LAPORAN PRAKTIKUM DWDM MODUL 10

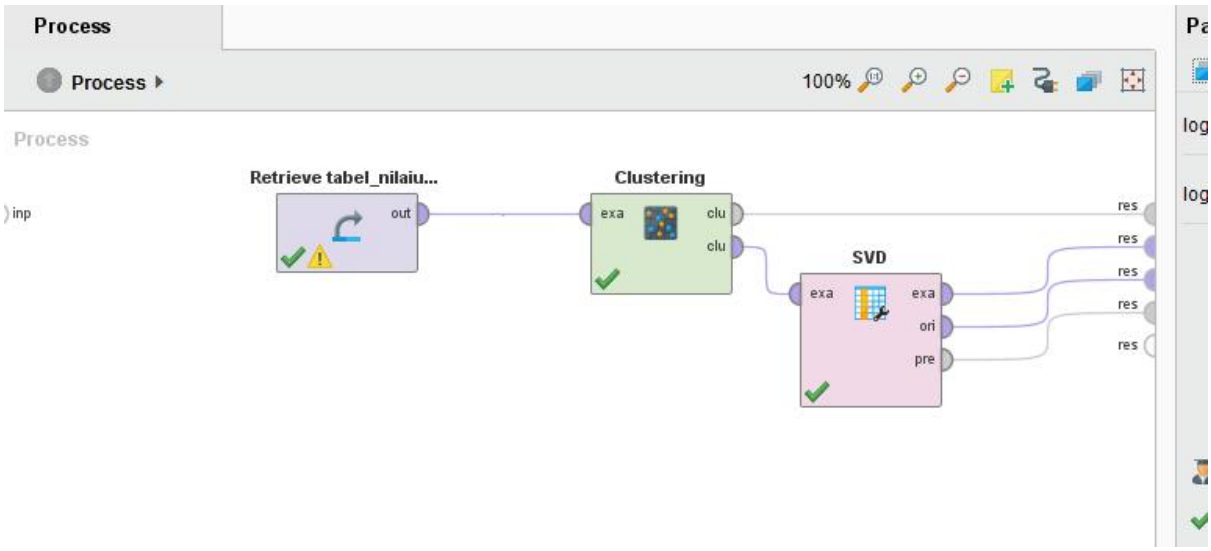
Nama : Ahyana Ilham W

NIM : L200170170

Latihan

Pertama membuat sebuah data pada excel dengan file .xls yang di import ke dalam rapid miner, setelah itu menggabungkan data hasil import dengan operator k-means dan operator SVD lalu dihubungkan.

	A	B	C	D
1	NO_SISWA	NAMA	B.IND	B.ING
2	S-101	JOKO	8.54	8.40
3	S-102	AGUS	9.98	6.81
4	S-103	SUSI	6.20	9.15
5	S-104	DYAH	5.24	7.26
6	S-105	WATI	5.70	5.71
7	S-106	IKA	8.57	5.87
8	S-107	EKO	7.70	7.71
9	S-108	YANTO	6.60	5.70
10	S-109	WAWAN	9.00	8.12
11	S-110	MAHMUD	9.81	9.58



Hingga seperti pada tampilan di atas. Setelah itu melakukan run dan melihat hasilnya seperti pada dibawah ini.

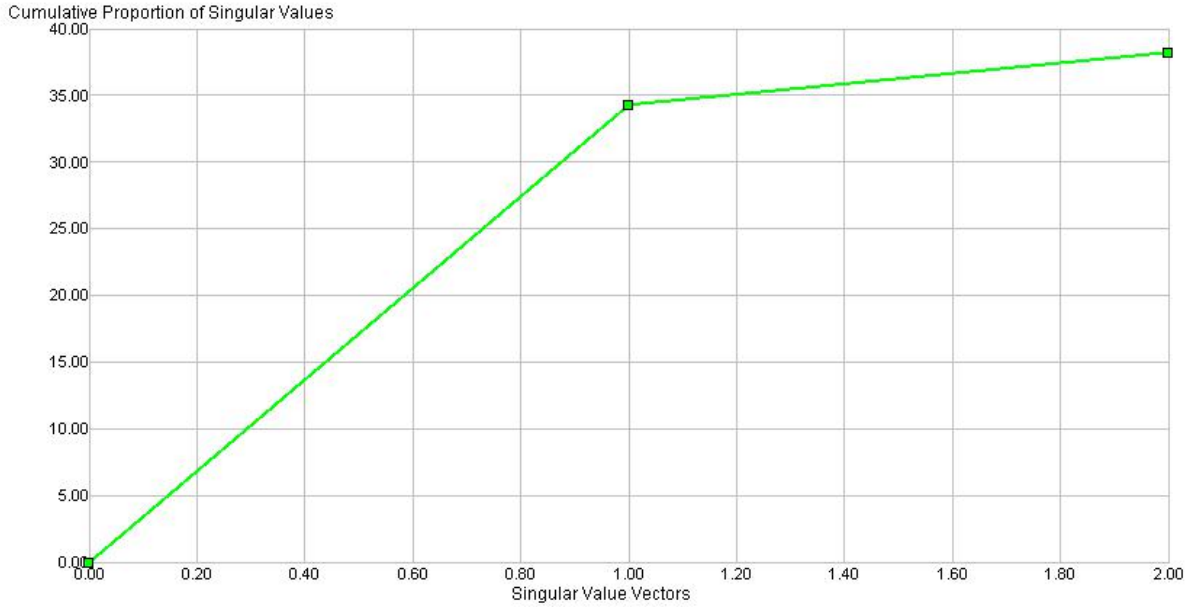
- SVD (Singular Value Decomposition)
  - Nilai Eigenvalue

Component	Singular Value	Proportion of Singular V...	Cumulative Singular Val...	Cumulative Proportion o...
SVD 1	34.340	0.898	34.340	0.898
SVD 2	3.906	0.102	38.246	1.000

