

Assignment - 6

Q1) (Single link)

	P_1	P_2	P_3	P_4	P_5	P_6
P_1	0					
P_2	0.2357	0				
P_3	0.2218	0.1483	0			
P_4	0.38	0.2042	0.1513	0		
P_5	0.3421	0.1388	0.2843	0.2932	0	
P_6	0.2347	0.2540	0.1100	0.2216	0.3921	0

min distance $P_3, P_6 \rightarrow$ merge

	P_1	P_2	$P_3 P_6$	P_4	P_5
P_1	0				
P_2	0.237	0			
$P_3 P_6$	0.2218	0.1483	0		
P_4	0.3688	0.2042	0.1513	0	
P_5	0.3421	0.1381	0.2216	0.2932	0

min distance $P_2 P_5 \rightarrow$ merge.

	P_1	$P_2 P_5$	$P_3 P_6$	P_4
P_1	0			
$P_2 P_5$	0.2351	0		
$P_3 P_6$	0.2218	0.1483	0	
P_4	0.3688	0.2042	0.1513	

	P_2	P_5
P_3	0.1483	0.2843
P_6	0.2540	0.3921

~~$P_3 P_6$~~ with .

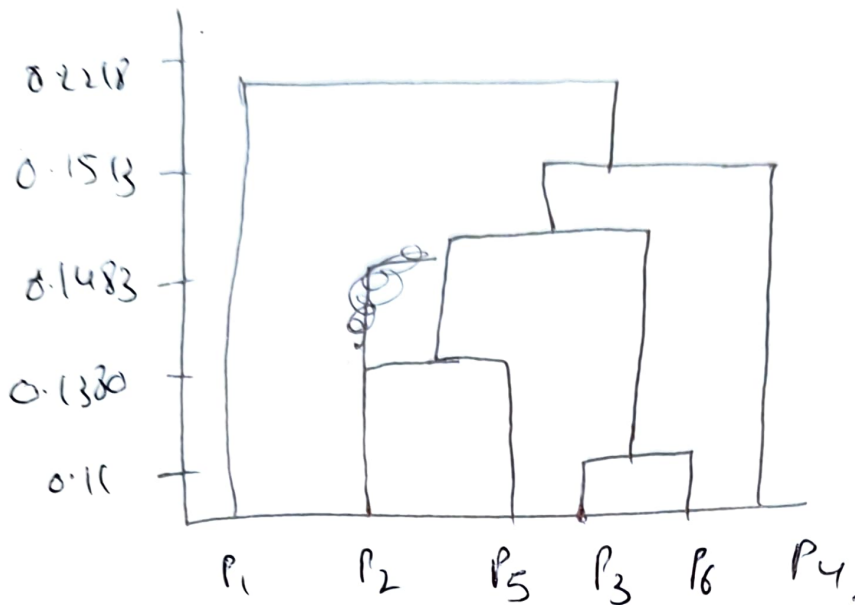
Min distance 0.1483 merge $P_3 P_6$ with $P_2 P_5$.

	P_1	P_4	$P_2 P_3 P_5 P_6$
P_1	0		
P_4	0.3688	0	
$P_2 P_3 P_5 P_6$	0.2218	0.1513	

Merge P_4 with $P_2 P_3 P_5 P_6$ (0.1513)

Finally merge P_1

Dendrogram



Complete Link.

	min	distance	$P_3 P_6$	Merge
	P_1	P_2	$P_3 P_6$	P_4 P_5
P_1	0			
P_2	0.2351	0		
$P_3 P_6$	0.2347	0.2540	0	
P_4	0.3688	0.2042	0.2216	0
P_5	0.3421	0.1388	0.3921	0.2932 0

min distance $P_2 P_5$ (0.1388)

	P_1	$P_2 P_5$	$P_3 P_6$	P_4
P_1	0			
$P_2 P_5$	0.3421	0		
$P_3 P_6$	0.2347	0.3921	0	
P_4	0.3688	0.2932	0.2216	0

merge P_3, P_6 with P_4 on (0.2216)

P_1 $P_2 P_5$ $P_3 P_4 P_6$

P_1 0
 $P_2 P_5$ 0.3421 0
 $P_3 P_4 P_6$ 0.3688 0.39 0

P_3 P_4 P_6

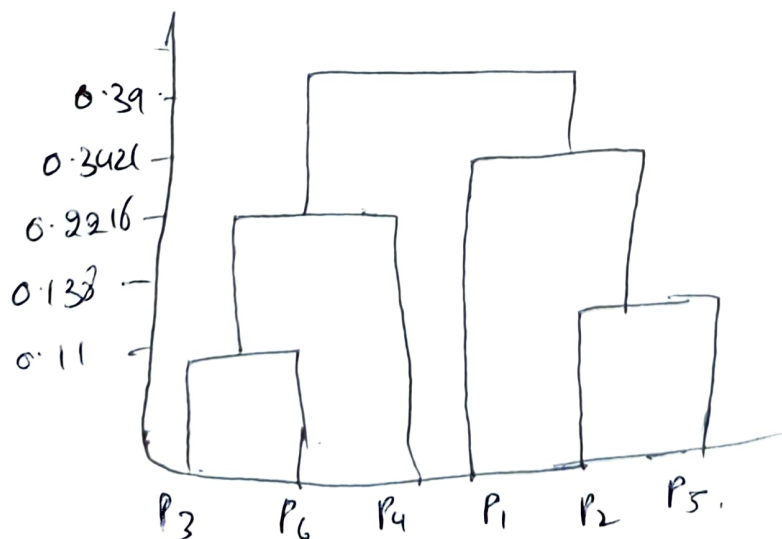
P_2 0.14 0.20 0.25
 P_5 0.28 0.29 0.39
 P_1 0.22 0.3688 0.2347.

merge $P_2 P_5$ with P_1 (0.3421)

$P_1 P_2 P_5$ $P_3 P_4 P_6$

$P_1 P_2 P_5$ 0
 $P_3 P_4 P_6$ 0.39 0

merge all with 0.39



(1) Average link

Merge $(P_3, P_6) (0.11)$

	P_1	P_2	$P_3 P_6$	P_4	P_5
P_1	0				
P_2	0.2351	0			
$P_3 P_6$	0.2282	0.2011	0		
P_4	0.3608	0.2012	0.186	0	
P_5	0.3421	0.1338	0.3382	0.2932	0

merge $P_5, P_2 (0.1338)$

	P_1	$P_2 P_5$	$P_3 P_6$	P_4
P_1	0			
$P_2 P_5$	0.2889	0		
$P_3 P_6$	0.2282	0.2696	0	
P_4	0.3688	0.2487	0.186	0

	P_2	P_5
P_3	0.1483	0.2843
P_6	0.2540	0.3921
P_4	0.2012	0.2932

merge P_4 with $P_3 P_6 (0.186)$

	P_1	$P_2 P_5$	$P_3 P_4 P_6$
P_1	0		
$P_2 P_5$	0.2889	0	
$P_3 P_4 P_6$	0.2751	0.2626	0.