PRAKTIKUM DWDM

disusun oleh :

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L200170107

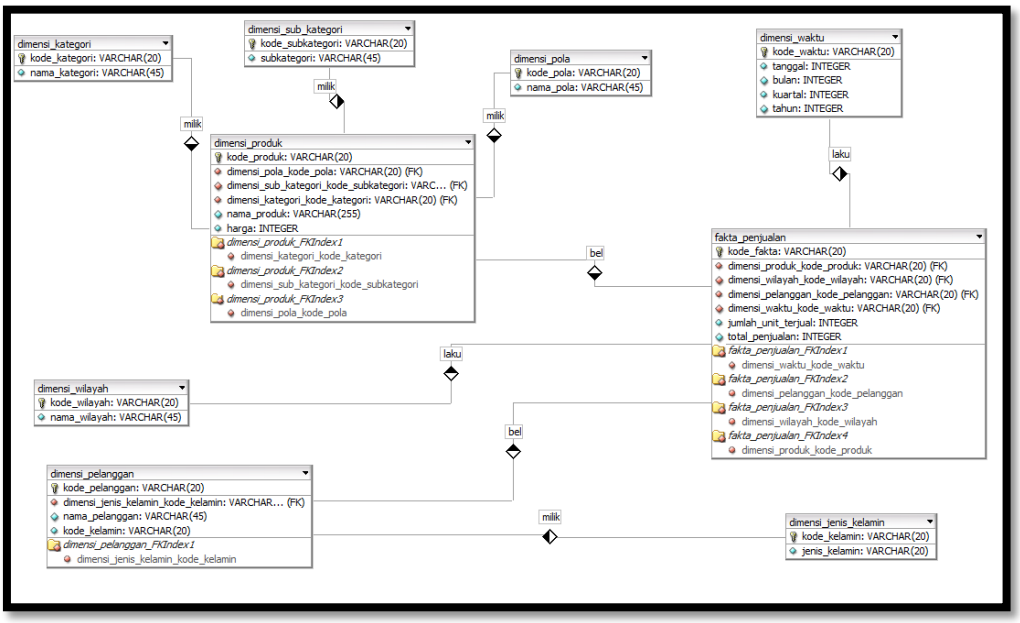
JURUSAN TEKNIK INFORMATIKA

FAKULTAS KOMUNIKASI DAN INFORMATIKA

UNIVERSITAS MUHAMMADIYAH SURAKARTA

2019

MODUL 1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nama_kategori: VARCHAR(45)
dimensi_sub_kategori
kode_subkategori: VARCHAR(20)
subkategori: VARCHAR(45)
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kode_pola: VARCHAR(20)
nama_pola: VARCHAR(45)
dimensi_waktu
kode_waktu: VARCHAR(20)
tanggal: INTEGER
bulan: INTEGER
kuartal: INTEGER
tahun: INTEGER
milik
milik
milik
laku
dimensi_produk
kode_produk: VARCHAR(20)
dimensi_pola_kode_pola: VARCHAR(20) (FK)
dimensi_sub_kategori_kode_subkategori: VARC... (FK)
dimensi_kategori_kode_kategori: VARCHAR(20) (FK)
nama_produk: VARCHAR(255)
harga: INTEGER
dimensi_produk_FKIndex1
dimensi_kategori_kode_kategori
dimensi_produk_FKIndex2
dimensi_sub_kategori_kode_subkategori
dimensi_produk_FKIndex3
dimensi_pola_kode_pola
beli
fakta_penjualan
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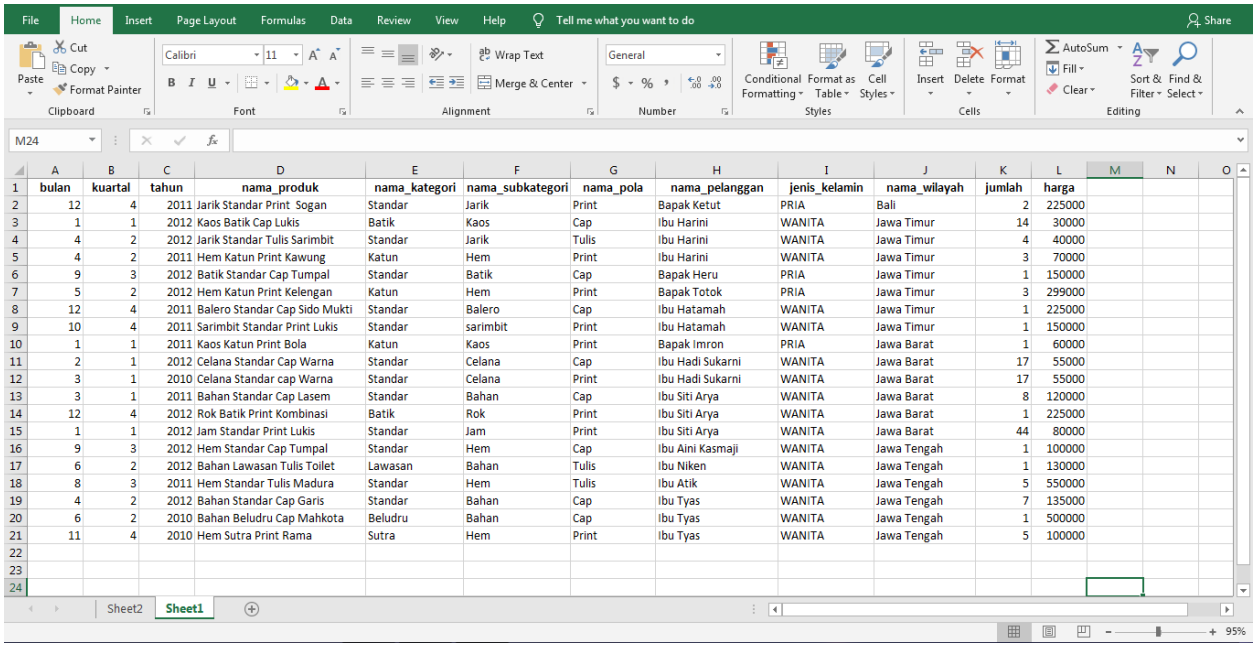
dimensi_pelanggan_kode_pelanggan: VARCHAR(20) (FK)
dimensi_waktu_kode_waktu: VARCHAR(20) (FK)
jumlah_unit_terjual: INTEGER
total_penjualan: INTEGER
fakta_penjualan_FKIndex1
dimensi_waktu_kode_waktu
fakta_penjualan_FKIndex2
dimensi_pelanggan_kode_pelanggan
fakta_penjualan_FKIndex3
dimensi_wilayah_kode_wilayah
fakta_penjualan_FKIndex4
dimensi_produk_kode_produk
laku
dimensi_wilayah
kode_wilayah: VARCHAR(20)
nama_wilayah: VARCHAR(45)
beli
dimensi_pelanggan
kode_pelanggan: VARCHAR(20)
dimensi_jenis_kelamin_kode_kelamin: VARCHAR... (FK)
nama_pelanggan: VARCHAR(45)
kode_kelamin: VARCHAR(20)
dimensi_pelanggan_FKIndex1
dimensi_jenis_kelamin_kode_kelamin
milik
dimensi_jenis_kelamin
kode_kelamin: VARCHAR(20)
jenis_kelamin: VARCHAR(20)

MODUL 5

➢ Kegiatan

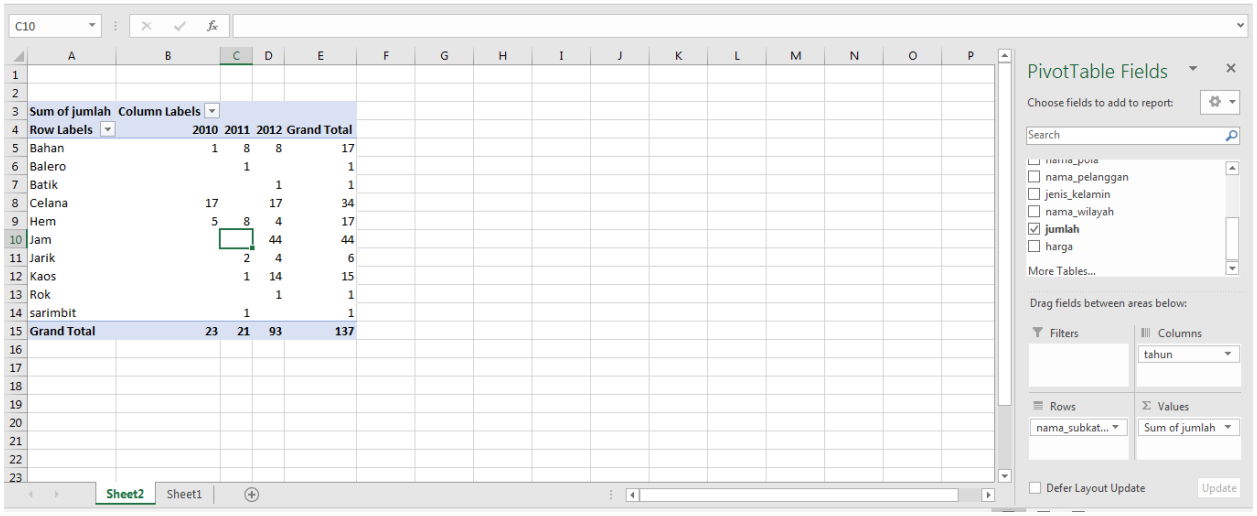
- Membuat tabel pada excel disimpan dengan nama **"Fakta_Penjualan.xls"**



bulan	kuartal	tahun	nama_produk	nama_kategori	nama_subkategori	nama_pola	nama_pelanggan	jenis_kelamin	nama_wilayah	jumlah	harga
12	4	2011	Jarik Standar Print Sogan	Standar	Jarik	Print	Bapak Ketut	PRIA	Bali	2	225000
1	1	2012	Kaos Batik Cap Lukis	Batik	Kaos	Cap	Ibu Harini	WANITA	Jawa Timur	14	30000
4	2	2012	Jarik Standar Tulis Sarimbit	Standar	Jarik	Tulis	Ibu Harini	WANITA	Jawa Timur	4	40000
4	2	2011	Hem Katun Print Kawung	Katun	Hem	Print	Ibu Harini	WANITA	Jawa Timur	3	70000
9	3	2012	Batik Standar Cap Tumpal	Standar	Batik	Cap	Bapak Heru	PRIA	Jawa Timur	1	150000
5	2	2012	Hem Katun Print Kelengan	Katun	Hem	Print	Bapak Totok	PRIA	Jawa Timur	3	299000
12	4	2011	Balero Standar Cap Sido Mukti	Standar	Balero	Cap	Ibu Hatamah	WANITA	Jawa Timur	1	225000
10	4	2011	Sarimbit Standar Print Lukis	Standar	sarimbit	Print	Ibu Hatamah	WANITA	Jawa Timur	1	150000
1	1	2011	Kaos Katun Print Bola	Katun	Kaos	Print	Bapak Imron	PRIA	Jawa Barat	1	60000
2	1	2012	Celana Standar Cap Warna	Standar	Celana	Cap	Ibu Hadi Sukarni	WANITA	Jawa Barat	17	55000
3	1	2010	Celana Standar cap Warna	Standar	Celana	Print	Ibu Hadi Sukarni	WANITA	Jawa Barat	17	55000
3	1	2011	Bahan Standar Cap Lasem	Standar	Bahan	Cap	Ibu Siti Arya	WANITA	Jawa Barat	8	120000
12	4	2012	Rok Batik Print Kombinasi	Batik	Rok	Print	Ibu Siti Arya	WANITA	Jawa Barat	1	225000
1	1	2012	Jam Standar Print Lukis	Standar	Jam	Print	Ibu Siti Arya	WANITA	Jawa Barat	44	80000
9	3	2012	Hem Standar Cap Tumpal	Standar	Hem	Cap	Ibu Aini Kasmaji	WANITA	Jawa Tengah	1	100000
6	2	2012	Bahan Lawasan Tulis Toilet	Lawasan	Bahan	Tulis	Ibu Niken	WANITA	Jawa Tengah	1	130000
8	3	2011	Hem Standar Tulis Madura	Standar	Hem	Tulis	Ibu Atik	WANITA	Jawa Tengah	5	550000
4	2	2012	Bahan Standar Cap Garis	Standar	Bahan	Cap	Ibu Tyas	WANITA	Jawa Tengah	7	135000
6	2	2010	Bahan Beludru Cap Mahkota	Beludru	Bahan	Cap	Ibu Tyas	WANITA	Jawa Tengah	1	500000
11	4	2010	Hem Sutra Print Rama	Sutra	Hem	Print	Ibu Tyas	WANITA	Jawa Tengah	5	100000

