import random

import uuid

import pymongo

import matplotlib.pyplot as plt

import numpy as np

import string

//产生随机数元组，包括int，float，string，dict类型数据

def getRandomInt():

return random.randint(0, 10000)

def getRandonFloat():

return random.uniform(0, 1000)

def getRandomStr():

return uuid.uuid1()**import** random  
  
**import** uuid  
  
**import** pymongo  
  
**import** matplotlib.pyplot **as** plt  
  
**import** numpy **as** np  
  
**import** string  
  
  
  
**def** getRandomInt():  
  
 **return** random.randint(0, 10000)  
  
  
  
**def** getRandonFloat():  
  
 **return** random.uniform(0, 1000)  
  
  
  
**def** getRandomStr():  
  
 **return** uuid.uuid1()  
  
  
  
**def** getRandomDict():  
  
 node={**'number'**+str(i):random.randint(1,100) **for** i **in** range(5)}  
  
 **return** node  
  
  
  
**def** dataRandom():  
  
  
  
 **for** i **in** range(100000):  
  
 tup=(getRandomInt(),getRandonFloat(),getRandomStr(),getRandomDict())  
  
 **return** tup  
  
  
  
client=pymongo.MongoClient(host=**'127.0.0.1'**,port=27017)  
  
db=client.test  
  
db=client[**'test'**]  
  
p=db.persons  
  
p=db[**'persons'**]  
  
  
  
  
**for** i **in** range(10000):  
  
 person={**'id'**:i,**'data'**:dataRandom()}  
  
 result=p.insert\_one(person)  
  
 print(result)  
  
  
  
fig = plt.figure()  
  
ax1 = fig.add\_subplot(111)  
  
ax1.set\_title(**"scatter Plot"**)  
  
plt.xlabel(**'X'**)  
  
plt.ylabel(**'Y'**)  
  
**for** i **in** range(1000):  
  
 y = getRandonFloat()  
  
 x = i  
  
 ax1.scatter(x, y, c=**'r'**, marker=**'.'**)  
  
plt.legend(**'x1'**)  
  
plt.show()

def getRandomDict():

node={'number'+str(i):random.randint(1,100) for i in range(5)}

return node

def dataRandom():

//产生随机数据，用tuple存储

for i in range(100000):

tup=(getRandomInt(),getRandonFloat(),getRandomStr(),getRandomDict())

return tup

//将数据写进MongoDB中

client=pymongo.MongoClient(host='127.0.0.1',port=27017)

db=client.test

db=client['test']

p=db.persons

p=db['persons']

//将数据写进Mongodb中

for i in range(10000):

person={'id':i,'data':dataRandom()}

result=p.insert\_one(person)

print(result)

//将生成的数据打印成散点图

fig = plt.figure()

ax1 = fig.add\_subplot(111)

ax1.set\_title("scatter Plot")

plt.xlabel('X')

plt.ylabel('Y')

for i in range(1000):

y = getRandonFloat()

x = i

ax1.scatter(x, y, c='r', marker='.')

plt.legend('x1')

plt.show()