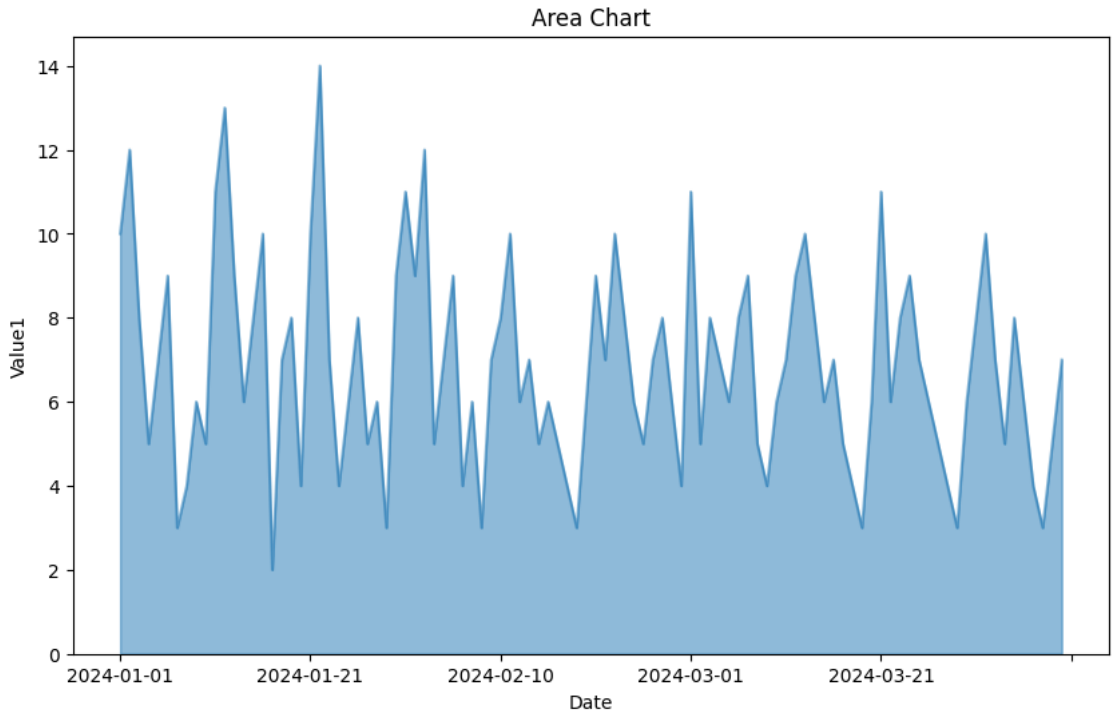
[40]:
```
plt.figure(figsize=(10, 6))
sns.heatmap(df.corr(), annot=True, cmap='coolwarm')
plt.title('Heatmap')
plt.show()
```

```
<ipython-input-40-d599dbc66e0e>:2: FutureWarning: The default value of
numeric_only in DataFrame.corr is deprecated. In a future version, it will
default to False. Select only valid columns or specify the value of numeric_only
to silence this warning.
  sns.heatmap(df.corr(), annot=True, cmap='coolwarm')
```



