

NO_SISWA	NAMA	B.IND	B.ING	MTK	IPA
S-101	JOKO	6.95	8.89	7.43	5.91
S-102	AGUS	9.06	8.31	6.89	8.86
S-103	SUSI	8.02	7.57	9.20	8.02
S-104	DYAH	8.86	9.90	9.85	8.14
S-105	WATI	7.45	6.45	8.40	8.78
S-106	IKA	9.51	9.72	7.70	8.42
S-107	EKO	8.08	8.19	9.12	5.32
S-108	YANTO	8.34	5.75	7.42	5.74
S-109	WAWAN	6.15	8.36	8.39	9.04
S-110	MAHMUD	9.99	6.36	6.87	5.57
S-111	BUDI	7.02	6.08	6.16	5.48
S-112	SANTI	9.52	9.35	6.59	9.02
S-113	DIAN	8.40	7.38	7.35	9.79
S-114	DANI	6.04	6.31	8.11	8.98
S-115	AHMAD	7.79	7.10	8.55	8.09
S-116	BAYU	6.69	7.95	5.01	6.34
S-117	RISA	7.96	8.48	7.26	9.88
S-118	RANI	8.14	6.09	7.77	7.49
S-119	YANI	5.38	7.59	6.63	9.55
S-120	RATIH	8.36	7.40	5.02	8.75
S-121	INDAH	7.07	8.48	9.42	5.06
S-122	JONO	5.07	7.83	5.31	5.86
S-123	SARAH	6.46	8.48	7.61	6.82
S-124	RAMA	8.65	7.66	9.89	6.84
S-125	BAMBANG	7.34	8.17	8.13	6.65
S-126	HADI	5.06	6.55	9.57	6.13

S-127	NANA	9.87	6.80	7.52	9.30
S-128	FEBRI	5.85	5.23	5.02	9.05
S-129	DENI	6.82	8.35	8.10	5.20
S-130	TONI	5.80	9.03	7.06	5.31

Untuk mengisi daftar nilai dalam table, gunakan formula berikut pada salah satu sel. Kemudian bias di copy-paste ke sel yang lain.

$$=5+RAND()*5$$

(Catatan : setiap mahasiswa pasti akan memiliki data yang berlainan, sehingga hasilnya juga berbeda)

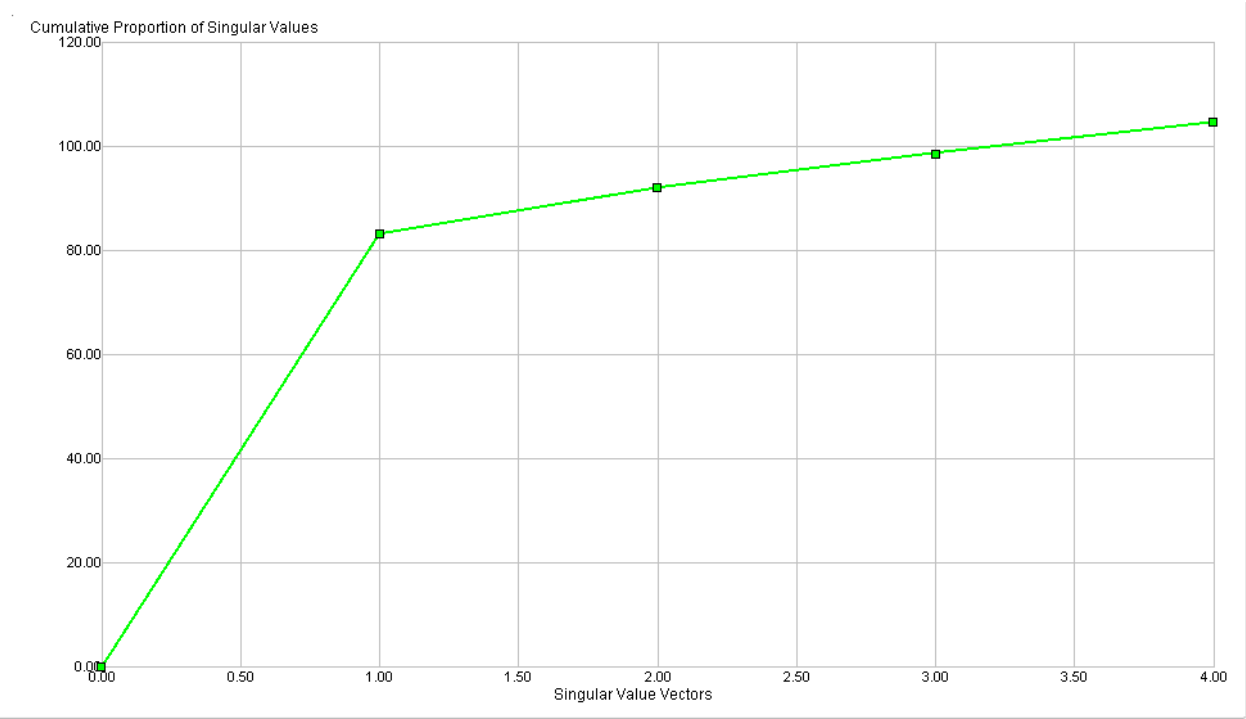
- Lakukan kembali kegiatan 10.4.1 dan 10.4.2 pada modul 10 isi secara lengkap menggunakan data yang terdapat pada table **Tabel Data Nilai Ujian 30 Siswa** tersebut, dengan ketentuan jumlah Cluster = 4. Catat dan tulis semua hasilnya pada lembar jawaban anda, untuk gambar bias di copy-paste.

