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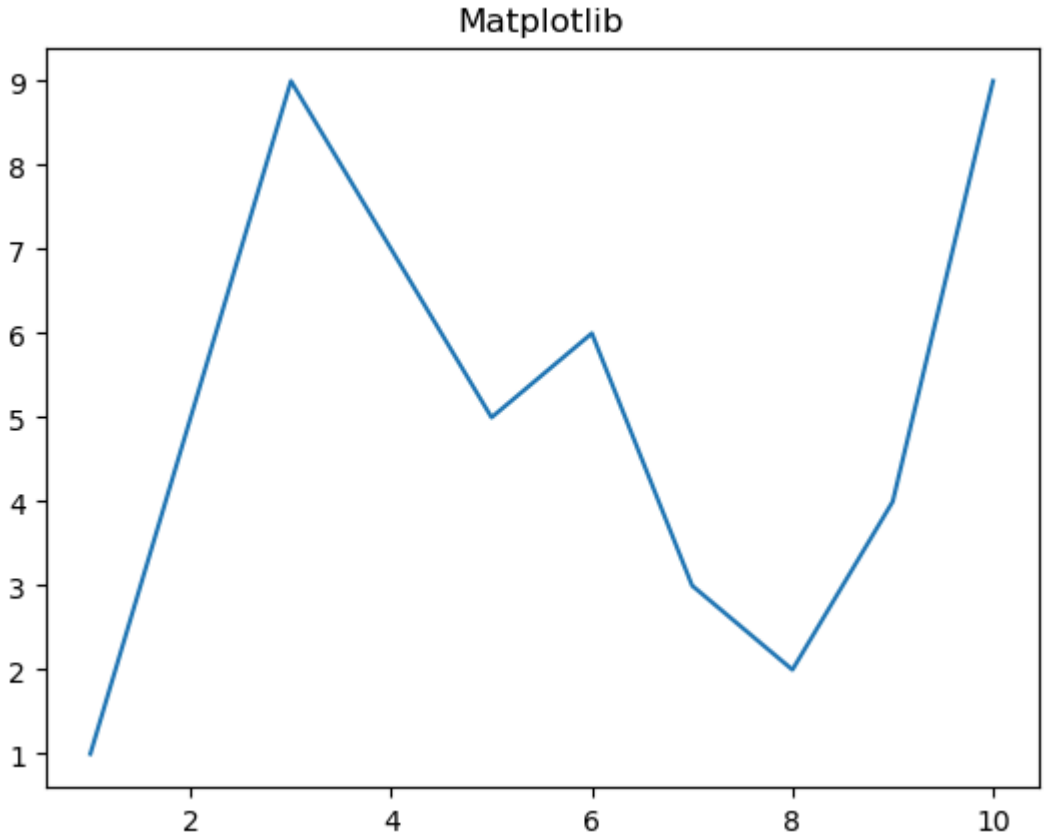
# Python for Data Science - 2305CS303

## Lab - 12

In [2]:
```
import matplotlib.pyplot as plt
```

In [28]:
```
x = range(1,11)
y = [1,5,9,7,5,6,3,2,4,9]
plt.plot(x,y)
plt.title("Matplotlib")
```

Out[28]: Text(0.5, 1.0, 'Matplotlib')

