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LAMPIRAN



Proses Fuzzy C-Means Georesistivitas

No.	Ke dalam	Parameter		Normalisasi	
		Batas bawah	Batas Atas	Batas bawah	Batas Atas
1	0.8	856	2084	1.0000	1.0000
2	1.3	356	552	0.4151	0.2642
3	2.4	229	356	0.2665	0.1701
4	1.2	147	229	0.1706	0.1091
5	1.85	95.3	147	0.1101	0.0697
6	1	61.4	95.3	0.0704	0.0449
7	0.9	39.6	61.4	0.0449	0.0286
8	1	25.5	39.6	0.0285	0.0181
9	2.8	16.4	25.5	0.0178	0.0114
10	0.9	10.6	16.4	0.0110	0.0070
11	0.85	6.83	10.6	0.0066	0.0042
12	0.55	856	2084	1.0000	1.0000
13	0.95	552	856	0.6444	0.4102
14	1.95	356	552	0.4151	0.2642
15	0.75	229	356	0.2665	0.1701
16	0.85	147	229	0.1706	0.1091
17	0.5	95.3	147	0.1101	0.0697
18	0.9	61.4	95.3	0.0704	0.0449
19	1.45	39.6	61.4	0.0449	0.0286
20	1.9	25.5	39.6	0.0285	0.0181
21	1.35	16.4	25.5	0.0178	0.0114
22	1.2	10.6	16.4	0.0110	0.0070
23	1.55	6.83	10.6	0.0066	0.0042
24	1.1	4.4	6.83	0.0038	0.0024
25	0.75	856	2084	1.0000	1.0000
26	1.05	356	552	0.4151	0.2642
27	1.7	229	356	0.2665	0.1701
28	1.6	147	229	0.1706	0.1091
29	0.4	95.3	147	0.1101	0.0697
30	0.95	61.4	95.3	0.0704	0.0449
31	1.05	39.6	61.4	0.0449	0.0286
32	1	25.5	39.6	0.0285	0.0181
33	2.5	16.4	25.5	0.0178	0.0114
34	1	10.6	16.4	0.0110	0.0070
35	3	4.4	6.83	0.0038	0.0024
36	0.85	147	229	0.1706	0.1091
37	1.25	95.3	147	0.1101	0.0697
38	1.35	61.4	95.3	0.0704	0.0449
39	0.8	39.6	61.4	0.0449	0.0286
40	1.2	25.5	39.6	0.0285	0.0181
41	1	16.4	25.5	0.0178	0.0114
42	1.35	10.6	16.4	0.0110	0.0070
43	1.05	6.83	10.6	0.0066	0.0042
44	1.8	4.4	6.83	0.0038	0.0024
45	2.2	2.83	4.4	0.0019	0.0012
46	0.75	1.82	2.83	0.0007	0.0005
47	1.4	1.18	1.82	0.0000	0.0000



Iterasi 1

No.	Ke dalam	Keanggotaan Cluster Random				Jumlah
		C1	C2	C3	C4	
1	0.8	0.2	0.3	0.4	0.1	1
2	1.3	0.3	0.2	0.2	0.3	1
3	2.4	0.4	0.3	0.2	0.1	1
4	1.2	0.5	0.1	0.2	0.2	1
5	1.85	0.6	0.1	0.1	0.2	1
6	1	0.7	0.1	0.1	0.1	1
7	0.9	0.1	0.5	0.2	0.2	1
8	1	0.2	0.4	0.3	0.1	1
9	2.8	0.3	0.2	0.3	0.2	1
10	0.9	0.4	0.1	0.2	0.3	1
11	0.85	0.5	0.2	0.1	0.2	1
12	0.55	0.6	0.1	0.2	0.1	1
13	0.95	0.1	0.2	0.3	0.4	1
14	1.95	0.2	0.5	0.1	0.2	1
15	0.75	0.3	0.5	0.1	0.1	1
16	0.85	0.4	0.2	0.3	0.1	1
17	0.5	0.5	0.2	0.2	0.1	1
18	0.9	0.6	0.2	0.1	0.1	1
19	1.45	0.1	0.1	0.1	0.7	1
20	1.9	0.2	0.5	0.1	0.2	1
21	1.35	0.3	0.1	0.5	0.1	1
22	1.2	0.4	0.2	0.1	0.3	1
23	1.55	0.5	0.3	0.1	0.1	1
24	1.1	0.6	0.2	0.2	0.1	1
25	0.75	0.1	0.3	0.3	0.3	1
26	1.05	0.2	0.6	0.1	0.1	1
27	1.7	0.3	0.3	0.2	0.2	1
28	1.6	0.4	0.1	0.1	0.4	1
29	0.4	0.5	0.1	0.3	0.1	1
30	0.95	0.6	0.1	0.2	0.1	1
31	1.05	0.1	0.4	0.4	0.1	1
32	1	0.2	0.1	0.6	0.1	1
33	2.5	0.3	0.1	0.1	0.5	1
34	1	0.4	0.4	0.1	0.1	1
35	3	0.5	0.1	0.2	0.2	1
36	0.85	0.6	0.2	0.1	0.1	1
37	1.25	0.1	0.5	0.2	0.2	1
38	1.35	0.2	0.5	0.1	0.2	1
39	0.8	0.3	0.4	0.1	0.2	1
40	1.2	0.4	0.4	0.1	0.1	1
41	1	0.5	0.2	0.1	0.2	1
	1.35	0.8	0.0	0.1	0.1	1
	1.05	0.1	0.6	0.1	0.2	1
	1.8	0.2	0.2	0.1	0.5	1
	2.2	0.3	0.1	0.2	0.4	1
	0.75	0.4	0.3	0.2	0.1	1
	1.4	0.7	0.0	0.1	0.2	1



STEP 1

Miu Kuadrat

0.040000	0.090000	0.160000	0.010000	
0.090000	0.040000	0.040000	0.090000	
0.160000	0.090000	0.040000	0.010000	
0.250000	0.010000	0.040000	0.040000	
0.360000	0.010000	0.010000	0.040000	
0.490000	0.010000	0.010000	0.010000	
0.010000	0.250000	0.040000	0.040000	
0.040000	0.160000	0.090000	0.010000	
0.090000	0.040000	0.090000	0.040000	
0.160000	0.010000	0.040000	0.090000	
0.250000	0.040000	0.010000	0.040000	
0.360000	0.010000	0.040000	0.010000	
0.010000	0.040000	0.090000	0.160000	
0.040000	0.250000	0.010000	0.040000	
0.090000	0.250000	0.010000	0.010000	
0.160000	0.040000	0.090000	0.010000	
0.250000	0.040000	0.040000	0.010000	
0.360000	0.040000	0.010000	0.010000	
0.010000	0.010000	0.010000	0.490000	
0.040000	0.250000	0.010000	0.040000	
0.090000	0.010000	0.250000	0.010000	
0.160000	0.040000	0.010000	0.090000	
0.250000	0.090000	0.010000	0.010000	
0.360000	0.022500	0.022500	0.019600	
0.010000	0.090000	0.090000	0.090000	
0.040000	0.360000	0.010000	0.010000	
0.090000	0.090000	0.040000	0.040000	
0.160000	0.010000	0.010000	0.160000	
0.250000	0.010000	0.090000	0.010000	
0.360000	0.010000	0.025600	0.019600	
0.010000	0.160000	0.160000	0.010000	
0.040000	0.010000	0.360000	0.010000	
0.090000	0.010000	0.010000	0.250000	
0.160000	0.160000	0.010000	0.010000	
0.250000	0.010000	0.040000	0.040000	
0.360000	0.040000	0.010000	0.010000	
0.010000	0.250000	0.040000	0.040000	
0.040000	0.250000	0.010000	0.040000	
0.090000	0.160000	0.010000	0.040000	
0.160000	0.160000	0.010000	0.010000	
0.250000	0.040000	0.010000	0.040000	
0.640000	0.000400	0.008100	0.008100	
0.010000	0.360000	0.010000	0.040000	
0.040000	0.040000	0.010000	0.250000	
0.090000	0.010000	0.040000	0.160000	
0.160000	0.090000	0.040000	0.010000	
0.490000	0.000400	0.006400	0.040000	
Total Miu Kuadrat	7.920000	4.163300	2.222600	2.667300



