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Kelas : F

PRAKTIKUM DWDM

Kegiatan

a. Svd

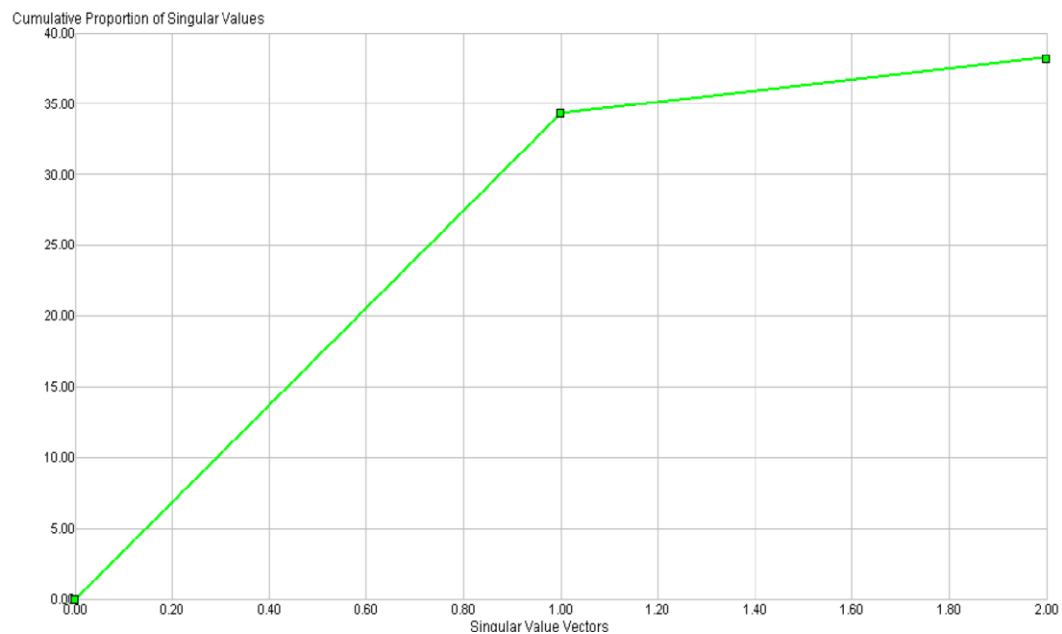
i. Nilai eigenvalue

Component	Singular Value	Proportion of Singular Values	Cumulative Singular Values	Cumulative Proportion of Sin...
SVD 1	34.340	0.898	34.340	0.898
SVD 2	3.906	0.102	38.246	1.000

ii. Nilai svd vectors

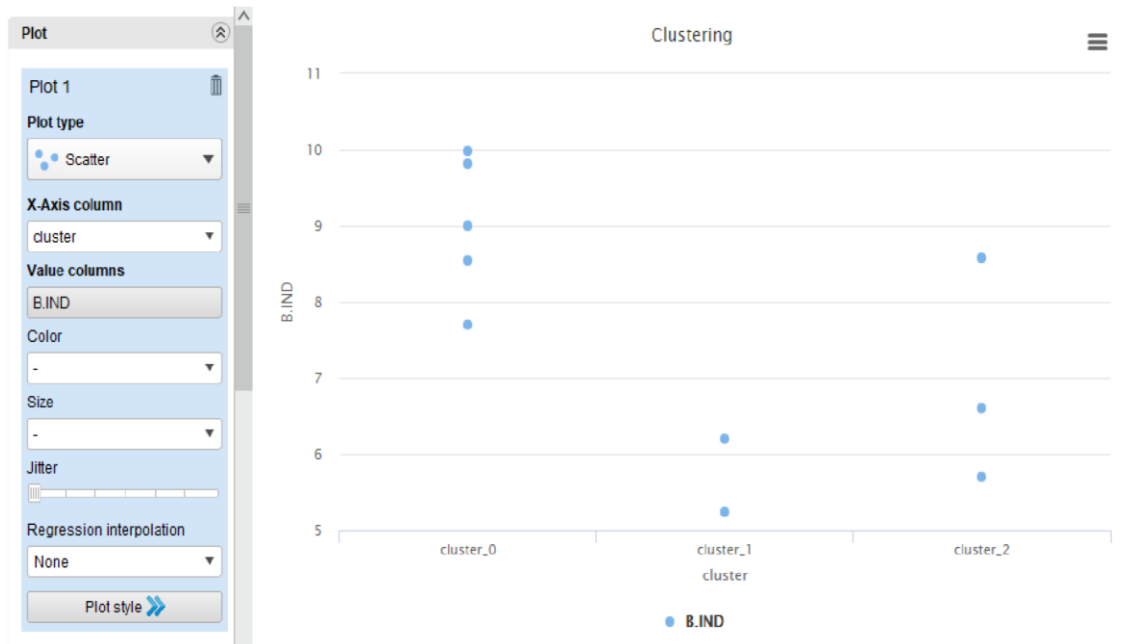
Attribute	SVD Vector 1
B.IND	0.723
B.ING	0.690