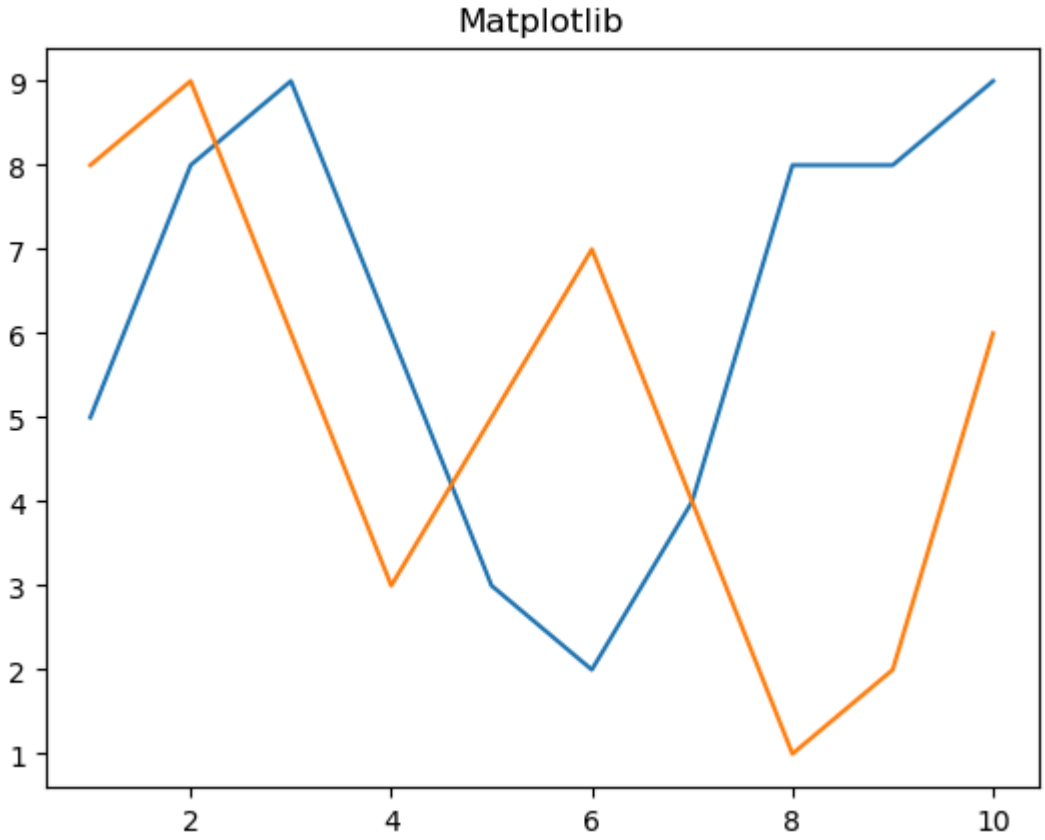



In [29]:
```
x = [1,2,3,4,5,6,7,8,9,10]
cxMarks = [5,8,9,6,3,2,4,8,8,9]
cyMarks = [8,9,6,3,5,7,4,1,2,6]

plt.plot(x,cxMarks)
```

```
plt.plot(x,cyMarks)
plt.title("Matplotlib")
```

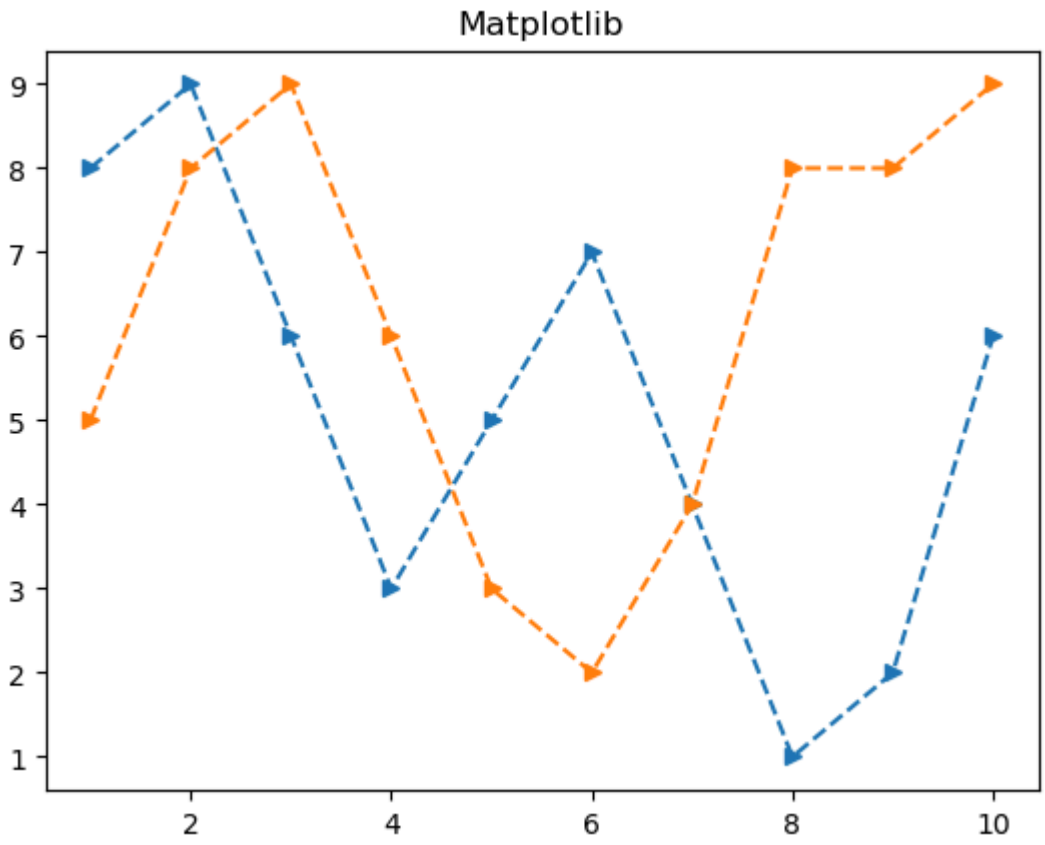
Out[29]: Text(0.5, 1.0, 'Matplotlib')