- Pada Pivot Table Field List, menyusun layout field dengan urutan :
  - ➢ Field nama_subkategori di kotak Row Labels
  - ➢ Field tahun di kotak Column Labels
  - ➢ Field jumlah di kotak Values

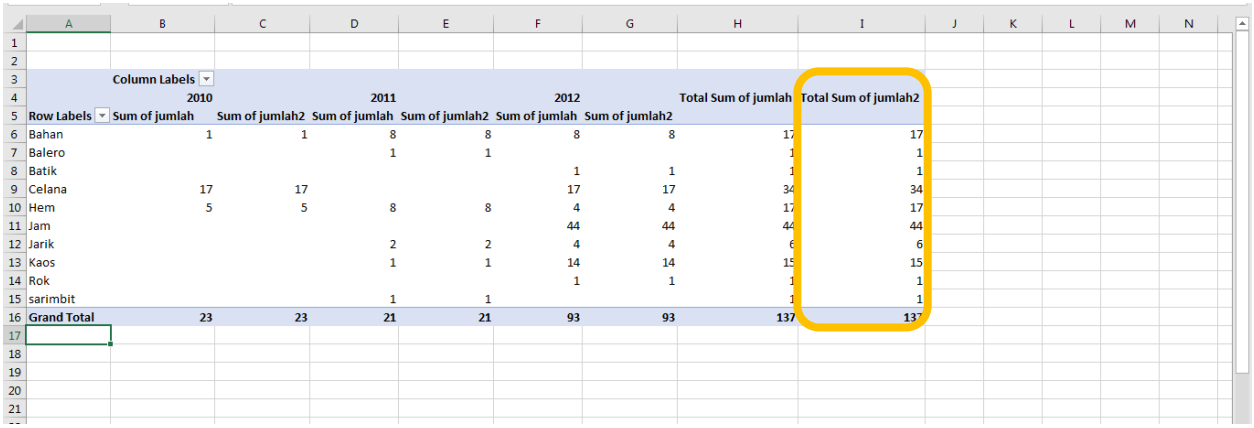
Dan akan menghasilkan suatu tabel dengan grouping field nama_subkategori pada bagian baris, field tahun pada kolom. Sedangkan nilai total jumlah_unit ditempatkan pada cell-cell hasil perpotongan item grouping baris dan kolom tersebut.



Sum of jumlah	Column Labels			
Row Labels	2010	2011	2012	Grand Total
Bahan	1	8	8	17
Balero		1		1
Batik			1	1
Celana	17		17	34
Hem	5	8	4	17
Jam			44	44
Jarik		2	4	6
Kaos		1	14	15
Rok			1	1
sarimbit		1		1
Grand Total	23	21	93	137

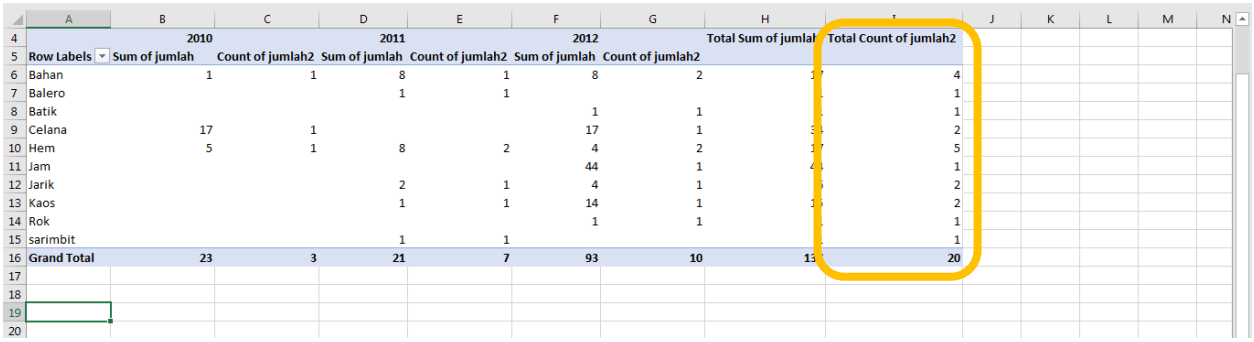
- Kemudian menambahkan field jumlah pada kotak values dan mensetting jumlah2 di values field setting dengan mengubah nilai sum menjadi count dan akan menghasilkan tabel seperti yang di bawah ini :

SEBELUM DIUBAH



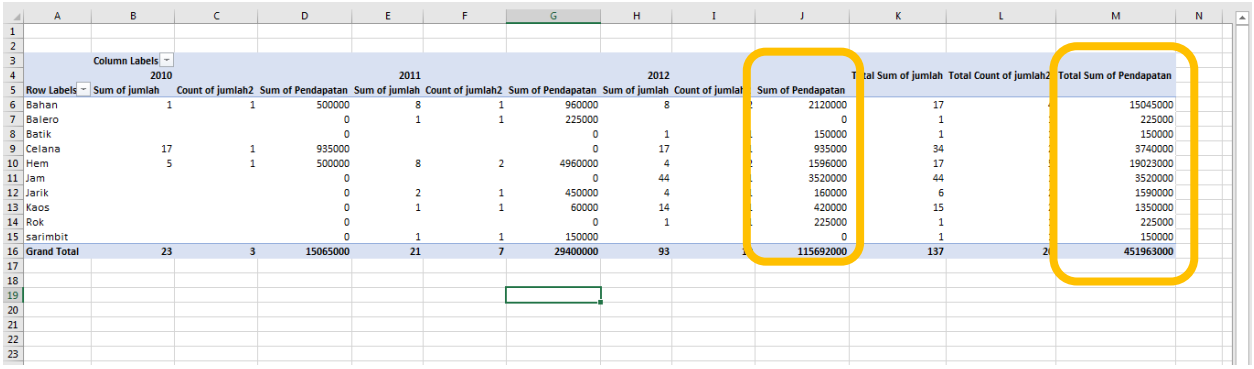
Column Labels	2010		2011		2012		Total Sum of jumlah	Total Sum of jumlah2
Row Labels	Sum of jumlah	Sum of jumlah2	Sum of jumlah	Sum of jumlah2	Sum of jumlah	Sum of jumlah2		
Bahan	1	1	8	8	8	8	17	17
Balero			1	1			1	1
Batik					1	1	1	1
Celana	17	17			17	17	34	34
Hem	5	5	8	8	4	4	17	17
Jam					44	44	44	44
Jarik			2	2	4	4	6	6
Kaos			1	1	14	14	15	15
Rok					1	1	1	1
sarimbit			1	1			1	1
Grand Total	23	23	21	21	93	93	137	137

SESUDAH DIUBAH



	2010		2011		2012		Total Sum of jumlah	Total Count of jumlah2
Row Labels	Sum of jumlah	Count of jumlah2	Sum of jumlah	Count of jumlah2	Sum of jumlah	Count of jumlah2		
Bahan	1	1	8	1	8	2	17	4
Balero			1	1			1	1
Batik					1	1	1	1
Celana	17	1			17	1	34	2
Hem	5	1	8	2	4	2	17	5
Jam					44	1	44	1
Jarik			2	1	4	1	6	2
Kaos			1	1	14	1	15	2
Rok					1	1	1	1
sarimbit			1	1			1	1
Grand Total	23	3	21	7	93	10	137	20

- Calculated Field, jika kita ingin mencari jumlah pendapatan yang diperoleh berdasarkan jumlah produk yang terjual dikalikan dengan harga produk menggunakan Pivot Table dengan menggunakan **Calculated Field**

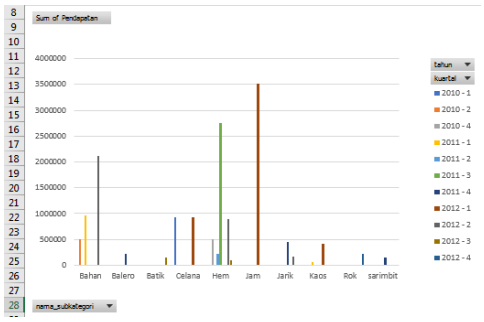


Column Labels	2010			2011			2012			Total Sum of jumlah	Total Count of jumlah2	Total Sum of Pendapatan
Row Labels	Sum of jumlah	Count of jumlah2	Sum of Pendapatan	Sum of jumlah	Count of jumlah2	Sum of Pendapatan	Sum of jumlah	Count of jumlah	Sum of Pendapatan			
Bahan	1	1	500000	8	1	960000	8		2120000	17		15045000
Balero			0	1	1	225000			0	1		225000
Batik			0			0	1		150000	1		150000
Celana	17	1	935000			0	17		935000	34		3740000
Hem	5	1	500000	8	2	4960000	4		1596000	17		19023000
Jam			0			0	44		3520000	44		3520000
Jarik			0	2	1	450000	4		160000	6		1590000
Kaos			0	1	1	60000	14		420000	15		1350000
Rok			0			0	1		225000	1		225000
sarimbit			0	1	1	150000			0	1		150000
Grand Total	23	3	15065000	21	7	29400000	93		115692000	137		451963000

- Operasi Roll Up dan Drill Down, digunakan untuk melihat data secara lebih rinci dan secara lebih umum berdasarkan kategori tertentu pada sebuah data, seperti gambar dibawah ini

