EXPERIMENT – 12

PROGRAM:

```
import math


iris_data = [
    [5.1, 3.5, 1.4, 0.2, 'setosa'],
    [4.9, 3.0, 1.4, 0.2, 'setosa'],
    [7.0, 3.2, 4.7, 1.4, 'versicolor'],
    [6.4, 3.2, 4.5, 1.5, 'versicolor'],
    [6.3, 3.3, 6.0, 2.5, 'virginica'],
    [5.8, 2.7, 5.1, 1.9, 'virginica']
]


print("Enter k value:")
k = int(input())


print("Enter sepal length, sepal
width, petal length, petal width:")
test = list(map(float, input().split()))


distances = []
for flower in iris_data:
    dist = math.sqrt(sum((a - b) ** 2
for a, b in zip(flower[:4], test)))
    distances.append((dist,
flower[4]))


distances.sort()
neighbors = distances[:k]
```

```
from collections import Counter

votes = Counter([label for _, label in
neighbors])

result =
votes.most_common(1)[0][0]


print("Predicted species:", result)
```