In [30]:
```
x = range(1,11,1)
cxMarks= [8,9,6,3,5,7,4,1,2,6]
cyMarks= [5,8,9,6,3,2,4,8,8,9]

plt.plot(x,cxMarks,linestyle='dashed',marker='>')
plt.plot(x,cyMarks,linestyle='dashed',marker='>')
plt.title("Matplotlib")
```

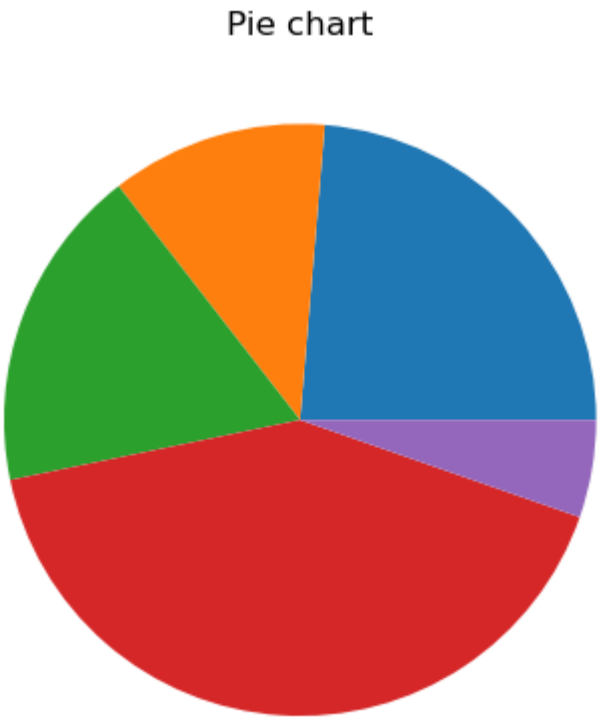
Out[30]: Text(0.5, 1.0, 'Matplotlib')




## 04) WAP to demonstrate the use of Pie chart.

In [31]:
```
adn = [200,100,150,350,45]
dept = ['MCA','BCA','MBA','BBA','BTECH']
c = ['r','g','b','y','c']
plt.pie(adn)
plt.title("Pie chart")
```