Sum of Pendapatan	Column Labels																									
	2010							2011											2012							
	1	1 Total	2	2 Total	4	4 Total		1		1 Total	2	2 Total	3	3 Total	4	4 Total		1		1 Total	2		2 Total		
Row Labels	3		6		11			1	3		4		8		10	12		1	2		4	5	6		
Bahan	0	0	500000	500000	0	0	500000	0	960000	960000	0	0	0	0	0	0	960000	0	0	0	945000	0	130000	2120000	
Balero	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	225000	225000	225000	0	0	0	0	0	0	0
Batik	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Celana	935000	935000	0	0	0	0	935000	0	0	0	0	0	0	0	0	0	0	0	935000	935000	0	0	0	0	0
Hem	0	0	0	0	500000	500000	500000	0	0	0	210000	210000	2750000	2750000	0	0	0	4960000	0	0	0	0	897000	0	897000
Jam	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3520000	0	3520000	0	0	0	0
Jarik	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	450000	450000	450000	0	0	0	160000	0	0	160000
Kaos	0	0	0	0	0	0	0	60000	0	60000	0	0	0	0	0	0	0	60000	420000	0	420000	0	0	0	0
Rok	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
sarimbit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	150000	0	150000	150000	0	0	0	0	0	0	0
Grand Total	935000	935000	500000	500000	500000	500000	15065000	60000	960000	1620000	210000	210000	2750000	2750000	150000	1350000	2400000	29400000	6380000	935000	12375000	1925000	897000	130000	9060000

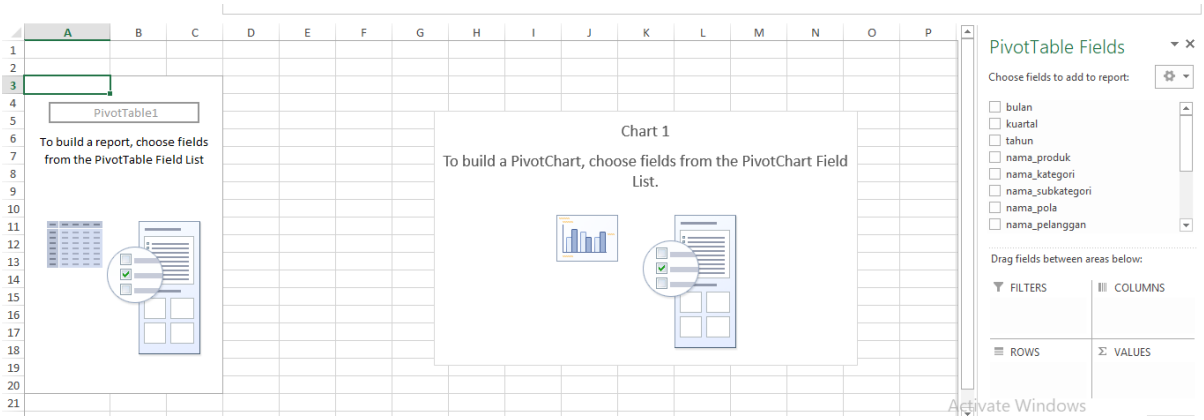
- Gambar dibawah menggunakan PivotChart yang merupakan sebuah cara untuk menampilkan cube dalam bentuk grafik.



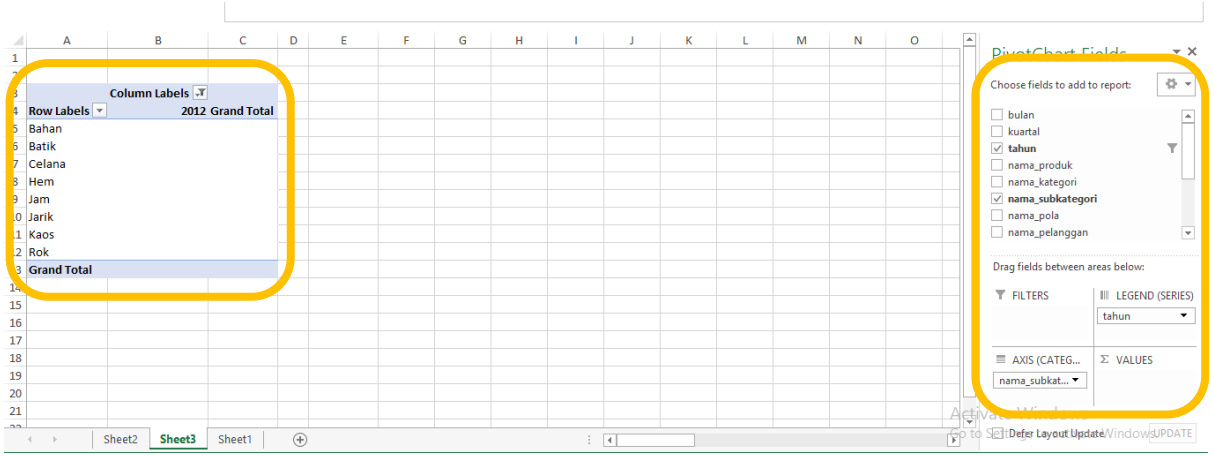
➢ Tugas

NO 1

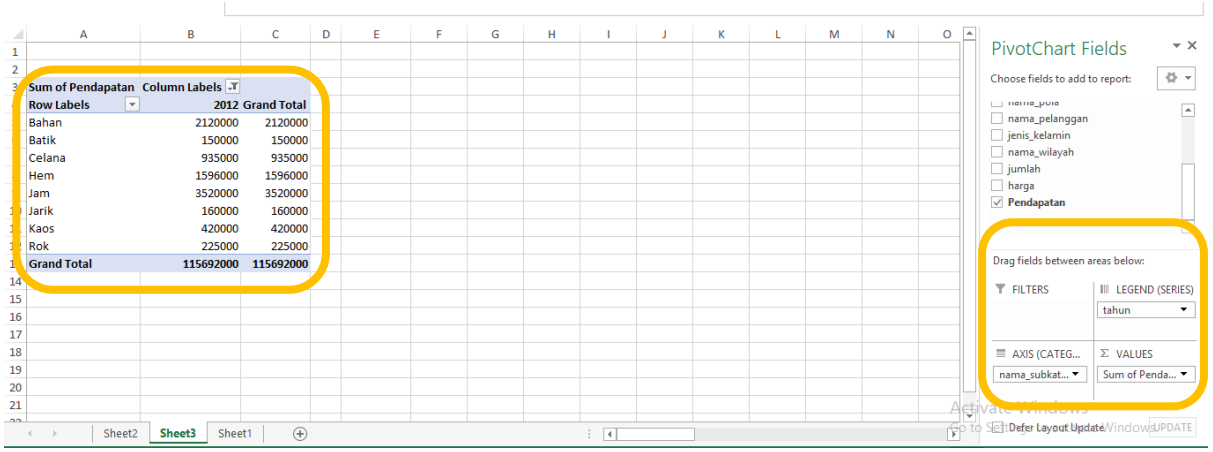
- Membuat **PivotTable** dan **PivotChart** baru



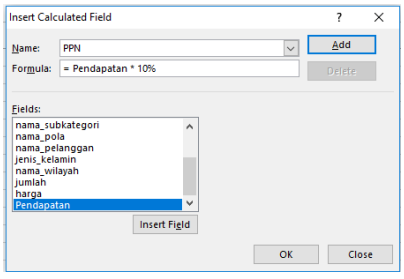
- Menambahkan field **nama_subkategori** ke kotak Row Labels dan field **tahun** ke kotak Column Labels dan tahun yang di gunakan hanya tahun 2012

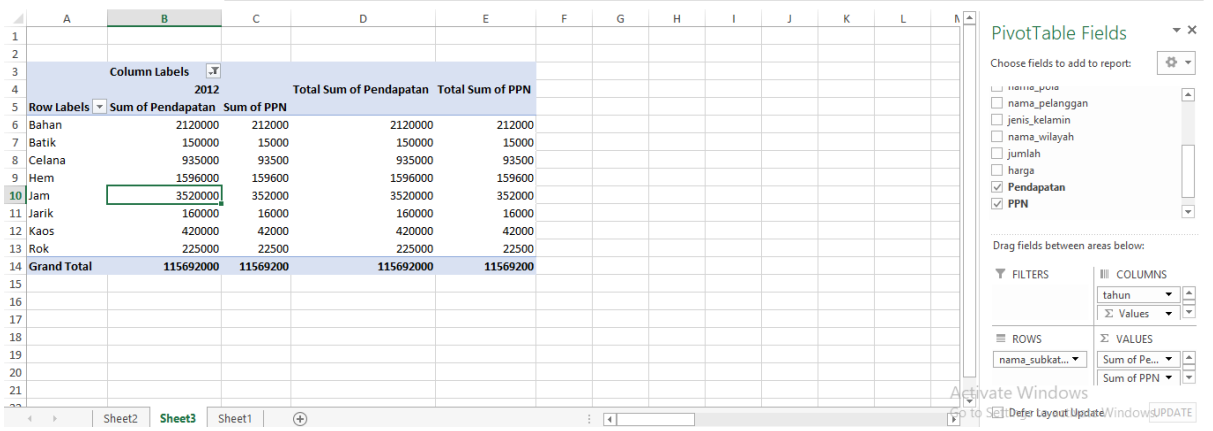


- Menambahkan field **Pendapatan** pada kotak values

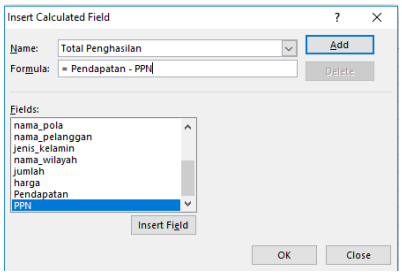


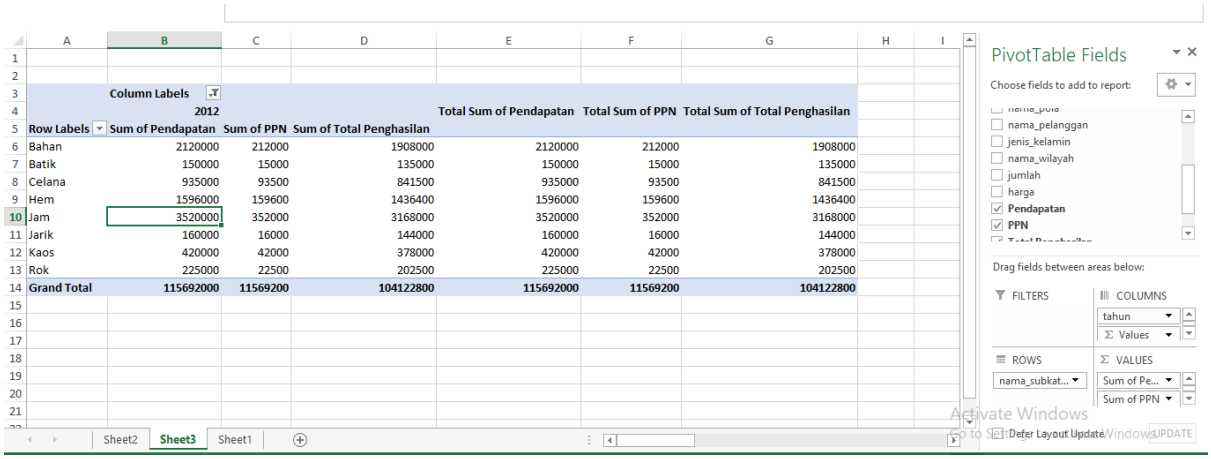
- Kemudian tambahkan field baru dengan cara “Insert Calculated Field” dengan nama **PPN** dan formulanya = Pendapatan * 10%. Dan klik OK