STEP 2

Miu Kuadrat 1		Miu Kuadrat 2		Miu Kuadrat 3		Miu Kuadrat 4	
0.040000	0.040000	0.090000	0.090000	0.160000	0.160000	0.010000	0.010000
0.037357	0.023781	0.016603	0.010569	0.016603	0.010569	0.037357	0.023781
0.042642	0.027216	0.023986	0.015309	0.010660	0.006804	0.002665	0.001701
0.042646	0.027277	0.001706	0.001091	0.006823	0.004364	0.006823	0.004364
0.039638	0.025101	0.001101	0.000697	0.001101	0.000697	0.004404	0.002789
0.034519	0.021999	0.000704	0.000449	0.000704	0.000449	0.000704	0.000449
0.000449	0.000286	0.011236	0.007154	0.001798	0.001145	0.001798	0.001145
0.001138	0.000726	0.004552	0.002903	0.002561	0.001633	0.000285	0.000181
0.001602	0.001024	0.000712	0.000455	0.001602	0.001024	0.000712	0.000455
0.001763	0.001120	0.000110	0.000070	0.000441	0.000280	0.000992	0.000630
0.001652	0.001054	0.000264	0.000169	0.000066	0.000042	0.000264	0.000169
0.360000	0.360000	0.010000	0.010000	0.040000	0.040000	0.010000	0.010000
0.006444	0.004102	0.025775	0.016409	0.057993	0.036921	0.103099	0.065637
0.016603	0.010569	0.103770	0.066058	0.004151	0.002642	0.016603	0.010569
0.023986	0.015309	0.066628	0.042525	0.002665	0.001701	0.002665	0.001701
0.027294	0.017457	0.006823	0.004364	0.015353	0.009820	0.001706	0.001091
0.027526	0.017431	0.004404	0.002789	0.004404	0.002789	0.001101	0.000697
0.025361	0.016162	0.002818	0.001796	0.000704	0.000449	0.000704	0.000449
0.000449	0.000286	0.000449	0.000286	0.000449	0.000286	0.022023	0.014021
0.001138	0.000726	0.007113	0.004536	0.000285	0.000181	0.001138	0.000726
0.001602	0.001024	0.000178	0.000114	0.004451	0.002843	0.000178	0.000114
0.001763	0.001120	0.000441	0.000280	0.000110	0.000070	0.000992	0.000630
0.001652	0.001054	0.000595	0.000380	0.000066	0.000042	0.000066	0.000042
0.001356	0.000866	0.000085	0.000054	0.000085	0.000054	0.000074	0.000047
0.010000	0.010000	0.090000	0.090000	0.090000	0.090000	0.090000	0.090000
0.016603	0.010569	0.149429	0.095124	0.004151	0.002642	0.004151	0.002642
0.023986	0.015309	0.023986	0.015309	0.010660	0.006804	0.010660	0.006804
0.027294	0.017457	0.001706	0.001091	0.001706	0.001091	0.027294	0.017457
0.027526	0.017431	0.001101	0.000697	0.009909	0.006275	0.001101	0.000697
0.025361	0.016162	0.000704	0.000449	0.001803	0.001149	0.001381	0.000880
0.000449	0.000286	0.007191	0.004578	0.007191	0.004578	0.000449	0.000286
0.001138	0.000726	0.000285	0.000181	0.010242	0.006532	0.000285	0.000181
0.001602	0.001024	0.000178	0.000114	0.000178	0.000114	0.004451	0.002843
0.001763	0.001120	0.001763	0.001120	0.000110	0.000070	0.000110	0.000070
0.000942	0.000602	0.000038	0.000024	0.000151	0.000096	0.000151	0.000096
0.061411	0.039278	0.006823	0.004364	0.001706	0.001091	0.001706	0.001091
0.001101	0.000697	0.027526	0.017431	0.004404	0.002789	0.004404	0.002789
0.002818	0.001796	0.017612	0.011224	0.000704	0.000449	0.002818	0.001796
0.004045	0.002575	0.007191	0.004578	0.000449	0.000286	0.001798	0.001145
0.004552	0.002903	0.004552	0.002903	0.000285	0.000181	0.000285	0.000181
0.004451	0.002843	0.000712	0.000455	0.000178	0.000114	0.000712	0.000455
0.007053	0.004481	0.000004	0.000003	0.000089	0.000057	0.000089	0.000057
0.000066	0.000042	0.002379	0.001518	0.000066	0.000042	0.000264	0.000169
0.000151	0.000096	0.000151	0.000096	0.000038	0.000024	0.000942	0.000602
0.000174	0.000112	0.000019	0.000012	0.000077	0.000050	0.000309	0.000198
0.000120	0.000078	0.000067	0.000044	0.000030	0.000019	0.000007	0.000005
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.961190	0.761279	0.723475	0.529774	0.477206	0.409261	0.379722	0.281833



STEP 3

Pusat Cluster	
8.239782	10.403539
5.754588	7.858633
4.657524	5.430768
7.024348	9.464101

STEP 9

Fungsi Objective
2208.921350

Selisih Fungsi Objective
2208.921350

STEP 4

X_V			
140.841002	69.646955	33.009194	107.933779
164.031484	86.185247	44.691414	128.319985
168.296307	89.232508	46.955615	132.046793
171.087279	91.236241	48.452703	134.489980
172.879374	92.527278	49.419810	136.061061
174.039540	93.363952	50.048904	137.078173
174.794430	93.909217	50.459158	137.740480
175.282401	94.261914	50.724825	138.168683
175.598043	94.490176	50.896848	138.445724
175.800517	94.636682	51.007244	138.623493
175.931047	94.731113	51.078473	138.738068
140.841002	69.646955	33.009194	107.933779
157.556459	81.592989	41.311183	122.676646
164.031484	86.185247	44.691414	128.319985
168.296307	89.232508	46.955615	132.046793
171.087279	91.236241	48.452703	134.489980
172.879374	92.527278	49.419810	136.061061
174.039540	93.363952	50.048904	137.078173
174.794430	93.909217	50.459158	137.740480
175.282401	94.261914	50.724825	138.168683
175.598043	94.490176	50.896848	138.445724
175.800517	94.636682	51.007244	138.623493
175.931047	94.731113	51.078473	138.738068
176.015525	94.792246	51.124577	138.812234
140.841002	69.646955	33.009194	107.933779
164.031484	86.185247	44.691414	128.319985
168.296307	89.232508	46.955615	132.046793
171.087279	91.236241	48.452703	134.489980
172.879374	92.527278	49.419810	136.061061
174.039540	93.363952	50.048904	137.078173
174.794430	93.909217	50.459158	137.740480
175.282401	94.261914	50.724825	138.168683
175.598043	94.490176	50.896848	138.445724
175.800517	94.636682	51.007244	138.623493
175.931047	94.731113	51.078473	138.738068
176.015525	94.792246	51.124577	138.812234
171.087279	91.236241	48.452703	134.489980
172.879374	92.527278	49.419810	136.061061
174.039540	93.363952	50.048904	137.078173
174.794430	93.909217	50.459158	137.740480
175.282401	94.261914	50.724825	138.168683
175.598043	94.490176	50.896848	138.445724
175.800517	94.636682	51.007244	138.623493
175.931047	94.731113	51.078473	138.738068
176.015525	94.792246	51.124577	138.812234
176.070060	94.831713	51.154347	138.860112
176.105216	94.857158	51.173538	138.890979
176.127646	94.873398	51.185780	138.910678



STEP 5

STEP 6

L				Total L
5.633640	6.268226	5.281471	1.079338	18.262675
14.762834	3.447410	1.787657	11.548799	31.546699
26.927409	8.030926	1.878225	1.320468	38.157027
42.771820	0.912362	1.938108	5.379599	51.001890
62.236575	0.925273	0.494198	5.442442	69.098488
85.279375	0.933640	0.500489	1.370782	88.084285
1.747944	23.477304	2.018366	5.509619	32.753234
7.011296	15.081906	4.565234	1.381687	28.040123
15.803824	3.779607	4.580716	5.537829	29.701976
28.128083	0.946367	2.040290	12.476114	43.590854
43.982762	3.789245	0.510785	5.549523	53.832314
50.702761	0.696470	1.320368	1.079338	53.798936
1.575565	3.263720	3.718006	19.628263	28.185554
6.561259	21.546312	0.446914	5.132799	33.687285
15.146668	22.308127	0.469556	1.320468	39.244819
27.373965	3.649450	4.360743	1.344900	36.729057
43.219843	3.701091	1.976792	1.360611	50.258338
62.654234	3.734558	0.500489	1.370782	68.260063
1.747944	0.939092	0.504592	67.492835	70.684463
7.011296	23.565479	0.507248	5.526747	36.610770
15.803824	0.944902	12.724212	1.384457	30.857395
28.128083	3.785467	0.510072	12.476114	44.899737
43.982762	8.525800	0.510785	1.387381	54.406727
63.365589	2.132826	1.150303	2.720720	69.369437
1.408410	6.268226	2.970827	9.714040	20.361504
6.561259	31.026689	0.446914	1.283200	39.318062
15.146668	8.030926	1.878225	5.281872	30.337690
27.373965	0.912362	0.484527	21.518397	50.289251
43.219843	0.925273	4.447783	1.360611	49.953510
62.654234	0.933640	1.281252	2.686732	67.555858
1.747944	15.025475	8.073465	1.377405	26.224289
7.011296	0.942619	18.260937	1.381687	27.596539
15.803824	0.944902	0.508968	34.611431	51.869125
28.128083	15.141869	0.510072	1.386235	45.166259
44.003881	0.947922	2.044983	5.552489	52.549276
61.591421	3.649450	0.484527	1.344900	67.070297
1.728794	23.131819	1.976792	5.442442	32.279848
6.961582	23.340988	0.500489	5.483127	36.286186
15.731499	15.025475	0.504592	5.509619	36.771184
28.045184	15.081906	0.507248	1.381687	45.016026
43.899511	3.779607	0.508968	5.537829	53.725915
112.512331	0.037855	0.413159	1.122850	114.086195
1.759310	34.103201	0.510785	5.549523	41.922819
7.040621	3.791690	0.511246	34.703059	46.046615
15.846305	0.948317	2.046174	22.217618	41.058414
28.176835	8.537144	2.046942	1.388910	40.149830
86.302547	0.037949	0.327589	5.556427	92.224512



