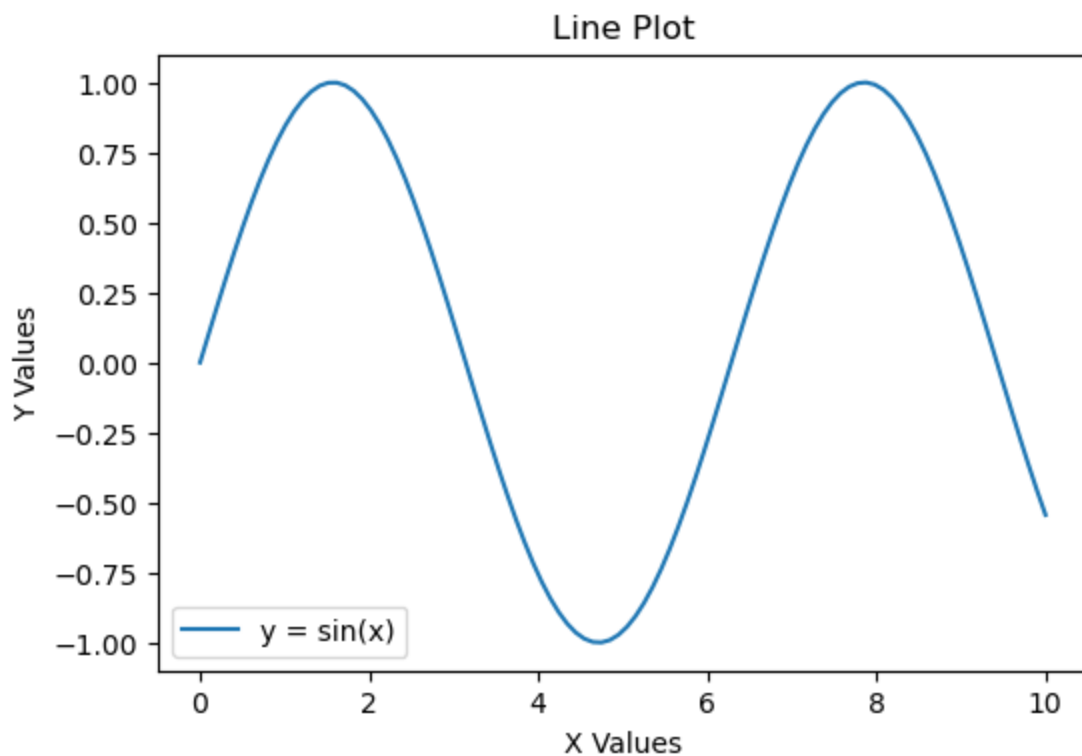# Plotting chart with Matplotlib Library

In [3]:
```python
# Importing the library
import matplotlib.pyplot as plt
import numpy as np
```

1. Line chart

In [6]:
```python
x = np.linspace(0, 10, 100)
y = np.sin(x)

# 1. Line Plot
plt.figure(figsize=(6,4))
plt.plot(x, y, label='y = sin(x)')
plt.title('Line Plot')
plt.xlabel('X Values')
plt.ylabel('Y Values')
plt.legend()
plt.show()
```
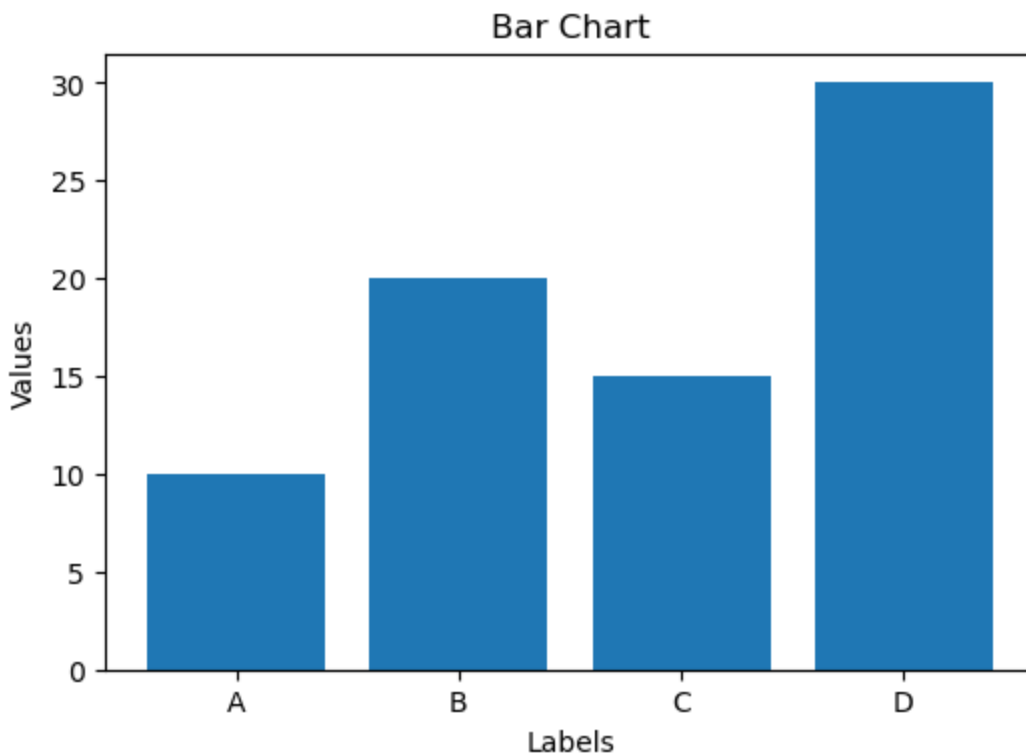