- Kemudian tambahkan field baru dengan cara “Insert Calculated Field” dengan nama **Total Penghasilan** dan formulanya = Pendapatan – PPN. Dan klik OK

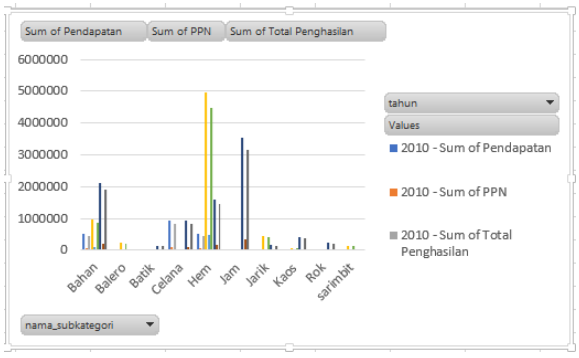




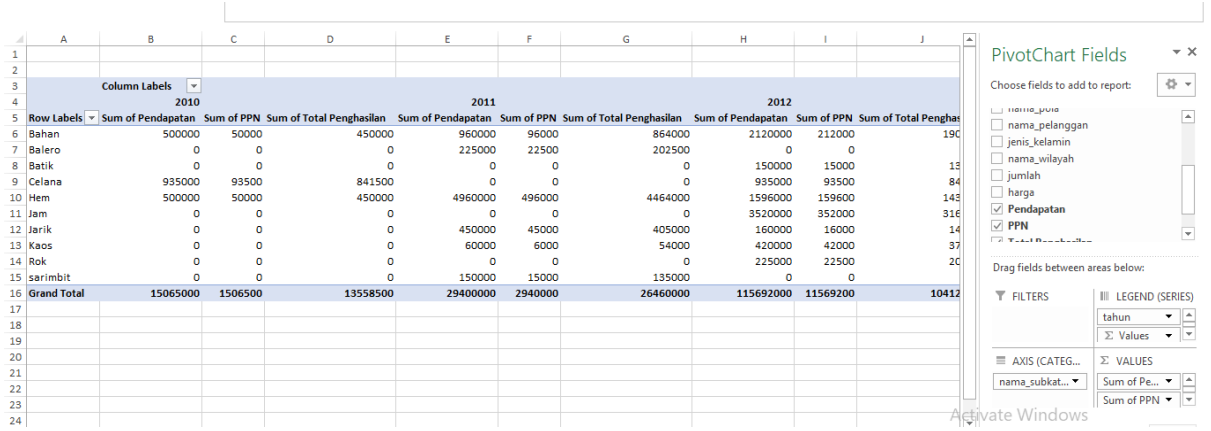
Column Labels						
	2012			Total Sum of Pendapatan	Total Sum of PPN	Total Sum of Total Penghasilan
Row Labels	Sum of Pendapatan	Sum of PPN	Sum of Total Penghasilan			
Bahan	2120000	212000	1908000	2120000	212000	1908000
Batik	150000	15000	135000	150000	15000	135000
Celana	935000	93500	841500	935000	93500	841500
Hem	1596000	159600	1436400	1596000	159600	1436400
Jam	3520000	352000	3168000	3520000	352000	3168000
Jarik	160000	16000	144000	160000	16000	144000
Kaos	420000	42000	378000	420000	42000	378000
Rok	225000	22500	202500	225000	22500	202500
Grand Total	115692000	11569200	104122800	115692000	11569200	104122800

NO 2

- PivotChart dari tahun 2010-2012

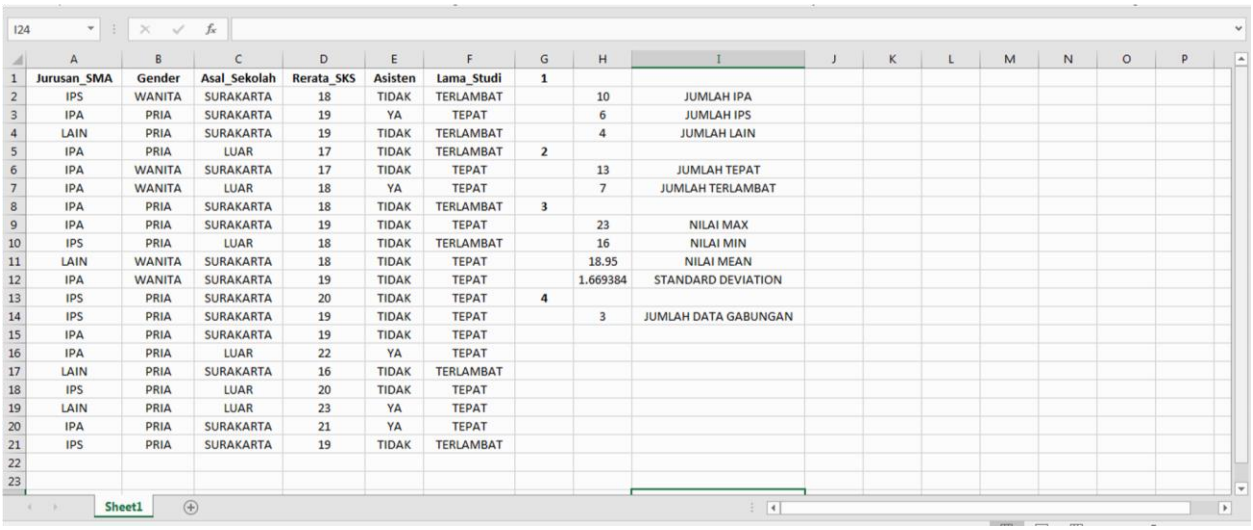


- PivotTable dari tahun 2010-2012



Column Labels	2010			2011			2012		
Row Labels	Sum of Pendapatan	Sum of PPN	Sum of Total Penghasilan	Sum of Pendapatan	Sum of PPN	Sum of Total Penghasilan	Sum of Pendapatan	Sum of PPN	Sum of Total Penghas
Bahan	500000	50000	450000	960000	96000	864000	2120000	212000	190
Balero	0	0	0	225000	22500	202500	0	0	
Batik	0	0	0	0	0	0	150000	15000	13
Celana	935000	93500	841500	0	0	0	935000	93500	84
Hem	500000	50000	450000	4960000	496000	4464000	1596000	159600	143
Jam	0	0	0	0	0	0	3520000	352000	316
Jarik	0	0	0	450000	45000	405000	160000	16000	14
Kaos	0	0	0	60000	6000	54000	420000	42000	37
Rok	0	0	0	0	0	0	225000	22500	20
sarimbit	0	0	0	150000	15000	135000	0	0	
Grand Total	15065000	1506500	13558500	29400000	2940000	26460000	115692000	11569200	10412

MODUL 6

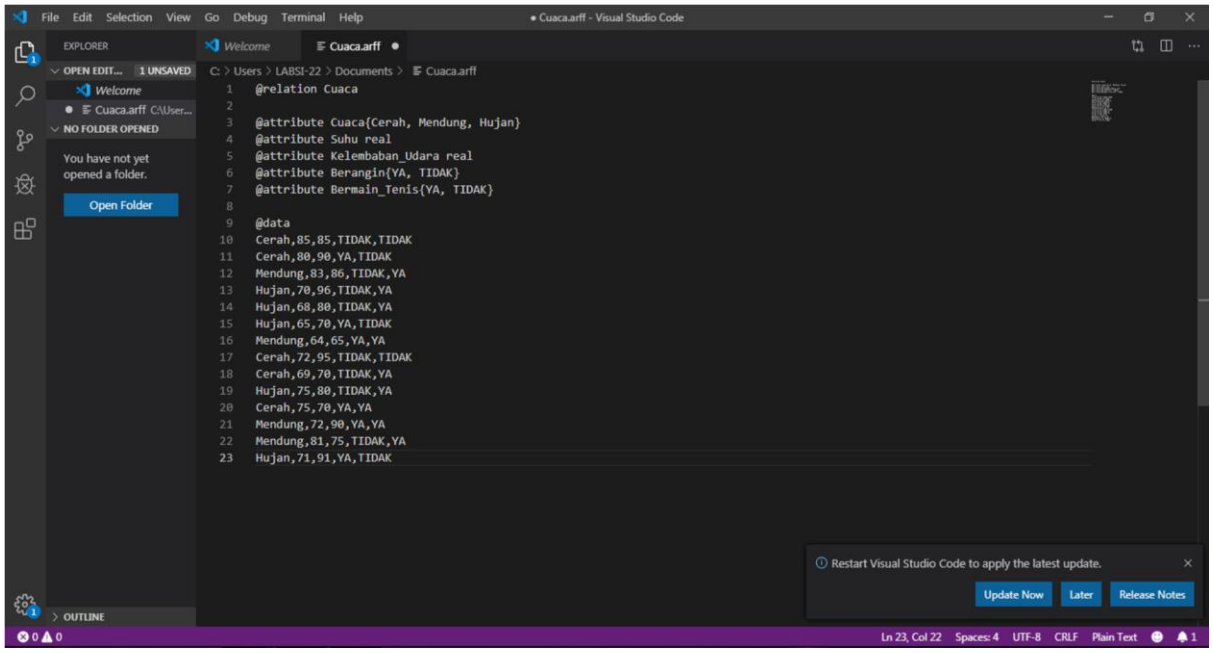


	A	B	C	D	E	F	G	H	I
1	Jurusan_SMA	Gender	Asal_Sekolah	Rerata_SKS	Asisten	Lama_Studi	1		
2	IPS	WANITA	SURAKARTA	18	TIDAK	TERLAMBAT		10	JUMLAH IPA
3	IPA	PRIA	SURAKARTA	19	YA	TEPAT		6	JUMLAH IPS
4	LAIN	PRIA	SURAKARTA	19	TIDAK	TERLAMBAT		4	JUMLAH LAIN
5	IPA	PRIA	LUAR	17	TIDAK	TERLAMBAT	2		
6	IPA	WANITA	SURAKARTA	17	TIDAK	TEPAT		13	JUMLAH TEPAT
7	IPA	WANITA	LUAR	18	YA	TEPAT		7	JUMLAH TERLAMBAT
8	IPA	PRIA	SURAKARTA	18	TIDAK	TERLAMBAT	3		
9	IPA	PRIA	SURAKARTA	19	TIDAK	TEPAT		23	NILAI MAX
10	IPS	PRIA	LUAR	18	TIDAK	TERLAMBAT		16	NILAI MIN
11	LAIN	WANITA	SURAKARTA	18	TIDAK	TEPAT		18.95	NILAI MEAN
12	IPA	WANITA	SURAKARTA	19	TIDAK	TEPAT		1.669384	STANDARD DEVIATION
13	IPS	PRIA	SURAKARTA	20	TIDAK	TEPAT	4		
14	IPS	PRIA	SURAKARTA	19	TIDAK	TEPAT		3	JUMLAH DATA GABUNGAN
15	IPA	PRIA	SURAKARTA	19	TIDAK	TEPAT			
16	IPA	PRIA	LUAR	22	YA	TEPAT			
17	LAIN	PRIA	SURAKARTA	16	TIDAK	TERLAMBAT			
18	IPS	PRIA	LUAR	20	TIDAK	TEPAT			
19	LAIN	PRIA	LUAR	23	YA	TEPAT			
20	IPA	PRIA	SURAKARTA	21	YA	TEPAT			
21	IPS	PRIA	SURAKARTA	19	TIDAK	TERLAMBAT			
22									
23									