STEP 7**STEP 8**

LT				Total LT
0.007100	0.014358	0.030295	0.009265	0.061018
0.006096	0.011603	0.022376	0.007793	0.047868
0.005942	0.011207	0.021297	0.007573	0.046018
0.005845	0.010961	0.020639	0.007435	0.044880
0.005784	0.010808	0.020235	0.007350	0.044176
0.005746	0.010711	0.019980	0.007295	0.043732
0.005721	0.010649	0.019818	0.007260	0.043448
0.005705	0.010609	0.019714	0.007238	0.043266
0.005695	0.010583	0.019648	0.007223	0.043149
0.005688	0.010567	0.019605	0.007214	0.043074
0.005684	0.010556	0.019578	0.007208	0.043026
0.007100	0.014358	0.030295	0.009265	0.061018
0.006347	0.012256	0.024207	0.008152	0.050961
0.006096	0.011603	0.022376	0.007793	0.047868
0.005942	0.011207	0.021297	0.007573	0.046018
0.005845	0.010961	0.020639	0.007435	0.044880
0.005784	0.010808	0.020235	0.007350	0.044176
0.005746	0.010711	0.019980	0.007295	0.043732
0.005721	0.010649	0.019818	0.007260	0.043448
0.005705	0.010609	0.019714	0.007238	0.043266
0.005695	0.010583	0.019648	0.007223	0.043149
0.005688	0.010567	0.019605	0.007214	0.043074
0.005684	0.010556	0.019578	0.007208	0.043026
0.005681	0.010549	0.019560	0.007204	0.042995
0.007100	0.014358	0.030295	0.009265	0.061018
0.006096	0.011603	0.022376	0.007793	0.047868
0.005942	0.011207	0.021297	0.007573	0.046018
0.005845	0.010961	0.020639	0.007435	0.044880
0.005784	0.010808	0.020235	0.007350	0.044176
0.005746	0.010711	0.019980	0.007295	0.043732
0.005721	0.010649	0.019818	0.007260	0.043448
0.005705	0.010609	0.019714	0.007238	0.043266
0.005695	0.010583	0.019648	0.007223	0.043149
0.005688	0.010567	0.019605	0.007214	0.043074
0.005681	0.010549	0.019560	0.007204	0.042995
0.005845	0.010961	0.020639	0.007435	0.044880
0.005784	0.010808	0.020235	0.007350	0.044176
0.005746	0.010711	0.019980	0.007295	0.043732
0.005721	0.010649	0.019818	0.007260	0.043448
0.005705	0.010609	0.019714	0.007238	0.043266
0.005695	0.010583	0.019648	0.007223	0.043149
0.005688	0.010567	0.019605	0.007214	0.043074
0.005684	0.010556	0.019578	0.007208	0.043026
0.005681	0.010549	0.019560	0.007204	0.042995
0.005680	0.010545	0.019549	0.007201	0.042975
0.005678	0.010542	0.019541	0.007200	0.042962
0.005678	0.010540	0.019537	0.007199	0.042954



Iterasi 9

No.	Ke dalam	Keanggotaan Cluster Random				Jumlah
		C1	C2	C3	C4	
1	0.8	0.2499751	0.2499987	0.2500437	0.2499825	1
2	1.3	0.2499775	0.2499988	0.2500395	0.2499842	1
3	2.4	0.2499779	0.2499988	0.2500388	0.2499845	1
4	1.2	0.2499781	0.2499989	0.2500383	0.2499847	1
5	1.85	0.2499783	0.2499989	0.2500381	0.2499848	1
6	1	0.2499784	0.2499989	0.2500379	0.2499849	1
7	0.9	0.2499784	0.2499989	0.2500378	0.2499849	1
8	1	0.2499785	0.2499989	0.2500377	0.2499849	1
9	2.8	0.2499785	0.2499989	0.2500377	0.2499849	1
10	0.9	0.2499785	0.2499989	0.2500376	0.2499850	1
11	0.85	0.2499785	0.2499989	0.2500376	0.2499850	1
12	0.55	0.2499751	0.2499987	0.2500437	0.2499825	1
13	0.95	0.2499769	0.2499988	0.2500406	0.2499838	1
14	1.95	0.2499775	0.2499988	0.2500395	0.2499842	1
15	0.75	0.2499779	0.2499988	0.2500388	0.2499845	1
16	0.85	0.2499781	0.2499989	0.2500383	0.2499847	1
17	0.5	0.2499783	0.2499989	0.2500381	0.2499848	1
18	0.9	0.2499784	0.2499989	0.2500379	0.2499849	1
19	1.45	0.2499784	0.2499989	0.2500378	0.2499849	1
20	1.9	0.2499785	0.2499989	0.2500377	0.2499849	1
21	1.35	0.2499785	0.2499989	0.2500377	0.2499849	1
22	1.2	0.2499785	0.2499989	0.2500376	0.2499850	1
23	1.55	0.2499785	0.2499989	0.2500376	0.2499850	1
24	1.1	0.2499785	0.2499989	0.2500376	0.2499850	1
25	0.75	0.2499751	0.2499987	0.2500437	0.2499825	1
26	1.05	0.2499775	0.2499988	0.2500395	0.2499842	1
27	1.7	0.2499779	0.2499988	0.2500388	0.2499845	1
28	1.6	0.2499781	0.2499989	0.2500383	0.2499847	1
29	0.4	0.2499783	0.2499989	0.2500381	0.2499848	1
30	0.95	0.2499784	0.2499989	0.2500379	0.2499849	1
31	1.05	0.2499784	0.2499989	0.2500378	0.2499849	1
32	1	0.2499785	0.2499989	0.2500377	0.2499849	1
33	2.5	0.2499785	0.2499989	0.2500377	0.2499849	1
34	1	0.2499785	0.2499989	0.2500376	0.2499850	1
35	3	0.2499785	0.2499989	0.2500376	0.2499850	1
36	0.85	0.2499781	0.2499989	0.2500383	0.2499847	1
37	1.25	0.2499783	0.2499989	0.2500381	0.2499848	1
38	1.35	0.2499784	0.2499989	0.2500379	0.2499849	1
39	0.8	0.2499784	0.2499989	0.2500378	0.2499849	1
40	1.2	0.2499785	0.2499989	0.2500377	0.2499849	1
41	1	0.2499785	0.2499989	0.2500377	0.2499849	1
	1.35	0.2499785	0.2499989	0.2500376	0.2499850	1
	1.05	0.2499785	0.2499989	0.2500376	0.2499850	1
	1.8	0.2499785	0.2499989	0.2500376	0.2499850	1
	2.2	0.2499785	0.2499989	0.2500376	0.2499850	1
	0.75	0.2499785	0.2499989	0.2500376	0.2499850	1
	1.4	0.2499785	0.2499989	0.2500376	0.2499850	1



STEP 3

Pusat Cluster	
6.236473	7.979370
6.236408	7.979268
6.236284	7.979074
6.236453	7.979337

STEP 9

Fungsi Objective
1160.068147391

Selisih Fungsi Objective
0.000082

STEP 4

X V			
76.132254	76.130152	76.126147	76.131589
93.411941	93.409613	93.405178	93.411205
96.625119	96.622752	96.618244	96.624371
98.736031	98.733640	98.729084	98.735275
100.094867	100.092460	100.087874	100.094106
100.975757	100.973340	100.968735	100.974993
101.549533	101.547109	101.542491	101.548767
101.920655	101.918227	101.913601	101.919887
102.160812	102.158381	102.153750	102.160044
102.314912	102.312479	102.307845	102.314143
102.414266	102.411832	102.407195	102.413497
76.132254	76.130152	76.126147	76.131589
88.563446	88.561178	88.556857	88.562729
93.411941	93.409613	93.405178	93.411205
96.625119	96.622752	96.618244	96.624371
98.736031	98.733640	98.729084	98.735275
100.094867	100.092460	100.087874	100.094106
100.975757	100.973340	100.968735	100.974993
101.549533	101.547109	101.542491	101.548767
101.920655	101.918227	101.913601	101.919887
102.160812	102.158381	102.153750	102.160044
102.314912	102.312479	102.307845	102.314143
102.414266	102.411832	102.407195	102.413497
102.478577	102.476142	102.471504	102.477807
76.132254	76.130152	76.126147	76.131589
93.411941	93.409613	93.405178	93.411205
96.625119	96.622752	96.618244	96.624371
98.736031	98.733640	98.729084	98.735275
100.094867	100.092460	100.087874	100.094106
100.975757	100.973340	100.968735	100.974993
101.549533	101.547109	101.542491	101.548767
101.920655	101.918227	101.913601	101.919887
102.160812	102.158381	102.153750	102.160044
102.314912	102.312479	102.307845	102.314143
102.478577	102.476142	102.471504	102.477807
98.736031	98.733640	98.729084	98.735275
100.094867	100.092460	100.087874	100.094106
100.975757	100.973340	100.968735	100.974993
101.549533	101.547109	101.542491	101.548767
101.920655	101.918227	101.913601	101.919887
102.160812	102.158381	102.153750	102.160044
102.314912	102.312479	102.307845	102.314143
102.414266	102.411832	102.407195	102.413497
102.478577	102.476142	102.471504	102.477807
102.520095	102.517660	102.513020	102.519325
102.546861	102.544425	102.539785	102.546091
102.563939	102.561504	102.556864	102.563170



