Nama : Muhammad Khotibul Umam Senoaji

NIM : L200170050

Kelas : C

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MODUL X

CLUSTERING : K-MEANS

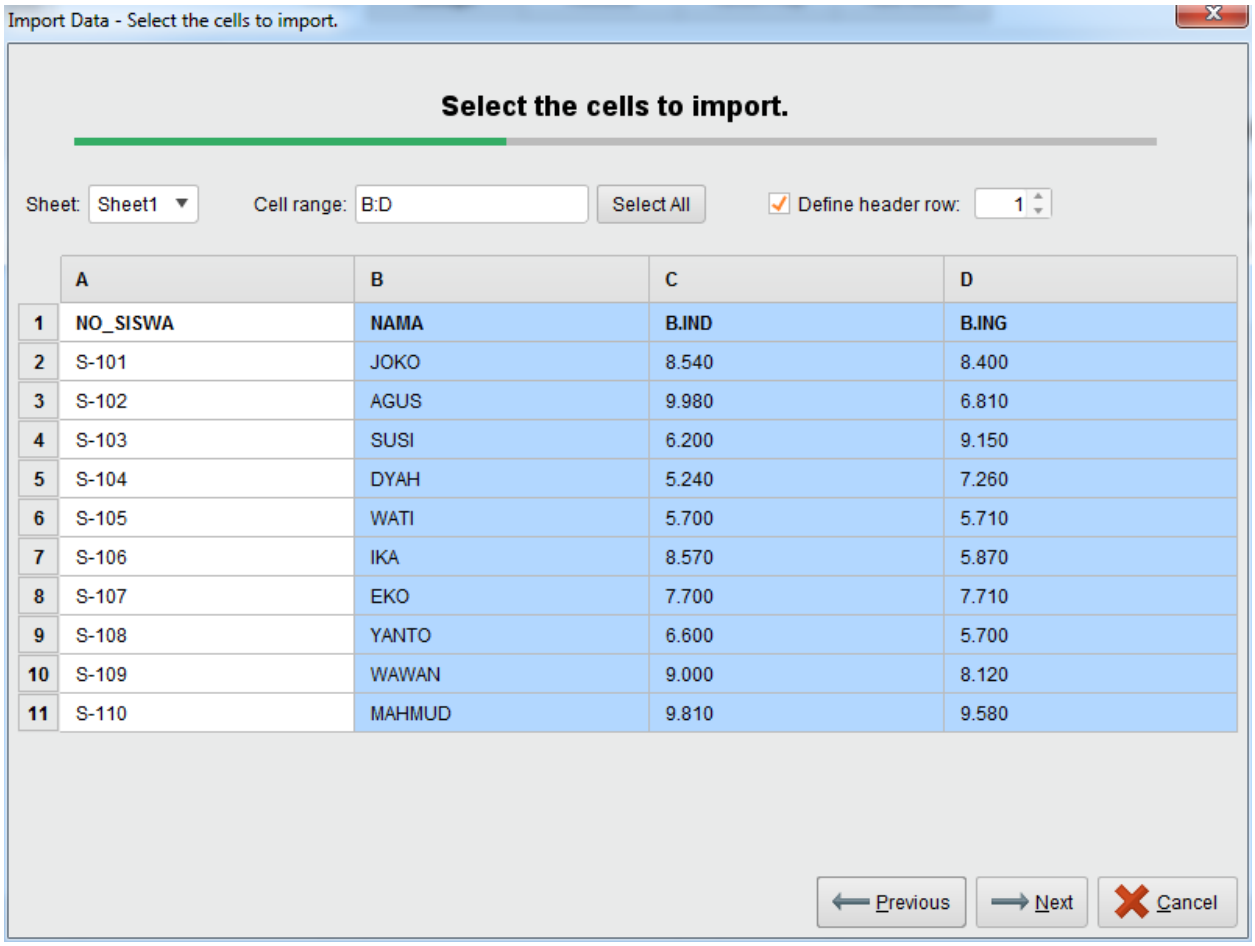
10.4 Langkah-langkah Praktikum

10.4.1 Algoritma K-Means Menggunakan RapidMiner

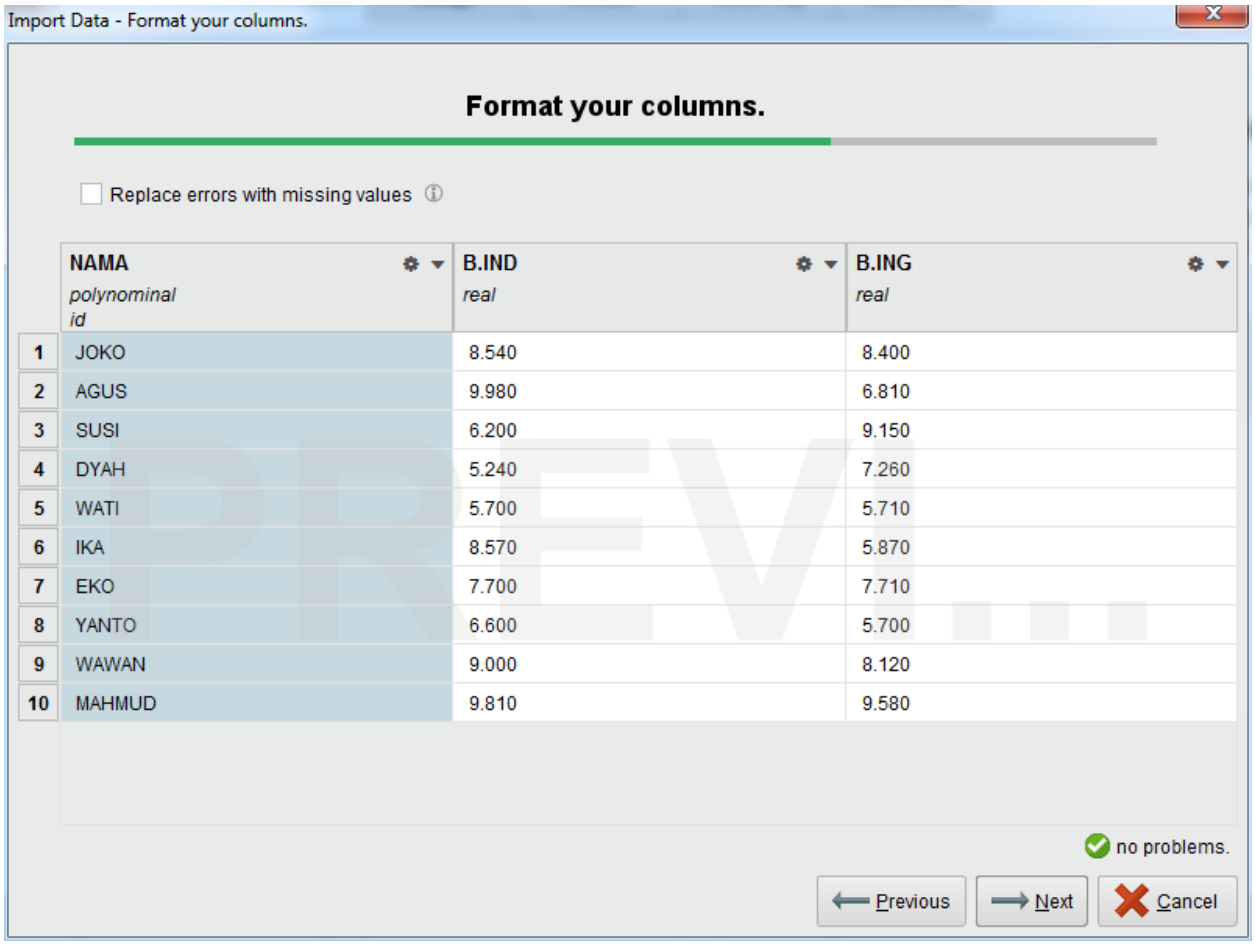
1. Membuat Tabel data data mahasiswa dan menyimpannya dengan nama **Tabel_NilaiUjian.xls**.

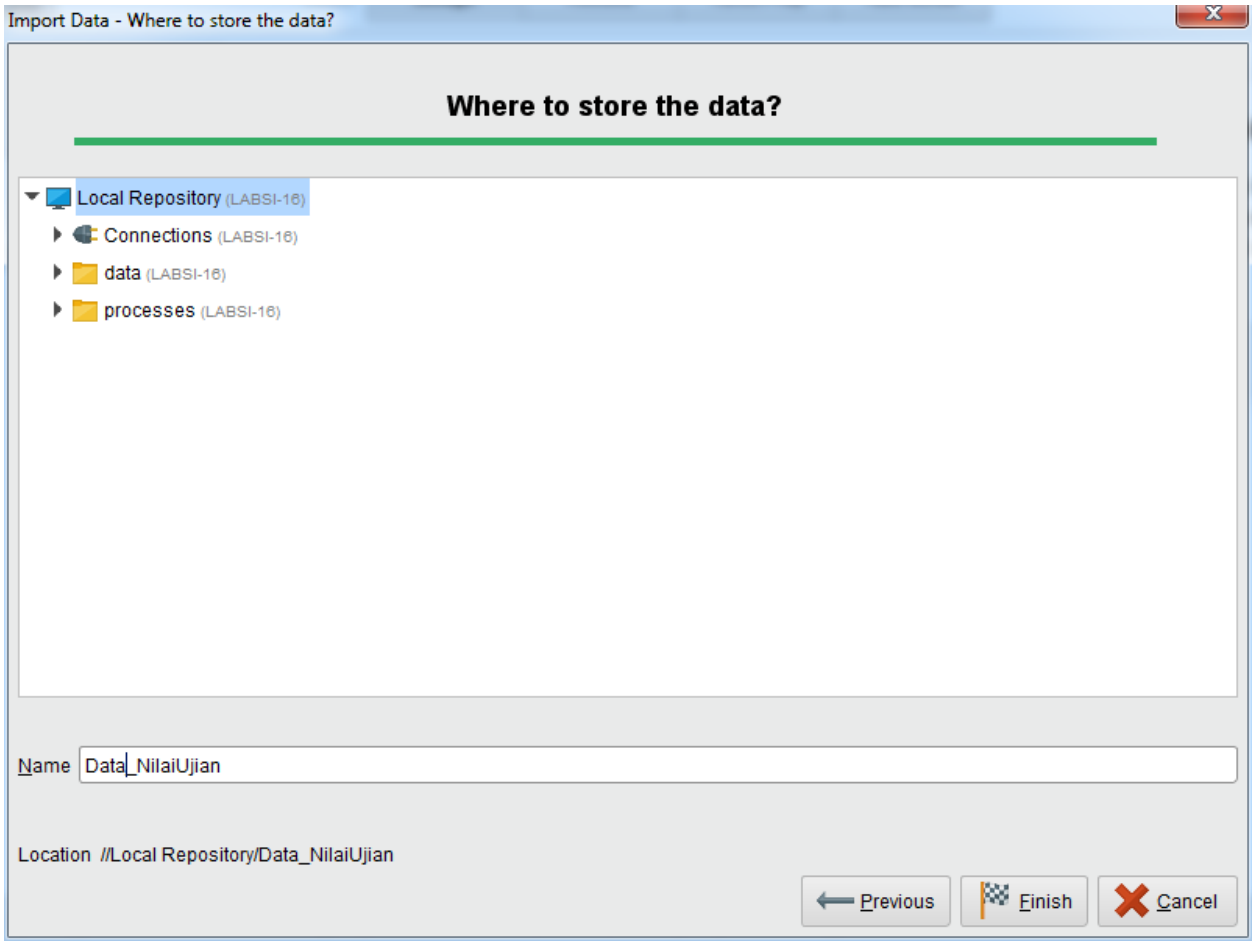
NO_SISWA	NAMA	B.IND	B.ING
S-101	JOKO	8.54	8.4
S-102	AGUS	9.98	6.81
S-103	SUSI	6.2	9.15
S-104	DYAH	5.24	7.26
S-105	WATI	5.7	5.71
S-106	IKA	8.57	5.87
S-107	EKO	7.7	7.71
S-108	YANTO	6.6	5.7
S-109	WAWAN	9	8.12
S-110	MAHMUD	9.81	9.58

2. Menggunakan data excel tersebut dan masukkan pada **RapidMiner**.

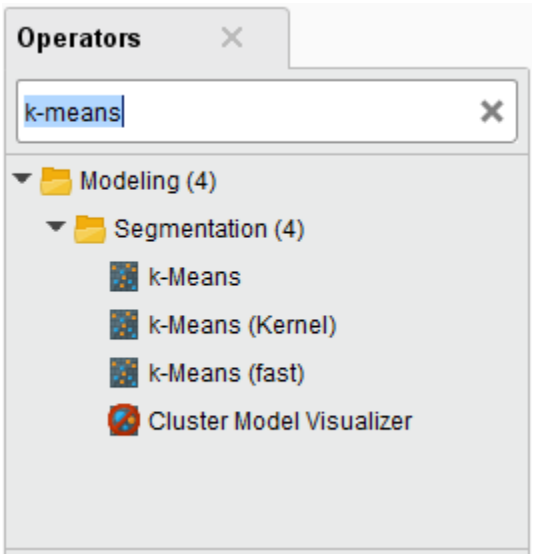


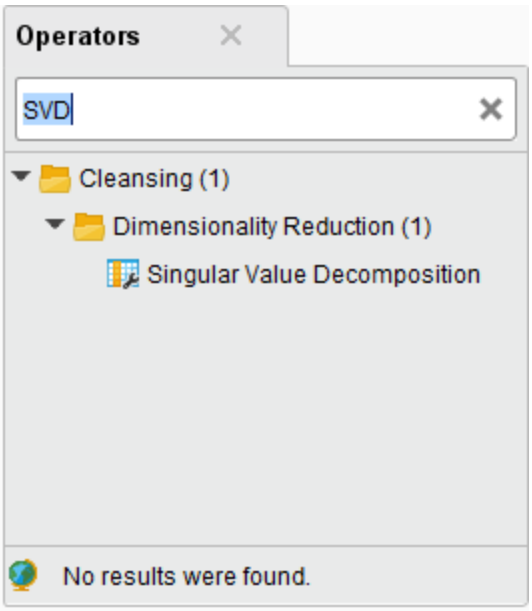
	A	B	C	D
1	NO_SISWA	NAMA	B.IND	B.ING
2	S-101	JOKO	8.540	8.400
3	S-102	AGUS	9.980	6.810
4	S-103	SUSI	6.200	9.150
5	S-104	DYAH	5.240	7.260
6	S-105	WATI	5.700	5.710
7	S-106	IKA	8.570	5.870
8	S-107	EKO	7.700	7.710
9	S-108	YANTO	6.600	5.700
10	S-109	WAWAN	9.000	8.120
11	S-110	MAHMUD	9.810	9.580

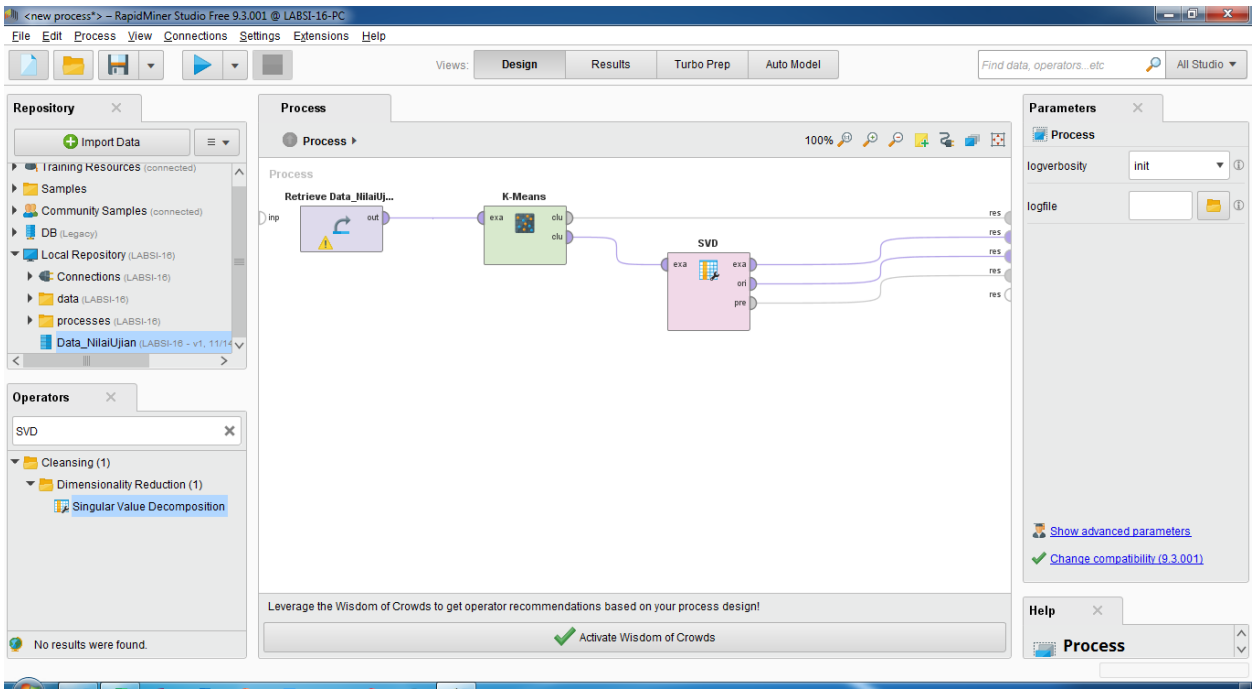

Import Data - Format your columns.
Format your columns.
Replace errors with missing values
NAMA
polynominal
id
B.IND
real
B.ING
real
1 JOKO 8.540 8.400
2 AGUS 9.980 6.810
3 SUSI 6.200 9.150
4 DYAH 5.240 7.260
5 WATI 5.700 5.710
6 IKA 8.570 5.870
7 EKO 7.700 7.710
8 YANTO 6.600 5.700
9 WAWAN 9.000 8.120
10 MAHMUD 9.810 9.580
no problems.
Previous
Next
Cancel



3. Masukkan data tersebut ke area proses, serta cari di **K-Means** dan **SVD** pada kolom **Operator** dan masukkan ke dalam area proses.





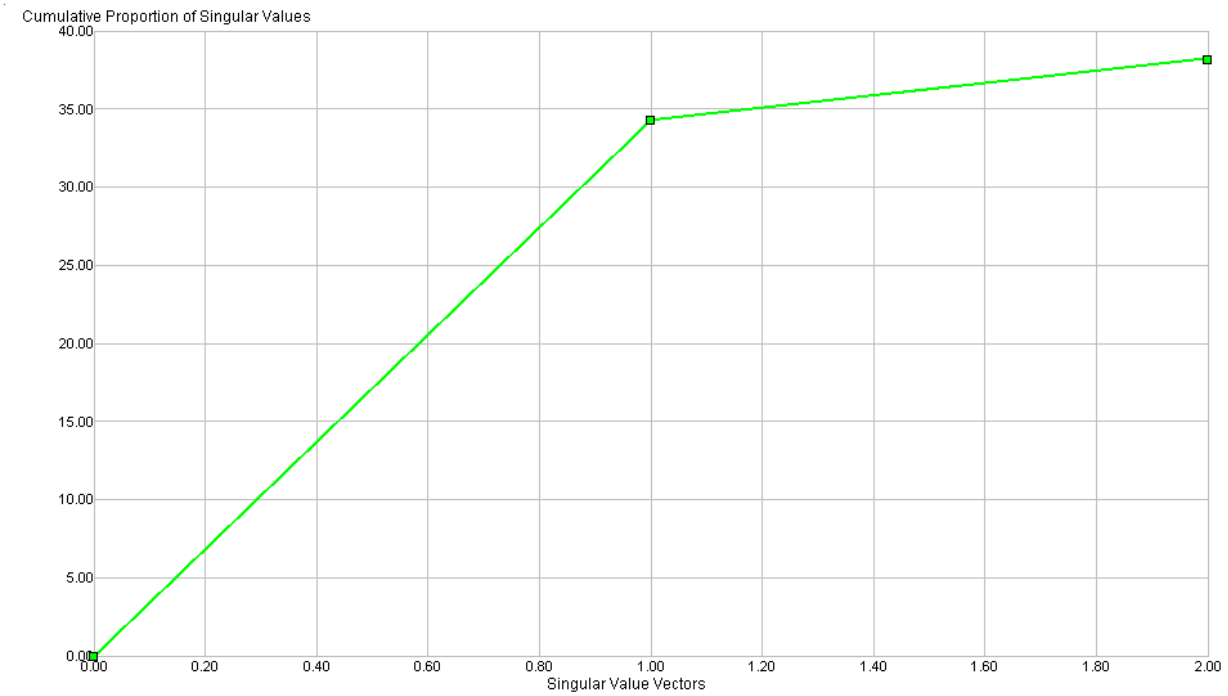


4. Setelah jalankan **Run**, hasilnya berupa :

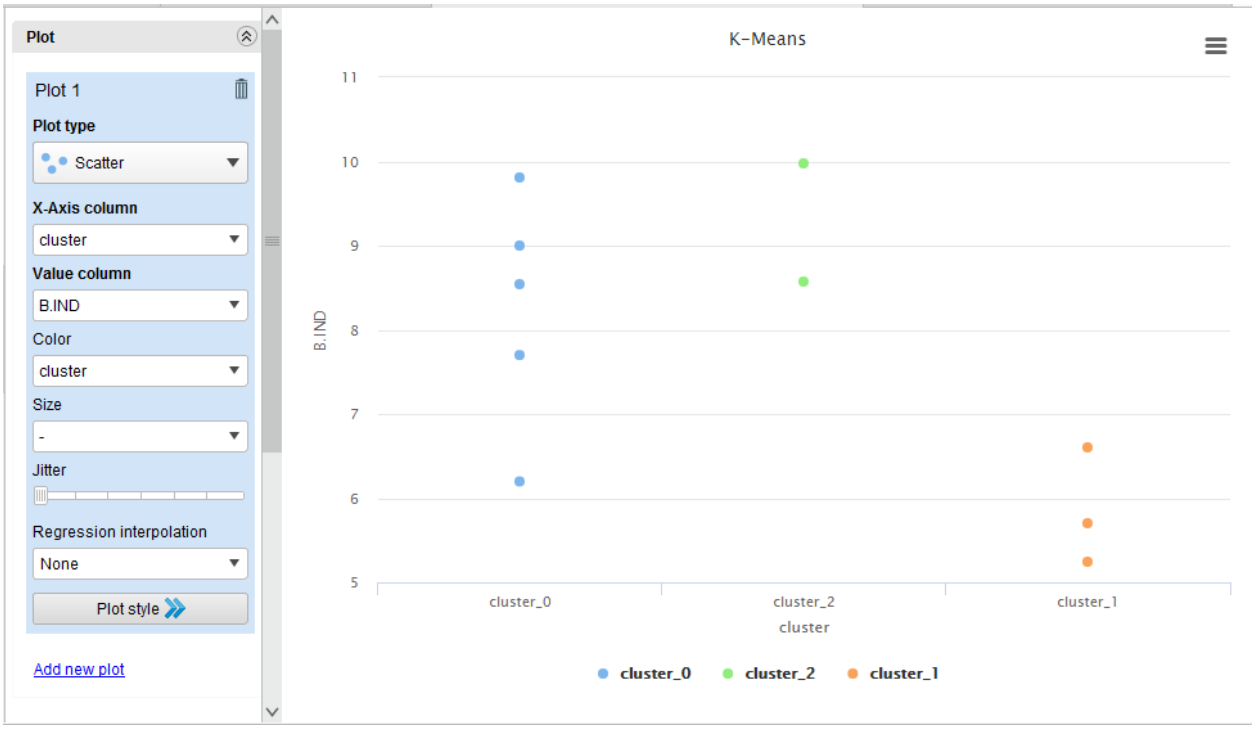
   a) SVD (Singular Value Decomposition)

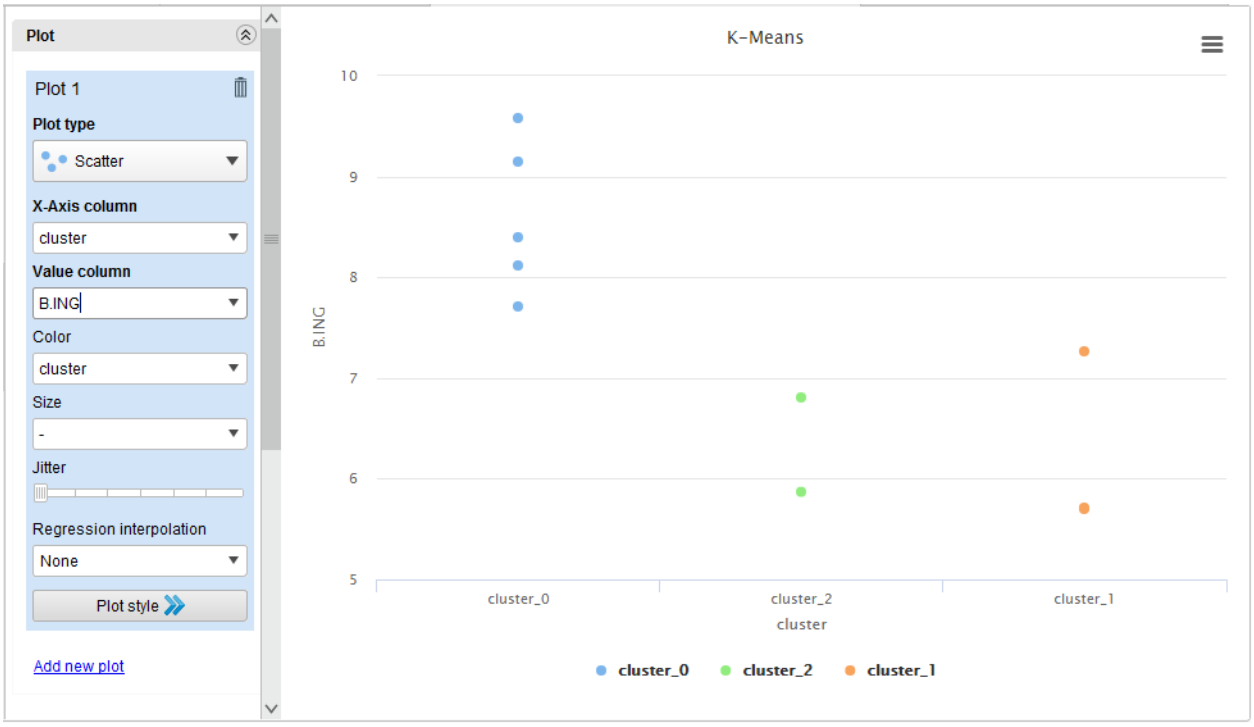
Component	Singular Value	Proportion of Singular Values	Cumulative Singular Values	Cumulative Proportion of Sin...
SVD 1	34.340	0.898	34.340	0.898
SVD 2	3.906	0.102	38.246	1.000

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



b) ExampleSet (K-Means)





c) ExampleSet (SVD)

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

d) Cluster Model (Clustering)

Cluster Model

```
Cluster 0: 5 items
Cluster 1: 3 items
Cluster 2: 2 items
Total number of items: 10
```

10.4.2 Interpretasi Hasil Algoritma K-Means

Row No.	NAMA	cluster	B.IND	B.ING
1	JOKO	cluster_0	8.540	8.400
2	AGUS	cluster_2	9.980	6.810
3	SUSI	cluster_0	6.200	9.150
4	DYAH	cluster_1	5.240	7.260
5	WATI	cluster_1	5.700	5.710
6	IKA	cluster_2	8.570	5.870
7	EKO	cluster_0	7.700	7.710
8	YANTO	cluster_1	6.600	5.700
9	WAWAN	cluster_0	9	8.120
10	MAHMUD	cluster_0	9.810	9.580

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