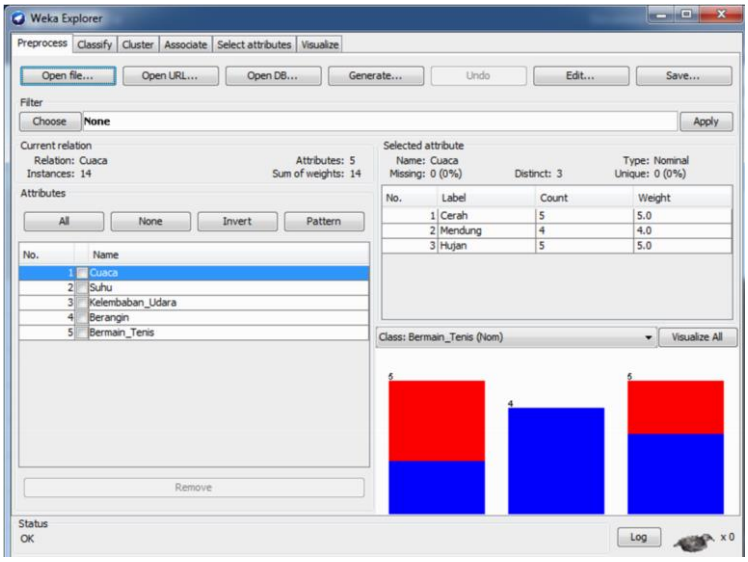
MODUL 7

➢ Kegiatan

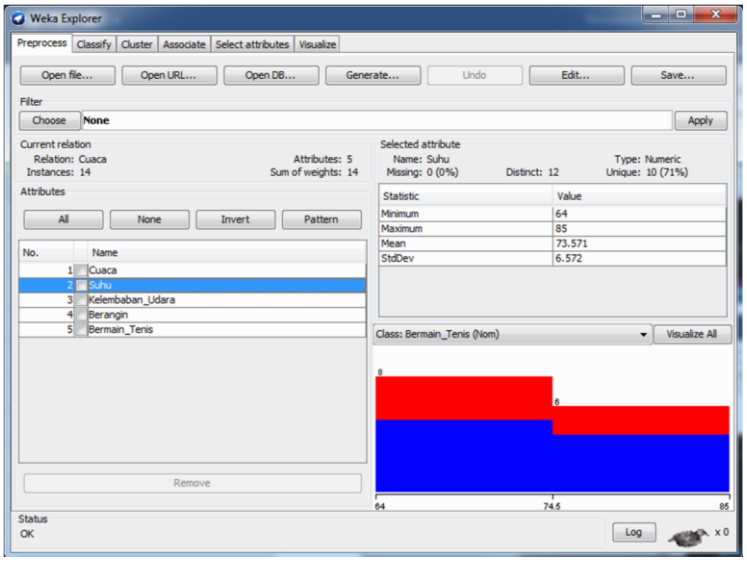
1. Cuaca.arff



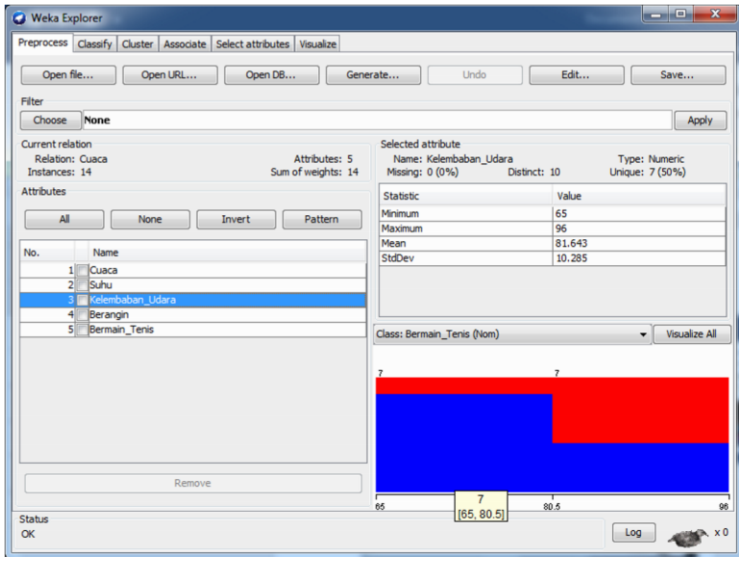
2. Gambar grafik dari WEKA
   - Cuaca



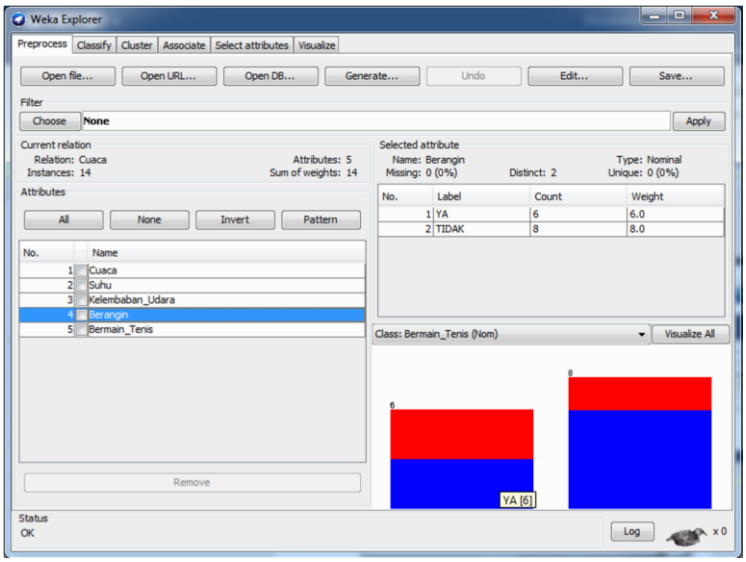
   - Suhu



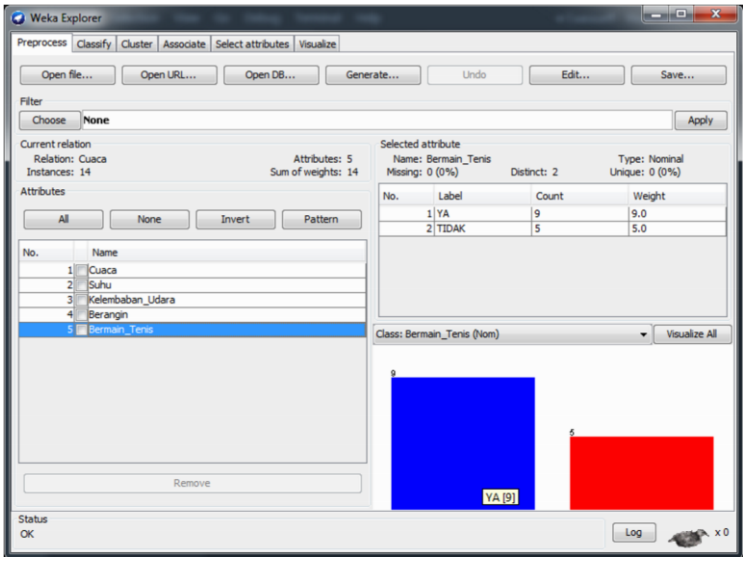
- Kelembaban_Udara



- Berangin

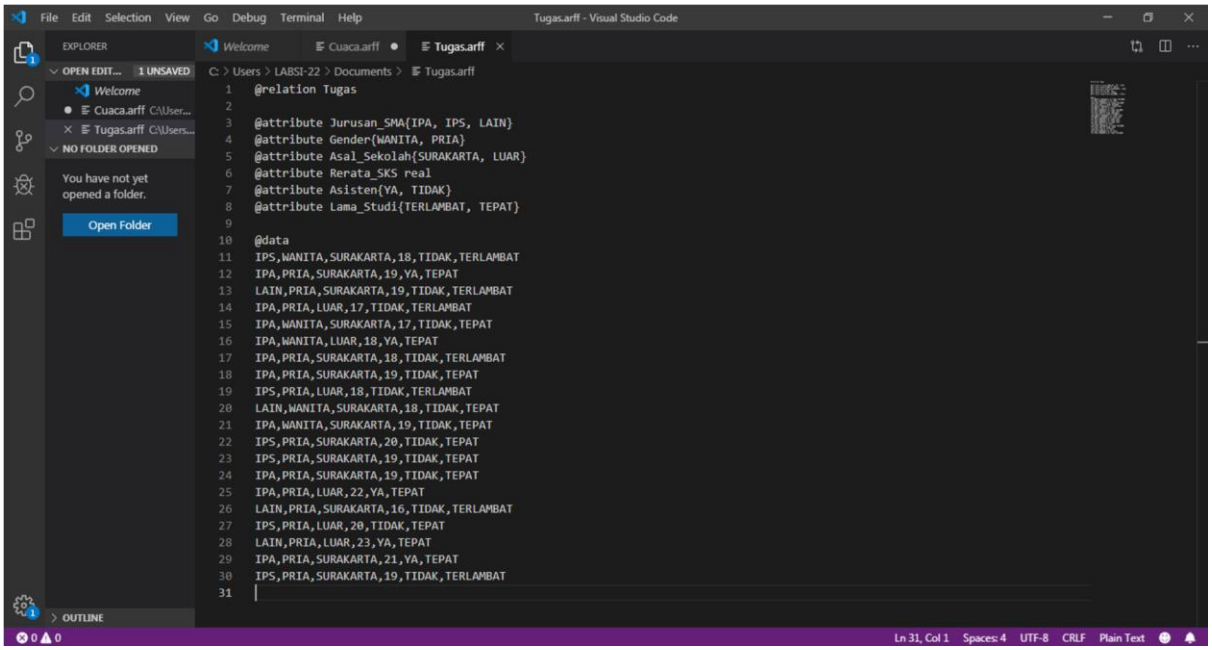


- Bermain_Tenis

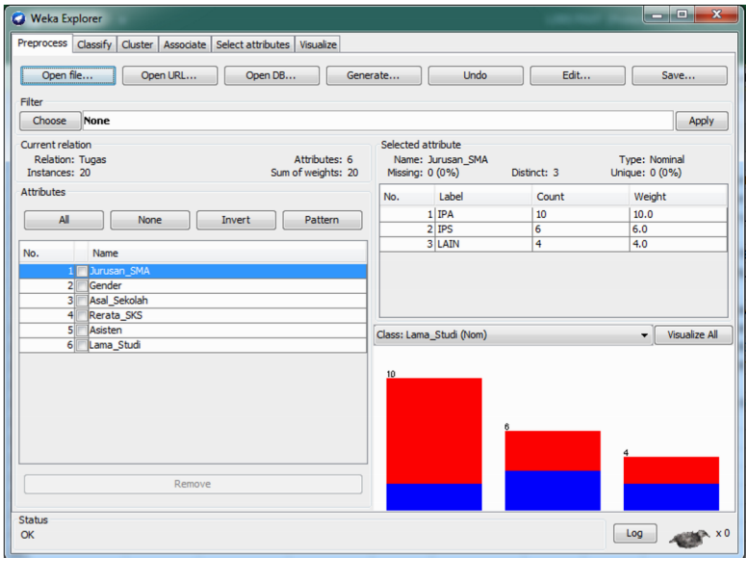


➢ Tugas

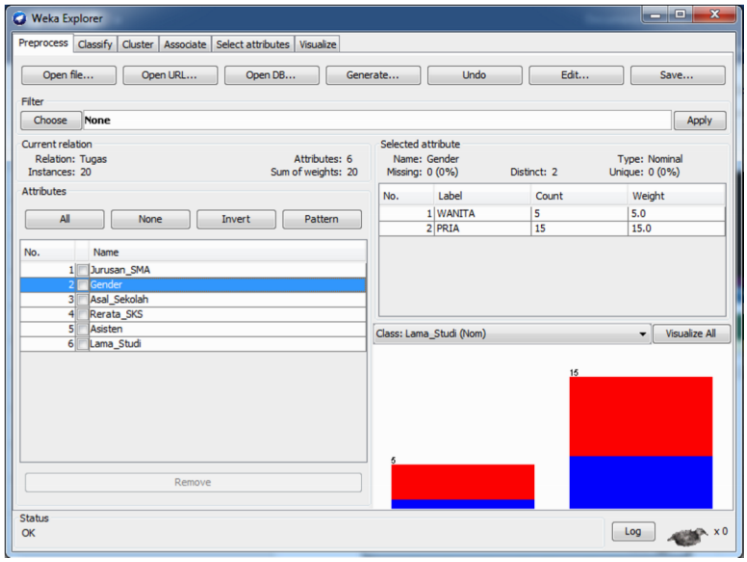
1. Tugas.arff



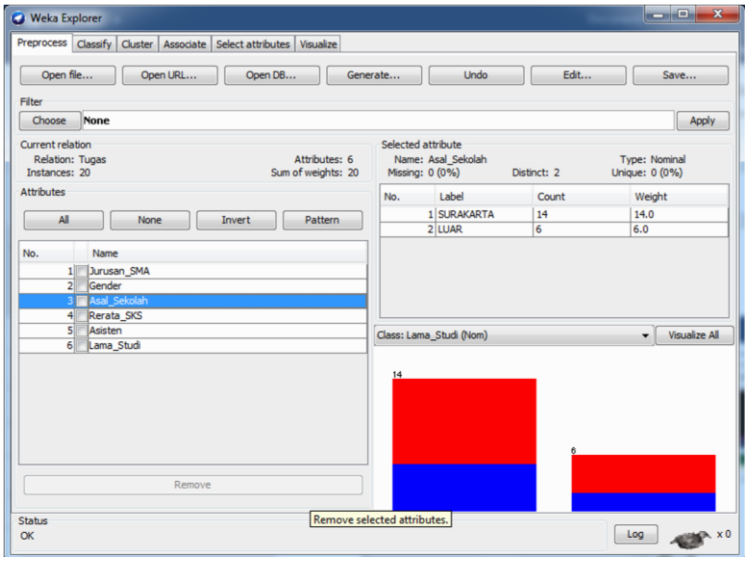