STEP 5**STEP 6**

L			
4.757317	4.758085	4.759548	4.757559
5.837195	5.838046	5.839667	5.837464
6.038001	6.038866	6.040514	6.038275
6.169922	6.170796	6.172461	6.170198
6.254842	6.255722	6.257398	6.255120
6.309893	6.310777	6.312460	6.310172
6.345751	6.346637	6.348325	6.346031
6.368944	6.369832	6.371523	6.369225
6.383953	6.384841	6.386534	6.384234
6.393583	6.394472	6.396166	6.393864
6.399792	6.400682	6.402377	6.400074
4.757317	4.758085	4.759548	4.757559
5.534191	5.535020	5.536599	5.534453
5.837195	5.838046	5.839667	5.837464
6.038001	6.038866	6.040514	6.038275
6.169922	6.170796	6.172461	6.170198
6.254842	6.255722	6.257398	6.255120
6.309893	6.310777	6.312460	6.310172
6.345751	6.346637	6.348325	6.346031
6.368944	6.369832	6.371523	6.369225
6.383953	6.384841	6.386534	6.384234
6.393583	6.394472	6.396166	6.393864
6.399792	6.400682	6.402377	6.400074
6.403811	6.404701	6.406397	6.404093
4.757317	4.758085	4.759548	4.757559
5.837195	5.838046	5.839667	5.837464
6.038001	6.038866	6.040514	6.038275
6.169922	6.170796	6.172461	6.170198
6.254842	6.255722	6.257398	6.255120
6.309893	6.310777	6.312460	6.310172
6.345751	6.346637	6.348325	6.346031
6.368944	6.369832	6.371523	6.369225
6.383953	6.384841	6.386534	6.384234
6.393583	6.394472	6.396166	6.393864
6.403811	6.404701	6.406397	6.404093
6.169922	6.170796	6.172461	6.170198
6.254842	6.255722	6.257398	6.255120
6.309893	6.310777	6.312460	6.310172
6.345751	6.346637	6.348325	6.346031
6.368944	6.369832	6.371523	6.369225
6.383953	6.384841	6.386534	6.384234
6.393583	6.394472	6.396166	6.393864
6.399792	6.400682	6.402377	6.400074
6.403811	6.404701	6.406397	6.404093
6.406406	6.407296	6.408992	6.406687
6.408079	6.408969	6.410665	6.408360
6.409146	6.410036	6.411732	6.409428

Total L
19.032509
23.352371
24.155655
24.683377
25.023082
25.243302
25.386744
25.479523
25.539562
25.578086
25.602925
19.032509
22.140263
23.352371
24.155655
24.683377
25.023082
25.243302
25.386744
25.479523
25.539562
25.578086
25.602925
25.619002
19.032509
23.352371
24.155655
24.683377
25.023082
25.243302
25.386744
25.479523
25.539562
25.578086
25.619002
24.683377
25.023082
25.243302
25.386744
25.479523
25.539562
25.578086
25.619002
25.629381
25.636073
25.640342



STEP 7

STEP 8

LT			
0.013135	0.013135	0.013136	0.013135
0.010705	0.010706	0.010706	0.010705
0.010349	0.010350	0.010350	0.010349
0.010128	0.010128	0.010129	0.010128
0.009991	0.009991	0.009991	0.009991
0.009903	0.009904	0.009904	0.009903
0.009847	0.009848	0.009848	0.009847
0.009812	0.009812	0.009812	0.009812
0.009788	0.009789	0.009789	0.009789
0.009774	0.009774	0.009774	0.009774
0.009764	0.009764	0.009765	0.009764
0.013135	0.013135	0.013136	0.013135
0.011291	0.011292	0.011292	0.011291
0.010705	0.010706	0.010706	0.010705
0.010349	0.010350	0.010350	0.010349
0.010128	0.010128	0.010129	0.010128
0.009991	0.009991	0.009991	0.009991
0.009903	0.009904	0.009904	0.009903
0.009847	0.009848	0.009848	0.009847
0.009812	0.009812	0.009812	0.009812
0.009788	0.009789	0.009789	0.009789
0.009774	0.009774	0.009774	0.009774
0.009764	0.009764	0.009765	0.009764
0.009758	0.009758	0.009759	0.009758
0.013135	0.013135	0.013136	0.013135
0.010705	0.010706	0.010706	0.010705
0.010349	0.010350	0.010350	0.010349
0.010128	0.010128	0.010129	0.010128
0.009991	0.009991	0.009991	0.009991
0.009903	0.009904	0.009904	0.009903
0.009847	0.009848	0.009848	0.009847
0.009812	0.009812	0.009812	0.009812
0.009788	0.009789	0.009789	0.009789
0.009774	0.009774	0.009774	0.009774
0.009758	0.009758	0.009759	0.009758
0.010128	0.010128	0.010129	0.010128
0.009991	0.009991	0.009991	0.009991
0.009903	0.009904	0.009904	0.009903
0.009847	0.009848	0.009848	0.009847
0.009812	0.009812	0.009812	0.009812
0.009788	0.009789	0.009789	0.009789
0.009774	0.009774	0.009774	0.009774
0.009764	0.009764	0.009765	0.009764
0.009758	0.009758	0.009759	0.009758
0.009754	0.009754	0.009755	0.009754
0.009752	0.009752	0.009752	0.009752
0.009750	0.009750	0.009751	0.009750

Total LT
0.052542
0.042822
0.041398
0.040513
0.039963
0.039614
0.039391
0.039247
0.039155
0.039096
0.039058
0.052542
0.045167
0.042822
0.041398
0.040513
0.039963
0.039614
0.039391
0.039247
0.039155
0.039096
0.039058
0.039034
0.052542
0.042822
0.041398
0.040513
0.039963
0.039614
0.039391
0.039247
0.039155
0.039096
0.039034
0.040513
0.039963
0.039614
0.039391
0.039247
0.039155
0.039096
0.039058
0.039034
0.039018
0.039008
0.039001



Proses Fuzzy C-Means Geoteknik

No.	Jenis	Parameter		Normalisasi	
		LL	IP	LL	IP
1	ML	41.26	17.29	0.8252	0.6916
2	ML	37.71	20.67	0.7542	0.8268
3	ML	37.77	2.93	0.7554	0.1172
4	ML	31.43	3.05	0.6286	0.1220
5	ML	45.27	21.32	0.9054	0.8528
6	CH	50.83	26.04	0.0166	0.0139
7	CH	54.29	27.54	0.0858	0.0339
8	CH	57.06	31.60	0.1412	0.0880
9	CH	55.55	29.61	0.1110	0.0615
10	CL	55.11	15.41	0.8802	0.1431
11	CL	58.08	20.58	0.8220	0.0732
12	ML	36.37	13.65	0.7274	0.5460
13	ML	32.01	11.95	0.6402	0.4780
14	CH	56.18	28.61	0.1236	0.0481
15	CH	58.16	30.06	0.1632	0.0675
16	CH	66.55	39.86	0.3310	0.1981
17	ML	28.51	15.19	0.5702	0.6076
18	ML	35.22	14.41	0.7044	0.5764
19	ML	29.92	11.39	0.5984	0.4556
20	ML	27.07	2.76	0.5414	0.1104
21	CH	57.17	31.63	0.1434	0.0884
22	CH	62.89	36.05	0.2578	0.1473
23	CH	55.01	28.24	0.1002	0.0432
24	CH	63.45	28.11	0.7167	0.0285
25	ML	36.62	14.76	0.7324	0.5904
26	CH	57.99	29.89	0.1598	0.0652
27	CH	62.56	34.12	0.2512	0.1216
28	MH	31.23	26.62	0.6246	0.1448
29	ML	34.52	3.56	0.6904	0.1424
30	CL	57.58	20.89	0.4418	0.1244
31	CH	62.04	35.18	0.2408	0.1357
32	CH	56.67	31.24	0.1334	0.0832
33	CH	66.76	38.78	0.3352	0.1837
34	CH	62.92	34.48	0.2584	0.1264
35	CH	53.50	26.81	0.0700	0.0241
36	CH	62.19	38.58	0.2438	0.1811
37	CH	58.32	33.15	0.1664	0.1087
38	CH	60.31	32.89	0.2062	0.1052
39	CH	65.92	36.78	0.3184	0.1571
40	CH	55.15	29.72	0.1030	0.0629
41	CH	57.83	29.93	0.1566	0.0657
42	CH	56.09	28.84	0.1218	0.0512
43	CH	61.00	37.25	0.2200	0.1633
44	ML	32.39	13.96	0.6478	0.5584
45	ML	41.50	24.7	0.8300	0.9880
46	ML	37.45	14.13	0.7490	0.5652
47	ML	41.92	18.17	0.8384	0.7268