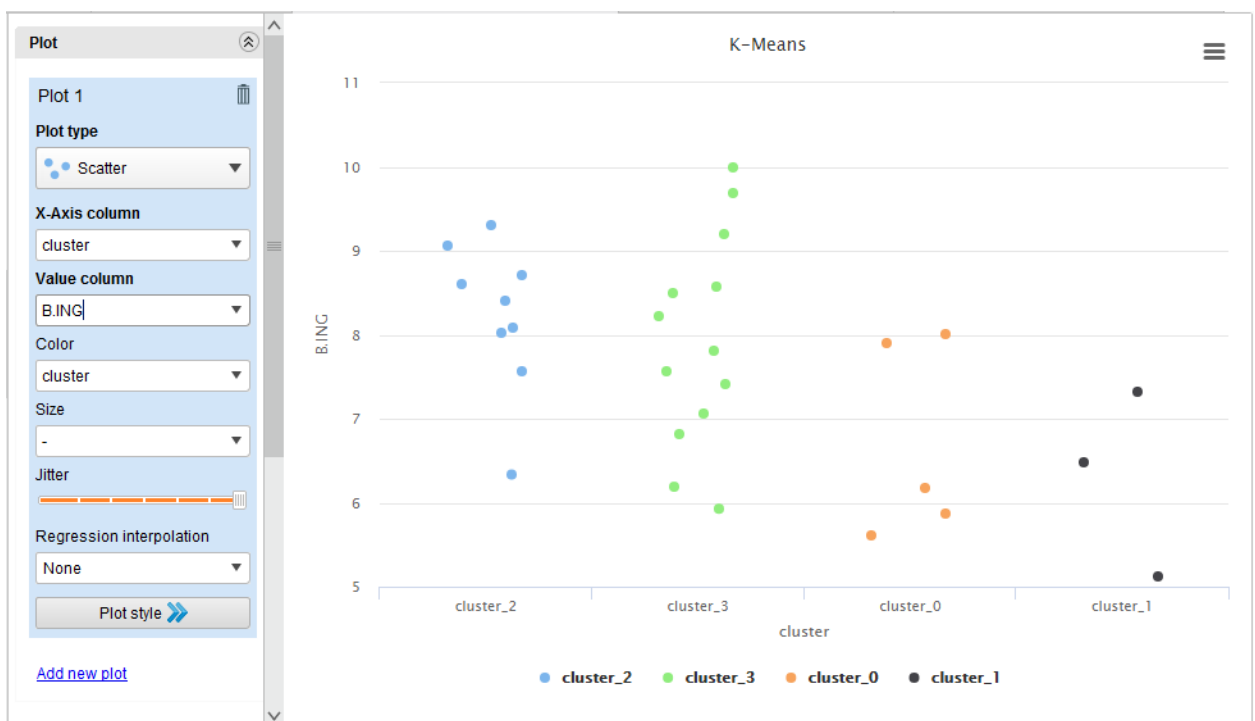
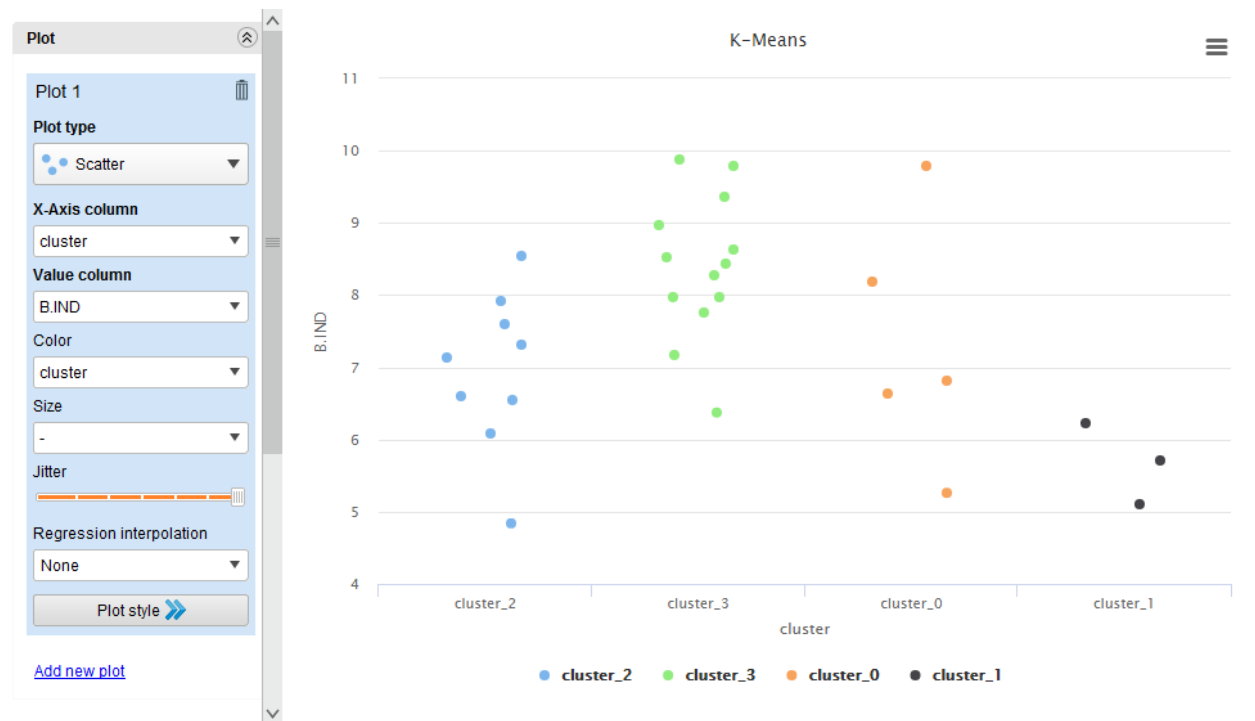
The screenshot shows the RapidMiner Studio Free 9.3.001 interface. The main workspace displays a process design with the following components:

