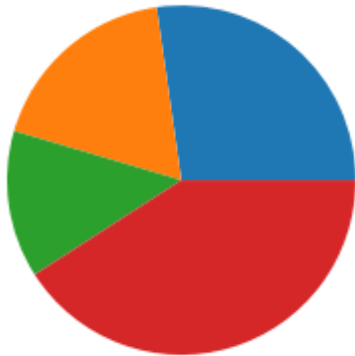
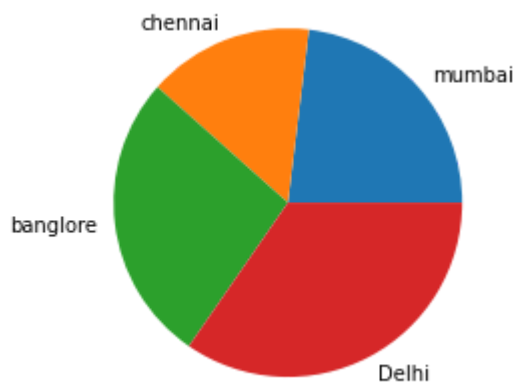


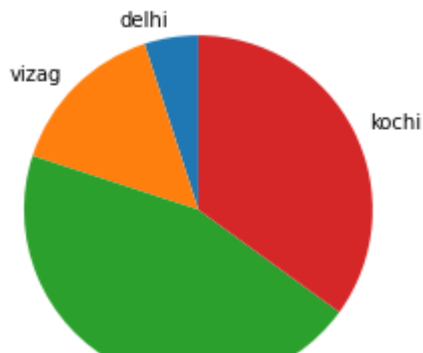
```
import matplotlib.pyplot as plt
import numpy as np
y = np.array([30, 20, 15, 45])
plt.pie(y)
plt.show()
```



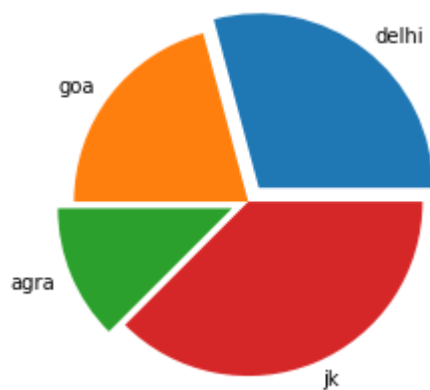
```
#2 labelling
import matplotlib.pyplot as plt
import numpy as np
y = np.array([30, 20, 35, 45])
mylabels = ["mumbai", "chennai", "banglore", "Delhi"]
plt.pie(y, labels = mylabels)
plt.show()
```



```
#3 angle
import matplotlib.pyplot as plt
import numpy as np
y = np.array([5, 15, 45, 35])
mylabels = ["delhi", "vizag", "agra", "kochi"]
plt.pie(y, labels = mylabels, startangle = 90)
plt.show()
```



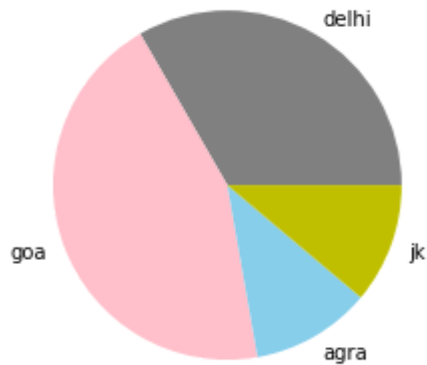
```
#4 labels and explode
import matplotlib.pyplot as plt
import numpy as np
y = np.array([35, 25, 15, 45])
mylabels = ["delhi", "goa", "agra", "jk"]
myexplode = [0.1, 0, 0.1, 0]
plt.pie(y, labels = mylabels, explode = myexplode)
plt.show()
```



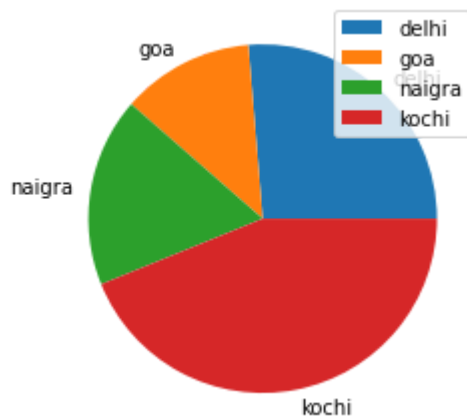
```
#5 shadow
import matplotlib.pyplot as plt
import numpy as np
y = np.array([30,30,20,20])
mylabels = ["delhi", "goa", "agra", "jk"]
myexplode = [0.2, 0, 0.1, 0]
plt.pie(y, labels = mylabels, explode = myexplode, shadow = True)
plt.show()
```



```
#6 colors
import matplotlib.pyplot as plt
import numpy as np
y = np.array([30,40,10,10])
mylabels = ["delhi", "goa", "agra", "jk"]
mycolors = ["grey", "pink", "skyblue", "y"]
plt.pie(y, labels = mylabels, colors = mycolors)
plt.show()
```

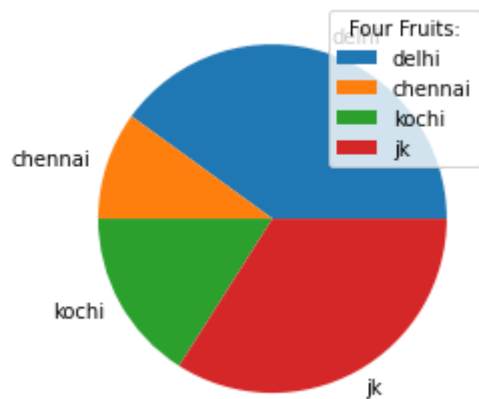


```
#7 legend
import matplotlib.pyplot as plt
import numpy as np
y = np.array([30,14,20,50])
mylabels = ["delhi", "goa", "naigra", "kochi"]
plt.pie(y, labels = mylabels)
plt.legend()
plt.show()
```

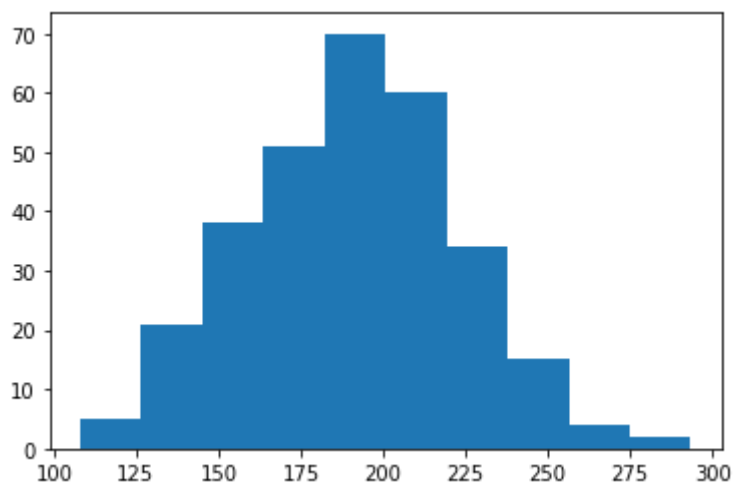


```
#8 title
import matplotlib.pyplot as plt
import numpy as np
y = np.array([40, 10, 16, 34])
mylabels = ["delhi", "chennai", "kochi", "jk"]
plt.pie(y, labels = mylabels)
```

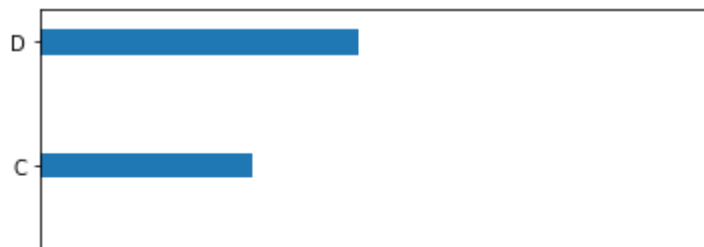
```
plt.legend(title = "Four Fruits:")
plt.show()
```



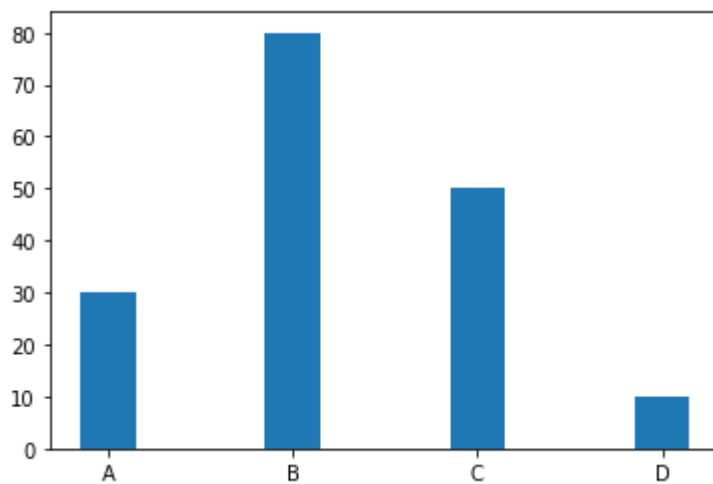
```
import matplotlib.pyplot as plt
import numpy as np
x = np.random.normal(190, 30, 300)
plt.hist(x)
plt.show()
```



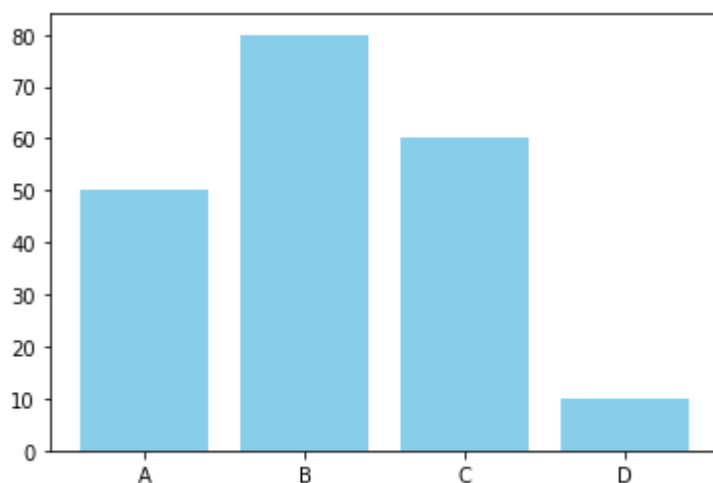
```
#1 horizontal
import matplotlib.pyplot as plt
import numpy as np
x = np.array(["A", "B", "C", "D"])
y = np.array([30, 20, 10, 15])
plt.barh(x, y, height = 0.2)
plt.show()
```



```
#2 width
import matplotlib.pyplot as plt
import numpy as np
x = np.array(["A", "B", "C", "D"])
y = np.array([30, 80, 50, 10])
plt.bar(x, y, width = 0.3)
plt.show()
```

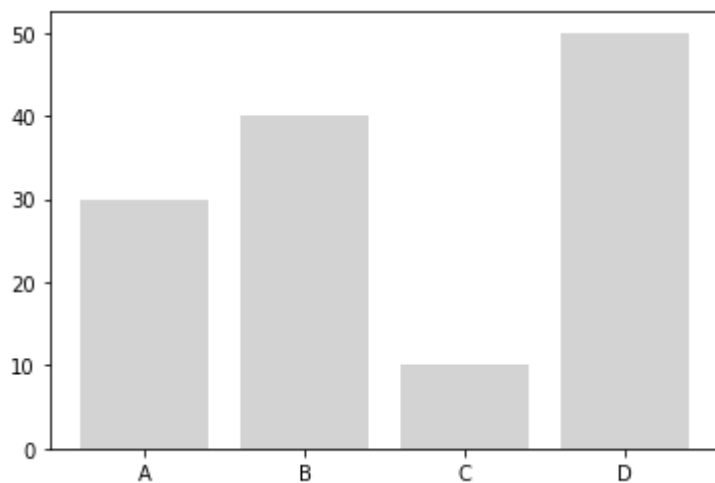


```
#3 color
import matplotlib.pyplot as plt
import numpy as np
x = np.array(["A", "B", "C", "D"])
y = np.array([50, 80, 60, 10])
plt.bar(x, y, color = "skyblue")
plt.show()
```

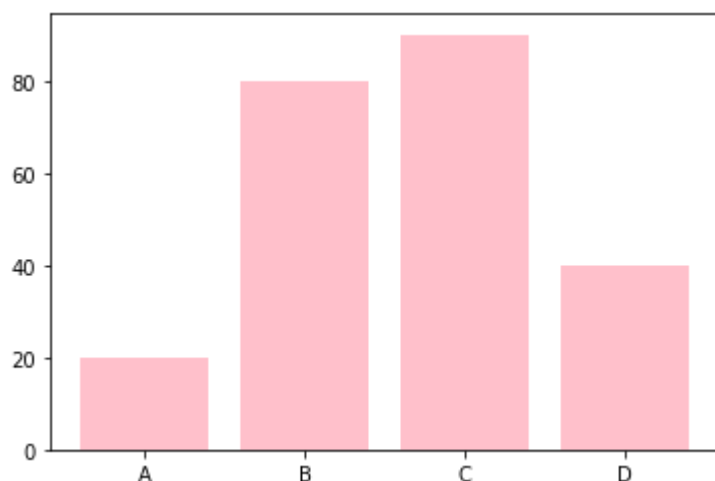


```
#4 color
```

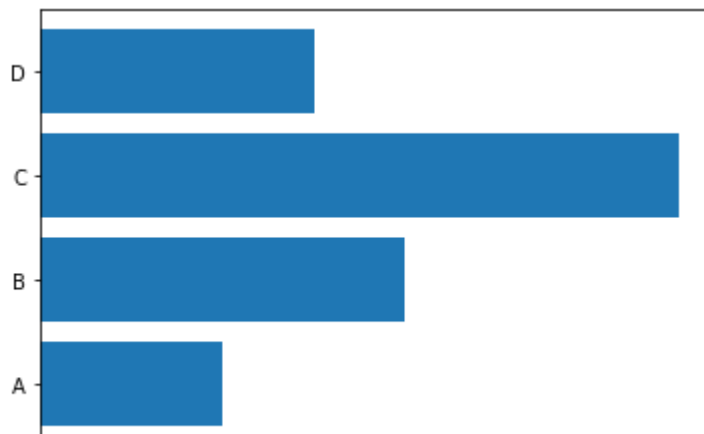
```
import matplotlib.pyplot as plt
import numpy as np
x = np.array(["A", "B", "C", "D"])
y = np.array([30, 40, 10, 50])
plt.bar(x, y, color = "lightgrey")
plt.show()
```



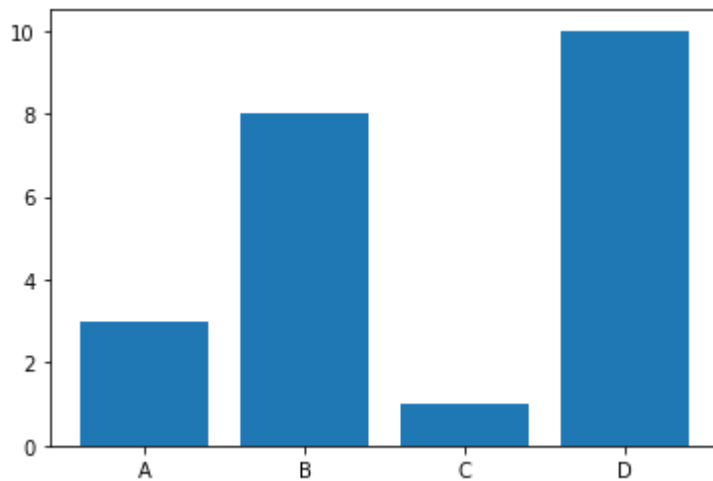
```
#5 colour
import matplotlib.pyplot as plt
import numpy as np
x = np.array(["A", "B", "C", "D"])
y = np.array([20, 80, 90, 40])
plt.bar(x, y, color = "pink")
plt.show()
```



```
#6 horizontal
import matplotlib.pyplot as plt
import numpy as np
x = np.array(["A", "B", "C", "D"])
y = np.array([20, 40, 70, 30])
plt.barh(x, y)
plt.show()
```



```
#7 bar graph
import matplotlib.pyplot as plt
import numpy as np
x = np.array(["A", "B", "C", "D"])
y = np.array([3, 8, 1, 10])
plt.bar(x,y)
plt.show()
```

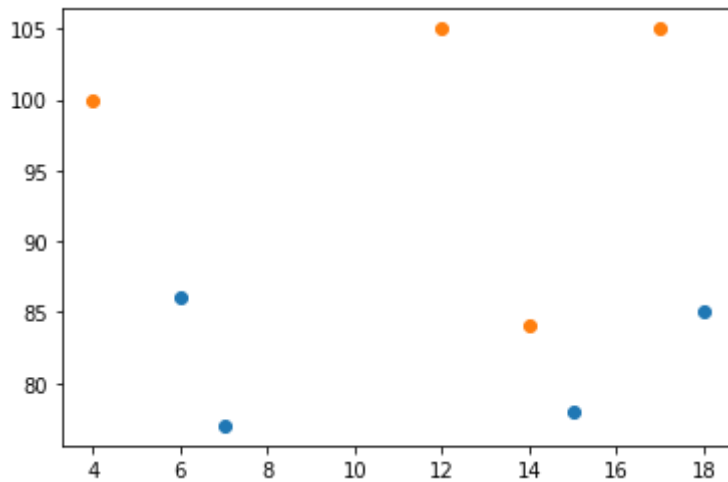


```
#1 scatter
import matplotlib.pyplot as plt
import numpy as np
x = np.array([5,17,18])
y = np.array([90,80,86])
plt.scatter(x, y)
plt.show()
```



```
plt.show()#2 2 plots
import matplotlib.pyplot as plt
import numpy as np
x = np.array([15,7,18,6])
y = np.array([78,77,85,86])
plt.scatter(x, y)
x = np.array([4,17,14,12])
y = np.array([100,105 ,84,105])
plt.scatter(x, y)
```

<matplotlib.collections.PathCollection at 0x7f7b434d0b50>

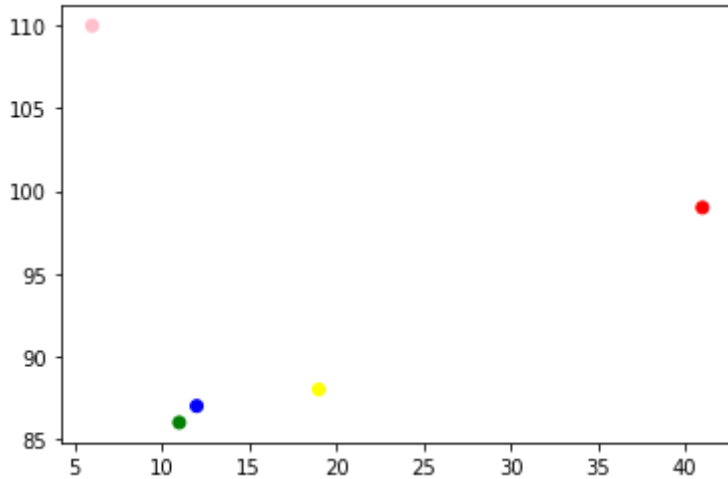


```
#3 color
import matplotlib.pyplot as plt
import numpy as np
x = np.array([12,9,4,10,12,9])
y = np.array([79,80,87,88,91,86])
plt.scatter(x, y, color = 'pink')
x = np.array([7,3,11,4,7,14])
y = np.array([105,90,94,100,80,85])
plt.scatter(x, y, color = '#48c999')
plt.show()
```

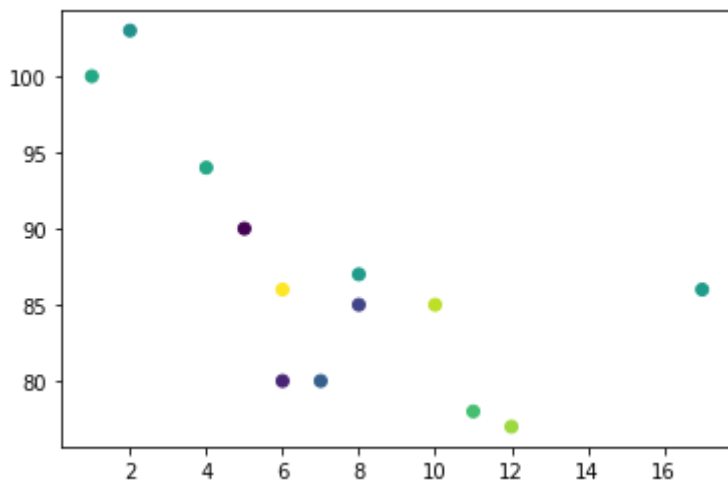




```
#4 own colors with markers
import matplotlib.pyplot as plt
import numpy as np
x = np.array([41,11,12,19,6])
y = np.array([99,86,87,88,110])
colors = np.array(["r","g","blue","yellow","pink"])
plt.scatter(x, y, c=colors)
plt.show()
```



```
#5 color map
import matplotlib.pyplot as plt
import numpy as np
x = np.array([5,6,8,7,1,17,2,8,4,11,12,10,6])
y = np.array([90,80,85,80,100,86,103,87,94,78,77,85,86])
colors = np.array([0, 10, 20, 30, 60, 55, 50, 55, 60, 70, 85, 90, 100])
plt.scatter(x, y, c=colors, cmap='viridis')
plt.show()
```



---

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