Iterasi 1

No.	Jenis	Keanggotaan Cluster Random				Jumlah
		C1	C2	C3	C4	
1	ML	0.2	0.3	0.4	0.1	1
2	ML	0.3	0.2	0.2	0.3	1
3	ML	0.4	0.3	0.2	0.1	1
4	ML	0.5	0.1	0.2	0.2	1
5	ML	0.6	0.1	0.1	0.2	1
6	CH	0.7	0.1	0.1	0.1	1
7	CH	0.1	0.5	0.2	0.2	1
8	CH	0.2	0.4	0.3	0.1	1
9	CH	0.3	0.2	0.3	0.2	1
10	CL	0.4	0.1	0.2	0.3	1
11	CL	0.5	0.2	0.1	0.2	1
12	ML	0.6	0.1	0.2	0.1	1
13	ML	0.1	0.2	0.3	0.4	1
14	CH	0.2	0.5	0.1	0.2	1
15	CH	0.3	0.5	0.1	0.1	1
16	CH	0.4	0.2	0.3	0.1	1
17	ML	0.5	0.2	0.2	0.1	1
18	ML	0.6	0.2	0.1	0.1	1
19	ML	0.1	0.1	0.1	0.7	1
20	ML	0.2	0.5	0.1	0.2	1
21	CH	0.3	0.1	0.5	0.1	1
22	CH	0.4	0.2	0.1	0.3	1
23	CH	0.5	0.3	0.1	0.1	1
24	CH	0.6	0.2	0.2	0.1	1
25	ML	0.1	0.3	0.3	0.3	1
26	CH	0.2	0.6	0.1	0.1	1
27	CH	0.3	0.3	0.2	0.2	1
28	MH	0.4	0.1	0.1	0.4	1
29	ML	0.5	0.1	0.3	0.1	1
30	CL	0.6	0.1	0.2	0.1	1
31	CH	0.1	0.4	0.4	0.1	1
32	CH	0.2	0.1	0.6	0.1	1
33	CH	0.3	0.1	0.1	0.5	1
34	CH	0.4	0.4	0.1	0.1	1
35	CH	0.5	0.1	0.2	0.2	1
36	CH	0.6	0.2	0.1	0.1	1
37	CH	0.1	0.5	0.2	0.2	1
38	CH	0.2	0.5	0.1	0.2	1
39	CH	0.3	0.4	0.1	0.2	1
40	CH	0.4	0.4	0.1	0.1	1
41	CH	0.5	0.2	0.1	0.2	1
	CH	0.8	0.0	0.1	0.1	1
	CH	0.1	0.6	0.1	0.2	1
	ML	0.2	0.2	0.1	0.5	1
	ML	0.3	0.1	0.2	0.4	1
	ML	0.4	0.3	0.2	0.1	1
	ML	0.7	0.02	0.08	0.2	1



STEP 1

Miu Kuadrat

0.040000	0.090000	0.160000	0.010000	
0.090000	0.040000	0.040000	0.090000	
0.160000	0.090000	0.040000	0.010000	
0.250000	0.010000	0.040000	0.040000	
0.360000	0.010000	0.010000	0.040000	
0.490000	0.010000	0.010000	0.010000	
0.010000	0.250000	0.040000	0.040000	
0.040000	0.160000	0.090000	0.010000	
0.090000	0.040000	0.090000	0.040000	
0.160000	0.010000	0.040000	0.090000	
0.250000	0.040000	0.010000	0.040000	
0.360000	0.010000	0.040000	0.010000	
0.010000	0.040000	0.090000	0.160000	
0.040000	0.250000	0.010000	0.040000	
0.090000	0.250000	0.010000	0.010000	
0.160000	0.040000	0.090000	0.010000	
0.250000	0.040000	0.040000	0.010000	
0.360000	0.040000	0.010000	0.010000	
0.010000	0.010000	0.010000	0.490000	
0.040000	0.250000	0.010000	0.040000	
0.090000	0.010000	0.250000	0.010000	
0.160000	0.040000	0.010000	0.090000	
0.250000	0.090000	0.010000	0.010000	
0.360000	0.022500	0.022500	0.019600	
0.010000	0.090000	0.090000	0.090000	
0.040000	0.360000	0.010000	0.010000	
0.090000	0.090000	0.040000	0.040000	
0.160000	0.010000	0.010000	0.160000	
0.250000	0.010000	0.090000	0.010000	
0.360000	0.010000	0.025600	0.019600	
0.010000	0.160000	0.160000	0.010000	
0.040000	0.010000	0.360000	0.010000	
0.090000	0.010000	0.010000	0.250000	
0.160000	0.160000	0.010000	0.010000	
0.250000	0.010000	0.040000	0.040000	
0.360000	0.040000	0.010000	0.010000	
0.010000	0.250000	0.040000	0.040000	
0.040000	0.250000	0.010000	0.040000	
0.090000	0.160000	0.010000	0.040000	
0.160000	0.160000	0.010000	0.010000	
0.250000	0.040000	0.010000	0.040000	
0.640000	0.000400	0.008100	0.008100	
0.010000	0.360000	0.010000	0.040000	
0.040000	0.040000	0.010000	0.250000	
0.090000	0.010000	0.040000	0.160000	
0.160000	0.090000	0.040000	0.010000	
0.490000	0.000400	0.006400	0.040000	
Total Miu Kuadrat	7.920000	4.163300	2.222600	2.667300



STEP 2

Miu Kuadrat 1		Miu Kuadrat 2		Miu Kuadrat 3		Miu Kuadrat 4		
0.033008	0.027664	0.074268	0.062244	0.132032	0.110656	0.008252	0.006916	
0.067878	0.074412	0.030168	0.033072	0.030168	0.033072	0.067878	0.074412	
0.120864	0.018752	0.067986	0.010548	0.030216	0.004688	0.007554	0.001172	
0.157150	0.030500	0.006286	0.001220	0.025144	0.004880	0.025144	0.004880	
0.325944	0.307008	0.009054	0.008528	0.009054	0.008528	0.036216	0.034112	
0.008134	0.006795	0.000166	0.000139	0.000166	0.000139	0.000166	0.000139	
0.000858	0.000339	0.021450	0.008467	0.003432	0.001355	0.003432	0.001355	
0.005648	0.003520	0.022592	0.014080	0.012708	0.007920	0.001412	0.000880	
0.009990	0.005532	0.004440	0.002459	0.009990	0.005532	0.004440	0.002459	
0.140831	0.022897	0.008802	0.001431	0.035208	0.005724	0.079218	0.012880	
0.205490	0.018311	0.032878	0.002930	0.008220	0.000732	0.032878	0.002930	
0.261864	0.196560	0.007274	0.005460	0.029096	0.021840	0.007274	0.005460	
0.006402	0.004780	0.025608	0.019120	0.057618	0.043020	0.102432	0.076480	
0.004944	0.001925	0.030900	0.012033	0.001236	0.000481	0.004944	0.001925	
0.014688	0.006072	0.040800	0.016867	0.001632	0.000675	0.001632	0.000675	
0.052960	0.031701	0.013240	0.007925	0.029790	0.017832	0.003310	0.001981	
0.142550	0.151900	0.022808	0.024304	0.022808	0.024304	0.005702	0.006076	
0.253584	0.207504	0.028176	0.023056	0.007044	0.005764	0.007044	0.005764	
0.005984	0.004556	0.005984	0.004556	0.005984	0.004556	0.293216	0.223244	
0.021656	0.004416	0.135350	0.027600	0.005414	0.001104	0.021656	0.004416	
0.012906	0.007956	0.001434	0.000884	0.035850	0.022100	0.001434	0.000884	
0.041248	0.023573	0.010312	0.005893	0.002578	0.001473	0.023202	0.013260	
0.025050	0.010800	0.009018	0.003888	0.001002	0.000432	0.001002	0.000432	
0.258000	0.010265	0.016125	0.000642	0.016125	0.000642	0.014047	0.000559	
0.007324	0.005904	0.065916	0.053136	0.065916	0.053136	0.065916	0.053136	
0.006392	0.002608	0.057528	0.023472	0.001598	0.000652	0.001598	0.000652	
0.022608	0.010944	0.022608	0.010944	0.010048	0.004864	0.010048	0.004864	
0.099936	0.023168	0.006246	0.001448	0.006246	0.001448	0.099936	0.023168	
0.172600	0.035600	0.006904	0.001424	0.062136	0.012816	0.006904	0.001424	
0.159063	0.044784	0.004418	0.001244	0.011311	0.003185	0.008660	0.002438	
0.002408	0.001357	0.038528	0.021717	0.038528	0.021717	0.002408	0.001357	
0.005336	0.003328	0.001334	0.000832	0.048024	0.029952	0.001334	0.000832	
0.030168	0.016536	0.003352	0.001837	0.003352	0.001837	0.083800	0.045933	
0.041344	0.020224	0.041344	0.020224	0.002584	0.001264	0.002584	0.001264	
0.017500	0.006033	0.000700	0.000241	0.002800	0.000965	0.002800	0.000965	
0.087768	0.065184	0.009752	0.007243	0.002438	0.001811	0.002438	0.001811	
0.001664	0.001087	0.041600	0.027167	0.006656	0.004347	0.006656	0.004347	
0.008248	0.004208	0.051550	0.026300	0.002062	0.001052	0.008248	0.004208	
0.028656	0.014136	0.050944	0.025131	0.003184	0.001571	0.012736	0.006283	
0.016480	0.010069	0.016480	0.010069	0.001030	0.000629	0.001030	0.000629	
0.039150	0.016433	0.006264	0.002629	0.001566	0.000657	0.006264	0.002629	
0.077952	0.032768	0.000049	0.000020	0.000987	0.000415	0.000987	0.000415	
0.002200	0.001633	0.079200	0.058800	0.002200	0.001633	0.008800	0.006533	
0.025912	0.022336	0.025912	0.022336	0.006478	0.005584	0.161950	0.139600	
0.074700	0.088920	0.008300	0.009880	0.033200	0.039520	0.132800	0.158080	
0.119840	0.090432	0.067410	0.050868	0.029960	0.022608	0.007490	0.005652	
0.410816	0.356132	0.000335	0.000291	0.005366	0.004652	0.033536	0.029072	
Total Miu Kuadrat X	3.635697	2.051564	1.231794	0.674599	0.860184	0.543764	1.422407	0.978583



STEP 3

Pusat Cluster	
2.178400	3.860470
3.379867	6.171519
2.583866	4.087436
1.875201	2.725677

STEP 9

Fungsi Objective
381.632477

Selish Fungsi Objective
381.632477

STEP 4

X_V			
11.872886	36.555839	14.624608	5.239971
11.231498	35.460152	13.979425	4.862377
16.036998	43.542609	19.106062	8.058106
16.378037	44.166154	19.547748	8.333148
10.666607	34.411762	13.280118	4.448182
19.469735	49.228251	23.184822	10.808313
19.021866	48.521658	22.671758	10.447798
18.381712	47.498171	21.962106	9.964099
18.706568	48.018235	22.323495	10.210422
15.504112	42.590096	18.460214	7.659696
16.183013	43.731855	19.218054	8.144719
13.091111	38.682049	15.988235	6.068439
13.807161	39.921937	16.805866	6.577279
18.756112	48.099131	22.368875	10.237346
18.447904	47.606405	22.019777	9.997029
16.825595	44.976930	20.202081	8.773033
13.167469	38.851427	16.164109	6.189278
12.957791	38.463484	15.859766	5.990166
14.089539	40.408292	17.132308	6.783470
16.742793	44.794062	19.988483	8.618698
18.369736	47.479059	21.948163	9.954364
17.476087	46.038119	20.934992	9.263842
18.890464	48.312513	22.524442	10.346311
16.820554	44.829156	19.961285	8.616892
12.784273	38.157974	15.657187	5.865402
18.478819	47.655967	22.054479	10.020738
17.693247	46.390081	21.169186	9.418596
16.220497	43.912842	19.383102	8.224929
16.038188	43.583512	19.148523	8.077073
16.973851	45.199642	20.293921	8.821159
17.627956	46.284454	21.105912	9.379074
18.449792	47.607180	22.038690	10.016555
16.915777	45.123578	20.295393	8.833080
17.629677	46.287024	21.097598	9.370286
19.162828	48.745574	22.829951	10.557089
17.280685	45.720439	20.735630	9.136511
18.124171	47.084553	21.674747	9.768744
17.991624	46.872392	21.511499	9.652464
17.174795	45.546221	20.580139	9.021388
18.728568	48.052680	22.351318	10.230900
18.487700	47.670073	22.065713	10.028889
18.740140	48.073309	22.352970	10.227242
17.504149	46.083058	20.986444	9.305295
13.246402	38.971298	16.202447	6.203603
10.069265	33.370694	12.682550	4.111966
12.901988	38.352277	15.772880	5.935989
11.615487	36.104023	14.340526	5.070465



STEP 5

STEP 6

L				Total L
0.474915	3.290026	2.339937	0.052400	6.157278
1.010835	1.418406	0.559177	0.437614	3.426032
2.565920	3.918835	0.764242	0.080581	7.329578
4.094509	0.441662	0.781910	0.333326	5.651407
3.839978	0.344118	0.132801	0.177927	4.494825
9.540170	0.492283	0.231848	0.108083	10.372384
0.190219	12.130414	0.906870	0.417912	13.645415
0.735268	7.599707	1.976590	0.099641	10.411206
1.683591	1.920729	2.009115	0.408417	6.021852
2.480658	0.425901	0.738409	0.689373	4.334340
4.045753	1.749274	0.192181	0.325789	6.312997
4.712800	0.386820	0.639529	0.060684	5.799834
0.138072	1.596877	1.512528	1.052365	4.299842
0.750244	12.024783	0.223689	0.409494	13.408210
1.660311	11.901601	0.220198	0.099970	13.882081
2.692095	1.799077	1.818187	0.087730	6.397090
3.291867	1.554057	0.646564	0.061893	5.554382
4.664805	1.538539	0.158598	0.059902	6.421843
0.140895	0.404083	0.171323	3.323900	4.040202
0.669712	11.198516	0.199885	0.344748	12.412860
1.653276	0.474791	5.487041	0.099544	7.714651
2.796174	1.841525	0.209350	0.833746	5.680794
4.722616	4.348126	0.225244	0.103463	9.399450
6.055399	1.008656	0.449129	0.168891	7.682075
0.127843	3.434218	1.409147	0.527886	5.499093
0.739153	17.156148	0.220545	0.100207	18.216053
1.592392	4.175107	0.846767	0.376744	6.991011
2.595280	0.439128	0.193831	1.315989	4.544228
4.009547	0.435835	1.723367	0.080771	6.249520
6.110586	0.451996	0.519524	0.172895	7.255002
0.176280	7.405513	3.376946	0.093791	11.052529
0.737992	0.476072	7.933928	0.100166	9.248157
1.522420	0.451236	0.202954	2.208270	4.384880
2.820748	7.405924	0.210976	0.093703	10.531351
4.790707	0.487456	0.913198	0.422284	6.613644
6.221046	1.828818	0.207356	0.091365	8.348585
0.181242	11.771138	0.866990	0.390750	13.210119
0.719665	11.718098	0.215115	0.386099	13.038977
1.545732	7.287395	0.205801	0.360856	9.399784
2.996571	7.688429	0.223513	0.102309	11.010822
4.621925	1.906803	0.220657	0.401156	7.150541
11.993690	0.019229	0.181059	0.082841	12.276819
0.175041	16.589901	0.209864	0.372212	17.347019
0.529856	1.558852	0.162024	1.550901	3.801633
0.906234	0.333707	0.507302	0.657915	2.405157
2.064318	3.451705	0.630915	0.059360	6.206298
5.691588	0.014442	0.091779	0.202819	6.000628



STEP 7**STEP 8**

LT				Total LT
0.084226	0.027355	0.068378	0.190841	0.370800
0.089035	0.028201	0.071534	0.205661	0.394430
0.062356	0.022966	0.052339	0.124099	0.261760
0.061057	0.022642	0.051157	0.120003	0.254859
0.093751	0.029060	0.075301	0.224811	0.422922
0.051362	0.020314	0.043132	0.092521	0.207328
0.052571	0.020609	0.044108	0.095714	0.213002
0.054402	0.021053	0.045533	0.100360	0.221349
0.053457	0.020825	0.044796	0.097939	0.217018
0.064499	0.023480	0.054171	0.130553	0.272703
0.061793	0.022867	0.052034	0.122779	0.259473
0.076388	0.025852	0.062546	0.164787	0.329573
0.072426	0.025049	0.059503	0.152039	0.309017
0.053316	0.020790	0.044705	0.097682	0.216493
0.054207	0.021006	0.045414	0.100030	0.220656
0.059433	0.022234	0.049500	0.113986	0.245152
0.075945	0.025739	0.061865	0.161570	0.325119
0.077174	0.025999	0.063053	0.166940	0.333165
0.070975	0.024747	0.058369	0.147417	0.301508
0.059727	0.022324	0.050029	0.116027	0.248107
0.054437	0.021062	0.045562	0.100458	0.221520
0.057221	0.021721	0.047767	0.107947	0.234656
0.052937	0.020699	0.044396	0.096653	0.214684
0.059451	0.022307	0.050097	0.116051	0.247906
0.078221	0.026207	0.063868	0.170491	0.338788
0.054116	0.020984	0.045342	0.099793	0.220235
0.056519	0.021556	0.047238	0.106173	0.231486
0.061650	0.022772	0.051591	0.121582	0.257596
0.062351	0.022944	0.052223	0.123807	0.261326
0.058914	0.022124	0.049276	0.113364	0.243678
0.056728	0.021606	0.047380	0.106620	0.232334
0.054201	0.021005	0.045375	0.099835	0.220416
0.059116	0.022161	0.049272	0.113211	0.243761
0.056723	0.021604	0.047399	0.106720	0.232446
0.052184	0.020515	0.043802	0.094723	0.211224
0.057868	0.021872	0.048226	0.109451	0.237417
0.055175	0.021238	0.046137	0.102367	0.224917
0.055581	0.021335	0.046487	0.103600	0.227003
0.058225	0.021956	0.048591	0.110848	0.239619
0.053394	0.020810	0.044740	0.097743	0.216688
0.054090	0.020978	0.045319	0.099712	0.220099
0.053361	0.020802	0.044737	0.097778	0.216678
0.057129	0.021700	0.047650	0.107466	0.233945
0.075492	0.025660	0.061719	0.161197	0.324068
0.099312	0.029966	0.078848	0.243193	0.451320
0.077507	0.026074	0.063400	0.168464	0.335445
0.086092	0.027698	0.069732	0.197221	0.380743



