

```

import math

data = [
    ([1, 2], 0),
    ([2, 3], 0),
    ([3, 3], 1),
    ([6, 5], 1),
    ([7, 7], 1),
    ([8, 6], 1)
]

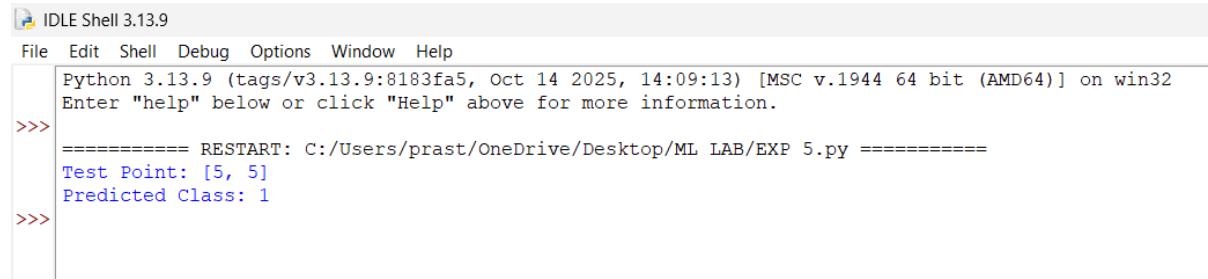
def dist(a, b):
    return math.sqrt(sum((x - y) ** 2 for x, y in zip(a, b)))

def knn(data, test, k):
    d = [(dist(x, test), label) for x, label in data]
    d.sort(key=lambda x: x[0])
    votes = [label for _, label in d[:k]]
    return max(set(votes), key=votes.count)

test_point = [5, 5]
k = 3
print("Test Point:", test_point)
print("Predicted Class:", knn(data, test_point, k))

```

OUTPUT:



```

IDLE Shell 3.13.9
File Edit Shell Debug Options Window Help
Python 3.13.9 (tags/v3.13.9:8183fa5, Oct 14 2025, 14:09:13) [MSC v.1944 64 bit (AMD64)] on win32
Enter "help" below or click "Help" above for more information.
>>> ===== RESTART: C:/Users/prast/OneDrive/Desktop/ML LAB/EXP 5.py =====
Test Point: [5, 5]
Predicted Class: 1
>>>

```