# pip install numpy

import statistics as st

import numpy as np

input\_x=[]

input\_y=[]

n=input("enter number of elements:")

for i in range(0,n):

input\_x.append(input("enter x:"))

input\_y.append(input("enter y:"))

x=np.array(input\_x, dtype =np.float64)

y=np.array(input\_y, dtype =np.float64)

xy=[]

x\_square=[]

x\_mean=st.mean(x)

y\_mean=st.mean(y)

xy\_mean=st.mean(x\*y)

x\_square\_mean=st.mean(x\*\*2)

best\_m=(x\_mean\*y\_mean - xy\_mean)/(x\_mean\*\*2-x\_square\_mean)

best\_c=y\_mean-x\_mean\*best\_m

predict\_x=input("enter x for prediction:");

predict\_y=best\_m\*predict\_x+best\_c

print predict\_y

Output:

comp@comp-ThinkCentre-M720t:~/Desktop$ python linear.py

enter number of elements:5

enter x:1

enter y:5

enter x:2

enter y:4

enter x:3

enter y:6

enter x:4

enter y:5

enter x:5

enter y:6

enter x for prediction:1

4.600000000000002