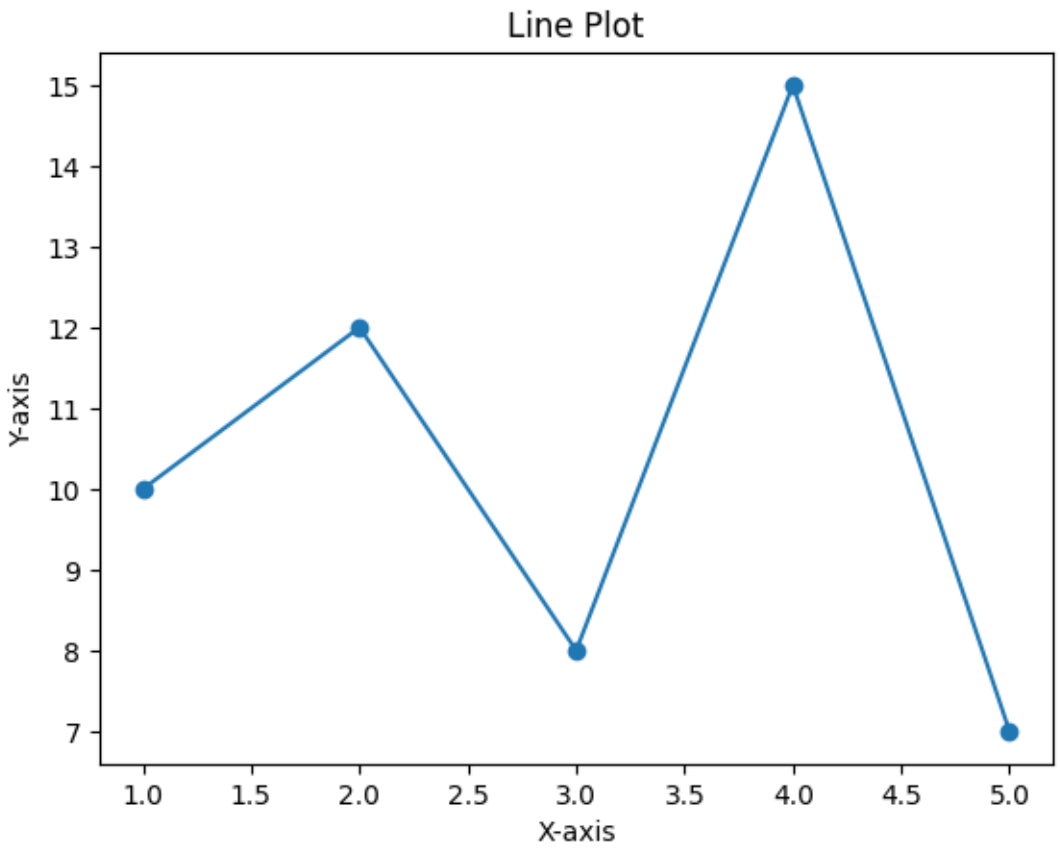
matplot

August 31, 2023

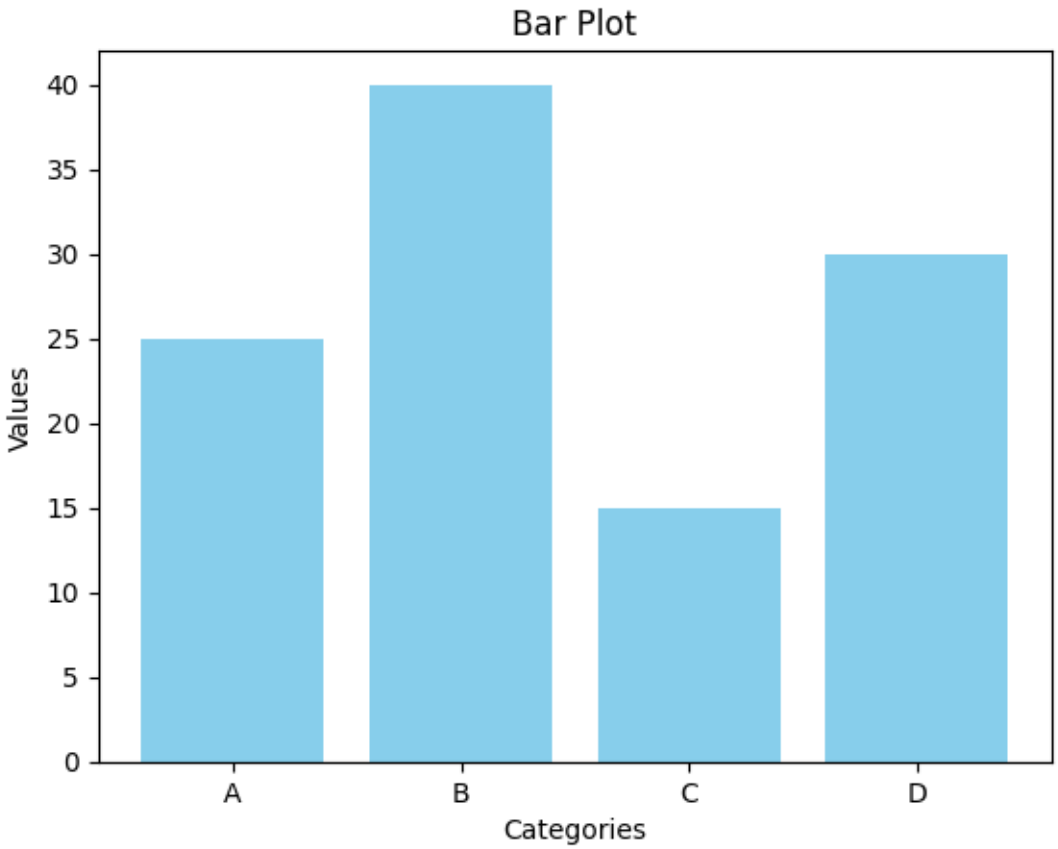
1 Line Plot:

[28]:
```
import matplotlib.pyplot as plt

x = [1, 2, 3, 4, 5]
