Nama : Sidiq Zainudin

NIM : L200170058

Kelas : C

TUGAS

Excel

NO_SISWA	NAMA	B.IND	B.ING	MTK	IPA
S-101	JOKO	8.52	9.63	8.39	9.47
S-102	AGUS	6.33	6.43	8.77	6.66
S-103	SUSI	6.29	9.15	7.56	6.28
S-104	DYAH	5.24	9.84	5.21	9.92
S-105	WATI	8.24	8.71	5.62	9.90
S-106	IKA	8.39	6.36	8.20	5.68
S-107	EKO	8.22	6.58	8.51	9.97
S-108	YANTO	8.14	7.58	6.12	9.20
S-109	WAWAN	9.01	6.00	7.18	6.77
S-110	MAHMUD	8.18	9.66	7.12	9.21
S-111	BUDI	8.01	7.77	8.34	7.19
S-112	SANTI	6.39	7.24	6.62	9.10
S-113	DIAN	5.83	5.20	8.01	7.90
S-114	DANI	8.60	7.29	8.86	5.11
S-115	AHMAD	6.19	9.43	6.70	6.74
S-116	BAYU	9.39	7.56	9.11	5.70
S-117	RISA	8.93	9.35	6.62	8.42
S-118	RANI	8.04	6.34	5.80	5.23
S-119	YANI	7.04	5.40	6.31	9.44
S-120	RATIH	6.07	7.08	9.81	5.48
S-121	INDAH	6.40	9.29	7.49	9.85
S-122	JONO	8.59	6.77	7.34	8.74
S-123	SARAH	5.93	6.33	7.60	7.62
S-124	RAMA	7.96	6.03	8.51	9.94
S-125	BAMBANG	5.13	8.79	5.17	7.78
S-126	HADI	7.02	6.78	7.43	9.51
S-127	NANA	6.85	6.79	6.47	5.91
S-128	FEBRI	9.68	6.39	6.66	8.03
S-129	DENI	7.93	6.29	5.69	5.06
S-130	TONI	6.59	6.27	5.63	6.14

Design
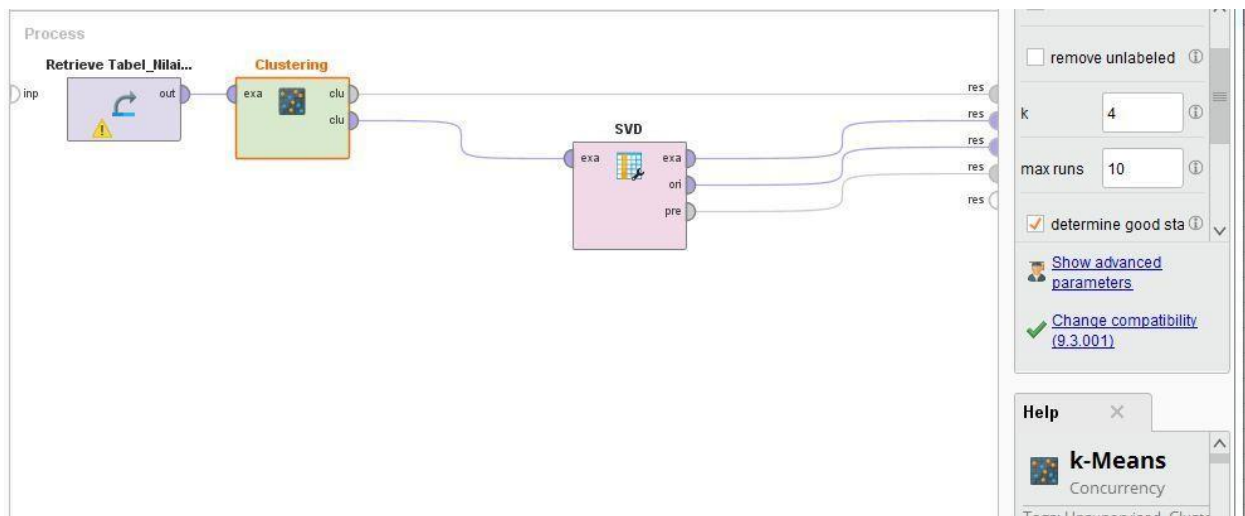
SVD

Component	Singular Value	Proportion of Singular V...	Cumulative Singular Val...	Cumulative Proportion o...
SVD 1	82.021	0.785	82.021	0.785
SVD 2	9.404	0.090	91.425	0.875
SVD 3	7.041	0.067	98.466	0.942
SVD 4	6.012	0.058	104.478	1.000

