

Input:

$D = \{t_1, t_2, \dots, t_n\}$  // Set of elements

A // Adjacency Matrix showing distance between elements

Output

DE // Dendrogram

Average Link Algorithm:

$d = 0;$

$k = n;$

$K = \{\{t_1\}, \dots, \{t_n\}\};$

$DE = \langle d, k, K \rangle;$

Repeat

$d = d + \Delta d;$

For each pair of  $K_i, K_j \in K$  do

Ave=average distance between all  $t_i \in K_i$  and  $t_j \in K_j$

If ave  $\leq d$  then

$K = K - \{K_i\} - \{K_j\} \cup \{K_i \cup K_j\};$

$k = k-1;$

$DE = DE \cup \langle d, k, K \rangle$

Until  $k=1;$