

Generate a random array of 50 integers and display them using a line chart, scatter plot, histogram and box plot. Apply appropriate color, labels and styling options

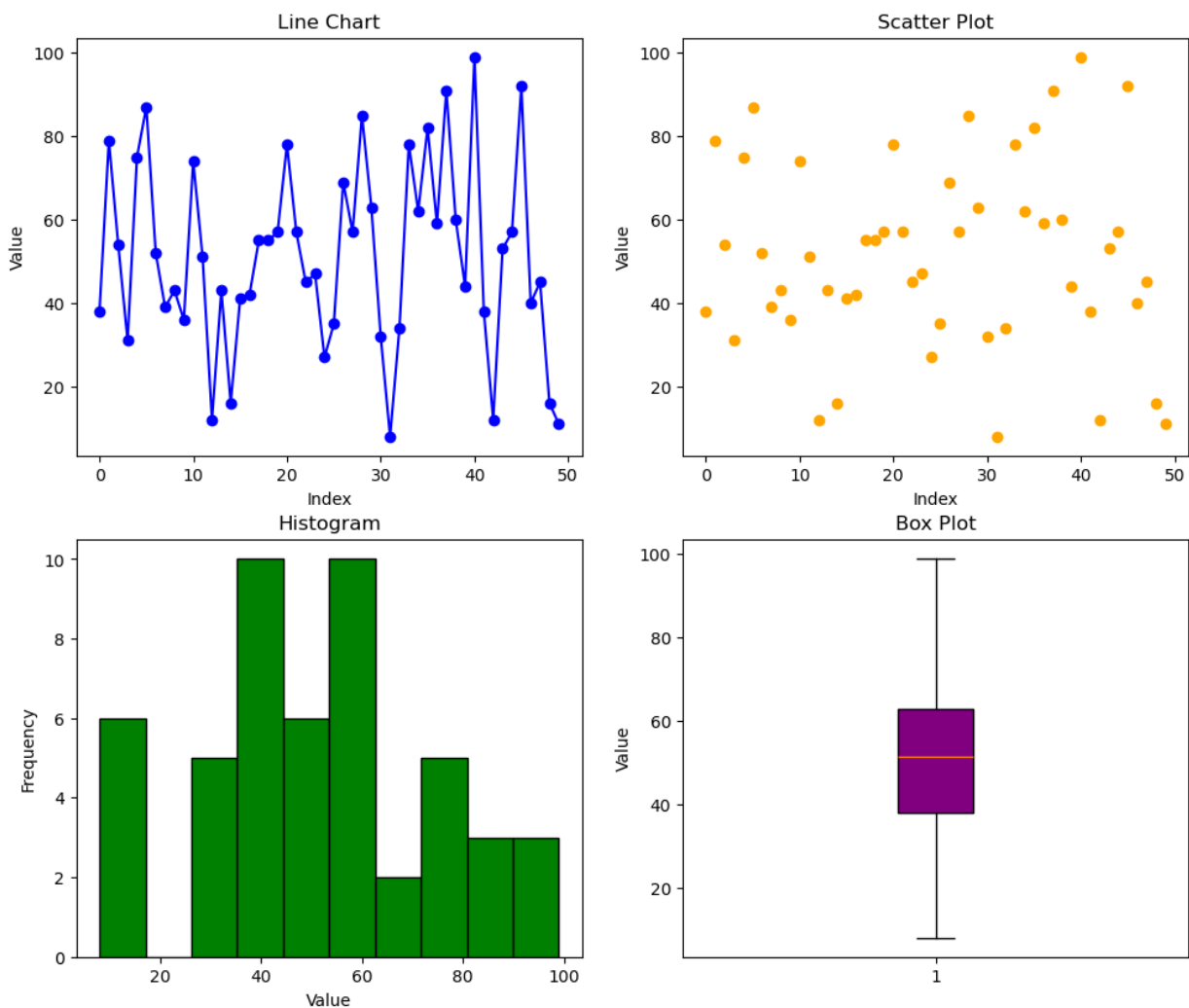
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In [2]: import numpy as np
import matplotlib.pyplot as plt
rn = np.random.randint(1, 101, size=50)

fig, axes = plt.subplots(2, 2, figsize=(12, 10))
axes[0,0].plot(rn, marker='o', linestyle='-', color='blue')
axes[0,0].set_title('Line Chart')
axes[0,0].set_xlabel('Index')
axes[0,0].set_ylabel('Value')

axes[0,1].scatter(range(len(rn)), rn, color='orange')
axes[0,1].set_title('Scatter Plot')
axes[0,1].set_xlabel('Index')
axes[0,1].set_ylabel('Value')

axes[1,0].hist(rn, bins=10, color='green', edgecolor='black')
axes[1,0].set_title('Histogram')
axes[1,0].set_xlabel('Value')
axes[1,0].set_ylabel('Frequency')

axes[1,1].boxplot(rn, patch_artist=True, boxprops=dict(facecolor='purple', color='black'))
axes[1,1].set_title('Box Plot')
axes[1,1].set_ylabel('Value')
plt.show()
```



Create two lists, one representing subject names and the other representing marks obtained in those subjects. Display

the data in a pie chart.

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In [4]: import matplotlib.pyplot as plt

subjects = ['Math', 'Science', 'English', 'History', 'Art']
marks = [85, 90, 75, 80, 95]

plt.figure(figsize=(8, 8))
plt.pie(marks, labels=subjects, autopct='%1.1f%%')
plt.title('Marks Distribution by Subject')
plt.axis('equal')
plt.show()
```