Iterasi 9

No.	Jenis	Keanggotaan Cluster Random				Jumlah
		C1	C2	C3	C4	
1	ML	0.249987	0.249830	0.249952	0.250230	1
2	ML	0.249987	0.249827	0.249951	0.250235	1
3	ML	0.249989	0.249853	0.249959	0.250200	1
4	ML	0.249989	0.249854	0.249959	0.250197	1
5	ML	0.249987	0.249821	0.249950	0.250242	1
6	CH	0.249990	0.249869	0.249963	0.250178	1
7	CH	0.249990	0.249867	0.249963	0.250180	1
8	CH	0.249990	0.249865	0.249962	0.250184	1
9	CH	0.249990	0.249866	0.249962	0.250182	1
10	CL	0.249989	0.249850	0.249958	0.250204	1
11	CL	0.249989	0.249853	0.249959	0.250199	1
12	ML	0.249988	0.249838	0.249955	0.250219	1
13	ML	0.249988	0.249843	0.249956	0.250213	1
14	CH	0.249990	0.249866	0.249962	0.250182	1
15	CH	0.249990	0.249865	0.249962	0.250184	1
16	CH	0.249989	0.249858	0.249960	0.250193	1
17	ML	0.249988	0.249840	0.249955	0.250217	1
18	ML	0.249988	0.249838	0.249954	0.250220	1
19	ML	0.249988	0.249844	0.249956	0.250211	1
20	ML	0.249989	0.249856	0.249960	0.250195	1
21	CH	0.249990	0.249865	0.249962	0.250184	1
22	CH	0.249990	0.249861	0.249961	0.250189	1
23	CH	0.249990	0.249866	0.249962	0.250181	1
24	CH	0.249989	0.249856	0.249959	0.250195	1
25	ML	0.249988	0.249837	0.249954	0.250221	1
26	CH	0.249990	0.249865	0.249962	0.250183	1
27	CH	0.249990	0.249862	0.249961	0.250188	1
28	MH	0.249989	0.249854	0.249959	0.250198	1
29	ML	0.249989	0.249853	0.249959	0.250200	1
30	CL	0.249989	0.249858	0.249960	0.250193	1
31	CH	0.249990	0.249861	0.249961	0.250188	1
32	CH	0.249990	0.249865	0.249962	0.250183	1
33	CH	0.249989	0.249858	0.249960	0.250192	1
34	CH	0.249990	0.249861	0.249961	0.250188	1
35	CH	0.249990	0.249867	0.249963	0.250180	1
36	CH	0.249990	0.249860	0.249961	0.250190	1
37	CH	0.249990	0.249864	0.249962	0.250185	1
38	CH	0.249990	0.249863	0.249961	0.250186	1
39	CH	0.249990	0.249859	0.249960	0.250191	1
40	CH	0.249990	0.249866	0.249962	0.250182	1
41	CH	0.249990	0.249865	0.249962	0.250183	1
	CH	0.249990	0.249866	0.249962	0.250182	1
	CH	0.249990	0.249861	0.249961	0.250188	1
	ML	0.249988	0.249840	0.249955	0.250217	1
	ML	0.249986	0.249818	0.249949	0.250247	1
	ML	0.249988	0.249837	0.249954	0.250221	1
	ML	0.249987	0.249829	0.249952	0.250232	1



STEP 1

Miu Kuadrat

0.062494	0.062415	0.062476	0.062615	
0.062494	0.062413	0.062476	0.062617	
0.062495	0.062426	0.062479	0.062600	
0.062495	0.062427	0.062480	0.062599	
0.062493	0.062411	0.062475	0.062621	
0.062495	0.062434	0.062482	0.062589	
0.062495	0.062433	0.062481	0.062590	
0.062495	0.062432	0.062481	0.062592	
0.062495	0.062433	0.062481	0.062591	
0.062494	0.062425	0.062479	0.062602	
0.062495	0.062427	0.062479	0.062600	
0.062494	0.062419	0.062477	0.062610	
0.062494	0.062421	0.062478	0.062607	
0.062495	0.062433	0.062481	0.062591	
0.062495	0.062432	0.062481	0.062592	
0.062495	0.062429	0.062480	0.062596	
0.062494	0.062420	0.062477	0.062608	
0.062494	0.062419	0.062477	0.062610	
0.062494	0.062422	0.062478	0.062605	
0.062495	0.062428	0.062480	0.062597	
0.062495	0.062432	0.062481	0.062592	
0.062495	0.062430	0.062480	0.062594	
0.062495	0.062433	0.062481	0.062591	
0.062495	0.062428	0.062480	0.062598	
0.062494	0.062418	0.062477	0.062611	
0.062495	0.062432	0.062481	0.062592	
0.062495	0.062431	0.062481	0.062594	
0.062495	0.062427	0.062479	0.062599	
0.062495	0.062426	0.062479	0.062600	
0.062495	0.062429	0.062480	0.062596	
0.062495	0.062431	0.062480	0.062594	
0.062495	0.062432	0.062481	0.062592	
0.062495	0.062429	0.062480	0.062596	
0.062495	0.062431	0.062480	0.062594	
0.062495	0.062434	0.062481	0.062590	
0.062495	0.062430	0.062480	0.062595	
0.062495	0.062432	0.062481	0.062593	
0.062495	0.062431	0.062481	0.062593	
0.062495	0.062430	0.062480	0.062595	
0.062495	0.062433	0.062481	0.062591	
0.062495	0.062432	0.062481	0.062592	
0.062495	0.062433	0.062481	0.062591	
0.062495	0.062431	0.062480	0.062594	
0.062494	0.062420	0.062477	0.062609	
0.062493	0.062409	0.062474	0.062624	
0.062494	0.062419	0.062477	0.062610	
0.062494	0.062414	0.062476	0.062616	
Total Miu Kuadrat	2.937245	2.934060	2.936532	2.942167



STEP 2

Miu Kuadrat 1		Miu Kuadrat 2		Miu Kuadrat 3		Miu Kuadrat 4	
0.051570	0.043221	0.051505	0.043166	0.051555	0.043208	0.051670	0.043305
0.047133	0.051670	0.047072	0.051603	0.047119	0.051655	0.047226	0.051772
0.047208	0.007324	0.047157	0.007316	0.047197	0.007323	0.047288	0.007337
0.039284	0.007624	0.039242	0.007616	0.039275	0.007623	0.039350	0.007637
0.056582	0.053294	0.056507	0.053224	0.056565	0.053279	0.056697	0.053403
0.001037	0.000867	0.001036	0.000866	0.001037	0.000866	0.001039	0.000868
0.005362	0.002116	0.005357	0.002114	0.005361	0.002116	0.005370	0.002120
0.008824	0.005500	0.008815	0.005494	0.008822	0.005498	0.008838	0.005508
0.006937	0.003841	0.006930	0.003838	0.006935	0.003841	0.006948	0.003847
0.055007	0.008943	0.054946	0.008934	0.054994	0.008941	0.055102	0.008959
0.051368	0.004577	0.051312	0.004572	0.051356	0.004576	0.051454	0.004585
0.045458	0.034122	0.045404	0.034081	0.045446	0.034113	0.045542	0.034185
0.040009	0.029872	0.039962	0.029837	0.039998	0.029864	0.040081	0.029926
0.007724	0.003008	0.007717	0.003005	0.007723	0.003007	0.007736	0.003013
0.010199	0.004216	0.010189	0.004212	0.010197	0.004215	0.010215	0.004223
0.020686	0.012382	0.020664	0.012369	0.020681	0.012379	0.020719	0.012402
0.035634	0.037971	0.035592	0.037926	0.035625	0.037961	0.035699	0.038041
0.044021	0.036022	0.043968	0.035978	0.044009	0.036012	0.044102	0.036088
0.037397	0.028472	0.037353	0.028440	0.037387	0.028465	0.037463	0.028523
0.033835	0.006899	0.033799	0.006892	0.033827	0.006898	0.033890	0.006911
0.008962	0.005525	0.008953	0.005519	0.008960	0.005523	0.008976	0.005533
0.016111	0.009208	0.016095	0.009198	0.016107	0.009205	0.016137	0.009222
0.006262	0.002700	0.006256	0.002697	0.006261	0.002699	0.006272	0.002704
0.044788	0.001782	0.044740	0.001780	0.044777	0.001782	0.044862	0.001785
0.045771	0.036896	0.045715	0.036852	0.045758	0.036886	0.045856	0.036965
0.009987	0.004075	0.009977	0.004071	0.009984	0.004074	0.010002	0.004081
0.015699	0.007599	0.015683	0.007592	0.015695	0.007598	0.015724	0.007611
0.039034	0.009049	0.038992	0.009039	0.039025	0.009047	0.039099	0.009064
0.043146	0.008899	0.043099	0.008890	0.043136	0.008897	0.043219	0.008914
0.027613	0.007774	0.027584	0.007766	0.027606	0.007773	0.027658	0.007787
0.015049	0.008483	0.015033	0.008474	0.015045	0.008481	0.015073	0.008496
0.008337	0.005200	0.008328	0.005194	0.008335	0.005198	0.008350	0.005208
0.020948	0.011482	0.020926	0.011470	0.020943	0.011480	0.020982	0.011501
0.016149	0.007899	0.016132	0.007891	0.016145	0.007898	0.016174	0.007912
0.004375	0.001508	0.004370	0.001507	0.004374	0.001508	0.004381	0.001511
0.015236	0.011316	0.015220	0.011304	0.015233	0.011313	0.015261	0.011334
0.010399	0.006791	0.010389	0.006784	0.010397	0.006790	0.010415	0.006802
0.012886	0.006574	0.012873	0.006568	0.012884	0.006573	0.012907	0.006585
0.019898	0.009816	0.019878	0.009806	0.019894	0.009814	0.019930	0.009832
0.006437	0.003933	0.006431	0.003929	0.006436	0.003932	0.006447	0.003939
0.009787	0.004108	0.009777	0.004104	0.009785	0.004107	0.009802	0.004114
0.007612	0.003200	0.007604	0.003197	0.007610	0.003199	0.007624	0.003205
0.013749	0.010207	0.013735	0.010197	0.013746	0.010205	0.013771	0.010224
0.040484	0.034897	0.040436	0.034855	0.040473	0.034887	0.040558	0.034961
0.051869	0.061743	0.051799	0.061660	0.051854	0.061725	0.051978	0.061872
0.046808	0.035322	0.046752	0.035279	0.046795	0.035312	0.046895	0.035387
0.052395	0.045420	0.052328	0.045363	0.052380	0.045407	0.052497	0.045509
1.255064	0.743350	1.253631	0.742470	1.254743	0.743153	1.257279	0.744711

