

Suhas Dhar

Assignment -

700821985

	$P_1$	$P_2$	$P_3$	$P_4$	$P_5$	$P_6$
$P_1$	0.0	0.2357	0.2218	0.3688	0.3421	0.2347
$P_2$	0.235	0.0	0.1483	0.2043	0.1388	0.2540
$P_3$	0.2218	0.1483	0.0	0.1513	0.2843	0.1100
$P_4$	0.3688	0.2042	0.1513	0.0	0.2932	0.2216
$P_5$	0.3421	0.1388	0.2843	0.2932	0.0	0.3921
$P_6$	0.2347	0.2540	0.1100	0.2216	0.3921	0.0

Pair  $[P_3, P_6] \rightarrow 0.11$

	$P_1$	$P_2$	$P_3, P_6$	$P_4$	$P_5$	
$P_1$	0					
$P_2$	0.2357	0.0				
$P_3, P_6$	0.2282	0.2011	0.0			
$P_4$	0.3688	0.2042	0.1864	0.0		
$P_5$	0.3421	0.1388	0.3382	0.2932	0.0	

$[P_3, P_6] P_1 \rightarrow \text{Avg}(0.2218, 0.2347) \rightarrow 0.2282$

$[P_3, P_6] P_2 \rightarrow \text{Avg}(0.1483, 0.2540) \rightarrow 0.2011$

$[P_3, P_6] P_4 \rightarrow \text{Avg}(0.1513, 0.2216) \rightarrow 0.1864$

$P_5, [P_3, P_6] \rightarrow \text{Avg}(0.2843, 0.3921) \rightarrow 0.3352$

$[P_2, P_5] \rightarrow 0.1388$

	$P_1$	$P_5 P_2$	$P_3 P_6$	$P_4$
$P_1$	0			
$P_2 P_5$	0.2889	0		
$P_3 P_6$	0.2252	0.2946	0	
$P_4$	0.3688	0.2487	0.1864	0

$$\begin{aligned}
 [P_2 P_5] P_1 &\rightarrow \text{Avg} = 0.2357, 0.3421 = 0.2889 \\
 [P_3 P_6] [P_2 P_5] &\rightarrow \text{Avg} = 0.2011, 0.3381 = 0.2946 \\
 P_4 [P_5 P_2] &\rightarrow \text{Avg} = 0.2042, 0.2932 = 0.2486
 \end{aligned}$$

$$[P_4 P_3 P_6] \rightarrow 0.1864$$

	$P_1$	$P_5 P_2$	$P_3 P_4 P_6$
$P_1$	0		
$P_2 P_5$	0.2889	0	
$P_3 P_4 P_6$	0.2958	0.2591	0

$$P_1 [P_3 P_4 P_6] \rightarrow \text{Avg} = (0.2252, 0.3688) = 0.2955$$

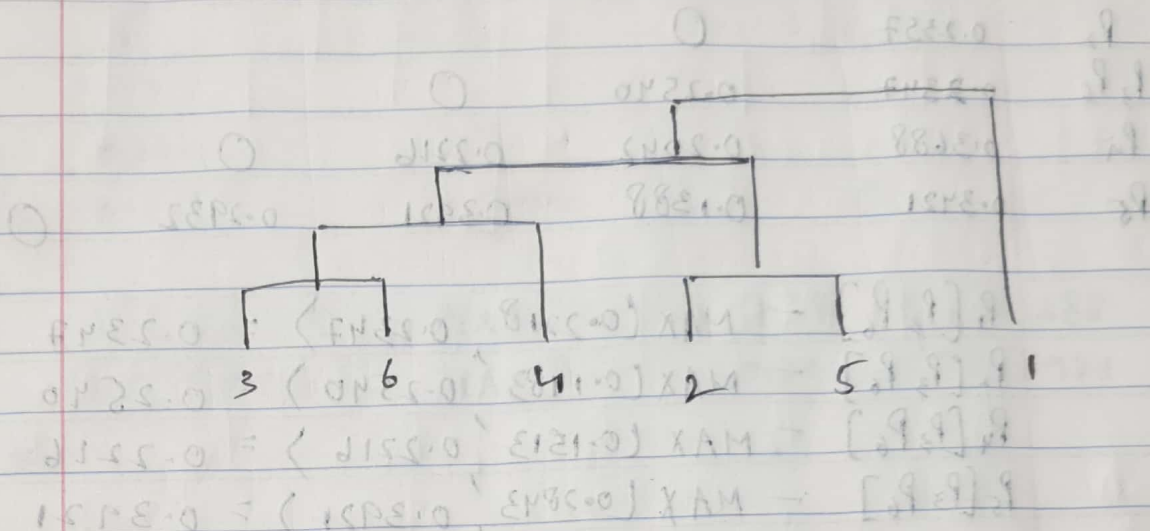
$$[P_3 P_4 P_6] [P_5 P_2] \rightarrow \text{Avg} = (0.2946, 0.2487) = 0.2591$$

$$[P_5 P_2] [P_3 P_4 P_6] \rightarrow 0.2591$$

	$P_1$	$P_2 P_3 P_4 P_5 P_6$
$P_1$	0	
$P_2 P_3 P_4 P_5 P_6$	0.2923	0



$$P_i [P_2 P_4 P_6 P_6] \rightarrow \text{Avg}(0.2889, 0.2958) \rightarrow 0.2923$$



