

A) 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.

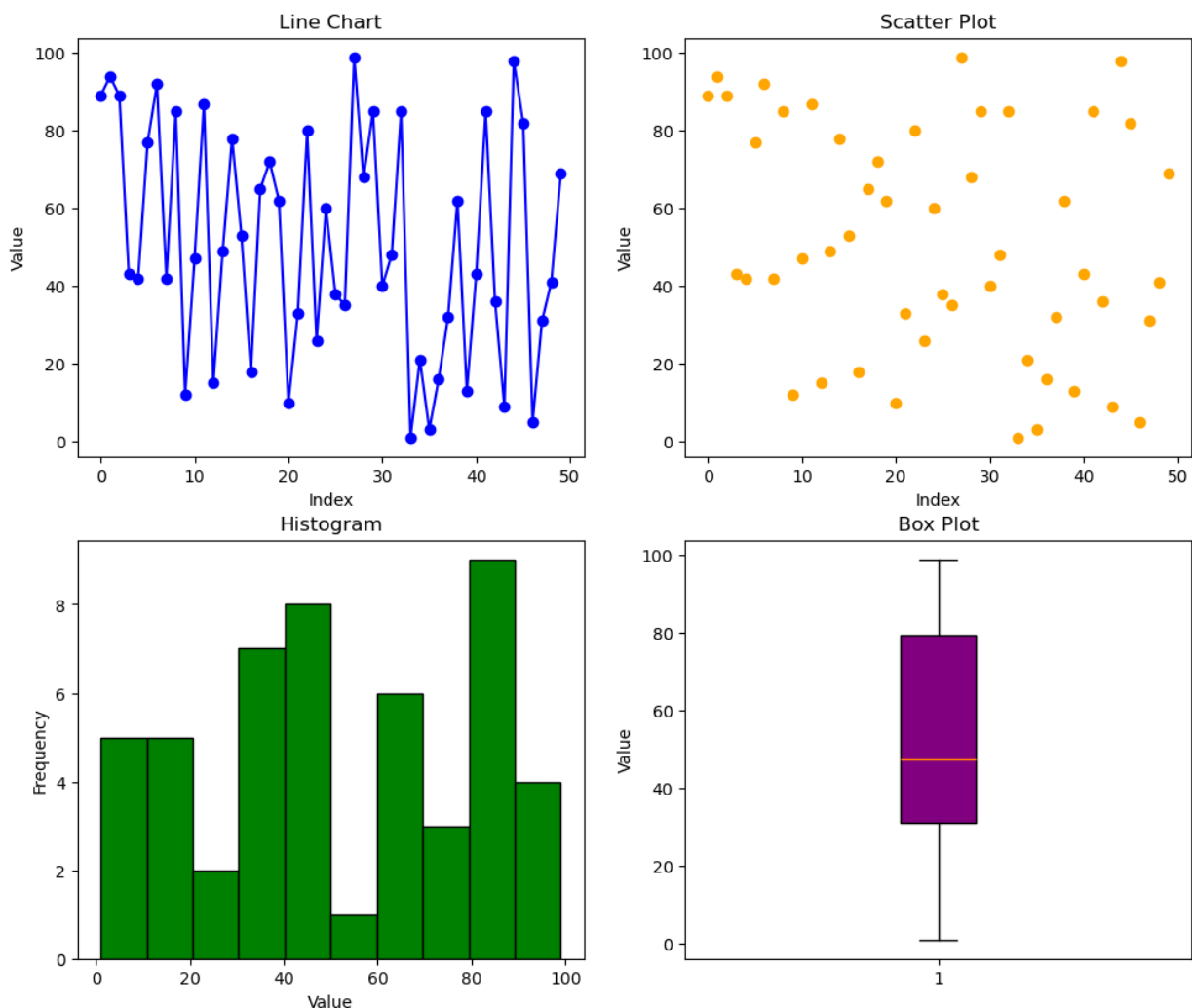
```
In [2]: import numpy as np
import matplotlib.pyplot as plt
rn = np.random.randint(1, 101, size=50)

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()
```



B) Write a Python program to print the shape, number of rows-columns, data types, feature names and the description

## of the data(Use User\_Data.csv)

```
In [3]: import pandas as pd

data = pd.read_csv('DATA.csv')
print(data.shape)
print(data.shape[0], data.shape[1])
print(data.dtypes)
print(data.columns.tolist())
print(data.describe())
```

```
(22, 3)
22 3
Name      object
Age      int64
Income($) int64
dtype: object
['Name', 'Age', 'Income($)']
```

	Age	Income(\$)
count	22.000000	22.000000
mean	34.818182	90431.818182
std	5.901060	43505.964412
min	26.000000	45000.000000
25%	29.000000	58500.000000
50%	36.500000	67500.000000
75%	39.750000	135250.000000
max	43.000000	162000.000000