Total Miu



STEP 3

Pusat Cluster	
2.340314	3.951361
2.340449	3.951755
2.340344	3.951449
2.340107	3.950752

STEP 9

Fungsi Objective
205.453811

Selisih Fungsi Objective
0.000232

STEP 4

X_V			
12.921612	12.924590	12.922279	12.917017
12.278639	12.281529	12.279286	12.274180
17.212743	17.216192	17.213515	17.207420
17.593971	17.597450	17.594750	17.588601
11.660059	11.662887	11.660692	11.655693
20.903509	20.907238	20.904344	20.897754
20.429596	20.433290	20.430423	20.423894
19.761661	19.765298	19.762475	19.756048
20.101119	20.104785	20.101940	20.095461
16.634735	16.638130	16.635495	16.629495
17.345194	17.348660	17.345970	17.339845
14.197975	14.201094	14.198673	14.193163
14.954625	14.957820	14.955340	14.949693
20.149008	20.152681	20.149830	20.143339
19.824461	19.828108	19.825277	19.818832
18.124061	18.127560	18.124844	18.118661
14.314042	14.317154	14.314738	14.309239
14.066577	14.069677	14.067271	14.061791
15.254610	15.257834	15.255331	15.249633
17.989073	17.992585	17.989859	17.983653
19.748899	19.752535	19.749713	19.743288
18.807492	18.811050	18.808288	18.801999
20.291834	20.295517	20.292658	20.286149
18.024963	18.028492	18.025753	18.019516
13.881447	13.884529	13.882136	13.876690
19.856889	19.860539	19.857706	19.851256
19.031467	19.035048	19.032269	19.025940
17.433581	17.437044	17.434356	17.428238
17.230400	17.233847	17.231172	17.225081
18.249826	18.253354	18.250616	18.244382
18.966974	18.970546	18.967774	18.961460
19.833139	19.836782	19.833955	19.827517
18.215501	18.219010	18.216286	18.210085
18.964693	18.968268	18.965493	18.959175
20.577443	20.581150	20.578273	20.571723
18.610491	18.614027	18.611282	18.605033
19.492202	19.495816	19.493011	19.486625
19.347397	19.351003	19.348205	19.341832
18.484806	18.488341	18.485597	18.479351
20.125444	20.129111	20.126265	20.119785
19.866710	19.870360	19.867527	19.861076
20.133061	20.136732	20.133882	20.127395
18.844886	18.848442	18.845682	18.839397
14.376788	14.379918	14.377489	14.371958
11.062557	11.065299	11.063171	11.058325
13.998367	14.001464	13.999060	13.993586
12.653540	12.656486	12.654199	12.648993



STEP 5**STEP 6**

L				Total L
0.807519	0.806692	0.807334	0.808799	3.230344
0.767336	0.766532	0.767156	0.768578	3.069602
1.075702	1.074743	1.075488	1.077184	4.303117
1.099528	1.098561	1.099312	1.101023	4.398423
0.728676	0.727890	0.728500	0.729892	2.914958
1.306368	1.305330	1.306135	1.307970	5.225803
1.276749	1.275721	1.276519	1.278336	5.107325
1.235005	1.233993	1.234778	1.236567	4.940343
1.256220	1.255200	1.255992	1.257795	5.025207
1.039578	1.038634	1.039367	1.041037	4.158616
1.083980	1.083016	1.083764	1.085469	4.336230
0.887288	0.886421	0.887094	0.888628	3.549432
0.934577	0.933688	0.934378	0.935950	3.738593
1.259213	1.258191	1.258984	1.260791	5.037179
1.238929	1.237915	1.238702	1.240496	4.956043
1.132658	1.131685	1.132440	1.134162	4.530946
0.894543	0.893677	0.894349	0.895880	3.578449
0.879076	0.878214	0.878883	0.880409	3.516583
0.953325	0.952428	0.953124	0.954710	3.813588
1.124221	1.123245	1.124003	1.125730	4.497198
1.234207	1.233196	1.233981	1.235769	4.937152
1.175371	1.174381	1.175150	1.176900	4.701802
1.268139	1.267115	1.267910	1.269722	5.072885
1.126464	1.125482	1.126244	1.127980	4.506171
0.867506	0.866649	0.867314	0.868831	3.470300
1.240956	1.239941	1.240729	1.242524	4.964150
1.189369	1.188373	1.189146	1.190907	4.757796
1.089504	1.088541	1.089289	1.090992	4.358327
1.076806	1.075847	1.076591	1.078287	4.307532
1.140518	1.139537	1.140298	1.142033	4.562386
1.185338	1.184345	1.185116	1.186873	4.741672
1.239472	1.238459	1.239245	1.241037	4.958212
1.138373	1.137397	1.138155	1.139881	4.553805
1.185196	1.184201	1.184973	1.186732	4.741102
1.285989	1.284958	1.285758	1.287581	5.144287
1.163059	1.162076	1.162839	1.164578	4.652552
1.218164	1.217159	1.217939	1.219717	4.872979
1.209114	1.208111	1.208889	1.210663	4.836778
1.155204	1.154221	1.154984	1.156723	4.621131
1.257740	1.256720	1.257512	1.259316	5.031288
1.241570	1.240554	1.241342	1.243138	4.966605
1.258216	1.257195	1.257988	1.259793	5.033192
1.177708	1.176719	1.177487	1.179236	4.711151
0.898464	0.897593	0.898269	0.899809	3.594135
0.691335	0.690572	0.691164	0.692513	2.765585
0.874813	0.873952	0.874620	0.876144	3.499530
0.790766	0.789947	0.790582	0.792032	3.163326



STEP 7**STEP 8**

LT				Total LT
0.077390	0.077372	0.077386	0.077417	0.309565
0.081442	0.081423	0.081438	0.081472	0.325775
0.058096	0.058085	0.058094	0.058114	0.232390
0.056838	0.056826	0.056835	0.056855	0.227354
0.085763	0.085742	0.085758	0.085795	0.343058
0.047839	0.047830	0.047837	0.047852	0.191358
0.048949	0.048940	0.048947	0.048962	0.195797
0.050603	0.050594	0.050601	0.050617	0.202415
0.049748	0.049739	0.049746	0.049762	0.198997
0.060115	0.060103	0.060112	0.060134	0.240465
0.057653	0.057641	0.057650	0.057671	0.230615
0.070433	0.070417	0.070429	0.070456	0.281735
0.066869	0.066855	0.066866	0.066891	0.267480
0.049630	0.049621	0.049628	0.049644	0.198524
0.050443	0.050433	0.050441	0.050457	0.201774
0.055175	0.055165	0.055173	0.055192	0.220704
0.069861	0.069846	0.069858	0.069885	0.279451
0.071091	0.071075	0.071087	0.071115	0.284367
0.065554	0.065540	0.065551	0.065575	0.262220
0.055589	0.055578	0.055587	0.055606	0.222361
0.050636	0.050626	0.050634	0.050650	0.202546
0.053170	0.053160	0.053168	0.053186	0.212684
0.049281	0.049272	0.049279	0.049295	0.197126
0.055479	0.055468	0.055476	0.055495	0.221918
0.072039	0.072023	0.072035	0.072063	0.288160
0.050360	0.050351	0.050358	0.050375	0.201444
0.052545	0.052535	0.052542	0.052560	0.210181
0.057361	0.057349	0.057358	0.057378	0.229446
0.058037	0.058025	0.058034	0.058055	0.232152
0.054795	0.054784	0.054793	0.054811	0.219184
0.052723	0.052713	0.052721	0.052739	0.210896
0.050421	0.050411	0.050419	0.050435	0.201686
0.054898	0.054888	0.054896	0.054915	0.219597
0.052730	0.052720	0.052727	0.052745	0.210921
0.048597	0.048588	0.048595	0.048610	0.194390
0.053733	0.053723	0.053731	0.053749	0.214936
0.051303	0.051293	0.051300	0.051317	0.205213
0.051687	0.051677	0.051684	0.051701	0.206749
0.054098	0.054088	0.054096	0.054114	0.216397
0.049688	0.049679	0.049686	0.049702	0.198756
0.050335	0.050326	0.050333	0.050350	0.201345
0.049670	0.049660	0.049668	0.049684	0.198681
0.053065	0.053055	0.053063	0.053080	0.212262
0.069557	0.069541	0.069553	0.069580	0.278231
0.090395	0.090373	0.090390	0.090430	0.361587
0.071437	0.071421	0.071433	0.071461	0.285753
0.079029	0.079011	0.079025	0.079058	0.316123