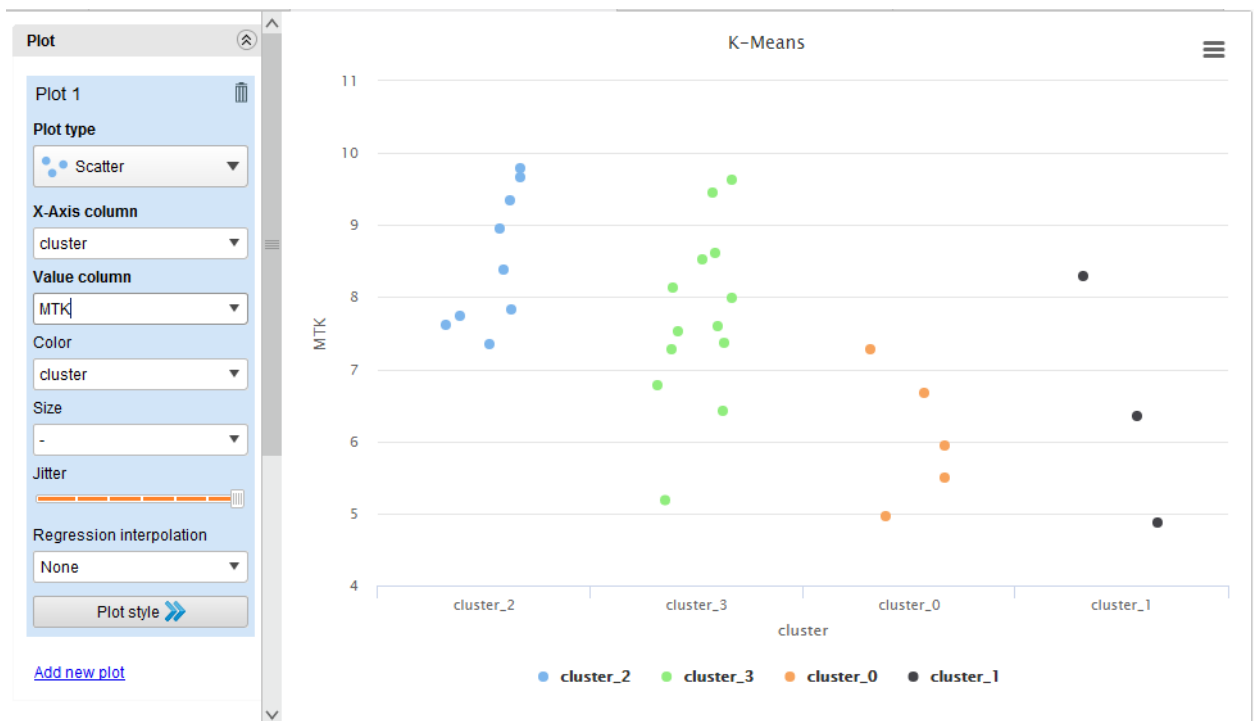
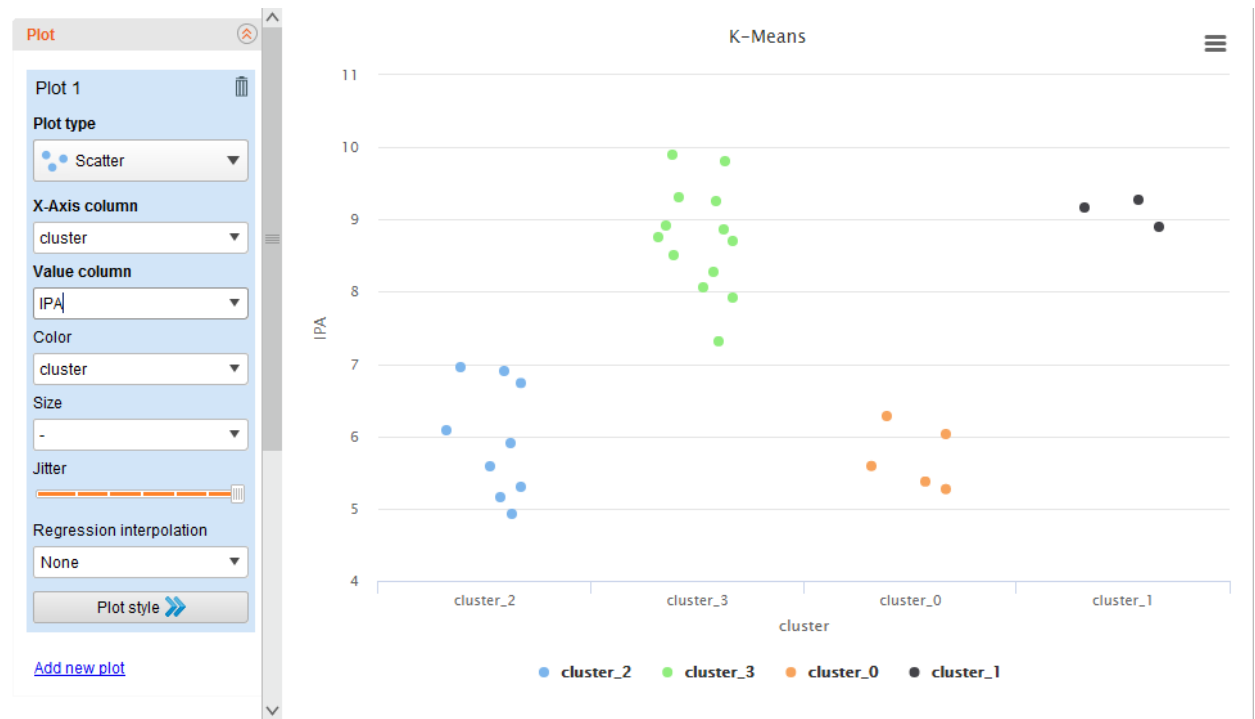
- Repository:** Contains a list of data sources, including 'Data_NilaiUjian (LABSI-16 - v1, 11/14/19)' and 'Tugas_NilaiUjian (LABSI-16 - v1, 11/14/19)'.
- Process:** A workflow starting with 'Retrieve Tugas_NilaiUjian...', followed by 'K-Means' (with parameters: add cluster attribute, add as label, remove unlabeled, k=4, max runs=10, determine good start values, measure types=NumericalMe..., numerical measure=EuclideanDis..., max optimization s...=100), and finally 'SVD'.
- Parameters:** A panel on the right showing the configuration for the 'K-Means (k-Means)' operator.
- Operators:** A panel on the left showing a search for 'svd' under 'Dimensionality Reduction (1)'.