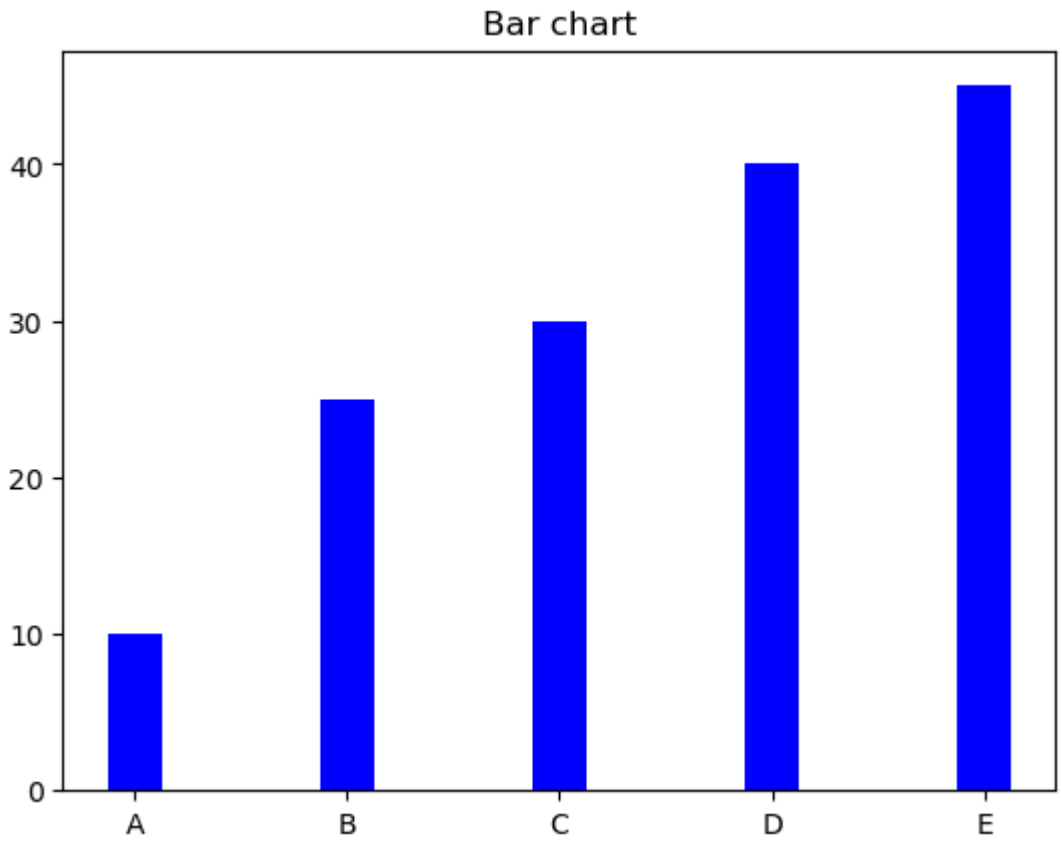
Out[31]:
```
Text(0.5, 1.0, 'Pie chart')
```




## 05) WAP to demonstrate the use of Bar chart.

In [32]:
```
x = ['A','B','C','D','E']
y = [10,25,30,40,45]
plt.bar(x,y,width=0.25,color='b')
plt.title("Bar chart")
```