iii. Nilai cumulative variance

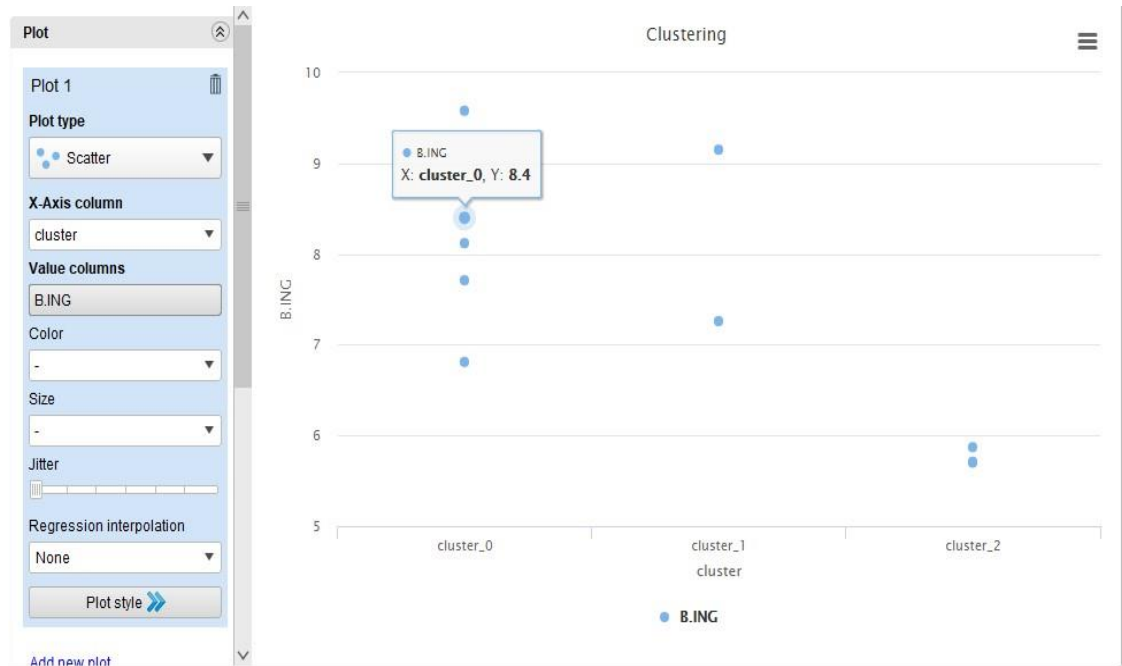


b. Example set (k-means)

i. B. Indonesia



ii. B. Inggris



c. Exampleset (svd)

Row No.	NAMA	cluster	svd_1
1	JOKO	cluster_0	0.349
2	AGUS	cluster_0	0.347
3	SUSI	cluster_1	0.315
4	DYAH	cluster_1	0.256
5	WATI	cluster_2	0.235
6	IKA	cluster_2	0.299
7	EKO	cluster_0	0.317
8	YANTO	cluster_2	0.254
9	WAWAN	cluster_0	0.353
10	MAHMUD	cluster_0	0.399

d. Cluster model (Clustering)

i. Description

Cluster Model

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Cluster 0: 5 items  
Cluster 1: 2 items  
Cluster 2: 3 items  
Total number of items: 10
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ii. Graph

