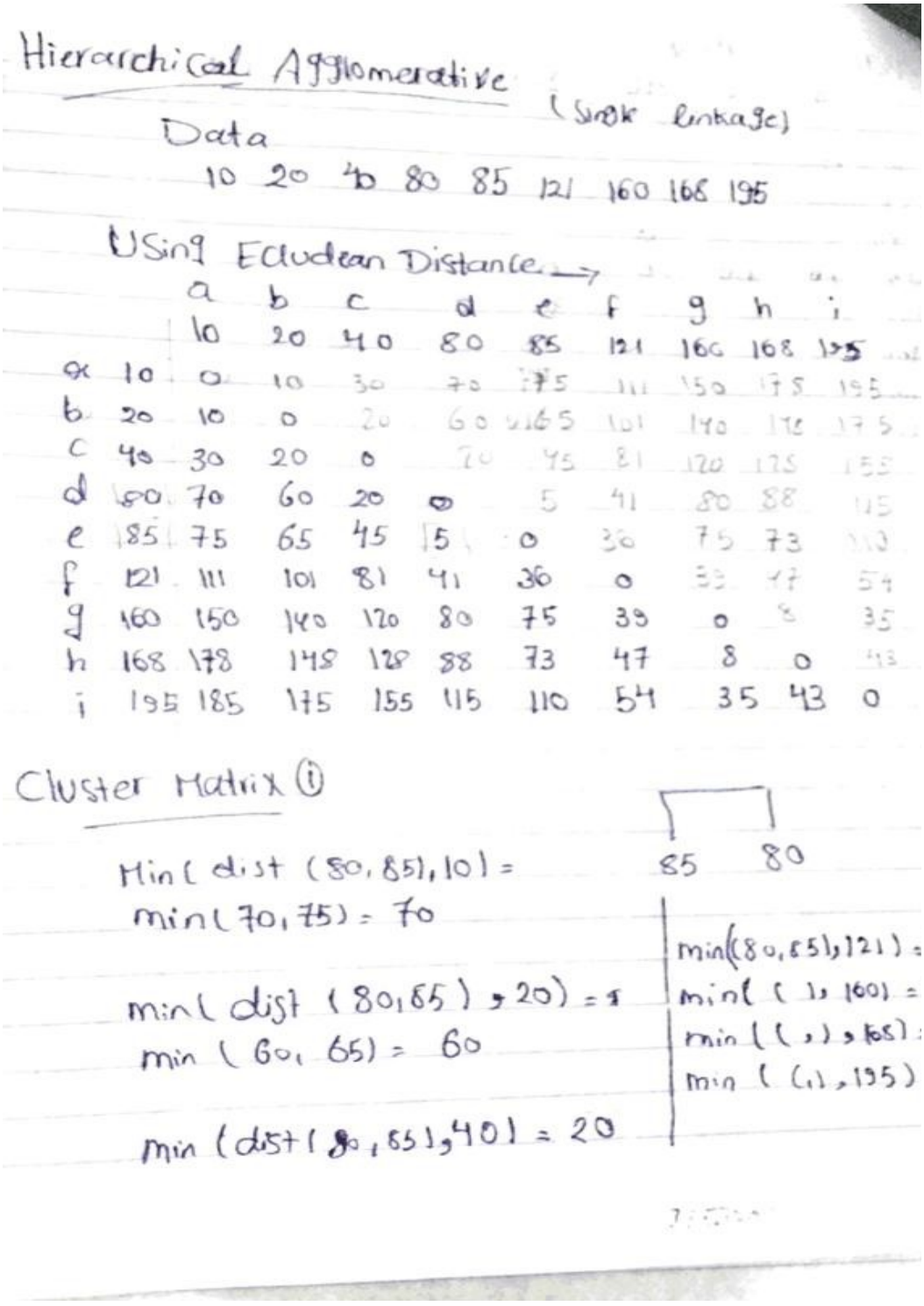
One iteration of Hierarchical single link by hand:



Hierarchical Agglomerative (Single linkage)

Data

10 20 40 80 85 121 160 168 195

Using Euclidean Distance →

	a	b	c	d	e	f	g	h	i
	10	20	40	80	85	121	160	168	195
a	10	0	10	30	70	75	111	150	175	195
b	20	10	0	20	60	65	101	140	168	175
c	40	30	20	0	40	45	81	120	128	155
d	80	70	60	40	0	5	41	80	88	115
e	85	75	65	45	5	0	36	75	73	110
f	121	111	101	81	41	36	0	39	47	74
g	160	150	140	120	80	75	39	0	8	35
h	168	178	148	128	88	73	47	8	0	43
i	195	185	175	155	115	110	54	35	43	0

Cluster Matrix ①

85 80

Min(dist (80, 85), 10) =

min(70, 75) = 70

min(dist (80, 85), 20) =

min (60, 65) = 60

min (dist (80, 85), 40) = 20

min((80, 85), 121) =

min(( ), 100) =

min (( ), 68) =

min (( ), 195)

Updated Matrix

	10	20	40	80,85	121	160	168	125
10	0	1						
20	10	0						
40	30	20	0					
80,85	70	60	20	0				
121	110			36	0			
160	150			75		0		
168	178			47			0	
125	185			110				0