Attribute	SVD Vector 1	SVD Vector 2	SVD Vector 3
B.IND	0.498	-0.448	-0.201
B.ING	0.497	0.299	0.812
MTK	0.483	-0.542	-0.038
IPA	0.521	0.645	-0.547

Cumulative Proportion of Singular Values

Example Set

- B.indo

- B.ING

Clustering

- MTK

Clustering

cluster_1
X: **cluster_1**, Y: **8.390671323620822**

MTK

cluster_1   cluster_2   cluster_3   cluster_0
cluster

● cluster_1   ● cluster_2   ● cluster_3   ● cluster_0

- IPA

Clustering
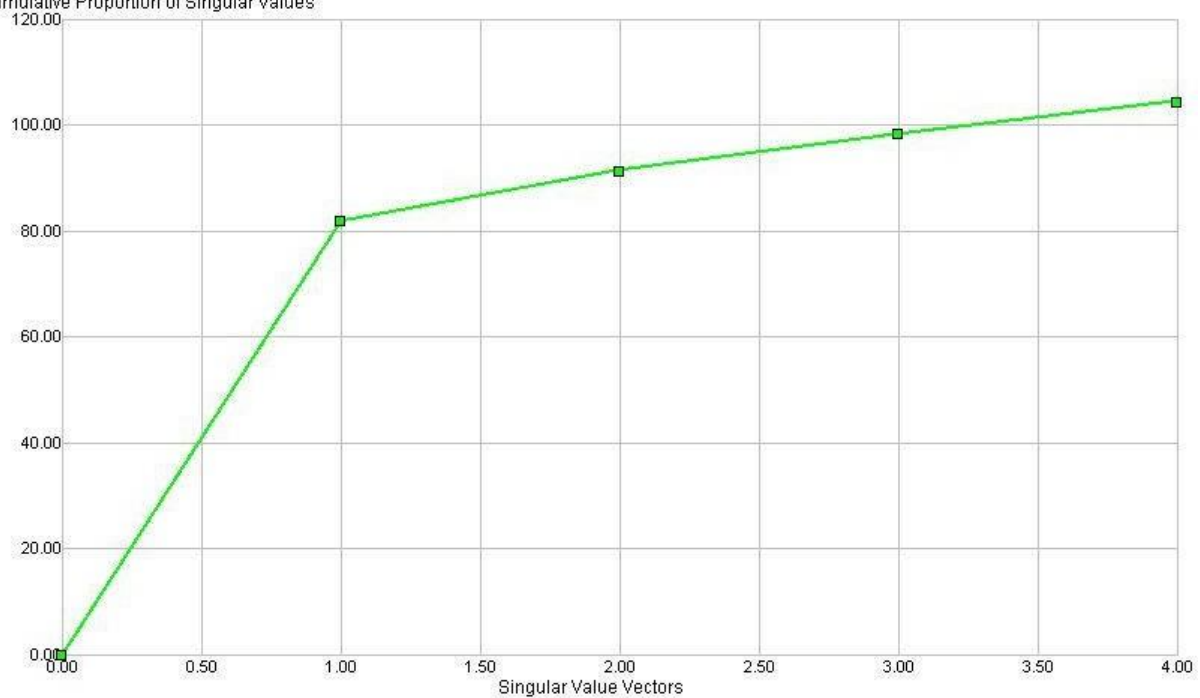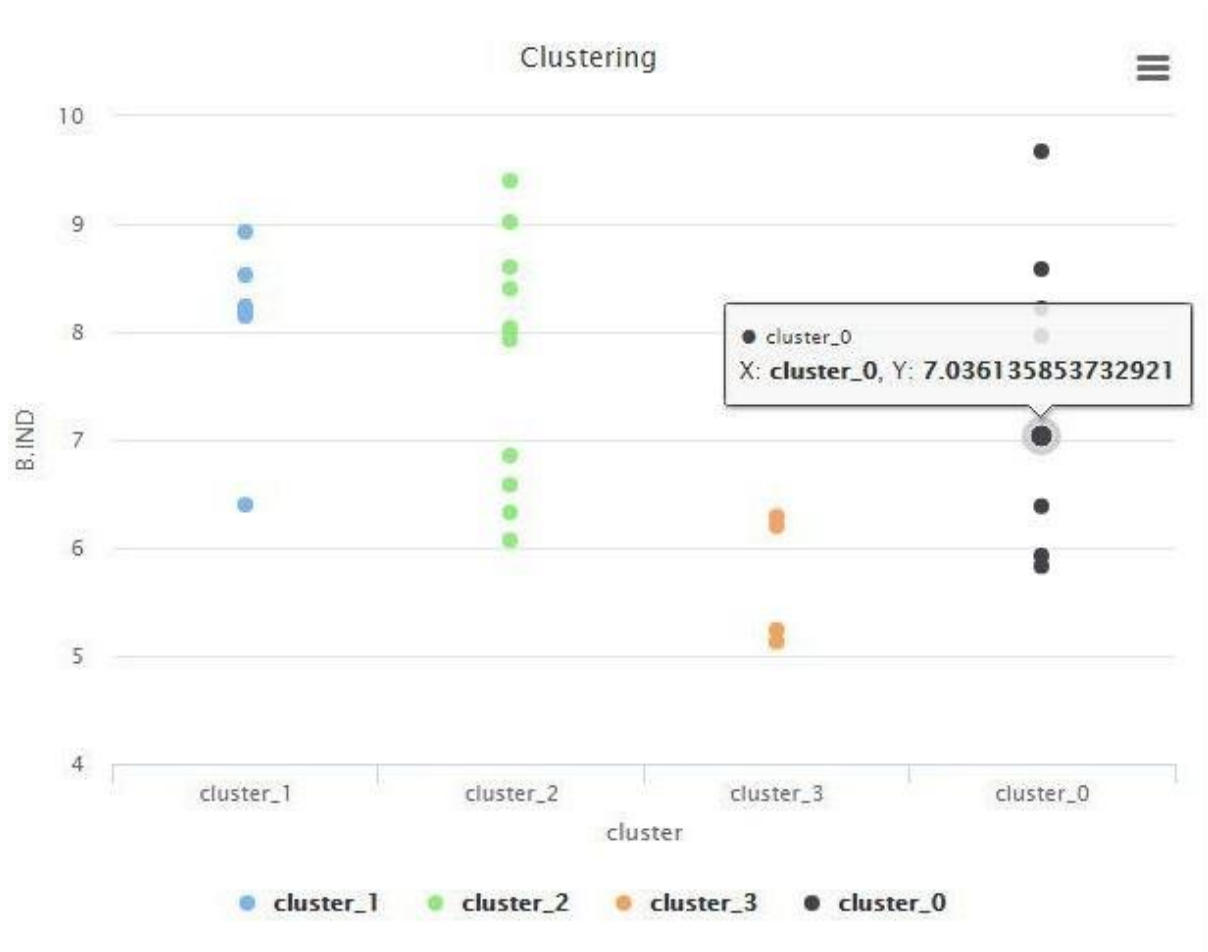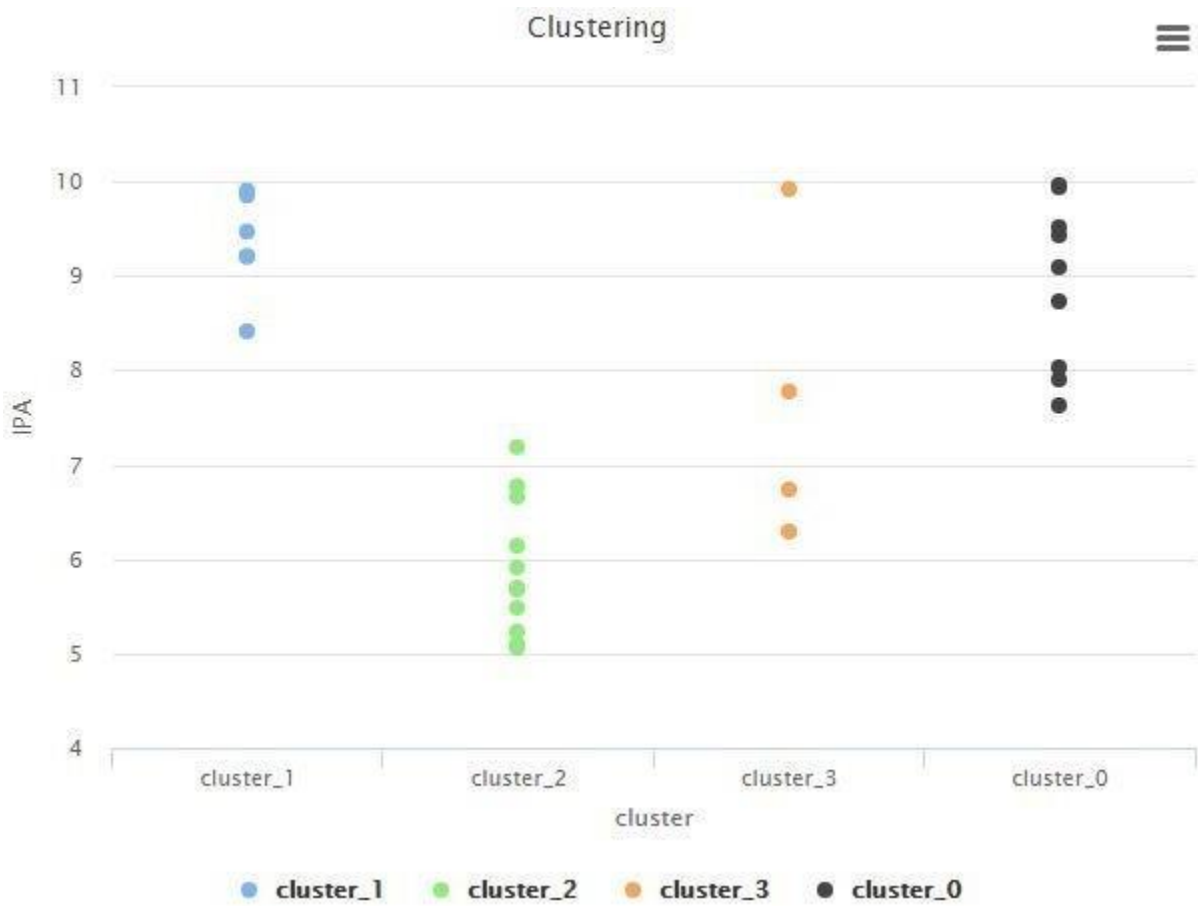
ExampleSet (SVD)