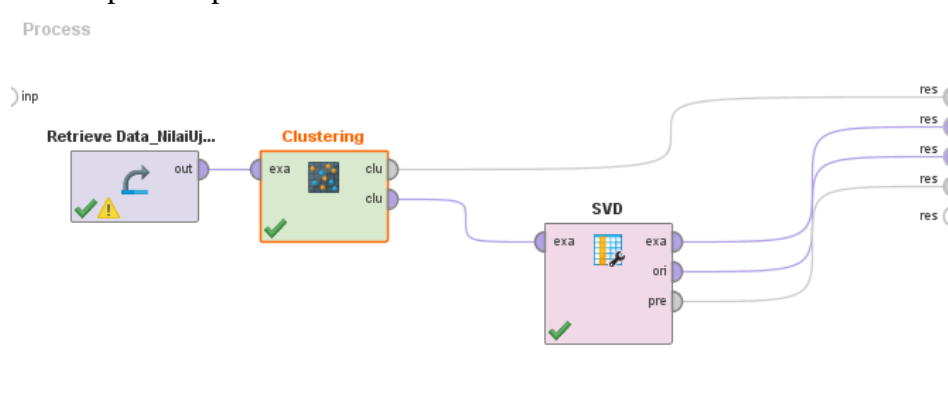


Tugas

1. Data 30 siswa dengan rumus $=5+\text{RAND}()*5$ di excel

1	NO_SISWA	NAMA	B.IND	B.ING	MTK	IPA
2	S-101	JOKO	8.438657	5.940955	5.838422	7.00588
3	S-102	AGUS	5.022113	7.127397	6.430201	7.393239
4	S-103	SUSI	6.84928	7.314979	9.119683	6.956578
5	S-104	DYAH	7.27202	5.8832	5.276722	8.865554
6	S-105	WATI	7.061957	5.444328	7.675219	8.70216
7	S-106	IKA	8.796677	7.90662	6.238178	8.262869
8	S-107	EKO	7.752793	6.058465	7.875554	7.779356
9	S-108	YANTO	6.865649	6.275851	8.251286	8.090897
10	S-109	WAWAN	8.68165	9.857797	5.411017	9.702641
11	S-110	MAHMUD	9.649017	6.683946	6.038494	5.479583
12	S-111	BUDI	9.974293	8.824327	6.210371	9.582867
13	S-112	SANTI	8.324404	9.753461	5.232109	7.198937
14	S-113	DIAN	9.27357	7.776091	5.202596	8.582494
15	S-114	DANI	9.662196	7.163481	6.754395	5.780256
16	S-115	AHMAD	7.510183	5.741983	9.925112	6.212203
17	S-116	BAYU	7.610176	5.765545	8.565954	5.692089
18	S-117	RISA	6.596093	6.7423	5.835307	7.711307
19	S-118	RANI	5.002175	5.412981	6.162931	5.907761
20	S-119	YANI	7.213599	8.498	8.338718	6.189077
21	S-120	RATIH	5.183595	6.94234	7.042925	5.676211
22	S-121	INDAH	5.492307	8.07478	8.006329	8.292135
23	S-122	JONO	8.374011	5.276246	6.140971	6.264486
25	S-124	RAMA	5.163547	7.016316	9.548363	5.032296
26	S-125	BAMBANG	7.364109	6.066391	9.268174	7.164467
27	S-126	HADI	7.85721	7.810948	6.076023	5.726546
28	S-127	NANA	9.438916	9.064791	8.112362	8.863394
29	S-128	FEBRI	6.165527	8.97882	8.914821	7.388201
30	S-129	DENI	8.81894	8.452299	6.035615	6.482981
31	S-130	TONI	9.446875	6.620474	7.018881	5.698536