MAX-Complete

	$P_1$	$P_2$	$P_3$	$P_4$	$P_5$	$P_6$
$P_1$	0.9					
$P_2$	0.2357	0				
$P_3$	0.2218	0.1453	0			
$P_4$	0.3688	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

$$\text{Pair } [P_3, P_6] \rightarrow 0.1100$$

$P_1$	0				
$P_2$	0.2357	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

$$\begin{aligned}
 P_1 [P_3 P_6] &= \max(0.2216, 0.2347) = 0.2347 \\
 P_2 [P_3 P_6] &= \max(0.1483, 0.2540) = 0.2540 \\
 P_4 [P_3 P_6] &= \max(0.1513, 0.2216) = 0.2216 \\
 P_5 [P_3 P_6] &= \max(0.2843, 0.3921) = 0.3921
 \end{aligned}$$

Pair  $[P_2 P_5]$

	$P_1$	$P_2 P_5$	$P_3 P_6$	$P_4$	
$P_1$	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	

$$\begin{aligned}
 P_1 [P_2 P_5] &\rightarrow \max(0.2357, 0.3421) = 0.3421 \\
 [P_3 P_6] [P_2 P_5] &\rightarrow \max(0.2540, 0.3921) = 0.3921 \\
 P_4 [P_2 P_5] &\rightarrow \max(0.2042, 0.1388) = 0.2932
 \end{aligned}$$

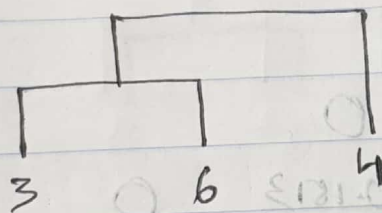


$$P_{25} (P_4 [P_2 P_6]) \rightarrow 0.2216$$

	$P_1$	$P_2 P_5$	$P_3 P_6 P_4$
$P$	0		
$P_2 P_5$	0.3421	0	
$P_3 P_6 P_4$	0.3688	0.3921	0

$$P_1 [P_4 P_3 P_6] \rightarrow \text{MAX}(0.3688, 0.2347) = 0.3688$$

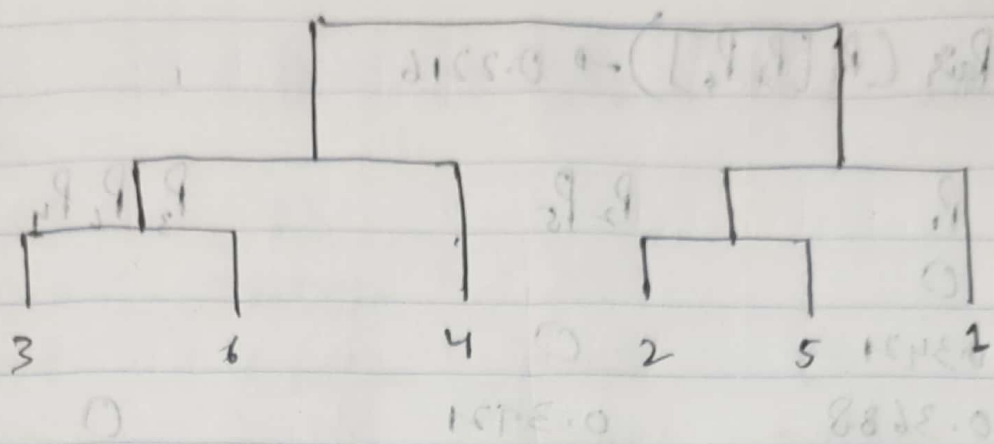
$$[P_2 P_5] [P_4 P_3 P_6] \rightarrow \text{MAX}(0.2932, 0.3921) = 0.3921$$



$$P_1 [P_2 P_5] \rightarrow 0.3421$$

<del><math>P_1 P_2 P_5</math></del>	<del>0.3421</del>	$P_1 P_2 P_5$	$P_3 P_6 P_4$
<del><math>P_2 P_5</math></del>	<del>0</del>	$P_1 P_2 P_5$	
<del><math>P_3 P_6 P_4</math></del>	<del>0.3921</del>	$P_3 P_6 P_4$	0

$$[P_1 P_2 P_5] [P_3 P_6 P_4] \rightarrow \text{MAX}(0.3688, 0.3421) = 0.3921$$



Single link

1.15E-0

	$P_1$	$P_2$	$P_3$	$P_4$	$P_5$	
$P_1$	○					
$P_2$	0.2357	○				
$P_3$	0.2218	0.1483	○			
$P_4$	0.3688	0.2042	0.1513	○		
$P_5$	0.3421	0.1355	0.2843	0.2932	○	