2. Hasil dari WEKA
    - Jurusan_SMA



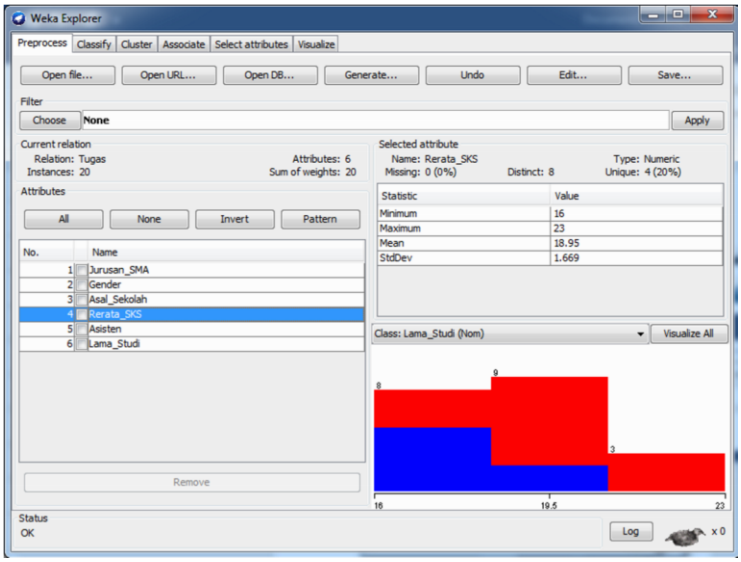
    - Gender



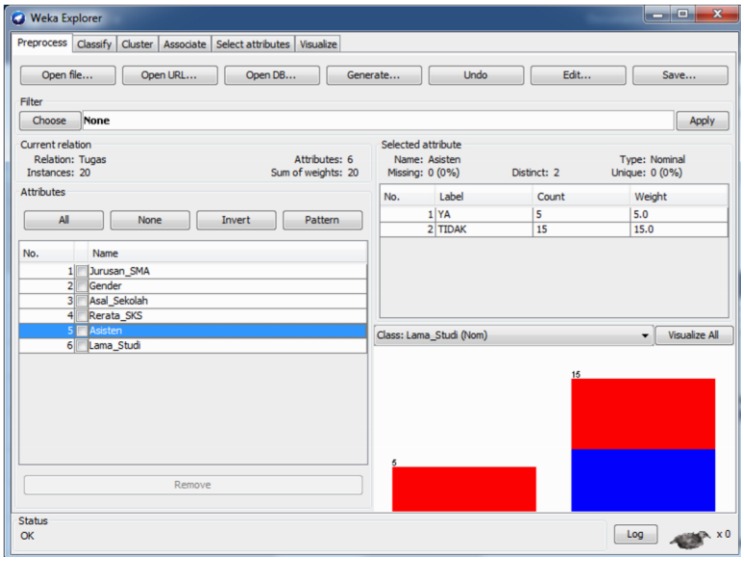
    - Asal_Sekolah



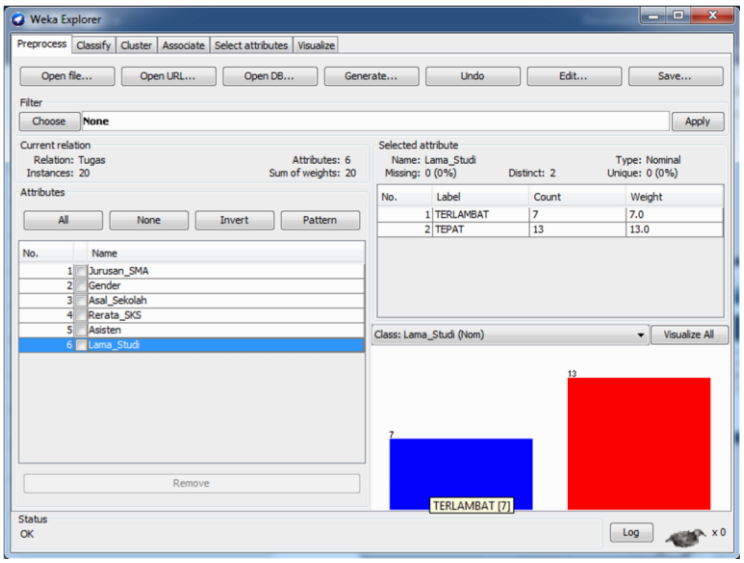
- Rerata_SKS



- Asisten



- Lama_Studi

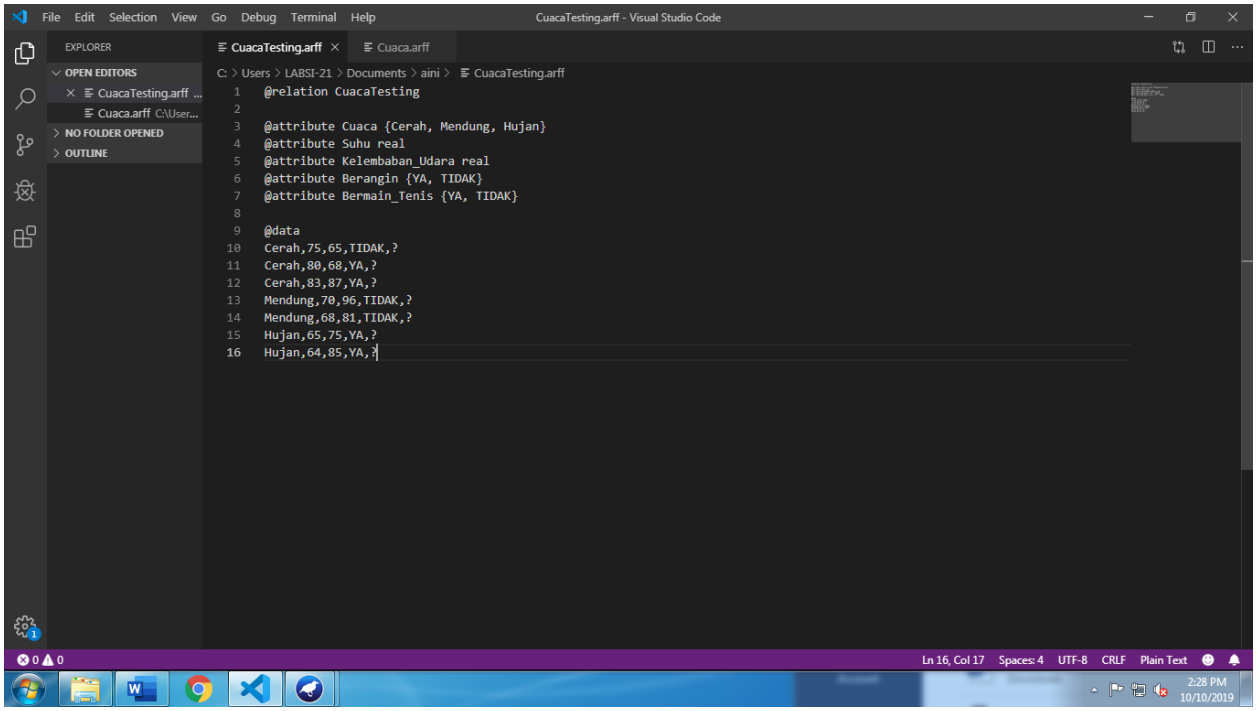


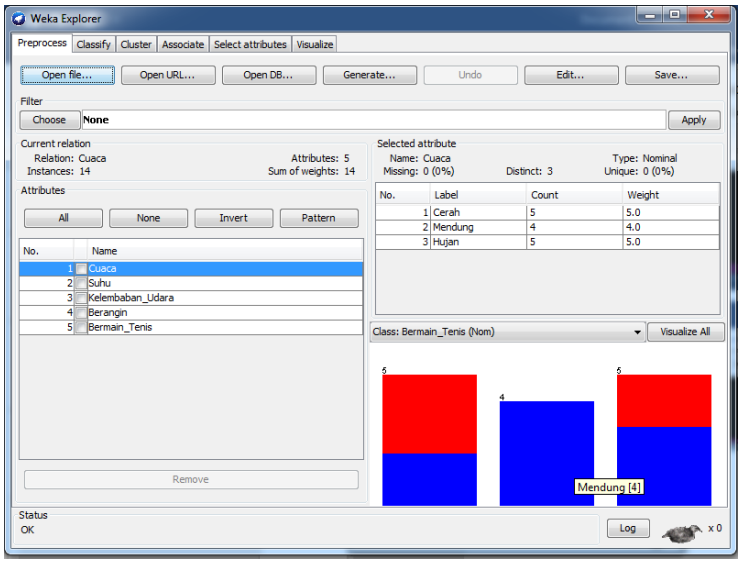
3. Jumlah atribut
    a. Bertipe binomial : 4
    b. Bertipe polynomial : 1
    c. Bertipe real : 1
4. Pada atribut Rerata_SKS, nilai
    - Maximum : 23
    - Minimum : 16
    - Mean : 18.95
    - StdDev : 1.669