2. Desain pada RapidMiner



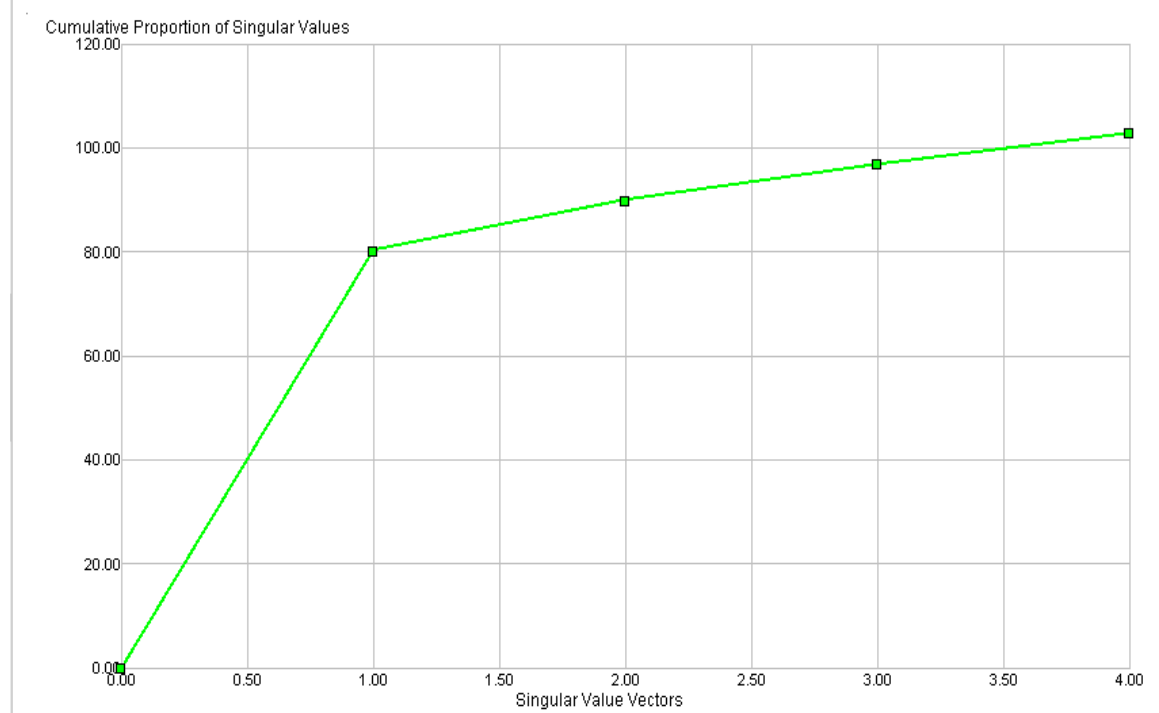
3. Clustering dengan algoritma k-Means
 - a. SVD (Singular Value Decomposition)
 - i. Nilai Eigenvalues

Component	Singular Value	Proportion of Singular V...	Cumulative Singular Val...	Cumulative Proportion o...
SVD 1	80.303	0.780	80.303	0.780
SVD 2	9.727	0.095	90.031	0.875
SVD 3	6.913	0.067	96.943	0.942
SVD 4	5.974	0.058	102.917	1.000