Row No.	NAMA	cluster	svd_1
1	JOKO	cluster_1	0.220
2	AGUS	cluster_2	0.171
3	SUSI	cluster_3	0.178
4	DYAH	cluster_3	0.185
5	WATI	cluster_1	0.199
6	IKA	cluster_2	0.174
7	EKO	cluster_0	0.203
8	YANTO	cluster_1	0.190
9	WAWAN	cluster_2	0.176
10	MAHMUD	cluster_1	0.209
11	BUDI	cluster_2	0.190
12	SANTI	cluster_0	0.179

Row No.	NAMA	cluster	svd_1
13	DIAN	cluster_0	0.164
14	DANI	cluster_2	0.181
15	AHMAD	cluster_3	0.177
16	BAYU	cluster_2	0.193
17	RISA	cluster_1	0.203
18	RANI	cluster_2	0.155
19	YANI	cluster_0	0.173
20	RATIH	cluster_2	0.172
21	INDAH	cluster_1	0.202
22	JONO	cluster_0	0.192
23	SARAH	cluster_0	0.168
24	RAMA	cluster_0	0.198

24	RAMA	cluster_0	0.198
25	BAMBANG	cluster_3	0.164
26	HADI	cluster_0	0.188
27	NANA	cluster_2	0.158
28	FEBRI	cluster_0	0.188
29	DENI	cluster_2	0.152
30	TONI	cluster_2	0.150

