Information Processing and Retrieval

Lab 5: Organizing document collections - Pen-and-paper exercises - Solutions

2.1 Performing clustering:

D_1

	d_1	d_2	d_3	d_4
d_1	0	8	6	4
d_2	8	0	2	6
d_3	6	2	0	6
d_4	4	6	6	0

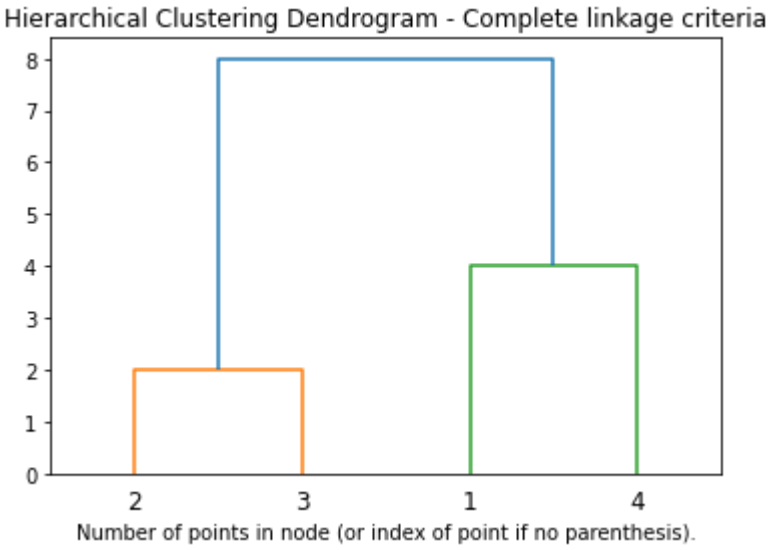
D_2

	d_1	(d_2, d_3)	d_4
d_1	0	8	4
(d_2, d_3)	8	0	6
d_4	4	6	0

D_3

	(d_1, d_4)	(d_2, d_3)
(d_1, d_4)	0	8
(d_2, d_3)	8	0

Dendogram obtained with the complete (maximum) link criterion.



2.2.1 External scores:

Purity(Ω,C) = 0.75

RI = $\frac{TP+TN}{TP+FP+FN+TN}$ = $\frac{3}{6}$ = 0.5

2.2.1 Internal scores:

- s(d_1) = 0.43
- s(d_2) = 0.71
- s(d_3) = 0.67
- s(d_4) = 0.33
- s(+) = avg(d_1, d_4) = 0.38
- s(-) = avg(d_2, d_3) = 0.69
- s(o) = avg(s(+),s(-)) = 0.54