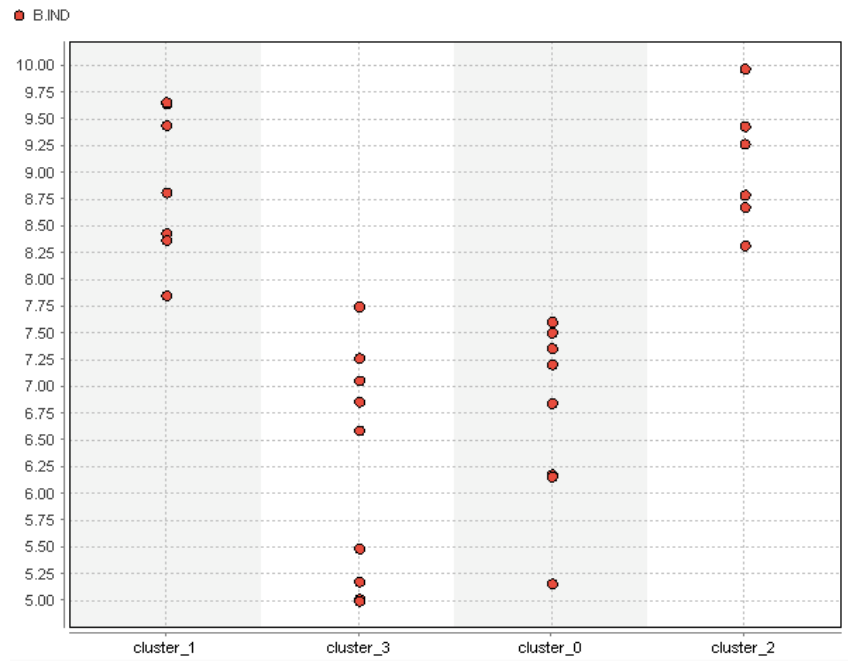
- ii. Nilai svd Cumulative variance

Attribute	SVD Vector 1	SVD Vector 2	SVD Vector 3
B.IND	0.519	-0.509	0.682
B.ING	0.500	-0.075	-0.519
MTK	0.491	0.830	0.254
IPA	0.490	-0.216	-0.448

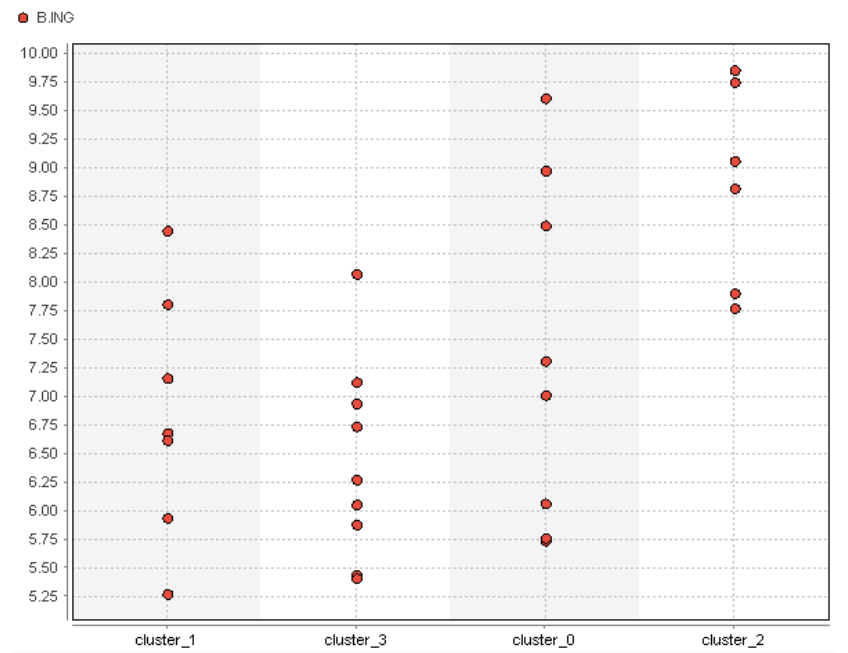
- iii. Nilai Cumulative variance



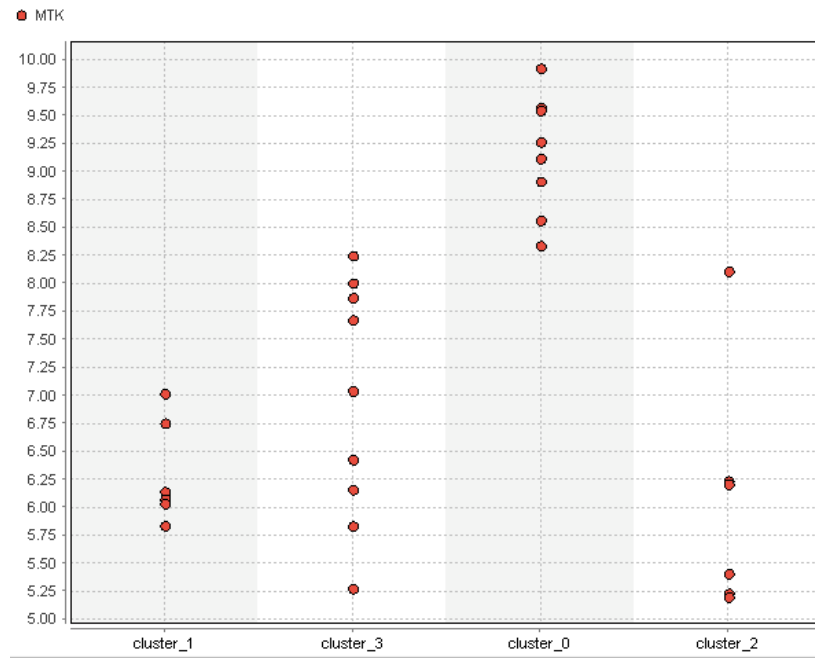
- b. ExampleSet (k-Means)
 - i. B. Indonesia