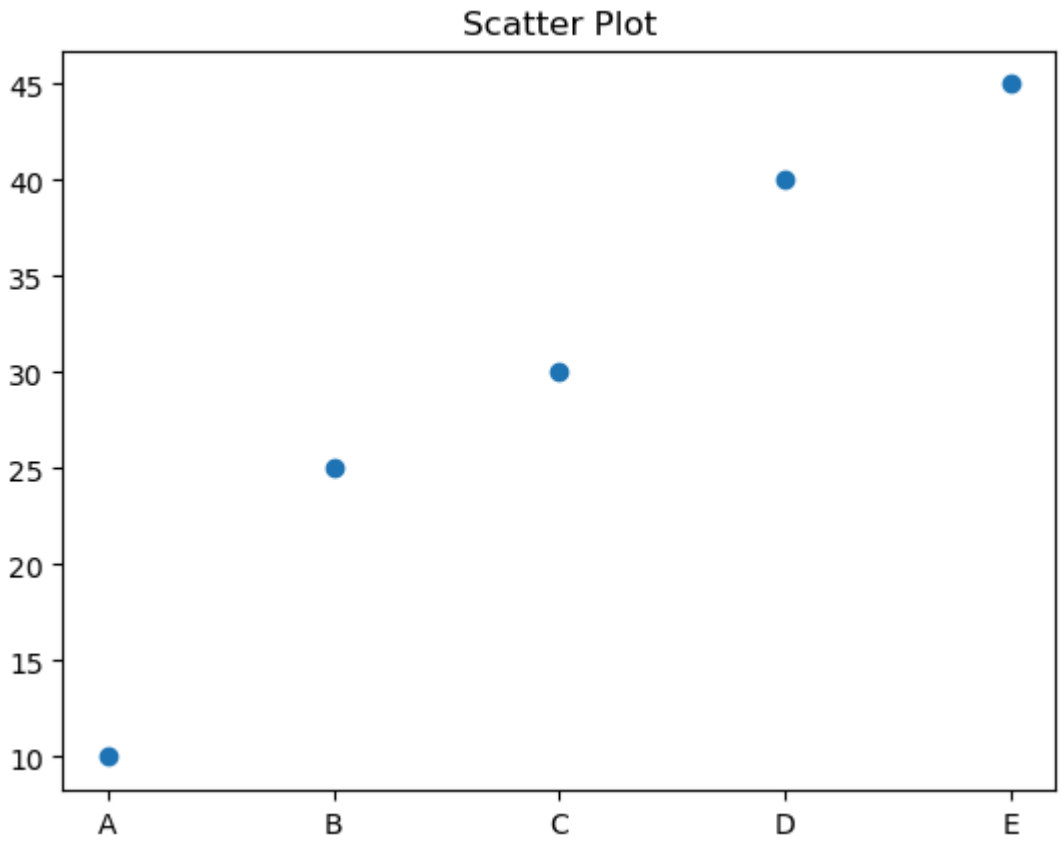
Out[32]:
```
Text(0.5, 1.0, 'Bar chart')
```




## 06) WAP to demonstrate the use of Scatter Plot.

In [33]:
```
x = ['A','B','C','D','E']
y = [10,25,30,40,45]
plt.scatter(x,y)
plt.title("Scatter Plot")
```

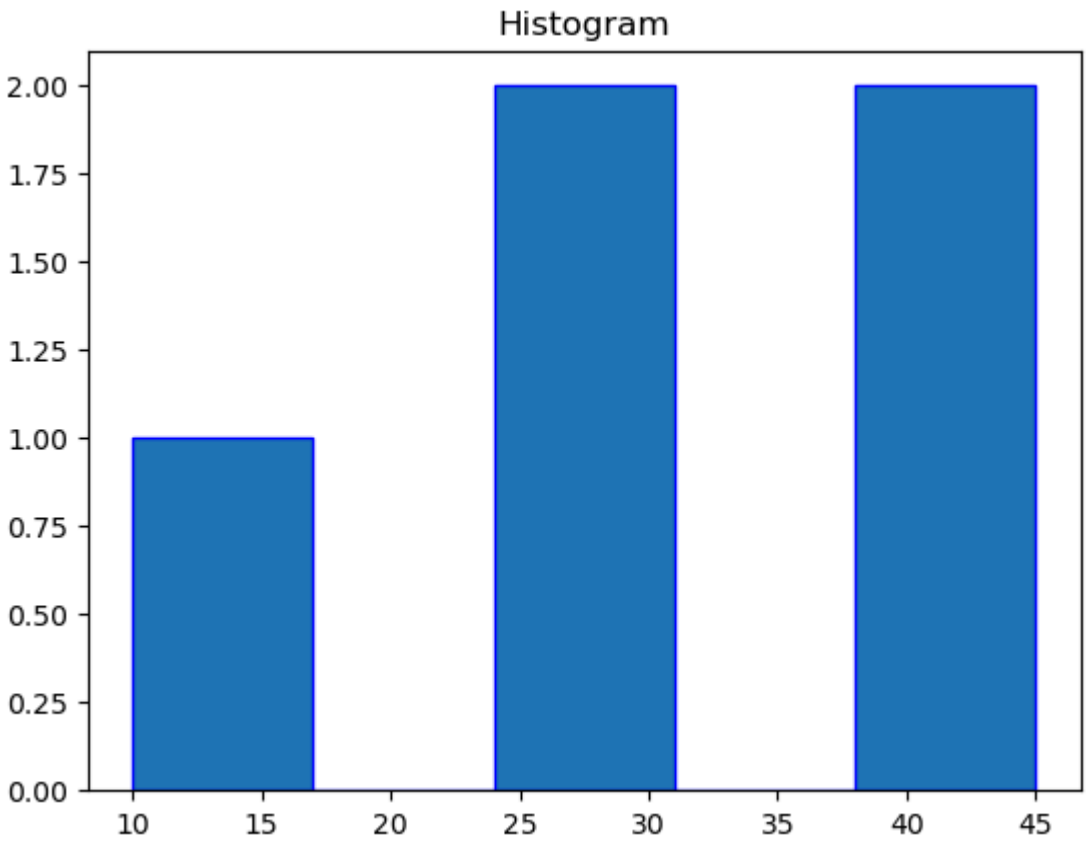
Out[33]:
```
Text(0.5, 1.0, 'Scatter Plot')
```




