**Code:**

import matplotlib.pyplot as plt

import numpy as np

import pandas as pd

url = "https://archive.ics.uci.edu/ml/machine-learning-databases/iris/iris.data"

col\_names=["sepallength","sepalwidth","petallength","petalwidth","class"]

dataset=pd.read\_csv(url,names=col\_names)

dataset

dataset\_knn=dataset.values[:,0:4]

labels=dataset.values[:,-1]

dataset\_knn

import math

def distance(x1,x2):

distances=0.0

for i in range(len(x1)):

distances+=(x1[i]-x2[i])\*\*2

return (math.sqrt(distances))

testing\_data=dataset.values[54,0:4]

distances\_with\_labels = []

for i in range(len(dataset\_knn)):

dist = distance(testing\_data, dataset\_knn[i])

distances\_with\_labels.append((dist, labels[i]))

distances\_with\_labels.sort()

distances\_cumm.sort()

distances\_with\_labels

k = 10

top\_k\_neighbors = distances\_with\_labels[:k]

class\_counts = {}

for dist, label in top\_k\_neighbors:

class\_counts[label] = class\_counts.get(label, 0) + 1

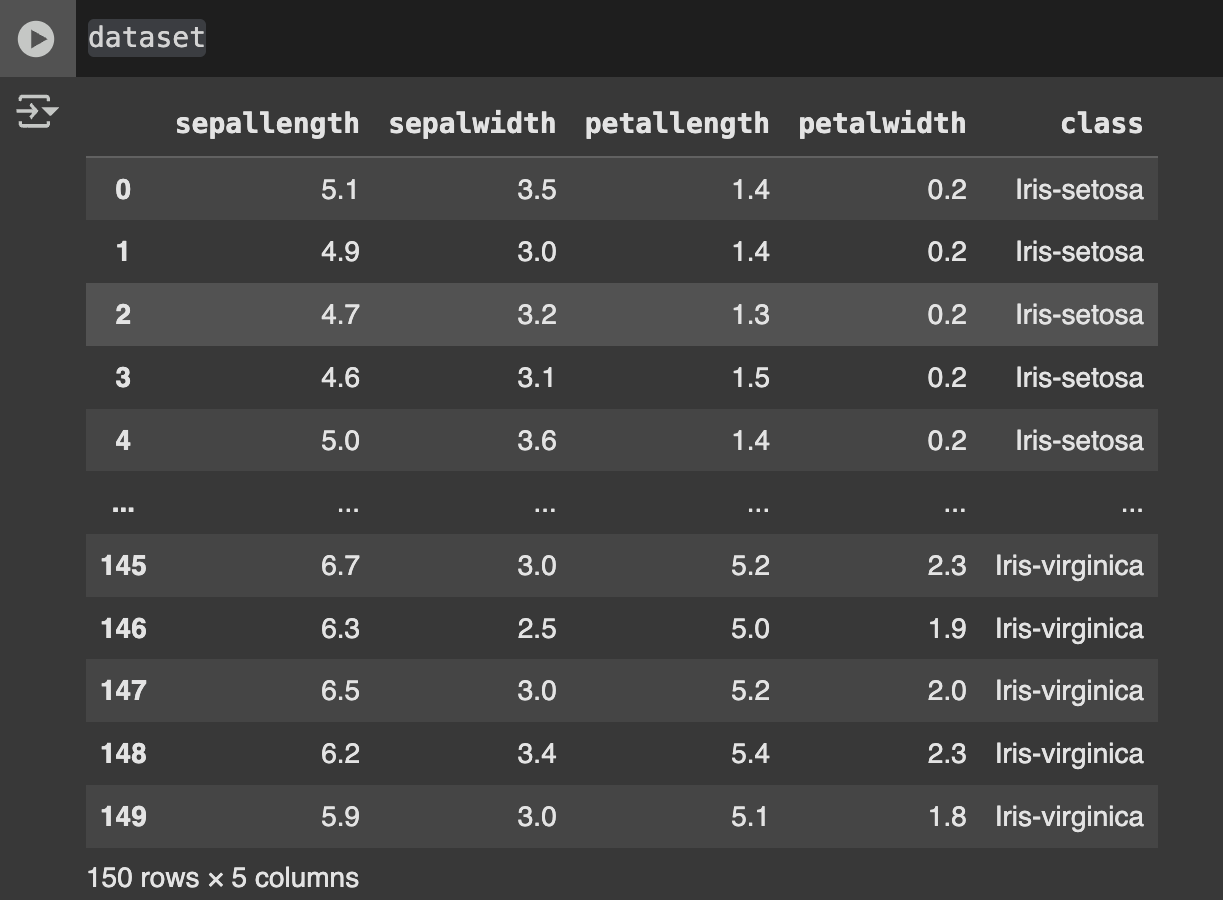
predicted\_class = max(class\_counts, key=class\_counts.get)

