EXP NO: 5
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K-NN ALGORITHM

Aim:

To write a program to implement the k-NN (k-nearest neighbour) algorithm in Python.

Algorithm:

1. Import dataset using csv.reader() or create your own list of instances.
2. Get the query instance from the user or initialize it as a list.
3. Define the value of 'k' (or) get it from the user.
4. Based on the query instance, find the distance of each instance from the query point using -

$$d_x = \sqrt{(q_1 - x_1)^2 + (q_2 - x_2)^2 + \ldots + (q_n - x_n)^2}$$

(n = total no. of attributes)

5. Find the nearest distance by sorting the distance array.
6. Check the consequence of first k nearest distances.
7. Count the no. of positive and negative consequences
8. If +ve consequences > -ve consequences:

   The given query instance corresponds to a positive consequence.

   Else:

   The given query instance corresponds to a negative consequnes
9. END