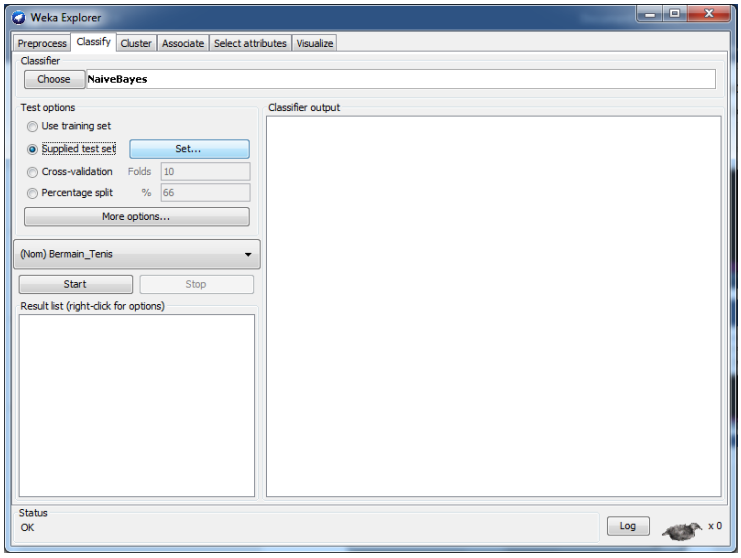
MODUL 8

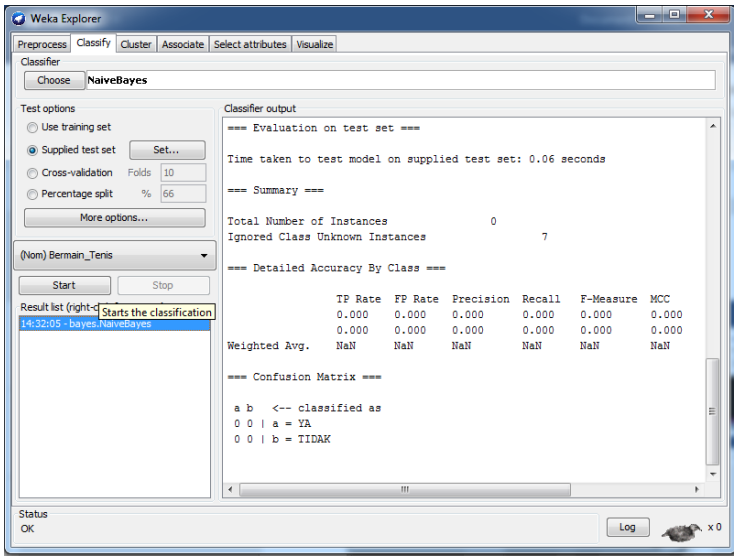
➢ Kegiatan

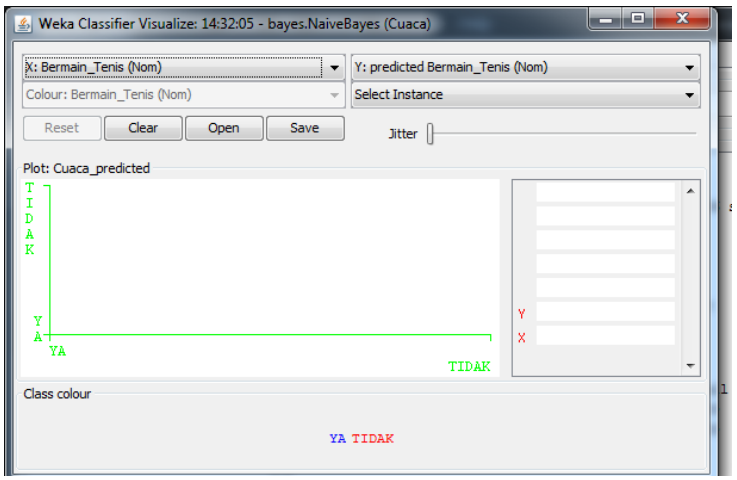
Implementasi Naive Bayes dengan WEKA

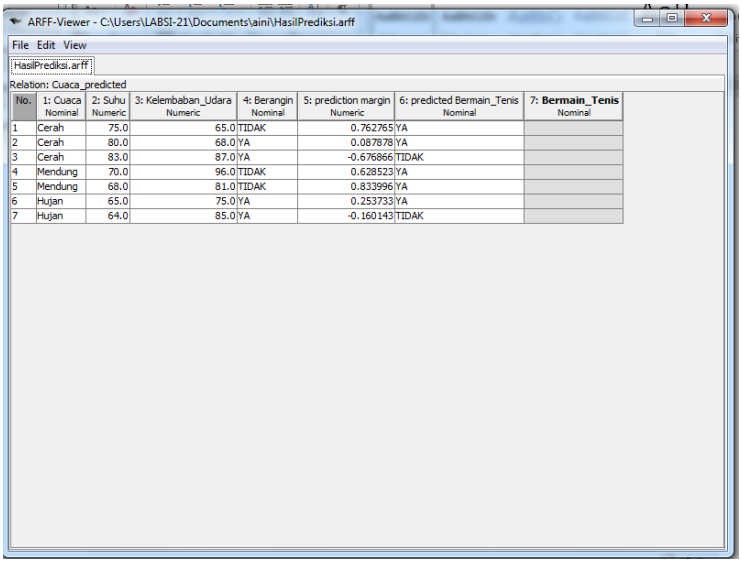





Weka Explorer
Preprocess
Classify
Cluster
Associate
Select attributes
Visualize
Classifier
Choose
NaiveBayes
Test options
Use training set
Supplied test set
Set...
Cross-validation
Folds
10
Percentage split
%
66
More options...
Classifier output
(Nom) Bermain_Tenis
Start
Stop
Result list (right-click for options)
Status
OK
Log
x 0

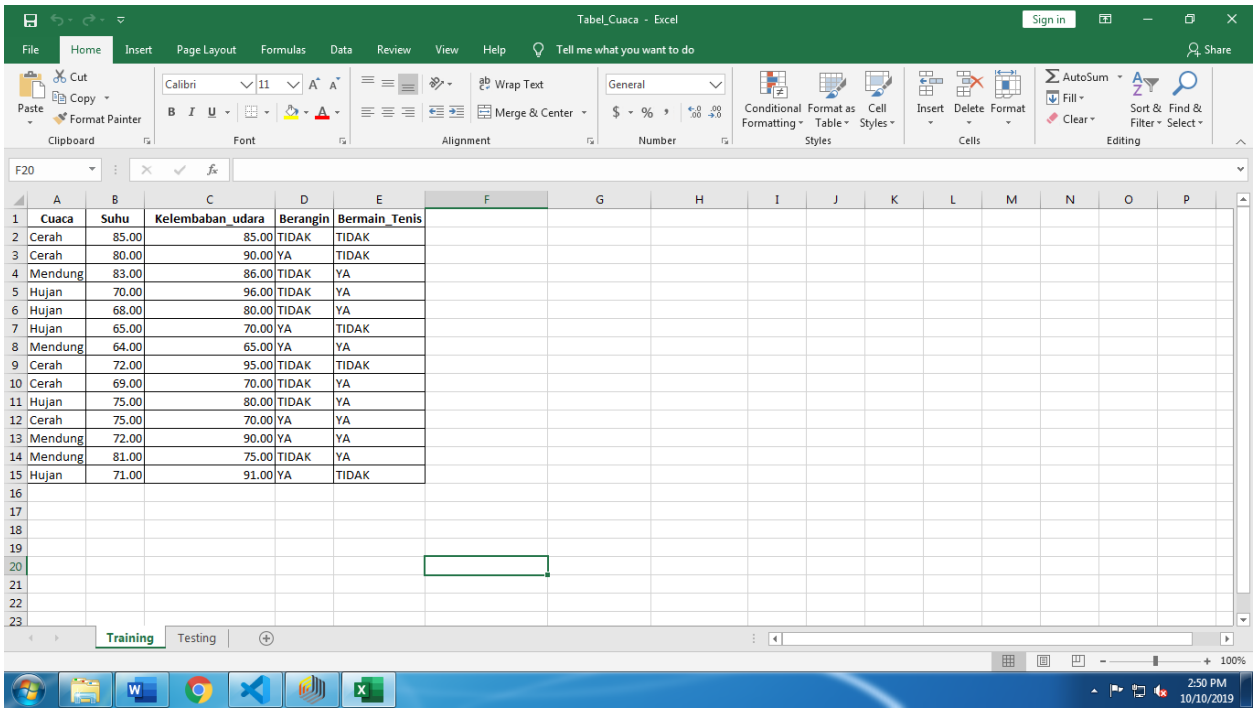

Weka Explorer
Preprocess
Classify
Cluster
Associate
Select attributes
Visualize
Classifier
Choose
NaiveBayes
Test options
Use training set
Supplied test set
Set...
Cross-validation
Folds
10
Percentage split
%
66
More options...
Classifier output
(Nom) Bermain_Tenis
Start
Stop
Result list (right-c
Starts the classification
14:32:05 - bayes.NaiveBayes
=== Evaluation on test set ===
Time taken to test model on supplied test set: 0.06 seconds
=== Summary ===
Total Number of Instances 0
Ignored Class Unknown Instances 7
=== Detailed Accuracy By Class ===
TP Rate FP Rate Precision Recall F-Measure MCC
0.000 0.000 0.000 0.000 0.000 0.000
0.000 0.000 0.000 0.000 0.000 0.000
Weighted Avg. NaN NaN NaN NaN NaN NaN
=== Confusion Matrix ===
a b <-- classified as
0 0 | a = YA
0 0 | b = TIDAK
Status
OK
Log
x 0


Weka Classifier Visualize: 14:32:05 - bayes.NaiveBayes (Cuaca)
X: Bermain_Tenis (Nom)
Y: predicted Bermain_Tenis (Nom)
Colour: Bermain_Tenis (Nom)
Select Instance
Reset
Clear
Open
Save
Jitter
Plot: Cuaca_predicted
TIDAK
YA
Y
X
Class colour
YA TIDAK