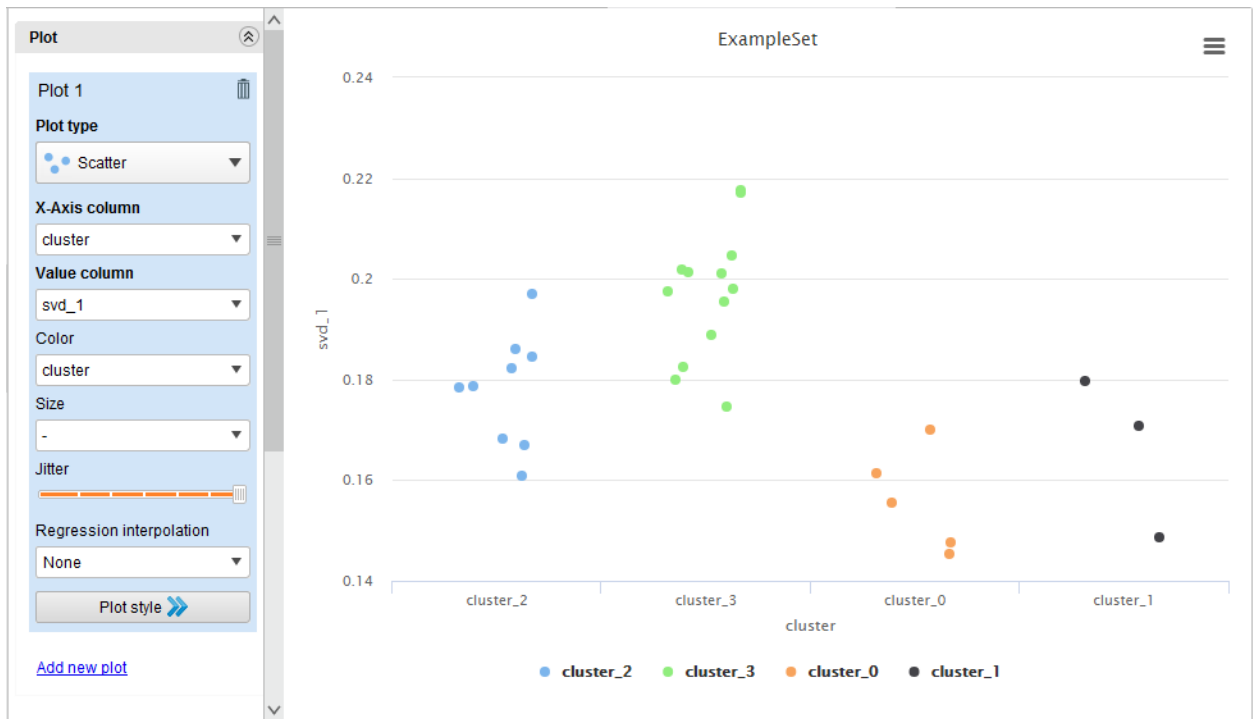
Component	Singular Value	Proportion of Singular Values	Cumulative Singular Values	Cumulative Proportion of Sin...
SVD 1	83.180	0.794	83.180	0.794
SVD 2	8.870	0.085	92.050	0.879
SVD 3	6.571	0.063	98.621	0.942
SVD 4	6.085	0.058	104.706	1.000

