#Install and set up Python and essential libraries like NumPy and pandas.

import pandas as pd

import numpy as np

print('version of numpy',np.\_\_version\_\_)

print('version of pandas',pd.\_\_version\_\_)

#numpy operations

a=[1,2,3,4]

print(a)

print('type of a',type(a))

b=np.array([1,2,3,4])

print(b)

print('type of b',type(b))

print('dimension of b is',b.ndim)

c=np.array([[1,2,3,4],[5,6,7,8]])

print(c)

print('type of c is',type(c))

print('dimension of c is',c.ndim)

d=np.array([[[1,2,3,4],[5,6,7,8]],[[11,22,33,44],[55,66,77,88]]])

print(d)

print('type of c is',type(d))

print('dimension of c is',d.ndim)

#pandas operation

data={'name':['alice','bob','charlie'],'sec':['A','B','C']}

df=pd.DataFrame(data)

print(df)

print('columns in dataframe',df.columns)