

Single

Complete

	0	1	2	3	4	5
0	0					
1	0.12	0				
2	0.51	0.25	0			
3	0.84	0.16	0.14	0		
4	0.28	0.77	0.70	0.45	0	
5	0.34	0.61	0.93	0.20	0.67	0

1) Merge 0,1 & update

	0,1	2	3	4	5
0,1	0				
2	0.25	0			
3	0.16	0.14	0		
4	0.28	0.70	0.45	0	
5	0.37	0.93	0.20	0.67	0

2) Merge 2,3 & update

	0,1	2,3	4	5
0,1	0			
2,3	0.16	0		
4	0.28	0.45	0	
5	0.34	0.20	0.67	0

	0	1	2	3	4	5
0	0					
1	0.12	0				
2	0.51	0.25	0			
3	0.84	0.16	0.14	0		
4	0.28	0.77	0.70	0.45	0	
5	0.34	0.61	0.93	0.20	0.67	0

1) Merge 0,1 & update

	0,1	2	3	4	5
0,1	0				
2	0.51	0			
3	0.84	0.14	0		
4	0.77	0.70	0.45	0	
5	0.61	0.93	0.20	0.67	0

2) Merge 2,3 & update

	0,1	2,3	4	5
0,1	0			
2,3	0.84	0		
4	0.77	0.70	0	
5	0.61	0.93	0.67	0

Single

3) Merge (0,1) & (2,3)

	(0,1,2,3)	4	5
(0,1,2,3)	0		
4	0.25	0	
5	0.20	0.67	0

4) Merge (0,1,2,3,5) & 4

	(0,1,2,3,5)	4
(0,1,2,3,5)	0	
4	0.25	0

→ Merge All

Complete

3) Merge (0,1) & 5

	(0,1,5)	(2,3)	4
(0,1,5)	0		
(2,3)	0.92	0	
4	0.77	0.70	0

4) Merge (2,3) & 4

	(0,1,5)	(2,3,4)
(0,1,5)	0	
(2,3,4)	0.92	0

→ Merge All

→ At third step, 'single' & 'complete' methods differ. for this, let's change cell value

$[3,0]$ from 0.87 to 0.60 (less than $[5,1]$)
 so that in step 3, complete also follows same

then at step 2 for 'complete'

step 2) After merge of 2, 3

	(0,1)	(2,3)	4	5
(0,1)	0			
(2,3)	0.60	0		
4	0.77	0.70	0	
5	0.61	0.93	0.67	0

Then in step 3, it merges (0,1) & (2,3)

	0,1,2,3	4	5
0,1,2,3	0		
4	0.77	0	
5	0.93	0.67	0

Again in step 4, to merge (0,1,2,3) with 5
 we need to change $[5,2]$ from 0.93 to
 lower than 0.67, so let's make it 0.66

Then, at Step 2 distance matrix would be

0, 1, 2, 3 4 5

(0,1,2,3)	0		
4	0.77	0	
5	0.66	0.67	0

So, at Step 4 we merge (0,1,2,3) with 5
to form cluster (0,1,2,3,5)

(0,1,2,3,5)	4
4	0
	0.77

At Step 5, we merge all to form single cluster.

So, we need to change cell (3,0) from 0.84 to lower than cell (5,1) = 0.61 and cell (5,2) from 0.93 to less than cell (5,4) = 0.67