y = [10, 12, 8, 15, 7]
plt.plot(x, y, marker='o')
plt.title("Line Plot")
plt.xlabel("X-axis")
plt.ylabel("Y-axis")
plt.show()

#output
```



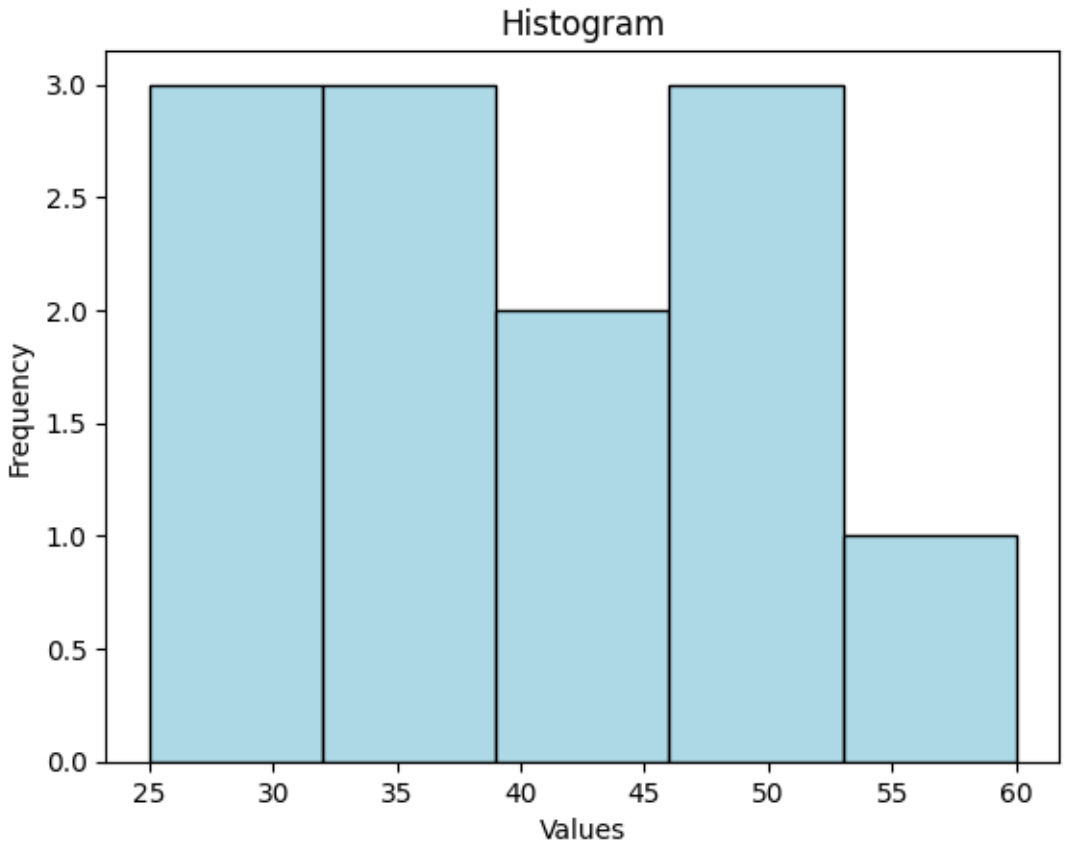
2 Bar Plot:

[29]:
```
categories = ['A', 'B', 'C', 'D']
values = [25, 40, 15, 30]
plt.bar(categories, values, color='skyblue')
plt.title("Bar Plot")
plt.xlabel("Categories")
plt.ylabel("Values")
plt.show()

#output
```



3 Histogram:

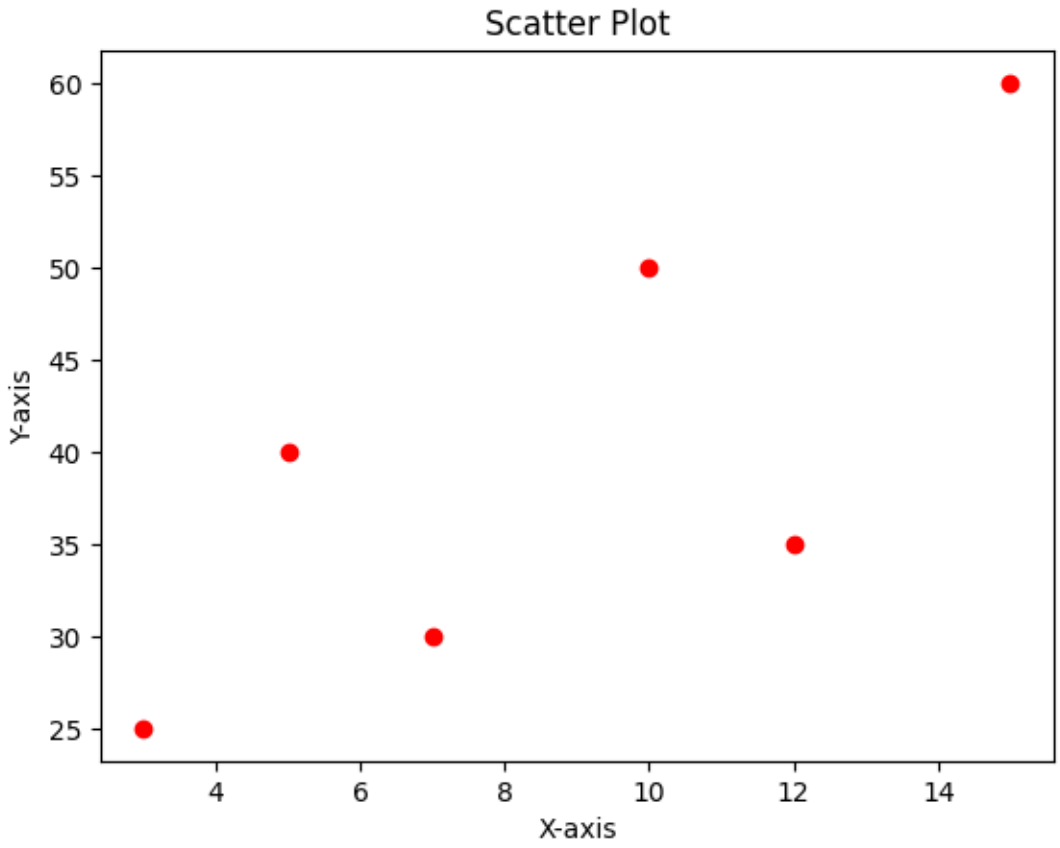
[30]:
```
data = [32, 45, 50, 28, 36, 42, 38, 25, 29, 52, 48, 60]
plt.hist(data, bins=5, color='lightblue', edgecolor='black')
plt.title("Histogram")
plt.xlabel("Values")
plt.ylabel("Frequency")
plt.show()

#output
```