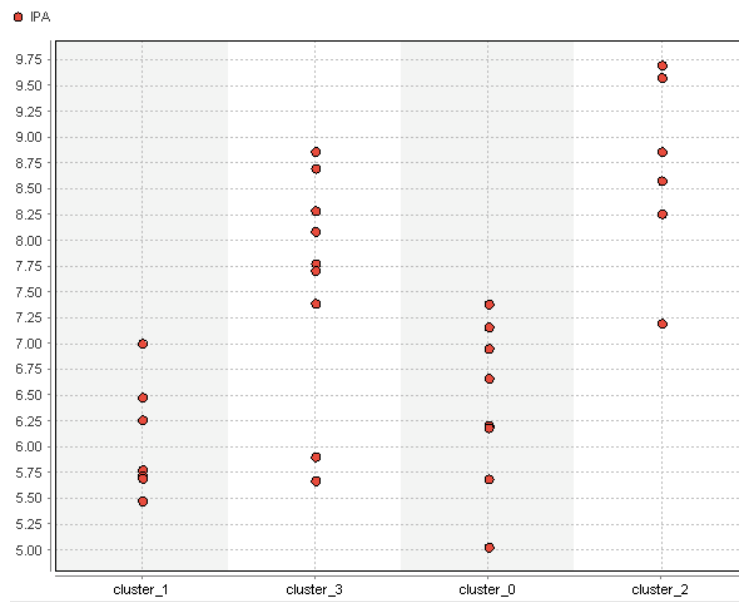
ii. B. Inggris



iii. Matematika



iv. IPA



c. ExampleSet (svd)

Row No.	NAMA	cluster	svd_1
1	JOKO	cluster_1	0.170
2	AGUS	cluster_3	0.161
3	SUSI	cluster_0	0.188
4	DYAH	cluster_3	0.170
5	WATI	cluster_3	0.180
6	IKA	cluster_2	0.195
7	EKO	cluster_3	0.183
8	YANTO	cluster_3	0.183
9	WAWAN	cluster_2	0.210
10	MAHMUD	cluster_1	0.174
11	BUDI	cluster_2	0.216
12	SANTI	cluster_2	0.190
13	DIAN	cluster_2	0.192
14	DANI	cluster_1	0.184
15	AHMAD	cluster_0	0.183
16	BAYU	cluster_0	0.172
17	RISA	cluster_3	0.167
18	RANI	cluster_3	0.140
19	YANI	cluster_0	0.188
20	RATIH	cluster_3	0.154
21	INDAH	cluster_3	0.185
22	JONO	cluster_1	0.163
23	SARAH	cluster_0	0.199
24	RAMA	cluster_0	0.166
25	BAMBANG	cluster_0	0.186
26	HADI	cluster_1	0.171
27	NANA	cluster_2	0.221
28	FEBRI	cluster_0	0.195
29	DENI	cluster_1	0.186
30	TONI	cluster_1	0.180

d. Cluster model (Clustering)

i. Description

Cluster Model

Cluster 0: 8 items
Cluster 1: 7 items
Cluster 2: 6 items
Cluster 3: 9 items
Total number of items: 30

ii. Graph



4. Masing – masing nama siswa yang terdapat dalam kelompok cluster

cluster_0	cluster_1	cluster_2	cluster_3
SUSI	JOKO	IKA	AGUS
AHMAD	MAHMUD	WAWAN	DYAH
BAYU	DANI	BUDI	WATI
YANI	JONO	SANTI	EKO
SARAH	HADI	DIAN	YANTO
RAMA	DENI	NANA	RISA
BAMBANG	TONI		RANI
FEBRI			RATIH
			INDAH