## 07) WAP to demonstrate the use of Histogram.

In [34]:
```
x = [10,25,30,40,45]
plt.hist(x,bins=5,edgecolor='b')
plt.title("Histogram")
```

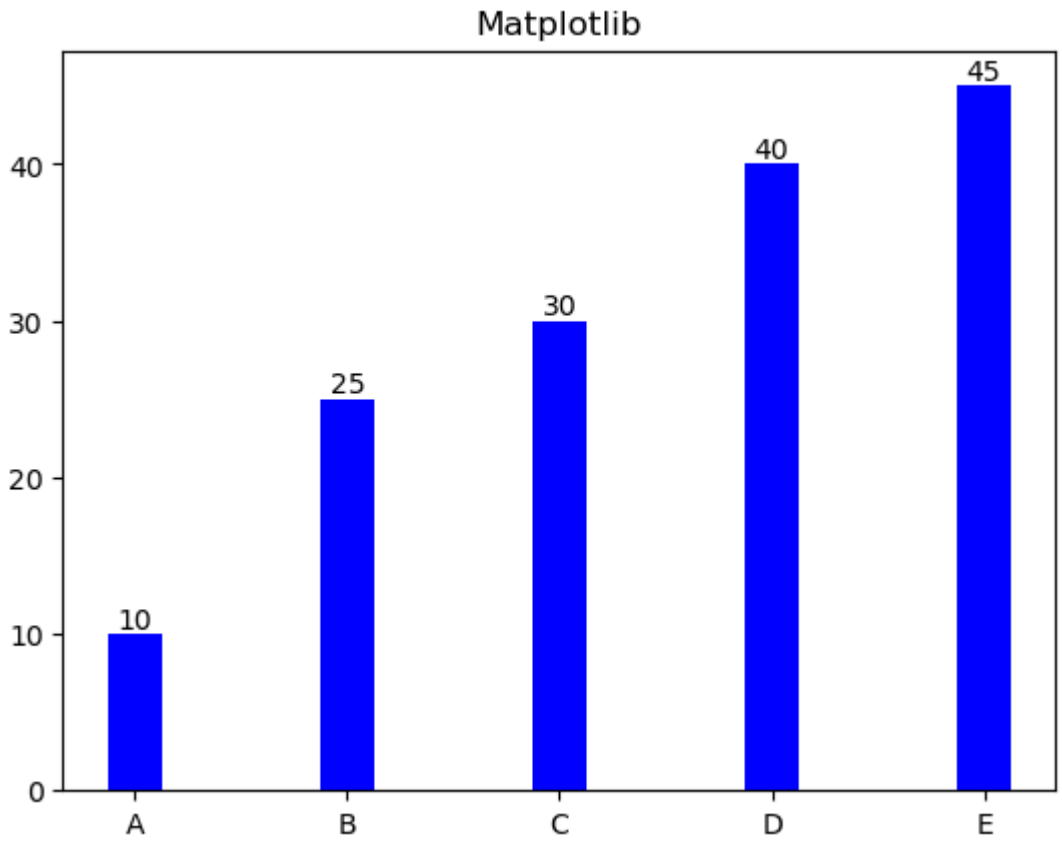
Out[34]:
```
Text(0.5, 1.0, 'Histogram')
```