4 Scatter Plot:

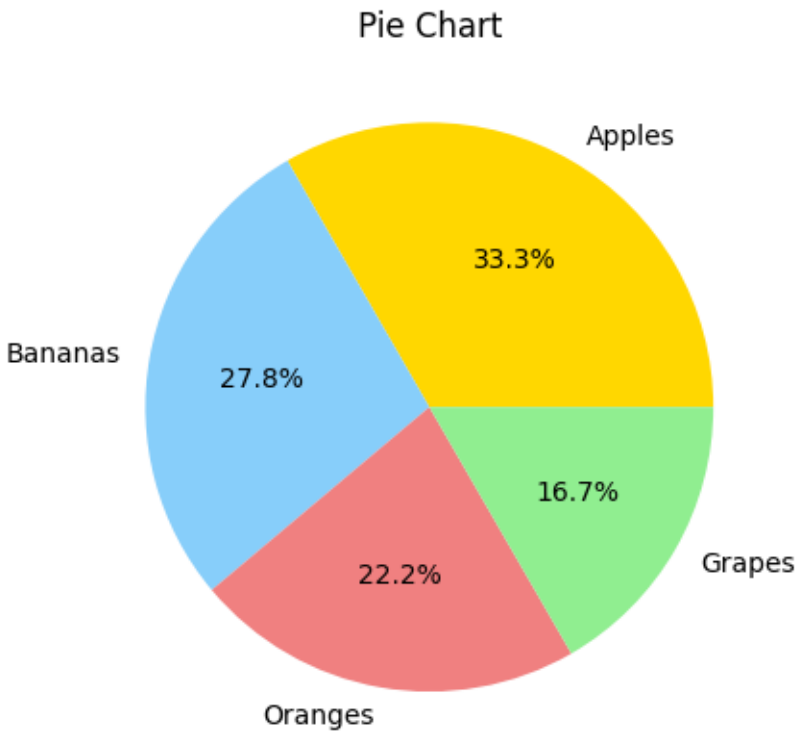
[31]:
```
x = [3, 5, 7, 10, 12, 15]
y = [25, 40, 30, 50, 35, 60]
plt.scatter(x, y, color='red', marker='o')
plt.title("Scatter Plot")
plt.xlabel("X-axis")
plt.ylabel("Y-axis")
```

```
plt.show()

#output
```



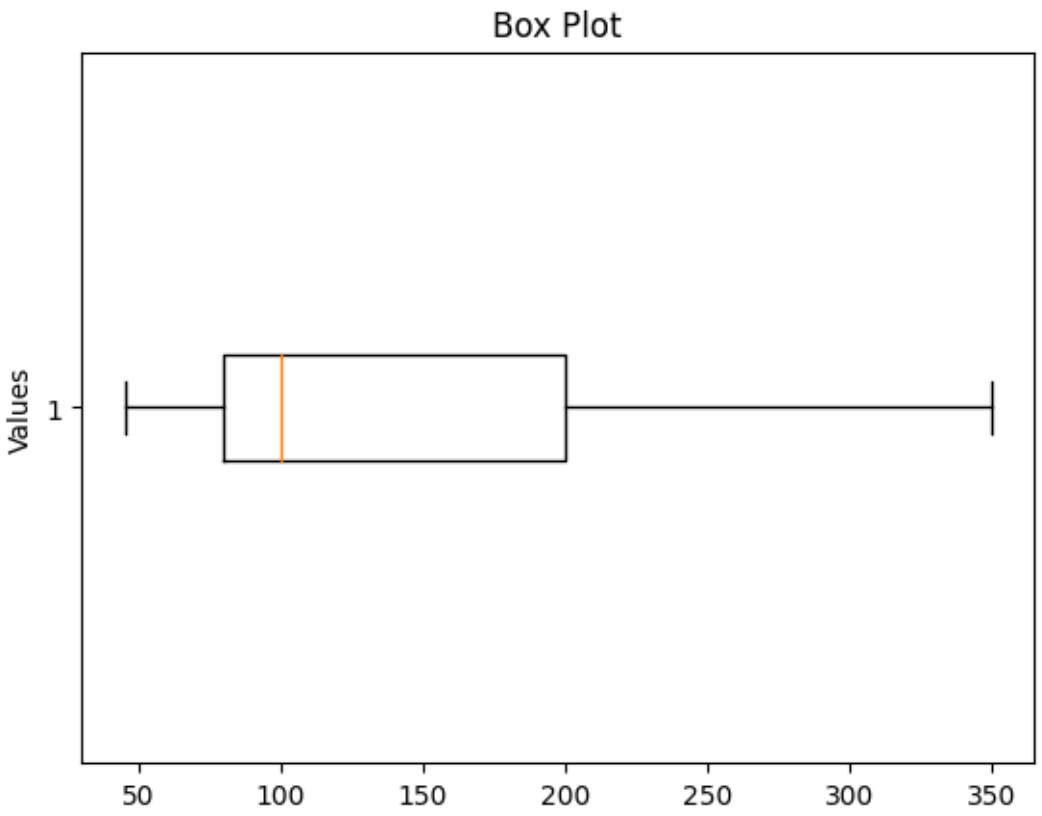
5 Pie Chart:

[32]:
```
labels = ['Apples', 'Bananas', 'Oranges', 'Grapes']
sizes = [30, 25, 20, 15]
plt.pie(sizes, labels=labels, autopct='%1.1f%%', colors=['gold',␣
 ↪'lightskyblue', 'lightcoral', 'lightgreen'])
plt.title("Pie Chart")
plt.show()

#output
```



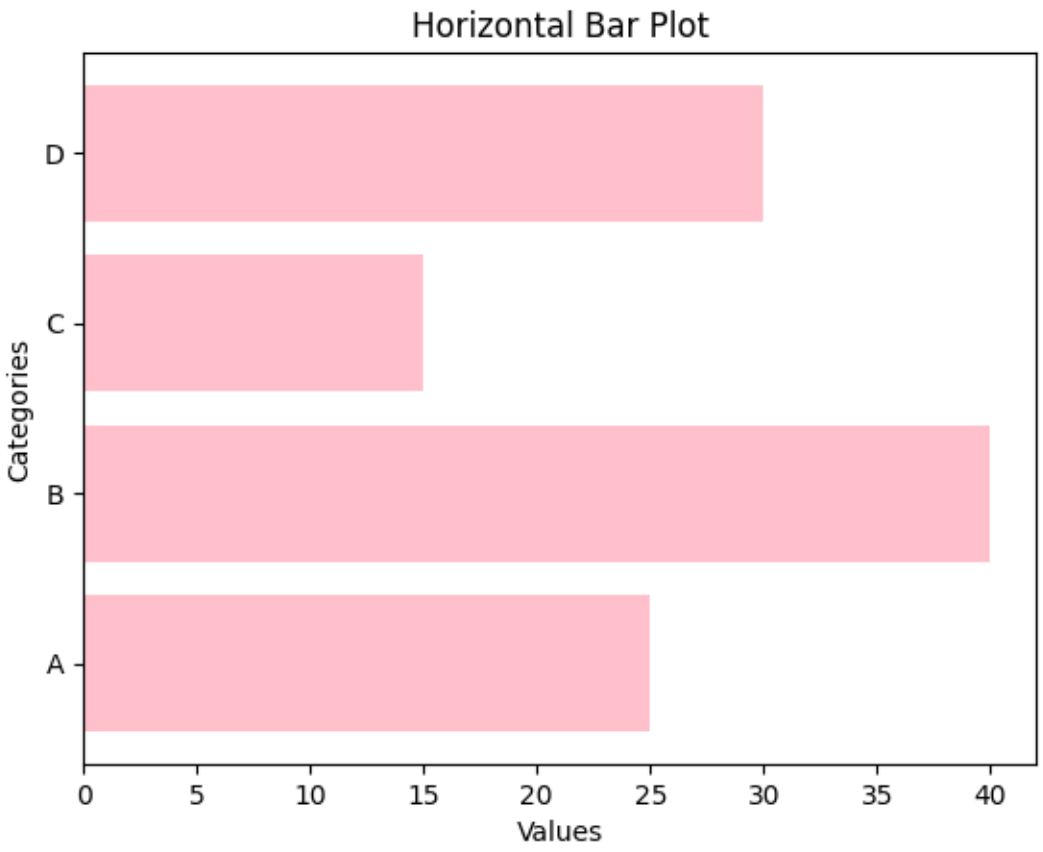
6 Box Plot:

[40]:
```
data = [45, 60, 75,300, 80,350, 90, 95, 100, 110, 120,250,200]
plt.boxplot(data,vert=False,)
plt.title("Box Plot")
plt.ylabel("Values")
plt.show()

#output
```



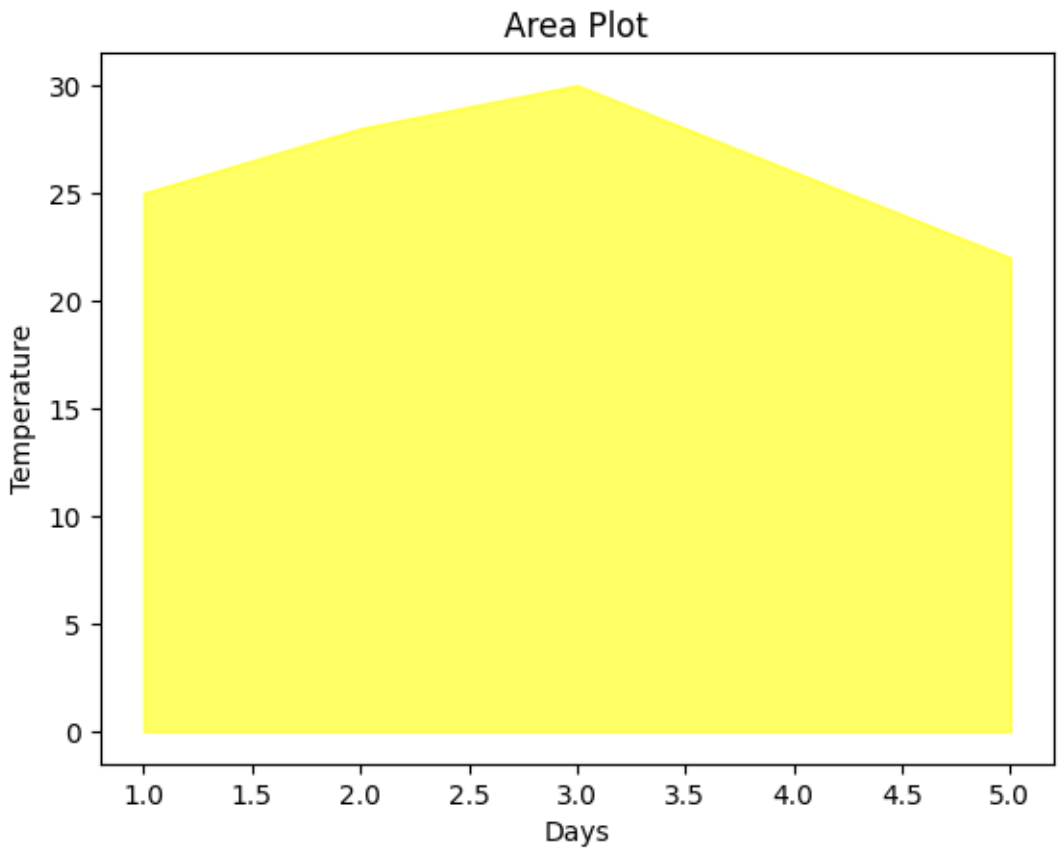
7 Barh Plot:

[41]:
```
categories = ['A', 'B', 'C', 'D']
values = [25, 40, 15, 30]
plt.barh(categories, values, color='pink')
plt.title("Horizontal Bar Plot")
plt.xlabel("Values")
plt.ylabel("Categories")
plt.show()

#output
```