2. Histogram

In [13]:
```python
data = np.random.randn(1000)
plt.figure(figsize=(6,4))
plt.hist(data, bins=30, edgecolor='k', alpha=0.8)
plt.title('Histogram')
plt.xlabel('Value')
plt.ylabel('Frequency')
plt.show()
```
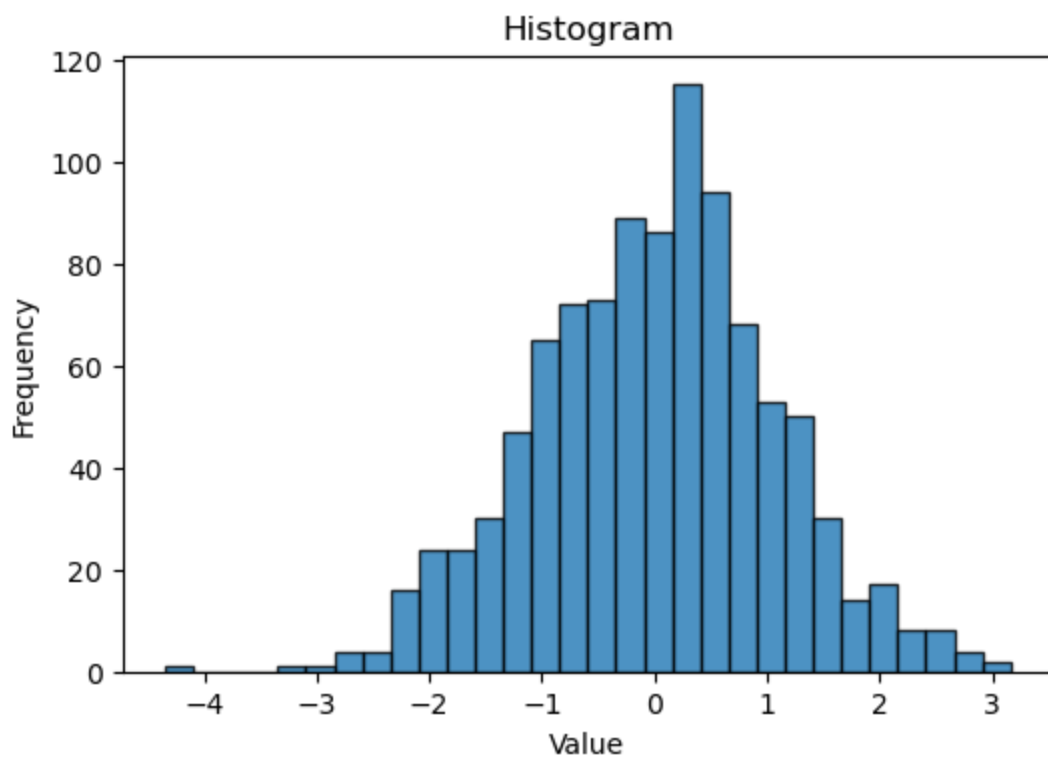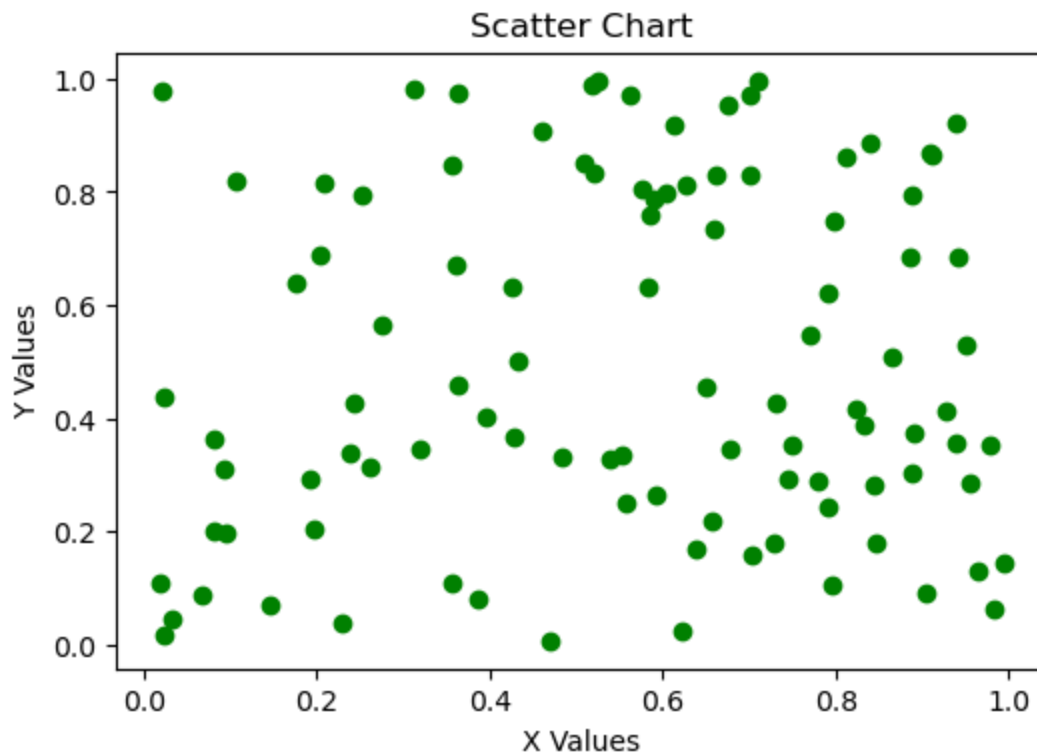
3. Bar Chart

```python
In [16]: labels = ['A', 'B', 'C', 'D']
         values = [10, 20, 15, 30]
         plt.figure(figsize=(6,4))
         plt.bar(labels, values)
         plt.title('Bar Chart')
         plt.xlabel('Labels')
         plt.ylabel('Values')
         plt.show()
```