## 08) WAP to display the value of each bar in a bar chart using Matplotlib.

In [35]:
```
x = ['A','B','C','D','E']
y = [10,25,30,40,45]
bars = plt.bar(x,y,width=0.25,color='b')
plt.bar_label(bars)
plt.title("Matplotlib")
```

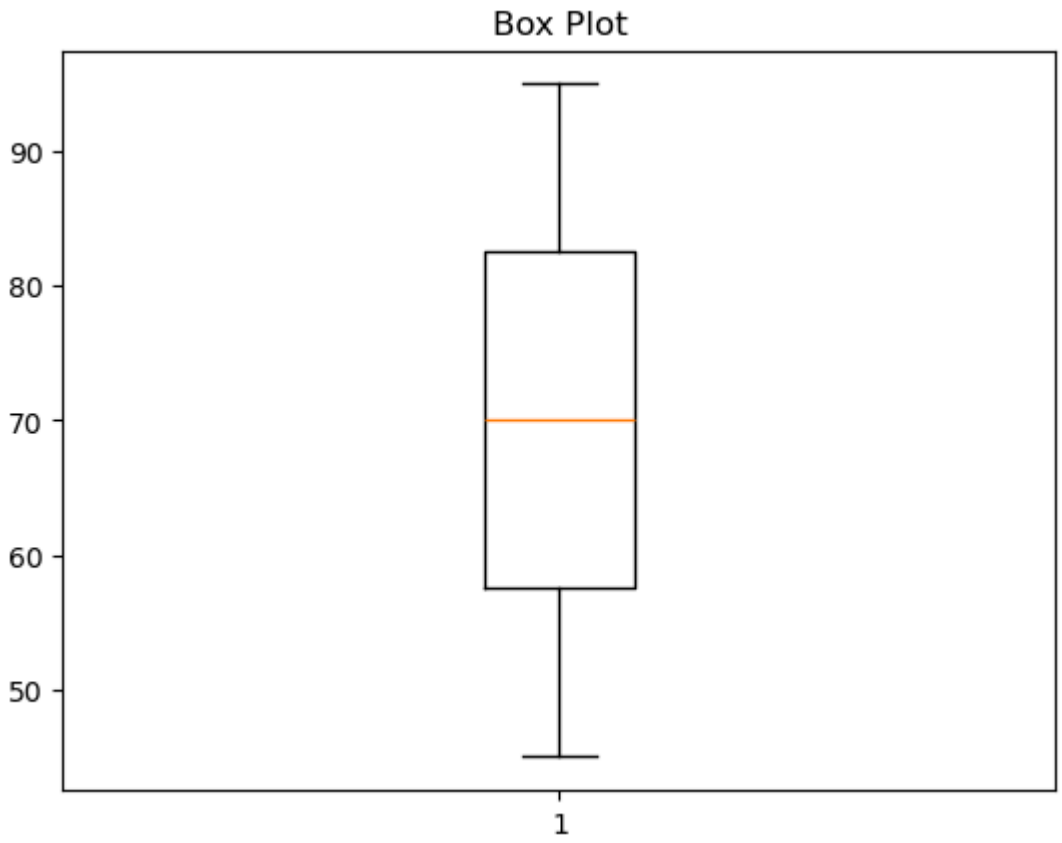
Out[35]:
```
Text(0.5, 1.0, 'Matplotlib')
```