8 Area Plot:

[43]:
```
days = [1, 2, 3, 4, 5]
temperature = [25, 28, 30, 26, 22]
plt.fill_between(days, temperature, color='yellow', alpha=0.6)
plt.title("Area Plot")
plt.xlabel("Days")
plt.ylabel("Temperature")
plt.show()

#output
```

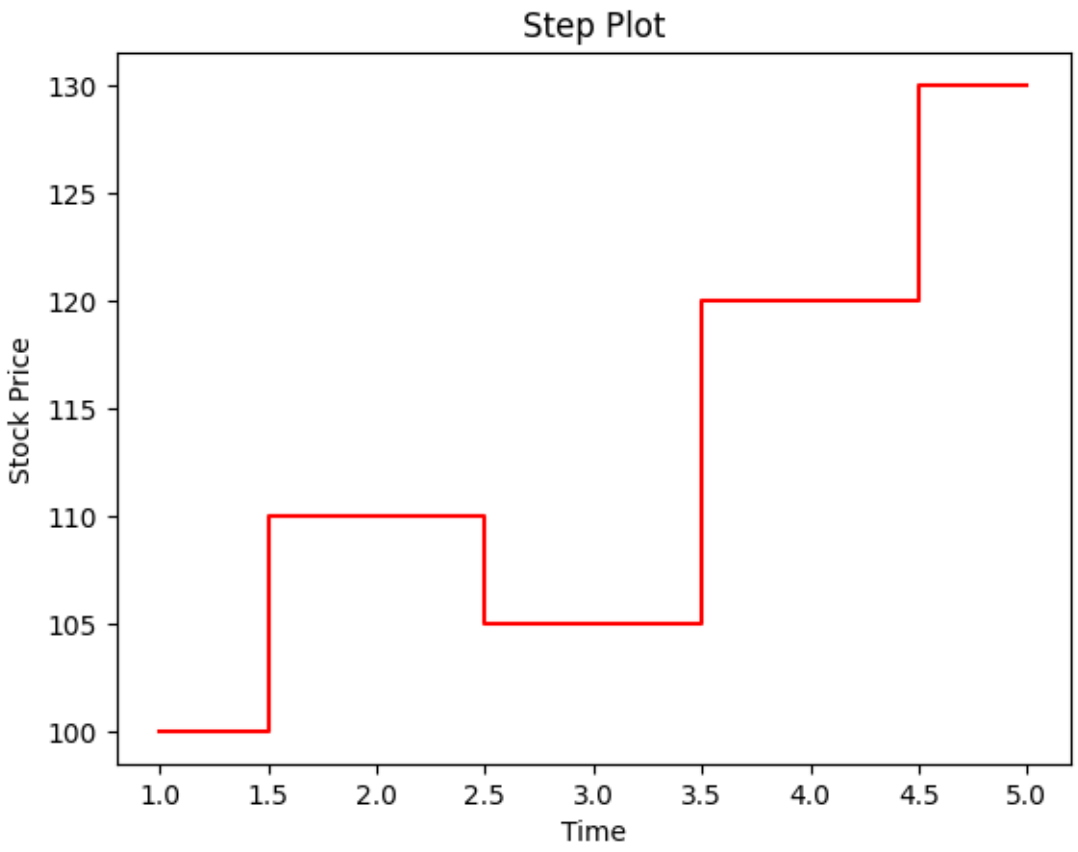


9 Stacked Bar Plot:

[27]:
```
categories = ['A', 'B', 'C', 'D']
values1 = [25, 40, 15, 30]
values2 = [15, 20, 30, 25]
plt.bar(categories, values1, color='green', label='Value 1')
plt.bar(categories, values2, bottom=values1, color='orange', label='Value 2')
plt.title("Stacked Bar Plot")
plt.xlabel("Categories")
plt.ylabel("Values")
plt.legend()
plt.show()

#output
```

10 Step Plot:

[26]:
```
time = [1, 2, 3, 4, 5]
stock_price = [100, 110, 105, 120, 130]
plt.step(time, stock_price, color='red', where='mid')
plt.title("Step Plot")
plt.xlabel("Time")
plt.ylabel("Stock Price")
plt.show()

#output
```


Step Plot
Stock Price
130
125
120
115
110
105
100
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
Time