

341 Introduction to Bioinformatics:

Biological Networks

Tutorial 7 – March 11, 2010

1. Run the hierarchical clustering using the minimum method (single-linkage clustering) on the following input distance matrix and display all the intermediate steps and the final dendrogram.

	BA	FI	MI	NA	RM	TO
BA	0	662	877	255	412	996
FI	662	0	295	468	268	400
MI	877	295	0	754	564	138
NA	255	468	754	0	219	869
RM	412	268	564	219	0	669
TO	996	400	138	869	669	0

2. Run the k-means clustering with $k=2$ on the following points in Euclidean 2-dimensional space and display all intermediate steps and the final clustering:

A(3,4), B(3,6), C(3,8) D(4,5), E(4,7), F(5,1), G(5,5), H(7,3), I(7,4), J(8,5)