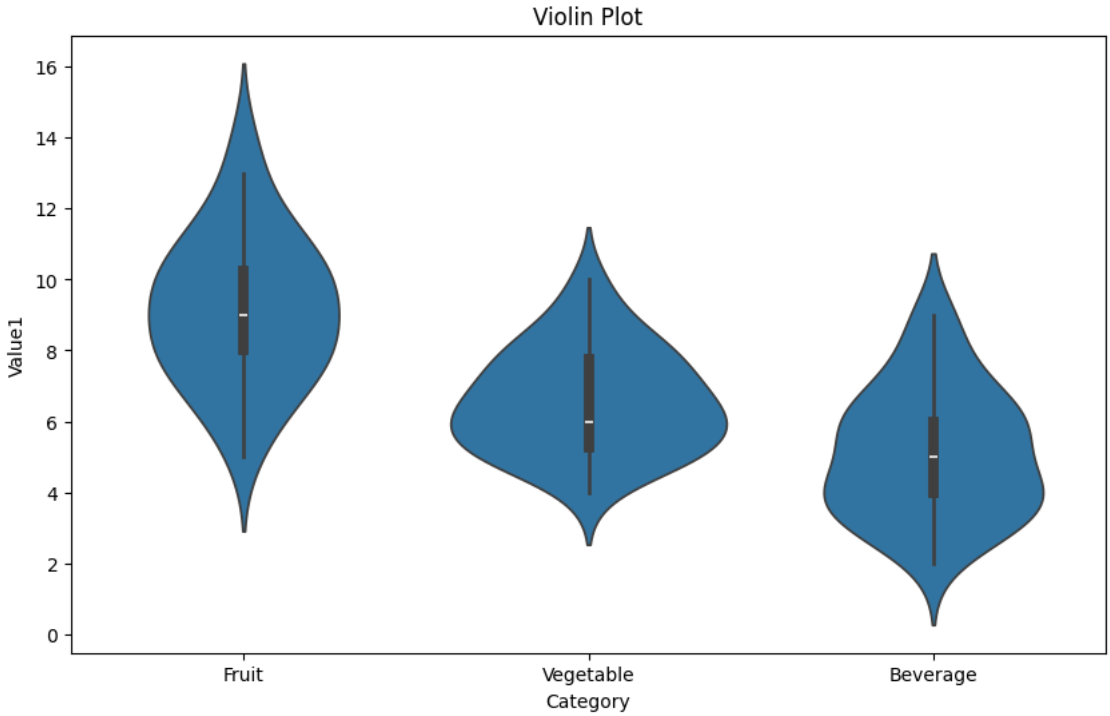
#8. Area Chart

[41]:
```
plt.figure(figsize=(10, 6))
df.groupby('Date')['Value1'].sum().plot(kind='area', stacked=False)
plt.title('Area Chart')
plt.xlabel('Date')
plt.ylabel('Value1')
plt.show()
```



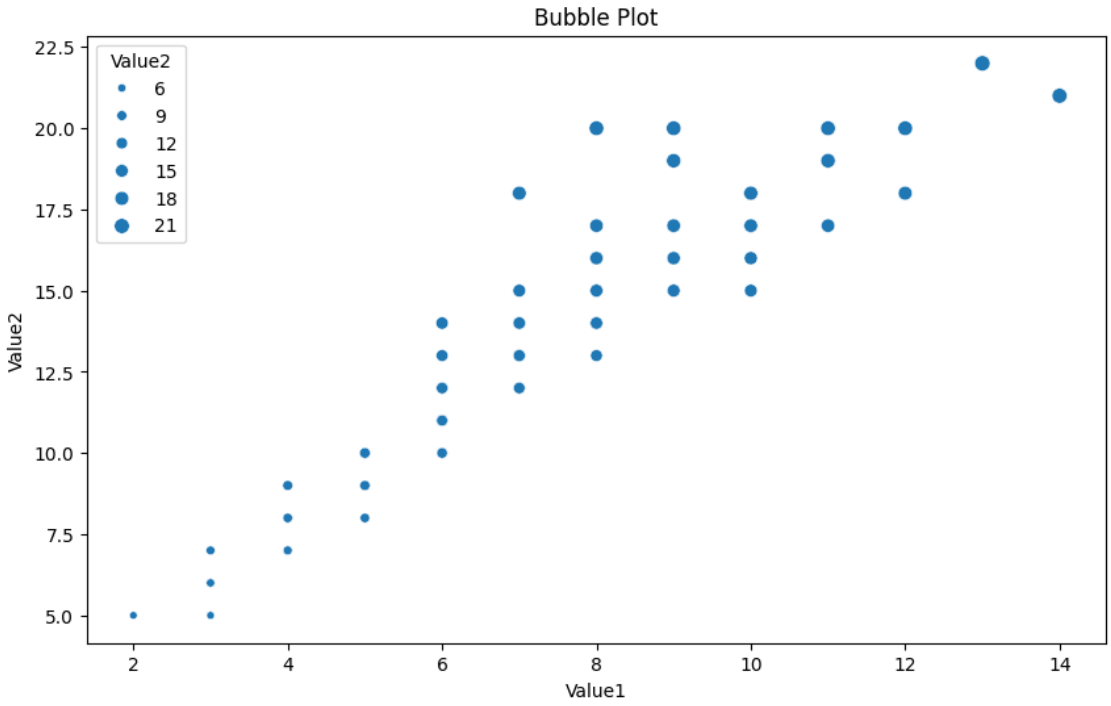
2 9. Violin plot

[42]:
```
plt.figure(figsize=(10, 6))
sns.violinplot(x='Category', y='Value1', data=df)
plt.title('Violin Plot')
plt.xlabel('Category')
plt.ylabel('Value1')
plt.show()
```



3 10. Bubble plot

[43]:
```
plt.figure(figsize=(10, 6))
sns.scatterplot(x='Value1', y='Value2', size='Value2', data=df)
plt.title('Bubble Plot')
plt.xlabel('Value1')
plt.ylabel('Value2')
plt.show()
```


Bubble Plot
Value2
6
9
12
15
18
21
22.5
20.0
17.5
15.0
12.5
10.0
7.5
5.0
Value2
2
4
6
8
10
12
14
Value1