$P_1 [P_3 P_6] - \min (0.2218, 0.3421) \rightarrow 0.2218$

$P_2 [P_3 P_6] - \min (0.1483, 0.2540) \rightarrow 0.1483$

$P_4 [P_3 P_6] - \min (0.1513, 0.2216) \rightarrow 0.1513$

$P_5 [P_3 P_6] - \min (0.2543, 0.3421) \rightarrow 0.2843$

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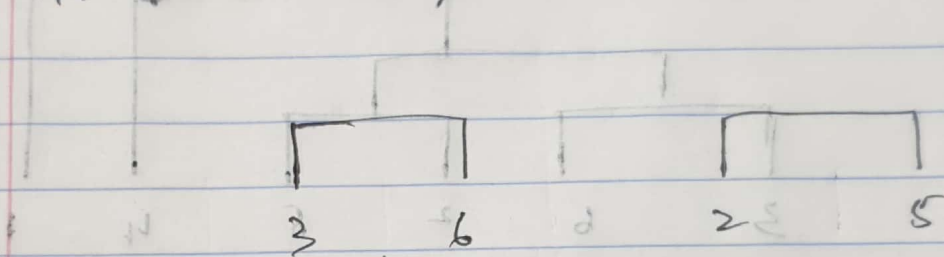
$[P_2 P_5] \rightarrow 0.1380$

	$P_1$	$P_2$	$P_3$	$P_4$
$P_1$	0			
$P_2$	0.2357	0		
$P_3$	0.2218	0.1483	0	
$P_4$	0.3685	0.2042	0.1513	0

$$P_1[P_2 P_3] \rightarrow \min(0.2357, 0.3421) \rightarrow 0.2357$$

$$P_3 P_6[P_2 P_5] \rightarrow \min(0.1483, 0.2843) \rightarrow 0.1483$$

$$P_4[P_2 P_5] \rightarrow \min(0.2042, 0.2932) \rightarrow 0.2042$$

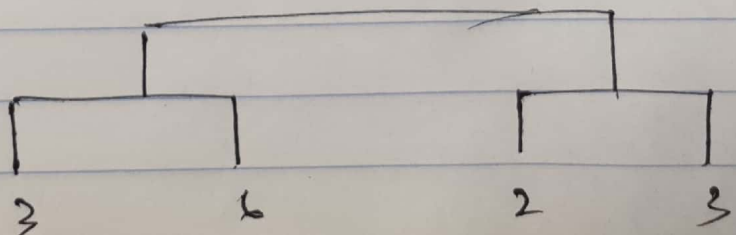


$$\text{Pair } [P_3 P_6] [P_2 P_5] = 0.1483$$

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

$$P_1[P_2 P_3 P_3 P_6] = \min(0.2357, 0.2218) = 0.2228$$

$$P_4[P_2 P_3 P_3 P_6] = \min(0.2042, 0.1513) = 0.1513$$

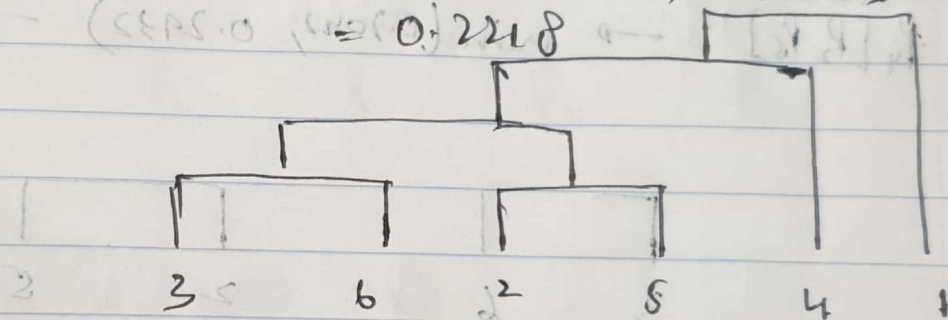




Pair  $[P_2, P_5, P_3, P_6] P_4 = 0.1513$

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

$P_1 [P_2, P_3, P_6, P_4] = \min(0.2218, 0.3688)$



$P_1 [P_2, P_3] = 0.1483$

$P_1$	$P_2$	$P_3$	$P_4$	$P_5$	$P_6$
0	0.1213	0	0	0	0

$P_1 [P_2, P_3, P_6, P_4] = \min(0.1213, 0.3688)$