## 09) WAP to create a Box Plot.

In [36]:
```
data = [45,50,55,60,65,70,75,80,85,90,95]
plt.boxplot(data)
plt.title("Box Plot")
```

Out[36]:
```
Text(0.5, 1.0, 'Box Plot')
```



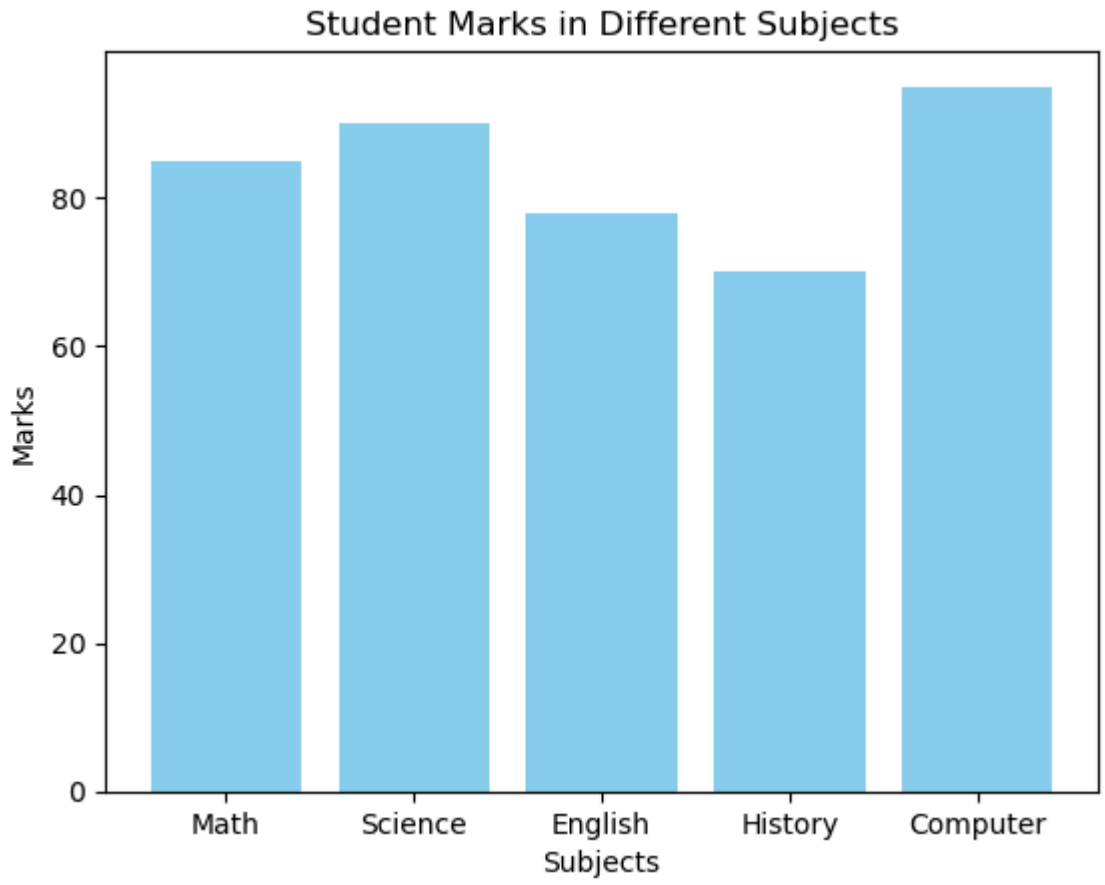

In [27]:
```python
import matplotlib.pyplot as plt

# Sample data
subjects = ["Math", "Science", "English", "History", "Computer"]
marks = [85, 90, 78, 70, 95]

# Create bar chart
plt.bar(subjects, marks, color="skyblue")

# Add labels and title
plt.xlabel("Subjects")
plt.ylabel("Marks")
plt.title("Student Marks in Different Subjects")

# Show chart
plt.show()
```


Student Marks in Different Subjects
Marks
0
20
40
60
80
Math
Science
English
History
Computer
Subjects

In [ ]: