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Practical No. 01

Q.1) Draw a histogram from a following income distribution.

Monthly Income	1000-2000	2000-3000	3000-4000	4000-5000
Frequency	120	125	180	150

=>

import matplotlib.pyplot as plt

income=['1000-2000','2000-3000','3000-4000','4000-5000']

frq=[120,125,180,150]

bins=4

plt.bar(income,frq,color='blue')
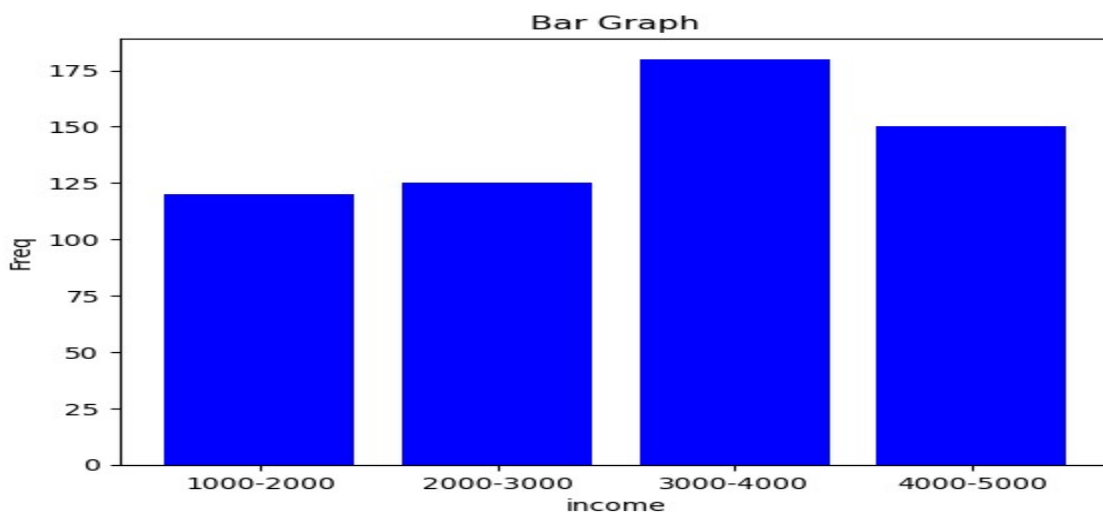
plt.xlabel('income')

plt.ylabel('Freq')

plt.title(Bar Graph)

plt.show()

Q2) Draw the less than cumulative frequency curve from the following frequency distribution.

IQ	Frequency
60-69	25
70-79	22
80-89	34
90-99	51
100-109	21
110-119	12
120-129	5

=>

```
import matplotlib.pyplot as plt

IQ=[69.5,79.5,89.5,99.5,109.5,119.5,129.5]

feq=[25,47,81,132,153,165,170]

plt.plot(IQ,feq,label='LCF')

plt.xlabel('IQ')

plt.ylabel('freq')

plt.legend()

plt.title('less than cummulative graph ')

plt.show()
```
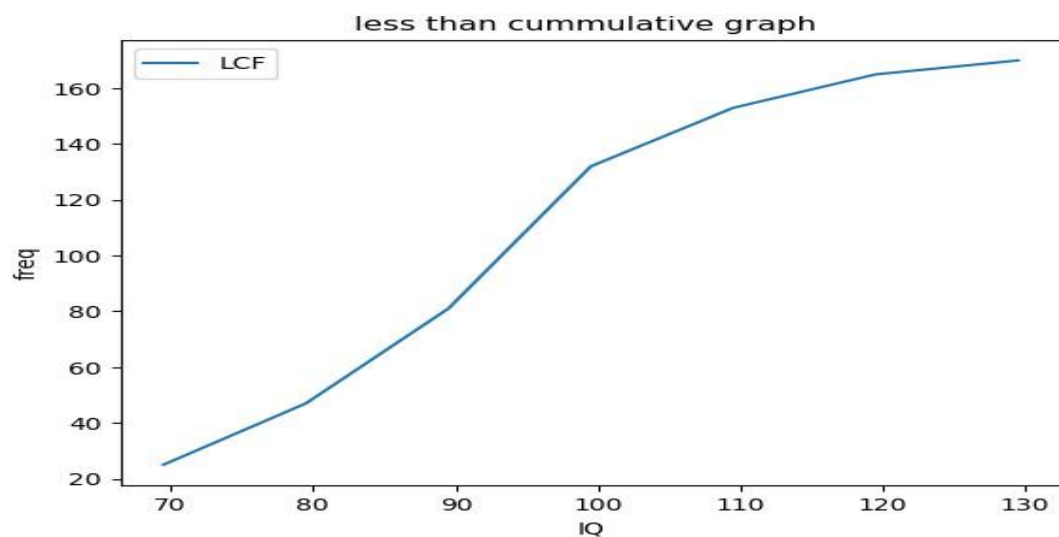
Q3) The following table gives the frequency distribution of weekly wages of 65 employees of a company. Draw more than frequency curve.

Wages (Rs)	250-259	260-269	270-279	280-289	290-299	300-309	310-319
No of Employees	8	10	16	14	10	5	2

=>

import matplotlib.pyplot as plt

Wages=[249.5,259.5,269.5,279.5,289.5,299.5,309.5]

feq=[65,57,47,31,17,7,2]

plt.plot(Wages,feq,label='MCF')

plt.xlabel('Wages')

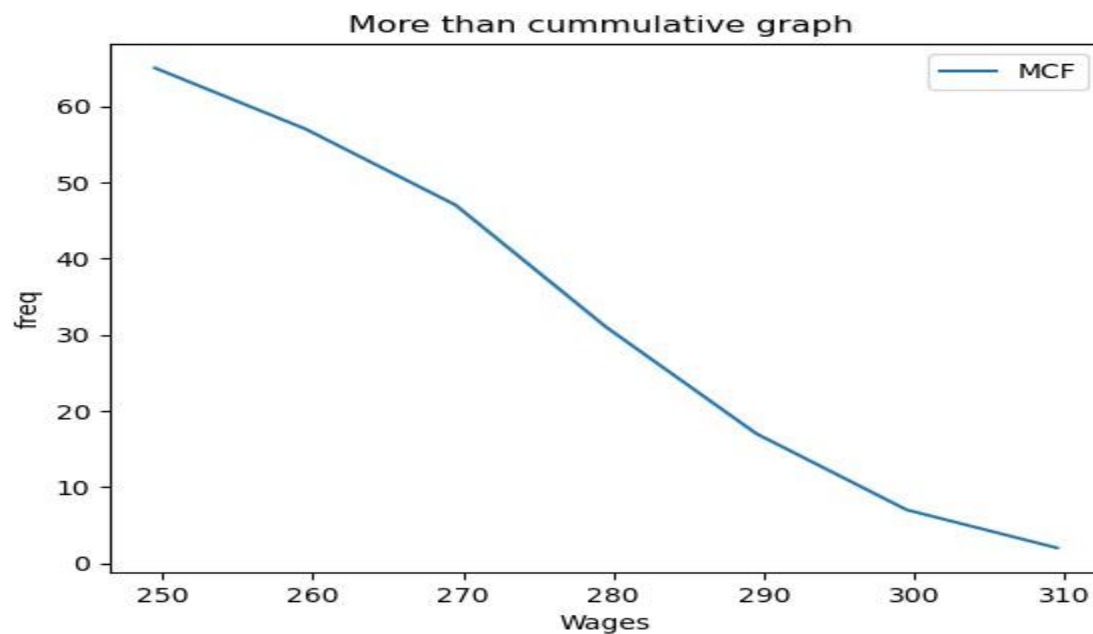plt.ylabel('freq')

plt.legend()

plt.title('More than cummulative graph ')

plt.show()

Q4) Represent the following data using simple bar diagram.

Class Interval	010-20	20-30	30-40	40-50	50-60
Frequency	45	60	48	35	40

=>

import matplotlib.pyplot as plt

income=['10-20','20-30','30-40','40-50','50-60']

frq=[45,60,48,35,40]

bins=4

plt.bar(income,frq,color='blue')
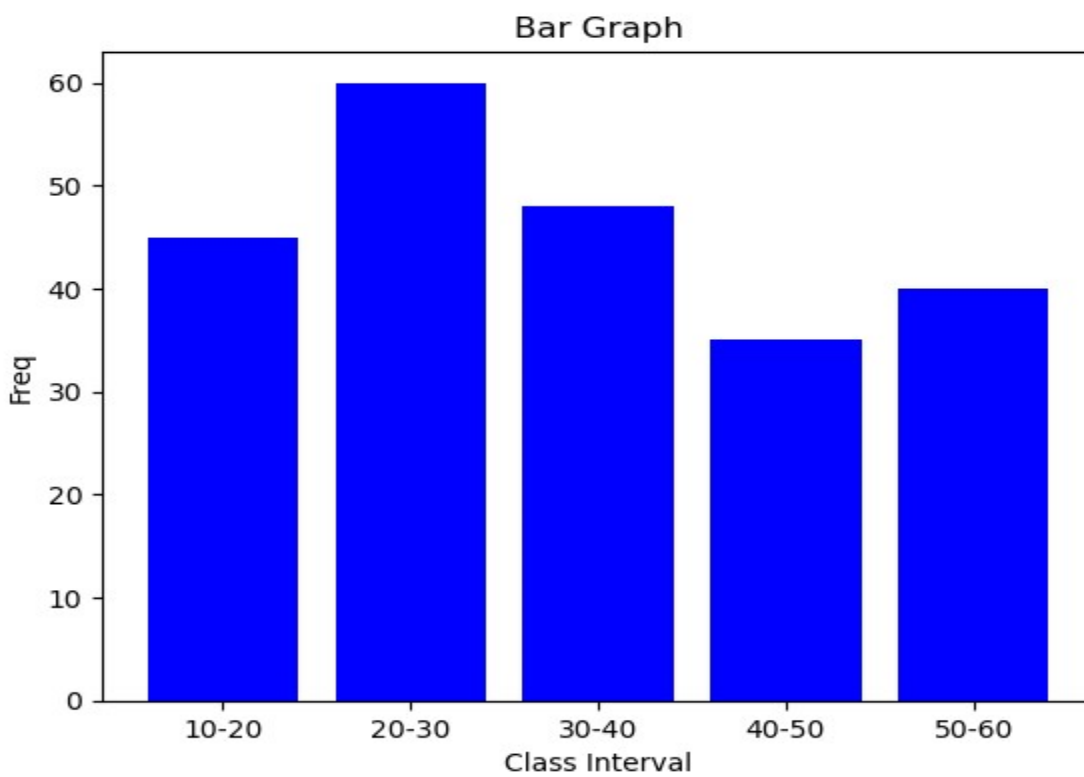
plt.xlabel('Class Interval')

plt.ylabel('Freq')

plt.title('Bar Graph')

plt.show()

Q5) Draw a Pie Diagram for the following data.

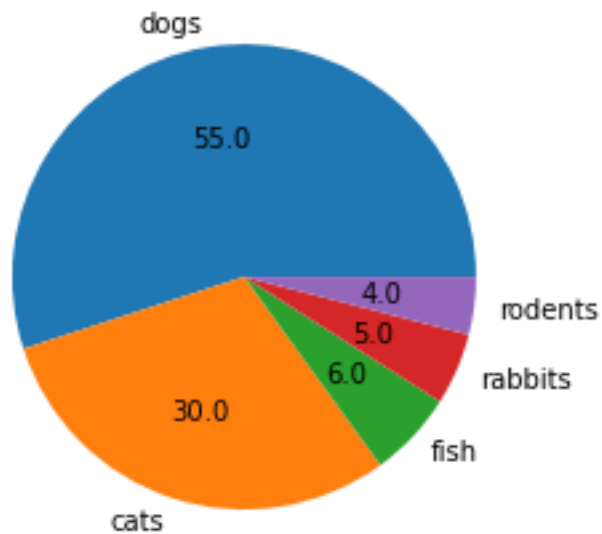|	
Dogs	**55%**
Cats	**30%**
Fish	**6%**
Rabbits	**5%**
Rodents	**4%**

=>

import matplotlib.pyplot as plt

animals=["dogs","cats","fish","rabbits","rodents"]

values=[55,30,6,5,4]

plt.pie(values,labels=animals,autopct='%.1f')

plt.show()

Q6) Draw a pie diagram for the following data.

Expenses	Rent	Grocery	Transport	Current	School Fee	Savings
Amount	7000	3000	800	300	2000	1900

=>

import matplotlib.pyplot as plt

exps=["rent","grocery","transport","current","school_fees","savings"]

amount=[7000,3000,800,300,2000,1900]

```
plt.pie(amount,labels=exps,autopct='%.1f')

plt.show()
```