DATA	INDEX KEMISKINAN (X)	INDEX KEPARAHAN n (Y)
1	2	3
2	4	5
3	3	6
4	8	7
5	9	8
6	7	9
7	2	2
8	5	4
9	8	2
10	9	1

Langkah 1 menentukan centroid		
Data	X	Y
7	2	2
2	4	5
4	8	7
5	9	8

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INTERASI 1

hitung jarak tiap data terhadap centroid

Data	X	Y	C1	C2	C3	C4	Min	Cluster
1	2	3	1	2,828427	7,211103	8,602325	1	C1
2	4	5	3,605551	0	4,472136	5,830952	0	C2
3	3	6	4,123106	1,414214	5,09902	6,324555	1,414214	C2
4	8	7	7,81025	4,472136	0	1,414214	0	C3
5	9	8	9,219544	5,830952	1,414214	0	0	C4
6	7	9	8,602325	5	2,236068	2,236068	2,236068	C3
7	2	2	0	3,605551	7,81025	9,219544	0	C1
8	5	4	3,605551	1,414214	4,242641	5,656854	1,414214	C2
9	8	2	6	5	5	6,082763	5	C2
10	9	1	7,071068	6,403124	6,082763	7	6,082763	C3

1. Pilih k poin secara acak sebagai centroid
2. hitung jarak tiap data terhadap centroid
3. kelompokkan data ke centroid terdekat (Minimum)
4. tentukan centroid baru tiap cluster
5. kembali menghitung jika posisi cluster beda

k Point Centroid Data

Data	X	Y
7	2	2
2	4	5
4	8	7
5	9	8

C1	**Data**	**X**	**Y**
	1	2	3
	7	2	2
	RATA	**2**	**2,5**
C2	**Data**	**X**	**Y**
	2	4	5
	3	3	6
	8	5	4
	9	8	2
	RATA	**5**	**4,25**
C3	**Data**	**X**	**Y**
	4	8	7
	6	7	9
	10	9	1
	RATA	**8**	**5,666667**
C4	**Data**	**X**	**Y**
	5	9	8
	RATA	**9**	**8**

Centroid baru tiap Cluster

Data	X	Y
C1	**2**	**2,5**
C2	**5**	**4,25**
C3	**8**	**5,666667**
C4	**9**	**8**

INTERASI 2

hitung jarak tiap data terhadap centroid

Data	X	Y	C1	C2	C3	C4	Min	Cluster	Ket
1	2	3	0,5	3,25	6,565905	8,602325	0,5	C1	**SAMA**
2	4	5	3,201562	1,25	4,055175	5,830952	1,25	C2	**SAMA**
3	3	6	3,640055	2,657536	5,011099	6,324555	2,657536	C2	**SAMA**
4	8	7	7,5	4,069705	1,333333	1,414214	1,333333	C3	**SAMA**
5	9	8	8,902247	5,482928	2,538591	0	0	C4	**SAMA**
6	7	9	8,20061	5,153882	3,480102	2,236068	2,236068	C4	**BEDA**
7	2	2	0,5	3,75	7,031674	9,219544	0,5	C1	**SAMA**
8	5	4	3,354102	0,25	3,431877	5,656854	0,25	C2	**SAMA**
9	8	2	6,020797	3,75	3,666667	6,082763	3,666667	C3	**BEDA**
10	9	1	7,158911	5,153882	4,772607	7	4,772607	C3	**SAMA**

1. Pilih k poin secara acak sebagai centroid
2. hitung jarak tiap data terhadap centroid
3. kelompokkan data ke centroid terdekat (Minimum)
4. tentukan centroid baru tiap cluster
5. kembali menghitung jika posisi cluster beda

k Point Centroid Data

Data	X	Y
C1	2	2,5
C2	5	4,25
C3	8	5,666667
C4	9	8

	Data	X	Y
C1	1	2	3
	7	2	2
	RATA	**2**	**2,5**
C2	**Data**	**X**	**Y**
	2	4	5
	3	3	6
	8	5	4
	RATA	**4**	**5**
C3	**Data**	**X**	**Y**
	4	8	7
	9	8	2
	10	9	1
	RATA	**8,333333**	**3,333333**
C4	**Data**	**X**	**Y**
	5	9	8
	6	7	9
	RATA	**8**	**8,5**

Centroid baru tiap Cluster

Data	X	Y
C1	**2**	**2,5**
C2	**4**	**5**
C3	**8,333333**	**3,333333**
C4	**8**	**8,5**

INTERASI 3

hitung jarak tiap data terhadap centroid

Data	X	Y	C1	C2	C3	C4	Min	Cluster	Ket
1	2	3	0,5	2,828427	6,342099	8,13941	0,5	C1	**SAMA**
2	4	5	3,201562	0	4,642796	5,315073	0	C2	**SAMA**
3	3	6	3,640055	1,414214	5,962848	5,59017	1,414214	C2	**SAMA**
4	8	7	7,5	4,472136	3,681787	1,5	1,5	C4	**BEDA**
5	9	8	8,902247	5,830952	4,714045	1,118034	1,118034	C4	**SAMA**
6	7	9	8,20061	5	5,821416	1,118034	1,118034	C4	**SAMA**
7	2	2	0,5	3,605551	6,472163	8,845903	0,5	C1	**SAMA**
8	5	4	3,354102	1,414214	3,399346	5,408327	1,414214	C2	**SAMA**
9	8	2	6,020797	5	1,374369	6,5	1,374369	C3	**SAMA**
10	9	1	7,158911	6,403124	2,426703	7,566373	2,426703	C3	**SAMA**