ExampleSet (30 examples, 2 special attributes, 1 regular attribute)

Cluster Model(Clustering)

Cluster Model

```
Cluster 0: 9 items
Cluster 1: 6 items
Cluster 2: 11 items
Cluster 3: 4 items
Total number of items: 30
```
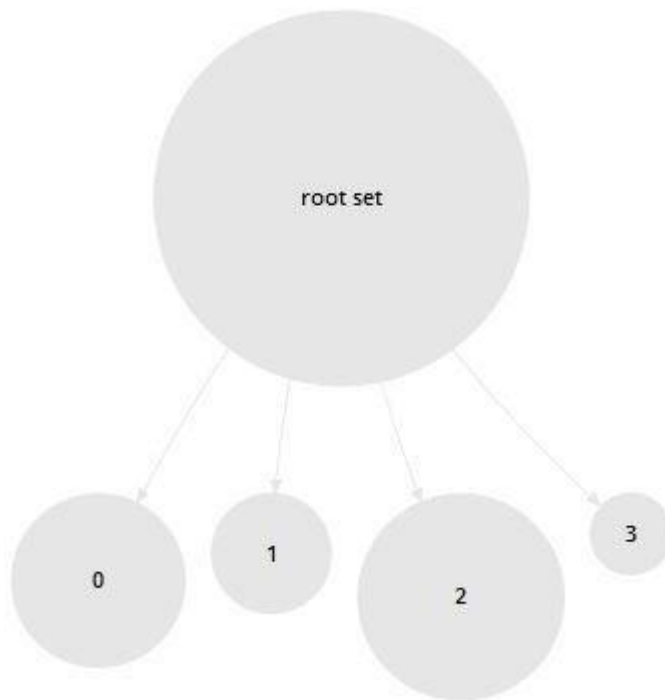
K-Means (HASIL)

Row No.	NAMA	cluster ↑	B.IND	B.ING	MTK	IPA
7	EKO	cluster_0	8.219	6.579	8.513	9.966
12	SANTI	cluster_0	6.386	7.241	6.619	9.098
13	DIAN	cluster_0	5.829	5.199	8.013	7.895
19	YANI	cluster_0	7.036	5.404	6.306	9.439
22	JONO	cluster_0	8.590	6.770	7.335	8.736
23	SARAH	cluster_0	5.934	6.333	7.598	7.620
24	RAMA	cluster_0	7.962	6.029	8.510	9.941
26	HADI	cluster_0	7.016	6.779	7.434	9.512
28	FEBRI	cluster_0	9.682	6.385	6.657	8.031
1	JOKO	cluster_1	8.523	9.628	8.391	9.469
5	WATI	cluster_1	8.237	8.710	5.621	9.902
8	YANTO	cluster_1	8.142	7.579	6.119	9.203

Row No.	NAMA	cluster ↑	B.IND	B.ING	MTK	IPA
10	MAHMUD	cluster_1	8.184	9.657	7.124	9.210
17	RISA	cluster_1	8.932	9.348	6.623	8.417
21	INDAH	cluster_1	6.397	9.286	7.491	9.851
2	AGUS	cluster_2	6.326	6.429	8.772	6.658
6	IKA	cluster_2	8.392	6.359	8.204	5.678
9	WAWAN	cluster_2	9.013	6.004	7.178	6.773
11	BUDI	cluster_2	8.010	7.766	8.342	7.186
14	DANI	cluster_2	8.595	7.290	8.856	5.106
16	BAYU	cluster_2	9.393	7.557	9.112	5.701
18	RANI	cluster_2	8.039	6.341	5.803	5.229
20	RATIH	cluster_2	6.070	7.081	9.808	5.484
27	NANA	cluster_2	6.853	6.786	6.471	5.910

29	DENI	cluster_2	7.935	6.292	5.692	5.060
30	TONI	cluster_2	6.587	6.269	5.632	6.141
3	SUSI	cluster_3	6.294	9.147	7.565	6.283
4	DYAH	cluster_3	5.240	9.838	5.206	9.919
15	AHMAD	cluster_3	6.192	9.428	6.700	6.738
25	BAMBANG	cluster_3	5.129	8.788	5.167	7.775