Attribute	SVD Vector 1	SVD Vector 2	SVD Vector 3
B.IND	0.499	-0.061	0.860
B.ING	0.506	0.271	-0.195
MTK	0.501	0.558	-0.309
IPA	0.494	-0.782	-0.356









Cluster Model

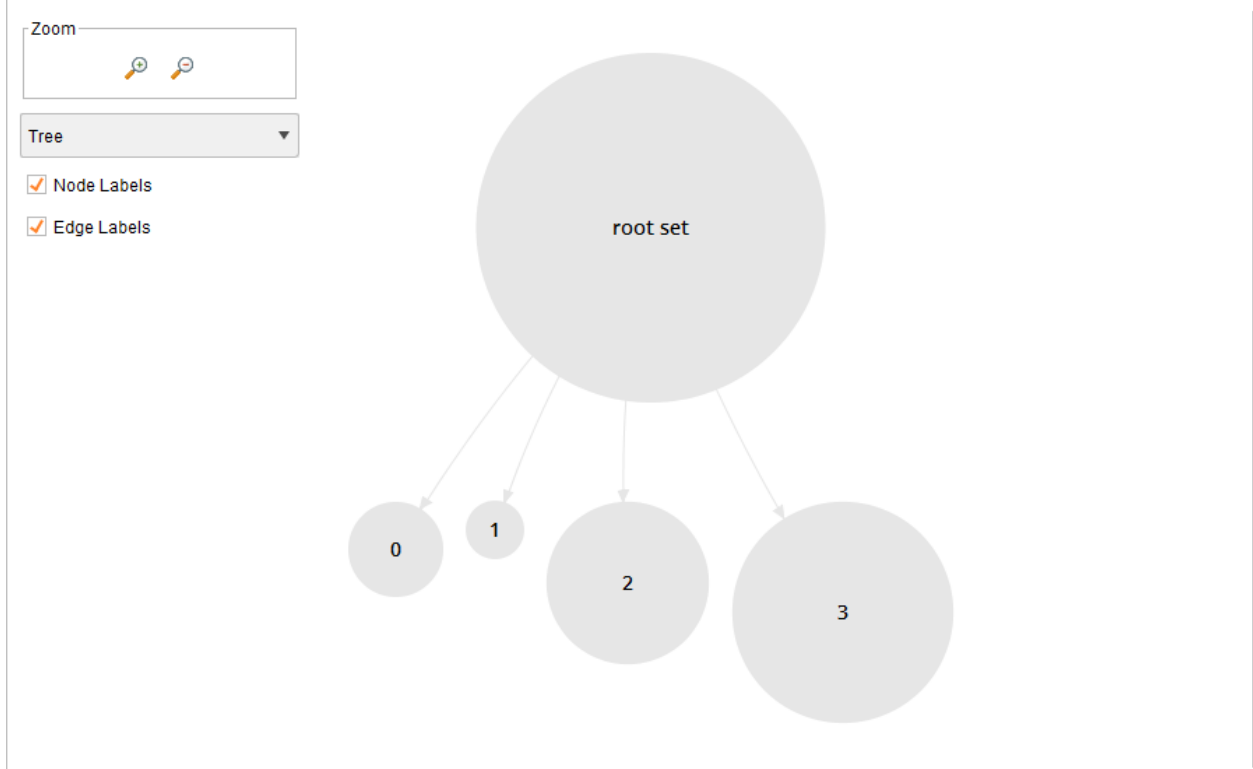
Cluster 0: 5 items

Cluster 1: 3 items

Cluster 2: 9 items

Cluster 3: 13 items

Total number of items: 30



Row No.	NAMA	cluster	B.IND	B.ING	MTK	IPA
1	JOKO	cluster_2	6.955	8.886	7.428	5.907
2	AGUS	cluster_3	9.064	8.310	6.887	8.861
3	SUSI	cluster_3	8.023	7.566	9.202	8.020
4	DYAH	cluster_3	8.862	9.904	9.848	8.139
5	WATI	cluster_3	7.449	6.452	8.400	8.779
6	IKA	cluster_3	9.514	9.724	7.704	8.424
7	EKO	cluster_2	8.084	8.187	9.119	5.320
8	YANTO	cluster_0	8.340	5.751	7.423	5.738
9	WAWAN	cluster_3	6.153	8.363	8.392	9.038
10	MAHMUD	cluster_0	9.993	6.362	6.873	5.573
11	BUDI	cluster_0	7.025	6.079	6.160	5.481
12	SANTI	cluster_3	9.521	9.350	6.587	9.017
13	DIAN	cluster_3	8.405	7.383	7.346	9.785
14	DANI	cluster_1	6.045	6.315	8.112	8.985

Row No.	NAMA	cluster	B.IND	B.ING	MTK	IPA
15	AHMAD	cluster_3	7.789	7.100	8.550	8.095
16	BAYU	cluster_0	6.693	7.950	5.011	6.336
