Data

NO	Y1	Y2
1	2	2
2	3	2
3	1	1
4	3	1
5	1,5	0,5

Menentukan centroid

Centroid 1 = (2,2)

Centroid 2 = (3,1)

Jawab :

1. Data (2,2)

Jarak ke centroid 1 = $\sqrt{(2-2)^2+(2-2)^2} = 0$

Jarak ke centroid 2 = $\sqrt{(2-3)^2+(2-1)^2} = \sqrt{1+1} = \sqrt{2} = 1.41$

Masuk ke centroid 1.

update centroid 1 = (2,2)

2. Data (3,2)

Jarak ke centroid 1 = $\sqrt{(3-2)^2+(2-2)^2} = 1$

Jarak ke Centroid 2 = $\sqrt{(3-3)^2+(2-1)^2} = 1$

Masuk ke centroid 1

update centroid 1 = $\left(\frac{2+3}{2}, \frac{2+2}{2}\right) = (2,5 , 2)$

3. Data (1. 1)

Jarak ke centroid 1 = $\sqrt{(1-2,5)^2+(1-2)^2} = \sqrt{3,25} = 1,8$

Jarak ke Centroid 2 = $\sqrt{(1-3)^2+(1-1)^2} = \sqrt{4} = 2$

Masuk ke centroid 1

update centroid 1 : $\left(\frac{2,5+1}{2}, \frac{2+1}{2}\right) = (1.75, 1.5)$

4. Data (3. 1)

Jarak ke centroid 1 : $\sqrt{(3-1,75)^2+(1-1.5)^2} = \sqrt{1.8125} = 1,35$

Jarak ke Centroid 2 : $\sqrt{(3-3)^2+(1-1)^2} = 0$

Masuk ke centroid 2

Update centroid 2 : (3, 1)

5. Data (1.5 , 0.5)

Jarak ke centroid 1 : $\sqrt{(1,57-1,75)^2+(0,5-1,5)^2} = \sqrt{1.0625} = 1.03$

Jarak ke centroid 2 : $\sqrt{(1.5-3)^2+(0,5-1)^2} = \sqrt{25} = 1,58$

Masuk ke centroid 1

update centroid 1 : $\left(\frac{1,75+1.5}{2}, \frac{1.5+0.5}{2}\right) = (1625, 1)$

Hasil Akhir

Data (2. 2) → cluster 1

Data (3, 2) → cluster 1

Data (1, 1) → cluster 1

Data (3, 1) → cluster 2

Data (1,5 , 0,5) → cluster 1

Centroid

cluster 1 = (1.625, 1)

cluster 2 = (3, 1)