EXPERIMENT – 5

Write a program for Implementation of K-Nearest Neighbours (K-NN) in Python

CODE :

```
# Simple K-NN

import math

# Data

X = [[1,2],[2,3],[3,3],[6,5],[7,7]]

Y = ['A','A','B','B','B']

# Distance

def dist(a,b):

    return math.sqrt((a[0]-b[0])**2 + (a[1]-b[1])**2)

# KNN

def knn(test, k):

    d = []

    for i in range(len(X)):

        d.append((dist(X[i], test), Y[i]))

    d.sort()

   return d[0][1]

# Test

print("Class =", knn([3,2], 3))
```

OUTPUT :