1. Pilih k poin secara acak sebagai centroid
2. hitung jarak tiap data terhadap centroid
3. kelompokkan data ke centroid terdekat (Minimum)
4. tentukan centroid baru tiap cluster
5. kembali menghitung jika posisi cluster beda

k Point Centroid Data

Data	X	Y
C1	2	2,5
C2	4	5
C3	8,333333	3,333333
C4	8	8,5

	Data	X	Y
C1	1	2	3
	7	2	2
	RATA	**2**	**2,5**
C2	**Data**	**X**	**Y**
	2	4	5
	3	3	6
	8	5	4
	RATA	**4**	**5**
C3	**Data**	**X**	**Y**
	9	8	2
	10	9	1
	RATA	**8,5**	**1,5**
C4	**Data**	**X**	**Y**
	4	8	7
	5	9	8
	6	7	9
	RATA	**8**	**8**

Centroid baru tiap Cluster

Data	X	Y
C1	**2**	**2,5**
C2	**4**	**5**
C3	**8,5**	**1,5**
C4	**8**	**8**

INTERASI 4

hitung jarak tiap data terhadap centroid

Data	X	Y	C1	C2	C3	C4	Min	Cluster	**Ket**
4	8	7	7,5	4,472136	5,522681	1	1	C4	**SAMA**
5	9	8	8,902247	5,830952	6,519202	1	1	C4	**SAMA**
6	7	9	8,20061	5	7,648529	1,414214	1,414214	C4	**SAMA**

1. Pilih k poin secara acak sebagai centroid
2. hitung jarak tiap data terhadap centroid
3. kelompokkan data ke centroid terdekat (Minimum)
4. tentukan centroid baru tiap cluster
5. kembali menghitung jika posisi cluster beda

k Point Centroid Data

Data	**X**	**Y**
C1	2	2,5
C2	4	5
C3	8,5	1,5
C4	8	8

Mulai Perhitungan DBI

1. Hitung jarak antar centroid

Data	X	Y	Cluster	Jarak terhadap centroid
1	2	3	C1	0,5
7	2	2	C1	0,5
2	4	5	C2	0
3	3	6	C2	1,414213562
8	5	4	C2	1,414213562
9	8	2	C3	0,707106781
10	9	1	C3	0,707106781
4	8	7	C4	1
5	9	8	C4	1
6	7	9	C4	1,414213562

Centroid	X	Y
C1	2	2,5
C2	4	5
C3	8,5	1,5
C4	8	8

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2. Hitung Similitude Antara Klaster

a. Hitung rata2 jarak terhadap masing-masing centroid

Data	X	Y	Cluster	Jarak terhadap centroid
1	2	3	C1	3,282952465
7	2	2	C1	3,018461676
Rata rata jarak terhadap C1				3,150707071

Data	X	Y	Cluster	Jarak terhadap centroid
2	4	5	C2	0
3	3	6	C2	1,414213562
8	5	4	C2	1,414213562
Rata rata jarak terhadap C2				0,942809042

Data	X	Y	Cluster	Jarak terhadap centroid
9	8	2	C3	0,707106781
10	9	1	C3	0,707106781
Rata rata jarak terhadap C3				0,707106781

Data	X	Y	Cluster	Jarak terhadap centroid
4	8	7	C4	1
5	9	8	C4	1
6	7	9	C4	1,414213562
Rata rata jarak terhadap C4				1,138071187

Centroid	Rata rata jarak terhadap Centroid
C1	3,150707071
C2	0,942809042
C3	0,707106781
C4	1,138071187

b. Hitung jarak antar centroid

Centroid	X	Y
C1	2	2,5
C2	4	5
C3	8,5	1,5
C4	8	8

Jarak	C1	C2	C3	C4
C1	0	3,202	6,576473	8,139410298
C2	3,202	0	5,700877	5
C3	6,576	5,701	0	6,519202405
C4	8,139	5	6,519202	0

Jarak antar centroid	
C12	3,201562119
C13	6,576473219
C14	8,139410298
C23	5,700877125
C24	5
C34	6,519202405

3. Hitung Davies-Bouldin Index centroid

a. Rasio

Jarak antar centroid	
C12	3,201562119
C13	6,576473219
C14	8,139410298
C23	5,700877125
C24	5
C34	6,519202405

Centroid	Rata rata jarak data terhadap Centroid
C1	3,150707071
C2	0,942809042
C3	0,707106781
C4	1,138071187

Jarak	C1	C2	C3	C4
C1	0	1,279	0,586608	0,526915108
C2	1,279	0	0,289414	0,416176046
C3	0,587	0,289	0	0,28303738
C4	0,527	0,416	0,283037	0

b. Rata rata max dari rasio

R	1	2	3	4
1	0	1,279	0,586608	0,526915108
2	1,279	0	0,289414	0,416176046
3	0,587	0,289	0	0,28303738
4	0,527	0,416	0,283037	0

Max
1,2786
1,2786
0,586608
0,526915

DBI	**0,917681**	Rata rata

Jadi nilai DBI nya sebesar:

0,91768

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