17	RISA	cluster_3	7.961	8.481	7.264	9.885
18	RANI	cluster_3	8.145	6.094	7.771	7.485
19	YANI	cluster_1	5.384	7.586	6.626	9.553
20	RATIH	cluster_3	8.358	7.401	5.018	8.753
21	INDAH	cluster_2	7.070	8.480	9.424	5.064
22	JONO	cluster_0	5.075	7.826	5.312	5.857
23	SARAH	cluster_2	6.457	8.477	7.608	6.823
24	RAMA	cluster_2	8.651	7.657	9.892	6.835
25	BAMBANG	cluster_2	7.344	8.168	8.133	6.654
26	HADI	cluster_2	5.063	6.548	9.565	6.128
27	NANA	cluster_3	9.866	6.801	7.515	9.303
28	FEBRI	cluster_1	5.855	5.234	5.020	9.049
29	DENI	cluster_2	6.818	8.346	8.095	5.204
30	TONI	cluster_2	5.800	9.033	7.065	5.305

3. Tuliskan masing-masing nama siswa yang terdapat dalam kelompok Cluster 0, Cluster 1, Cluster 2, dan Cluster 3.

➤ Cluster 0

- YANTO
- MAHMUD
- BUDI
- BAYU
- JONO

➤ Cluster 1

- DANI
- YANI
- FEBRI

➤ Cluster 2

- JOKO
- EKO
- INDAH
- SARAH
- RAMA
- BAMBANG
- HADI
- DENI
- TONI

➤ Cluster 3

- AGUS
- SUSI
- DYAH
- WATI
- IKA
- WAWAN
- SANTI
- DIAN
- AHMAD
- RISA
- RANI
- RATIH
- NANA

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