4. Scatter chart

```
In [21]:  x_vals = np.random.rand(100)
          y_vals = np.random.rand(100)
          plt.figure(figsize=(6,4))
          plt.scatter(x_vals, y_vals, color='green')
          plt.title('Scatter Chart')
          plt.xlabel('X Values')
          plt.ylabel('Y Values')
          plt.show()
```


5. Pie Chart

```
In [33]:  sizes = [215, 130, 245, 210]
          labels = ['A', 'B', 'C', 'D']
          explode = (0, 0, 0.2, 0)   # explode 1st slice for emphasis
          plt.figure(figsize=(6,4))
          plt.pie(sizes, explode=explode, labels=labels, autopct='%2.1f%%', shadow=True, startangl
          plt.title('Pie Chart')
          plt.show()
```

Pie Chart
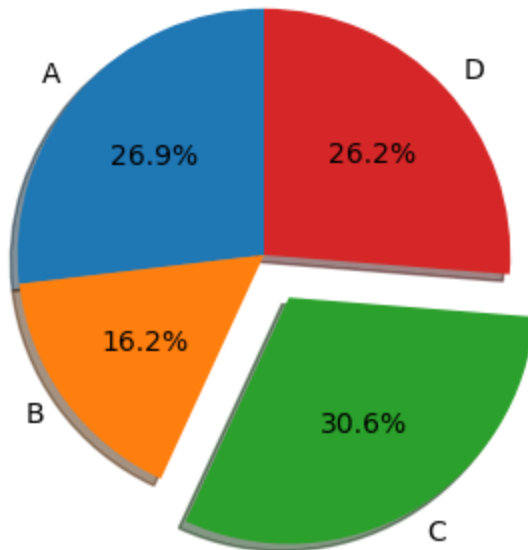

```
In [ ]: !jupyter nbconvert --to webpdf --allow-chromium-download Aug_25th.ipynb
```

```
In [ ]:
```