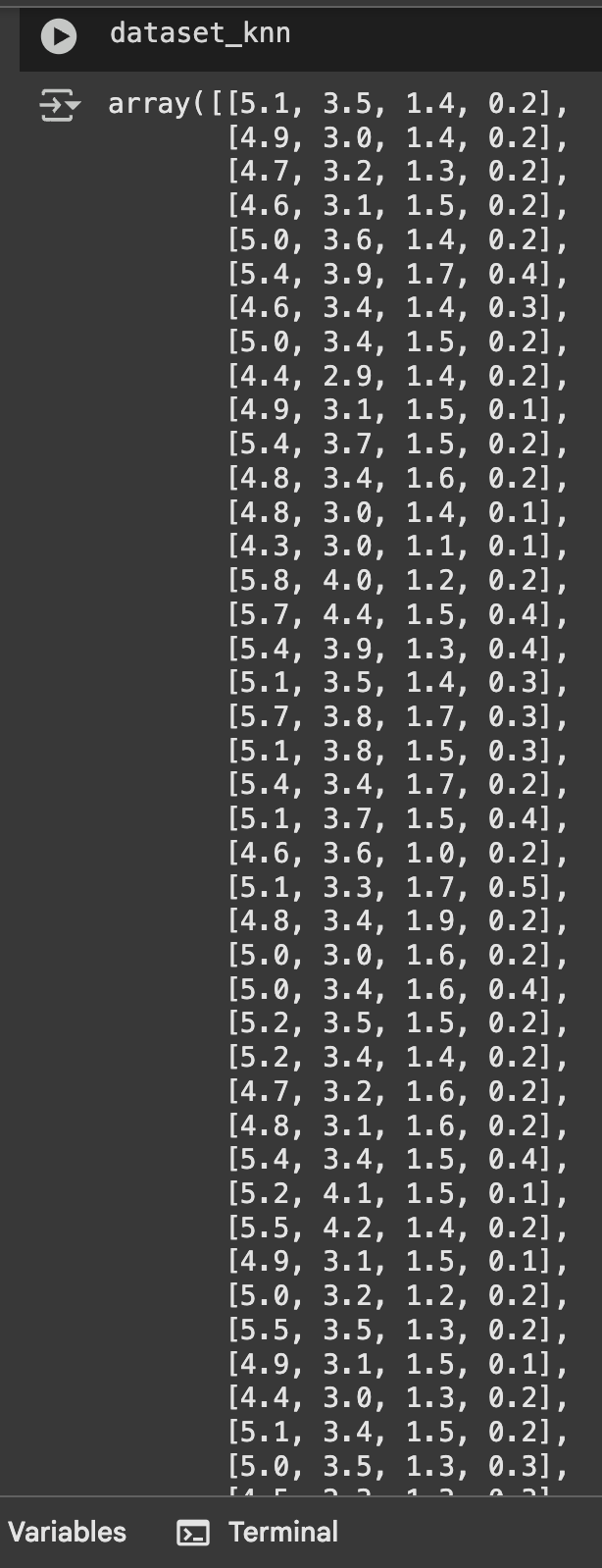
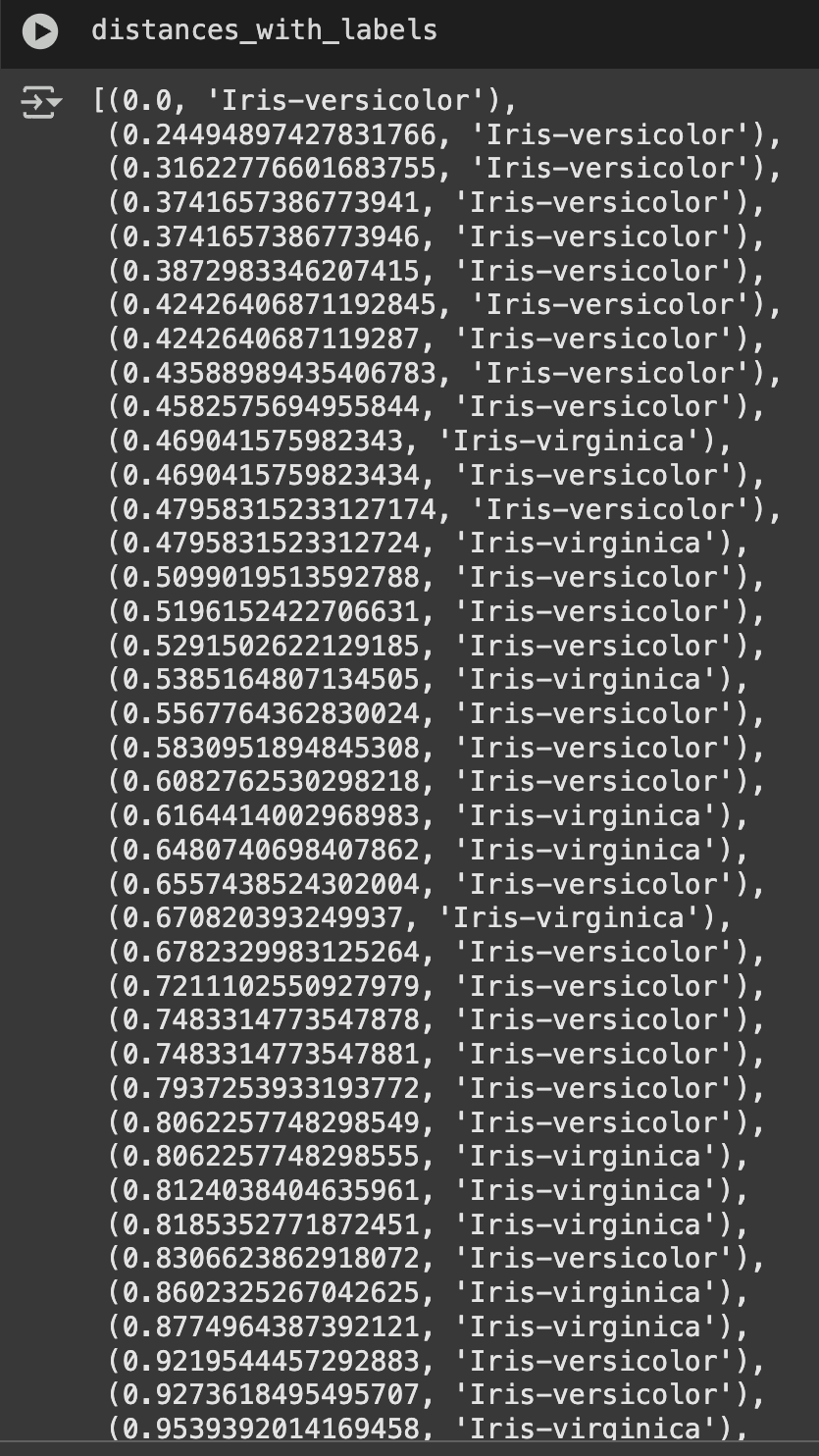
print(f"The predicted class for the testing data is: {predicted\_class}")

max\_key = max(class\_counts, key=class\_counts.get)

print("predicated class :", max\_key)

**Results:**

****

****