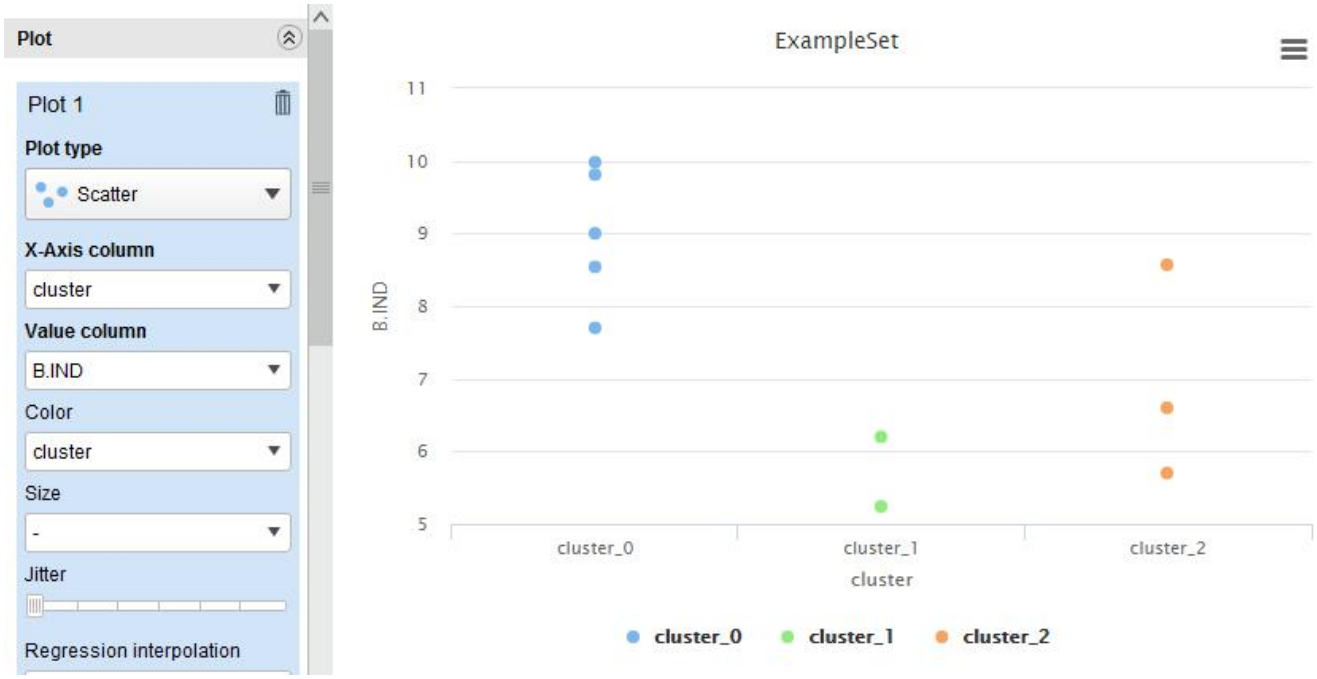
- Nilai Svd vectors

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

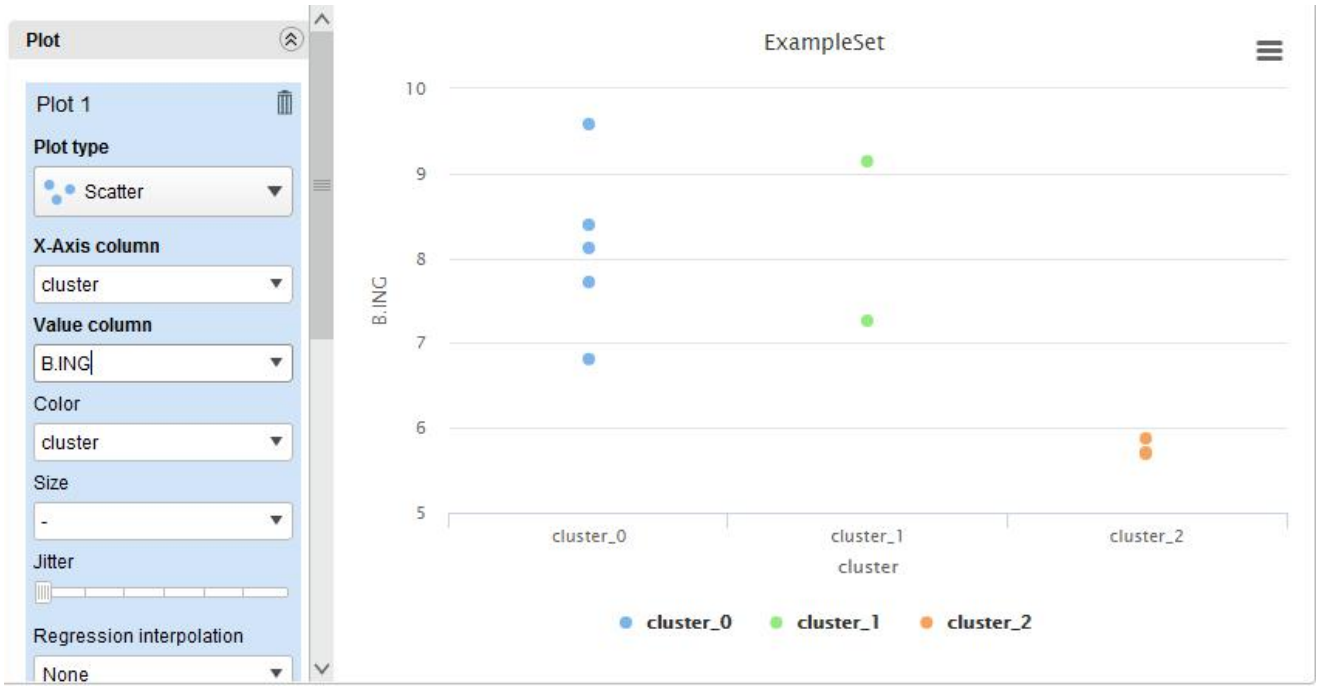
- Nilai Cumulative Variance



- ExampleSet (k-means)
  - Kelompok Siswa bidang B.Indonesia



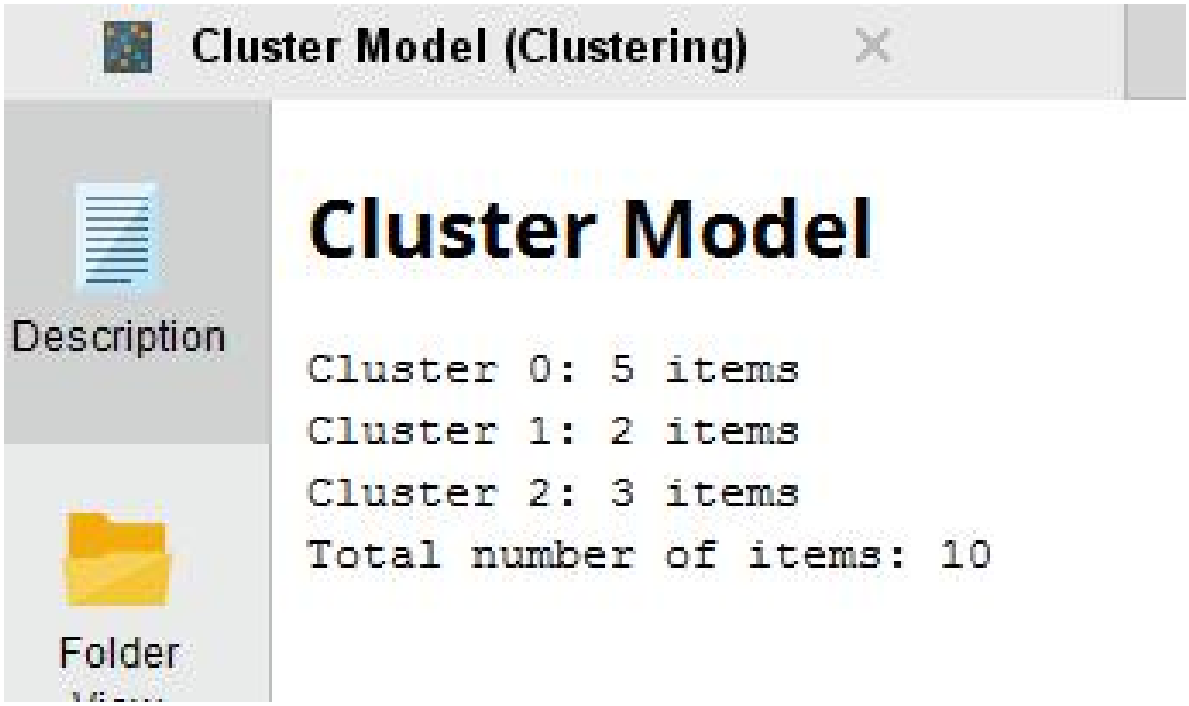
- Kelompok Siswa bidang B.Inggris



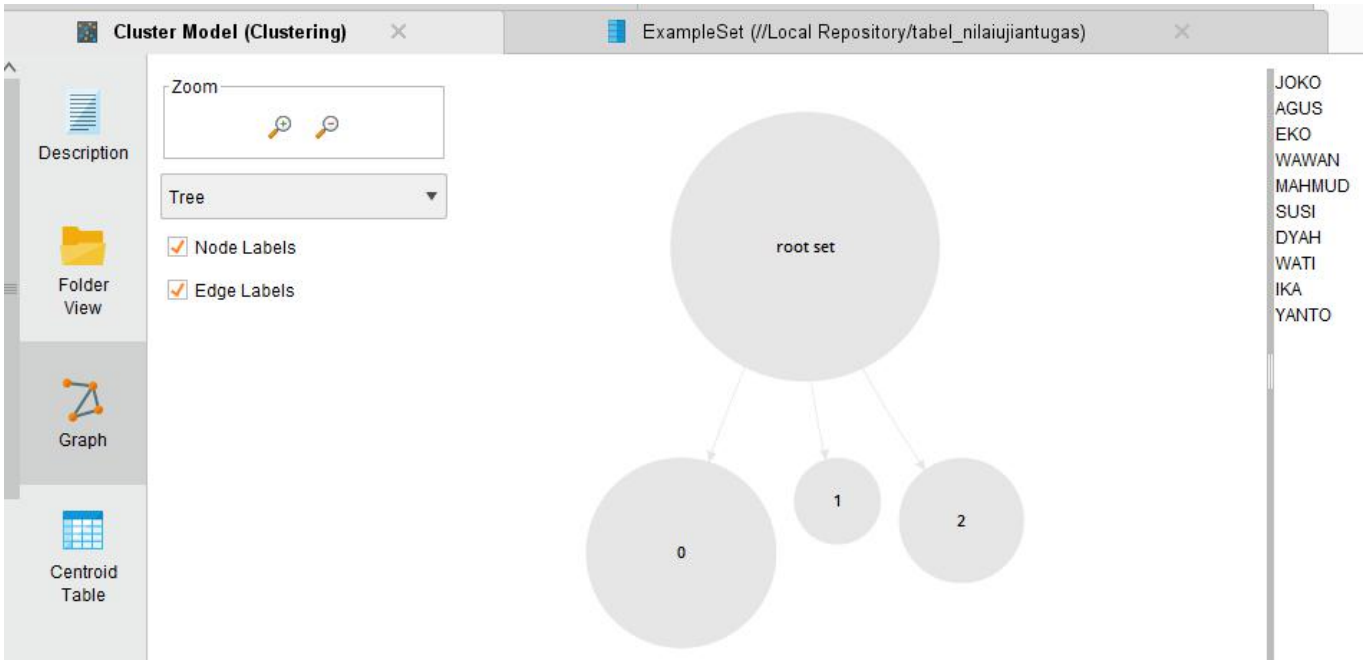
- ExampleSet (SVD)

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

- Cluster Model (Clustering)
  - Description



  - Graph



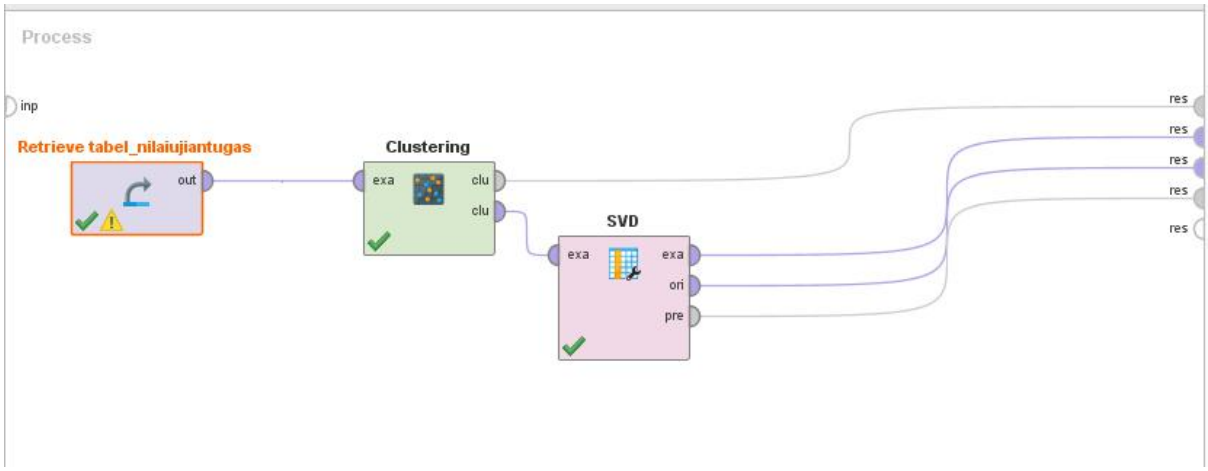
Interpretasi Hasil Algoritma K-Means

NO_SISWA	NAMA	B.IND	B.ING	CLUSTER
S-101	JOKO	8.54	8.40	CLUSTER_0
S-102	AGUS	9.98	6.81	CLUSTER_0
S-103	SUSI	6.20	9.15	CLUSTER_1
S-104	DYAH	5.24	7.26	CLUSTER_1
S-105	WATI	5.70	5.71	CLUSTER_2
S-106	IKA	8.57	5.87	CLUSTER_2
S-107	EKO	7.70	7.71	CLUSTER_0
S-108	YANTO	6.60	5.70	CLUSTER_2
S-109	WAWAN	9.00	8.12	CLUSTER_0
S-110	MAHMUD	9.81	9.58	CLUSTER_0

Tugas

Membuat file excel dengan data 30 orang lalu di import ke dalam rapid miner seperti pada latihan setelah itu mengkoneksikan operator k-means dan operator svd dengan data hasil import tersebut.

NO_SISWA	NAMA	B.IND	B.ING	MTK	IPA
S-101	JOKO	5,516003132	7,645039895	9,361715761	9,761784769
S-102	AGUS	5,953455926	8,84052569	7,461548778	5,267208256
S-103	SUSI	5,822618132	9,590210367	8,497318134	6,559733473
S-104	DYAH	8,476670571	8,151936749	9,643332574	7,260918648
S-105	WATI	8,484711384	6,492990826	8,863443084	6,951415667
S-106	IKA	5,998969054	9,098329046	9,987343962	8,567803527
S-107	EKO	9,457566402	7,304023631	7,228900948	9,751950684
S-108	YANTO	7,211979573	6,122344168	9,059399167	7,764082834
S-109	WAWAN	5,294100169	8,910177217	5,990044703	8,431105622
S-110	MAHMUD	7,901203431	5,54621579	6,131908789	7,685123527
S-111	BUDI	7,404940092	6,196208202	7,017905097	5,495922797
S-112	SANTI	5,134075129	8,42590831	7,168892576	5,478583845
S-113	DIAN	8,320773703	6,20161879	6,327829979	8,922411821
S-114	DANI	6,847417408	9,004045732	5,072286008	7,650834581
S-115	AHMAD	9,71323567	8,82483609	6,051746128	9,252564154
S-116	BAYU	9,633399089	7,717411251	5,445605057	9,20170499
S-117	RISA	8,660557919	8,703622398	7,02253323	7,399886077
S-118	RANI	7,965509564	7,651762242	9,666149416	9,975319066
S-119	YANI	7,919265616	6,996023534	6,880937866	5,992211841
S-120	RATIH	6,900913429	5,210447486	9,137485451	9,610705674
S-121	INDAH	8,076418078	6,781803407	8,536865853	5,519492991
S-122	JONO	5,715513103	5,912871701	9,817724417	6,509755876
S-123	SARAH	7,724596568	5,734104076	8,707147584	8,236148474
S-124	RAMA	5,386689807	8,41113482	9,480150713	6,556612183
S-125	BAMBANG	6,946968842	7,088560593	7,115296992	6,333247679
S-126	HADI	8,172583301	9,211836067	9,425772904	6,166346624
S-127	NANA	7,234773012	5,653800798	7,848789796	6,763057647
S-128	FEBRI	6,054564503	5,969931526	5,803545682	8,999426205
S-129	DENI	8,498621286	9,599554286	5,330248788	9,413497158
S-130	TONI	9,95352946	5,175153417	7,760017619	8,400866012



Hingga seperti pada gambar diatas. Setelah itu melakukan run dan lihat hasilnya seperti dibawah.

- SVD (Singular Value Decomposition)

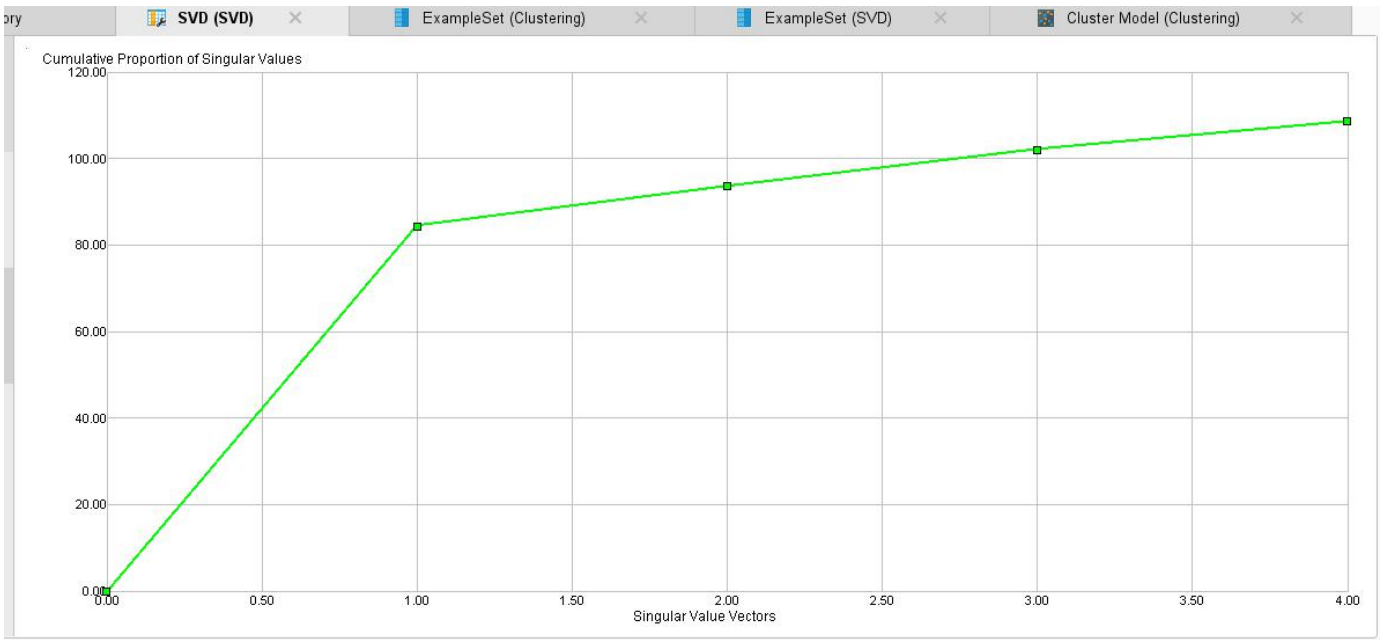
- Nilai Eigenvalue

Component	Singular Value	Proportion of Singular Values	Cumulative Singular Values	Cumulative Proportion of Singular V...
SVD 1	84.536	0.777	84.536	0.777
SVD 2	9.274	0.085	93.811	0.862
SVD 3	8.366	0.077	102.176	0.939
SVD 4	6.605	0.061	108.781	1.000

- Nilai svd vectors

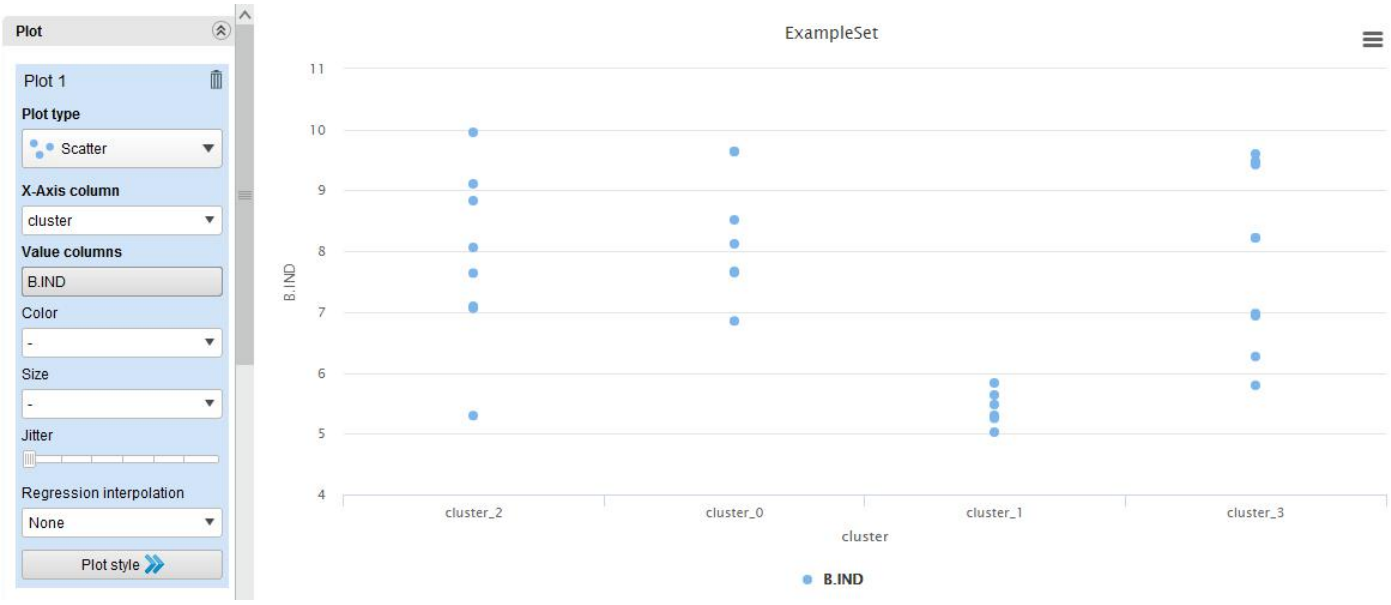
Attribute	SVD Vector 1	SVD Vector 2	SVD Vector 3
B.IND	0.487	-0.218	0.842
B.ING	0.500	0.218	-0.156
MTK	0.510	0.666	-0.170
IPA	0.503	-0.679	-0.488

- Nilai Cumulative Variance

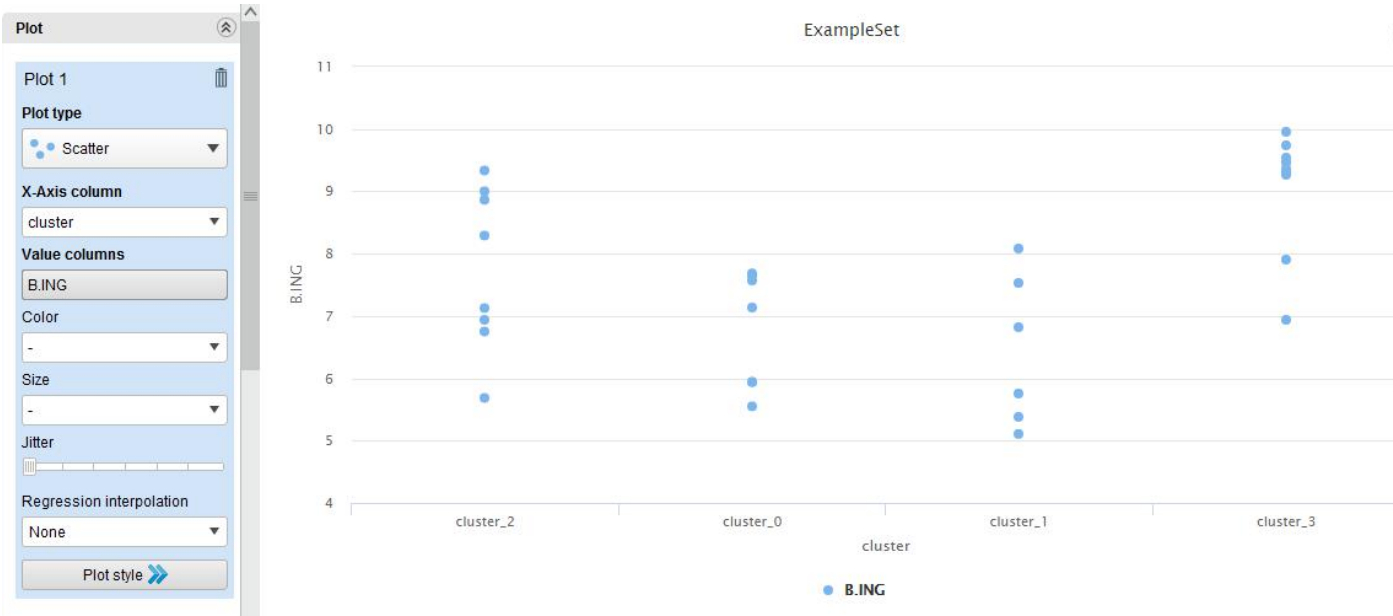


- ExampleSet (k-means)

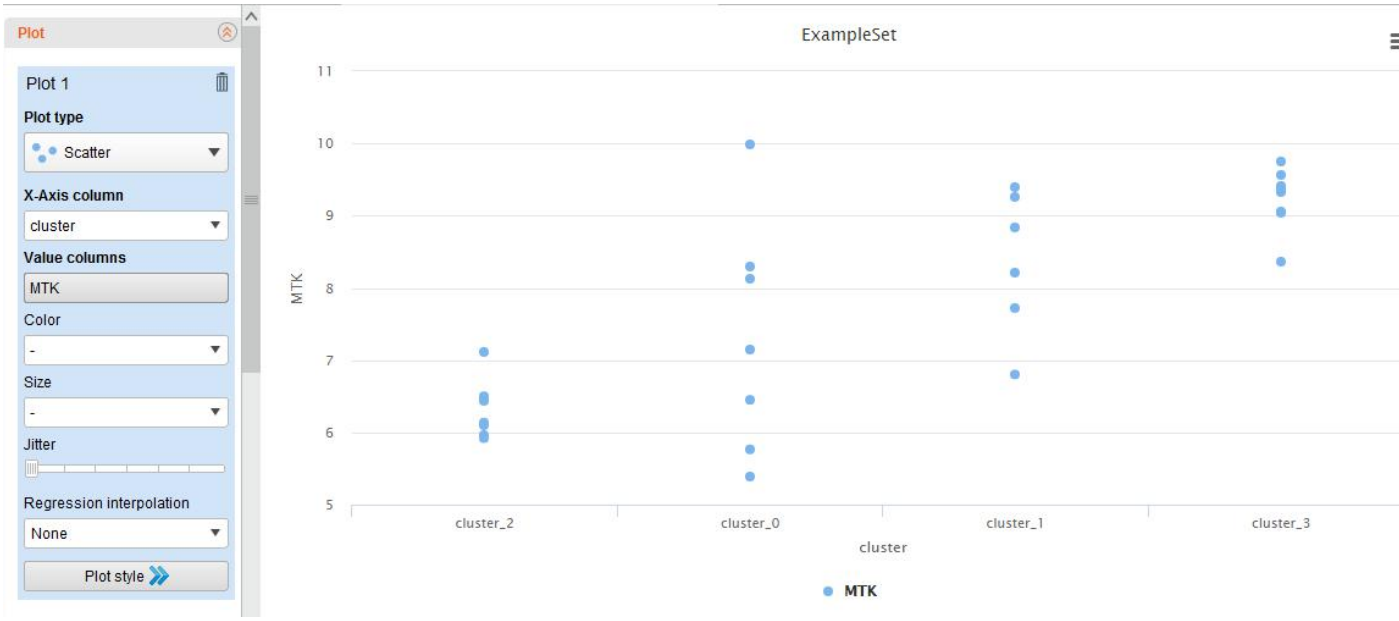
- Kelompok siswa bidang B.Indonesia



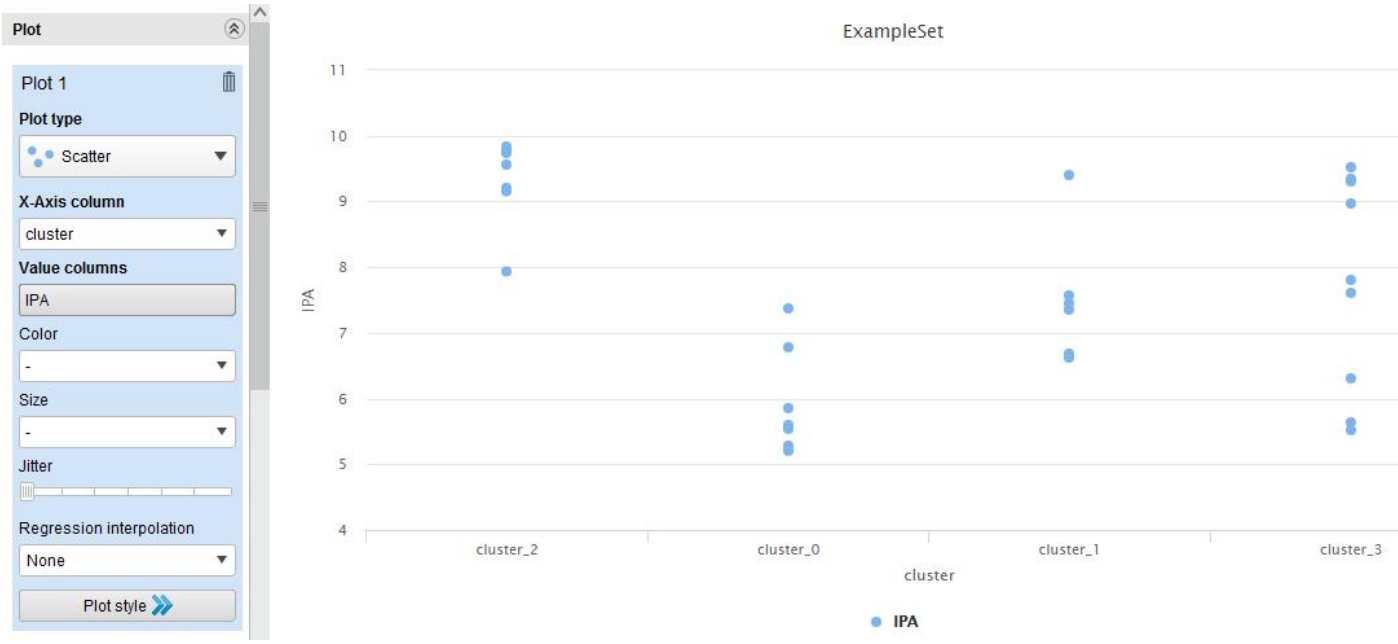
- Kelompok siswa bidang B.Inggris



- Kelompok siswa bidang Matematika



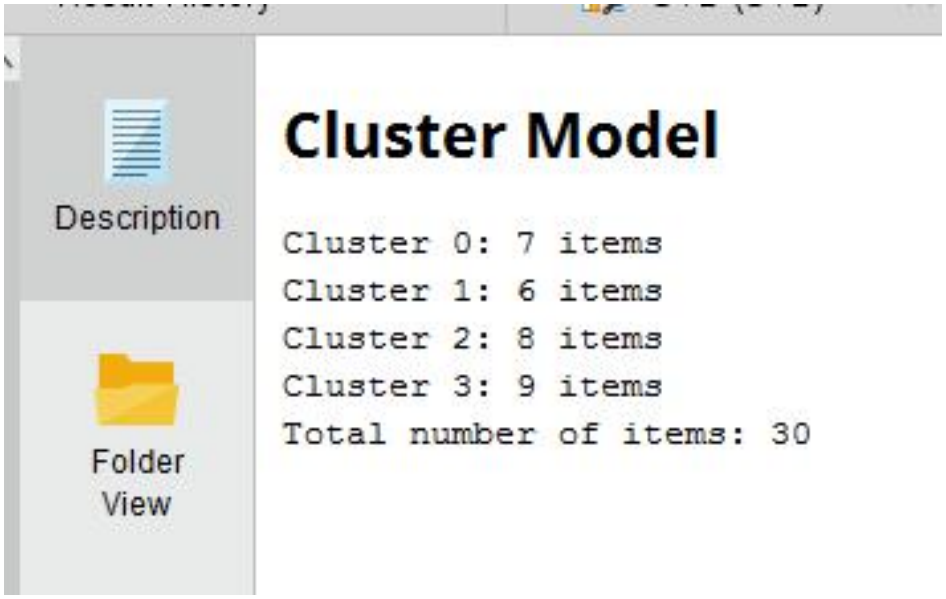
- Kelompok siswa Bidang IPA



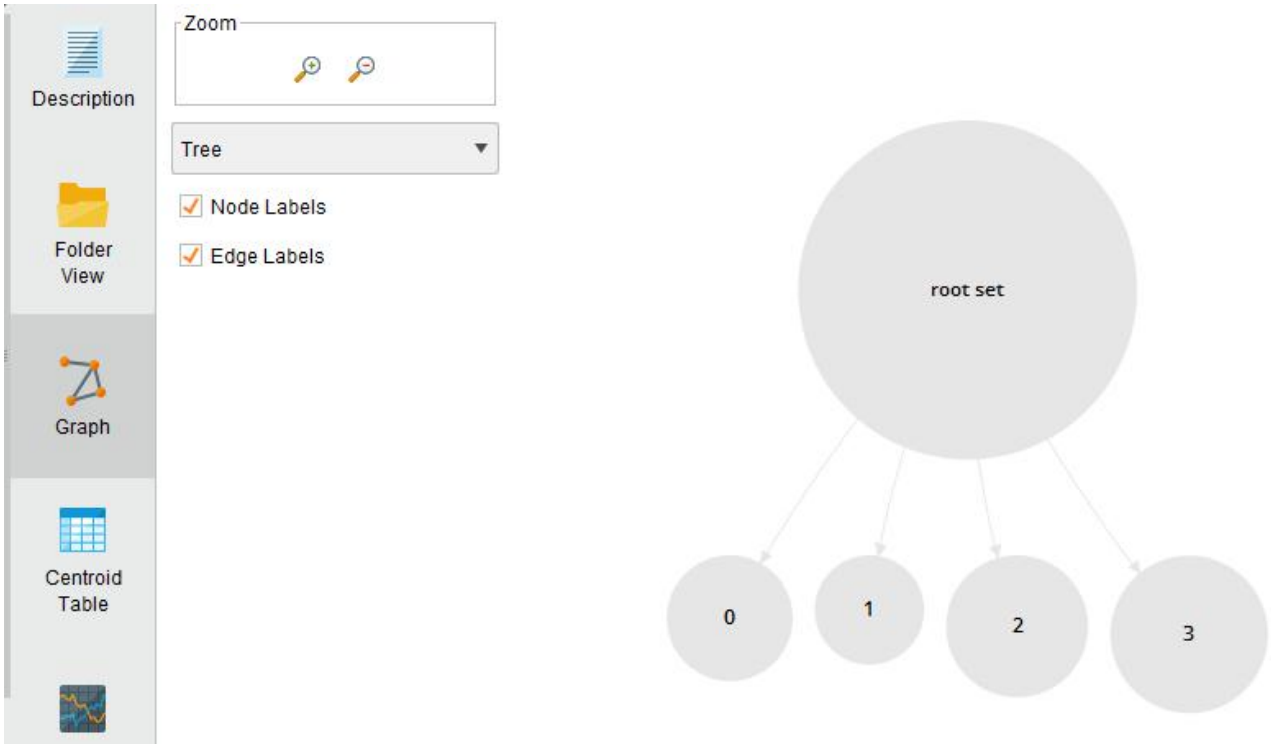
- ExampleSet (SVD)

Row No.	NAMA	cluster	svd_1
1	JOKO	cluster_2	0.194
2	AGUS	cluster_0	0.158
3	SUSI	cluster_1	0.154
4	DYAH	cluster_2	0.174
5	WATI	cluster_3	0.202
6	IKA	cluster_3	0.195
7	EKO	cluster_3	0.184
8	YANTO	cluster_2	0.207
9	WAWAN	cluster_1	0.148
10	MAHMUD	cluster_2	0.177
11	BUDI	cluster_1	0.171
12	SANTI	cluster_3	0.223
13	DIAN	cluster_0	0.183
14	DANI	cluster_3	0.200
15	AHMAD	cluster_3	0.197
16	BAYU	cluster_0	0.157
17	RISA	cluster_0	0.158
18	RANI	cluster_0	0.174
19	YANI	cluster_2	0.177
20	RATIH	cluster_3	0.214
21	INDAH	cluster_1	0.158
22	JONO	cluster_3	0.196
23	SARAH	cluster_2	0.188
24	RAMA	cluster_0	0.157
25	BAMBANG	cluster_1	0.190
26	HADI	cluster_2	0.178
27	NANA	cluster_3	0.198
28	FEBRI	cluster_1	0.167
29	DENI	cluster_0	0.184
30	TONI	cluster_2	0.187

- Cluster Model (clustering)
  - Description



- Graph



- Interpretasi Hasil Algoritma k-means

NO_SISWA	NAMA	B.IND	B.ING	MTK	IPA	CLUSTER
S-101	JOKO	8,798269224	6,896556426	6,321440996	8,657644205	CLUSTER_2
S-102	AGUS	9,905338892	8,32293643	5,801352006	7,172849365	CLUSTER_0
S-103	SUSI	7,364648772	7,274749989	6,63481719	9,014896974	CLUSTER_1
S-104	DYAH	7,392925043	8,695659923	8,560741897	7,070912734	CLUSTER_2
S-105	WATI	9,523723449	9,79137677	8,497758011	7,709743786	CLUSTER_3
S-106	IKA	6,868911433	5,570862654	7,368177331	7,510322972	CLUSTER_3
S-107	EKO	9,992490864	7,390372433	5,858858989	8,909634715	CLUSTER_3
S-108	YANTO	8,652124107	9,214979207	9,750013123	6,07470671	CLUSTER_2
S-109	WAWAN	8,724781834	9,300484557	5,035901349	8,736293083	CLUSTER_1
S-110	MAHMUD	5,813306165	6,105316743	9,692112113	5,233106543	CLUSTER_2
S-111	BUDI	5,319809832	8,589793524	5,477734655	5,513129665	CLUSTER_1
S-112	SANTI	6,918083869	8,571676244	8,200287937	9,740977829	CLUSTER_3
S-113	DIAN	5,233783773	9,889787212	6,3148674	8,876269748	CLUSTER_0
S-114	DANI	8,829439081	6,468962992	5,074267313	8,980707472	CLUSTER_3
S-115	AHMAD	9,658776049	8,422507581	8,528315585	9,761440156	CLUSTER_3
S-116	BAYU	5,753348938	6,50510133	8,785077833	9,363897554	CLUSTER_0
S-117	RISA	5,171329266	6,799356997	5,341398348	8,497694734	CLUSTER_0
S-118	RANI	8,333549455	5,020507748	5,127141918	9,842103969	CLUSTER_0
S-119	YANI	8,722225027	5,780694709	7,189841656	5,752601454	CLUSTER_2
S-120	RATIH	6,382573853	8,76114326	9,310451857	7,913049165	CLUSTER_3
S-121	INDAH	6,058037716	8,653121477	6,786646685	6,250136126	CLUSTER_1
S-122	JONO	7,590659021	6,810508273	5,34877713	6,975756178	CLUSTER_3
S-123	SARAH	7,361372899	9,366035082	9,312018864	7,978222502	CLUSTER_2
S-124	RAMA	5,797799248	9,549878827	5,316647341	5,922714756	CLUSTER_0
S-125	BAMBANG	5,047771257	9,818301056	5,674748355	5,772758717	CLUSTER_1
S-126	HADI	7,119409143	6,650399937	6,485330791	9,974329202	CLUSTER_2
S-127	NANA	6,318259791	7,214554541	5,73664993	7,271597837	CLUSTER_3
S-128	FEBRI	5,541492118	5,197483134	8,747199679	9,939316127	CLUSTER_1
S-129	DENI	9,797098062	7,303742284	9,572136087	9,892462892	CLUSTER_0
S-130	TONI	5,227462498	7,131729865	7,526361302	5,58567922	CLUSTER_2

- Cluster_0
  - Agus
  - Dian
  - Bayu
  - Risa
  - Rani
  - Rama
  - Deni

- Cluster_1
  - Susi
  - Wawan
  - Budi
  - Indah

    - Bambang
    - Febri
- Cluster_2
    - Joko
    - Dyah
    - Yanto
    - Mahmud
    - Yani
    - Sarah
    - Hadi
    - Toni
- Cluster_3
    - Wati
    - Ika
    - Eko
    - Santi
    - Dani
    - Ahmad
    - Ratih
    - Jono
    - Nana