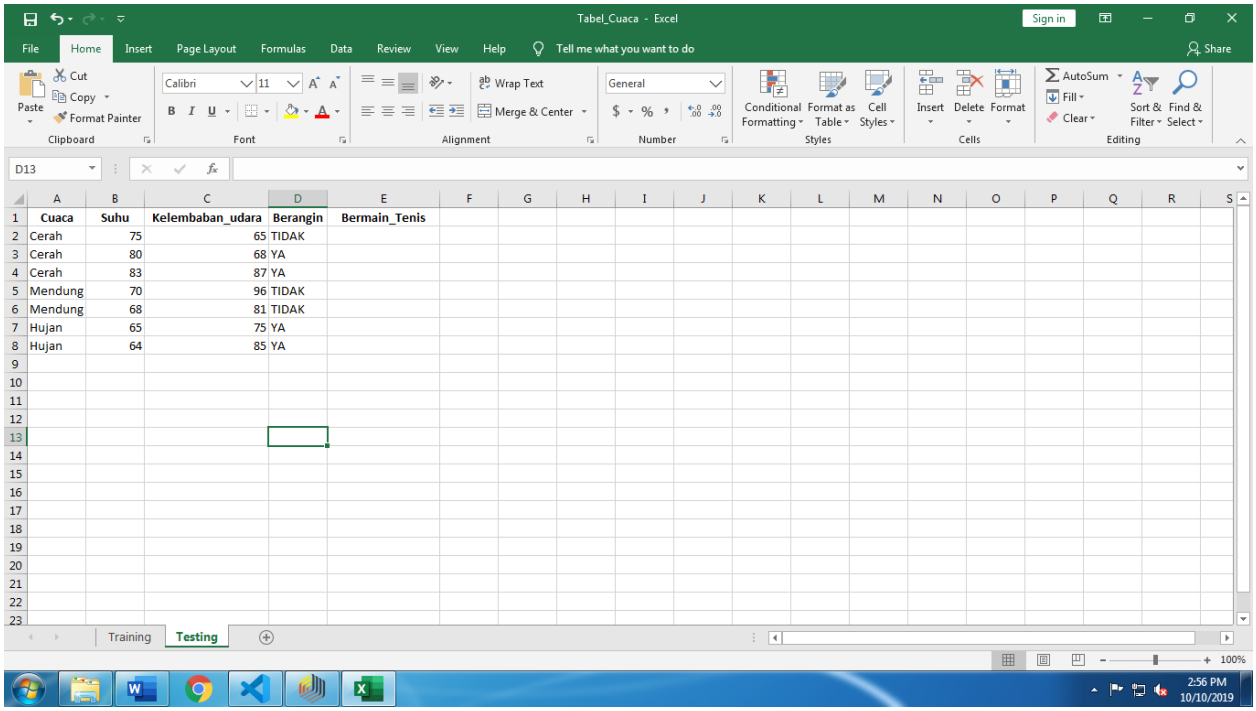


No.	1: Cuaca Nominal	2: Suhu Numeric	3: Kelembaban_Udara Numeric	4: Berangin Nominal	5: prediction margin Numeric	6: predicted Bermain_Tenis Nominal	7: Bermain_Tenis Nominal
1	Cerah	75.0	65.0	TIDAK	0.762765	YA	
2	Cerah	80.0	68.0	YA	0.087878	YA	
3	Cerah	83.0	87.0	YA	-0.676866	TIDAK	
4	Mendung	70.0	96.0	TIDAK	0.628523	YA	
5	Mendung	68.0	81.0	TIDAK	0.833996	YA	
6	Hujan	65.0	75.0	YA	0.253733	YA	
7	Hujan	64.0	85.0	YA	-0.160143	TIDAK	

Implementasi Naive Bayes dengan RapidMiner

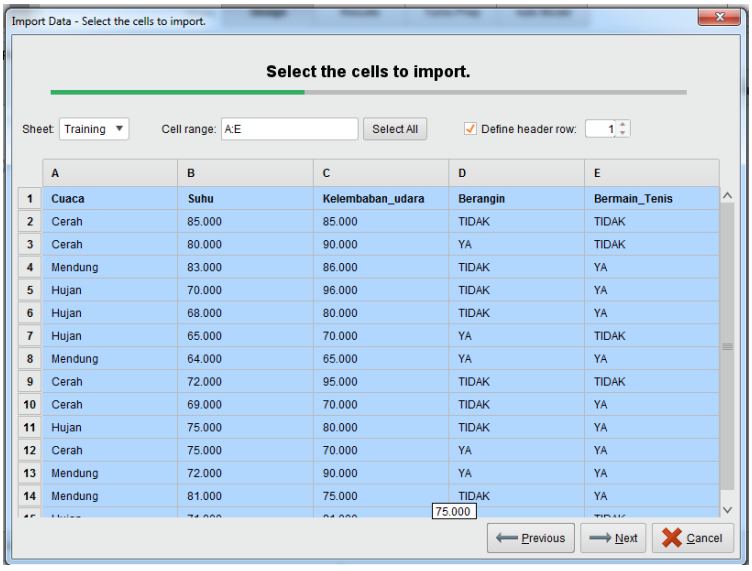


	A	B	C	D	E
1	Cuaca	Suhu	Kelembaban_udara	Berangin	Bermain_Tenis
2	Cerah	85.00	85.00	TIDAK	TIDAK
3	Cerah	80.00	90.00	YA	TIDAK
4	Mendung	83.00	86.00	TIDAK	YA
5	Hujan	70.00	96.00	TIDAK	YA
6	Hujan	68.00	80.00	TIDAK	YA
7	Hujan	65.00	70.00	YA	TIDAK
8	Mendung	64.00	65.00	YA	YA
9	Cerah	72.00	95.00	TIDAK	TIDAK
10	Cerah	69.00	70.00	TIDAK	YA
11	Hujan	75.00	80.00	TIDAK	YA
12	Cerah	75.00	70.00	YA	YA
13	Mendung	72.00	90.00	YA	YA
14	Mendung	81.00	75.00	TIDAK	YA
15	Hujan	71.00	91.00	YA	TIDAK



Tabel_Cuaca - Excel

	A	B	C	D	E
1	Cuaca	Suhu	Kelembaban_udara	Berangin	Bermain_Tenis
2	Cerah	75	65	TIDAK	
3	Cerah	80	68	YA	
4	Cerah	83	87	YA	
5	Mendung	70	96	TIDAK	
6	Mendung	68	81	TIDAK	
7	Hujan	65	75	YA	
8	Hujan	64	85	YA	



Import Data - Select the cells to import.

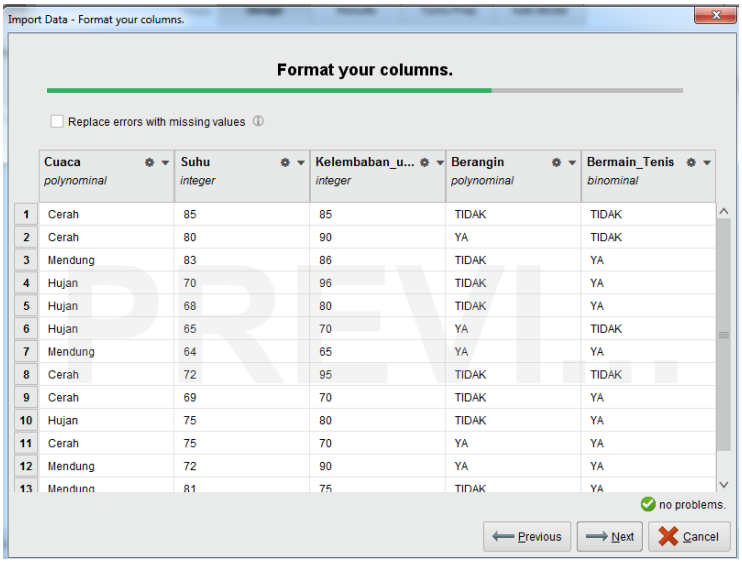
Select the cells to import.

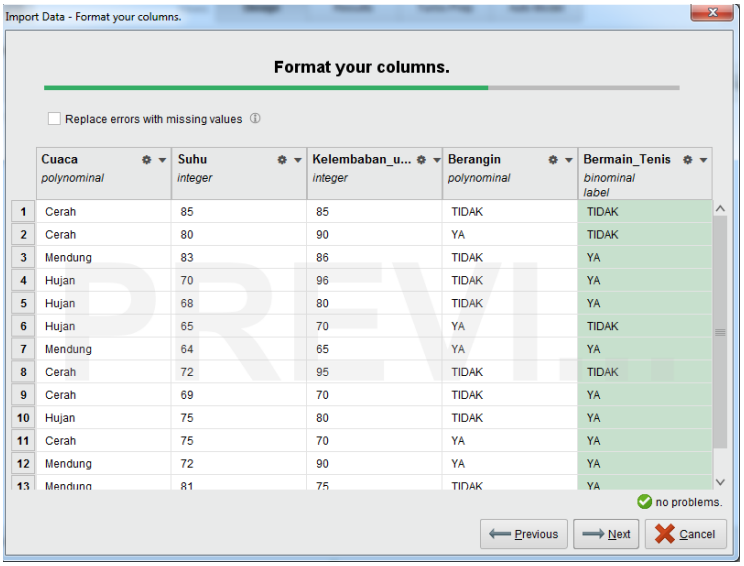
Sheet: Training | Cell range: A:E | Select All | Define header row: 1

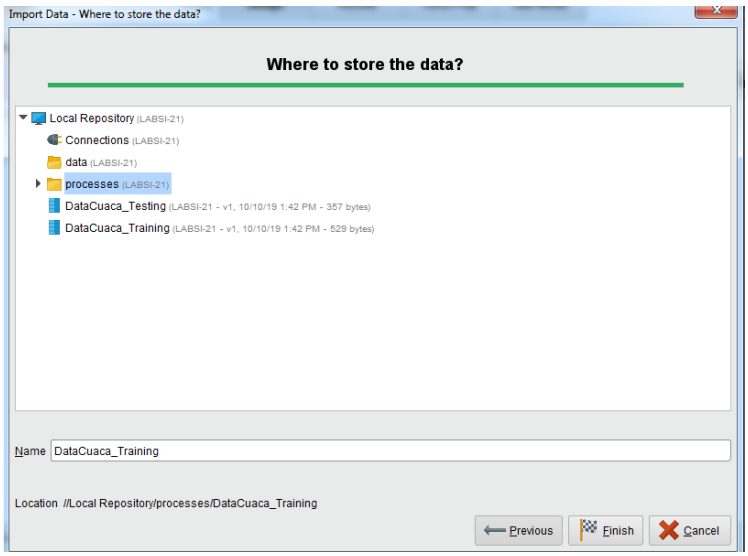
	A	B	C	D	E
1	Cuaca	Suhu	Kelembaban_udara	Berangin	Bermain_Tenis
2	Cerah	85.000	85.000	TIDAK	TIDAK
3	Cerah	80.000	90.000	YA	TIDAK
4	Mendung	83.000	86.000	TIDAK	YA
5	Hujan	70.000	96.000	TIDAK	YA
6	Hujan	68.000	80.000	TIDAK	YA
7	Hujan	65.000	70.000	YA	TIDAK
8	Mendung	64.000	65.000	YA	YA
9	Cerah	72.000	95.000	TIDAK	TIDAK
10	Cerah	69.000	70.000	TIDAK	YA
11	Hujan	75.000	80.000	TIDAK	YA
12	Cerah	75.000	70.000	YA	YA
13	Mendung	72.000	90.000	YA	YA
14	Mendung	81.000	75.000	TIDAK	YA

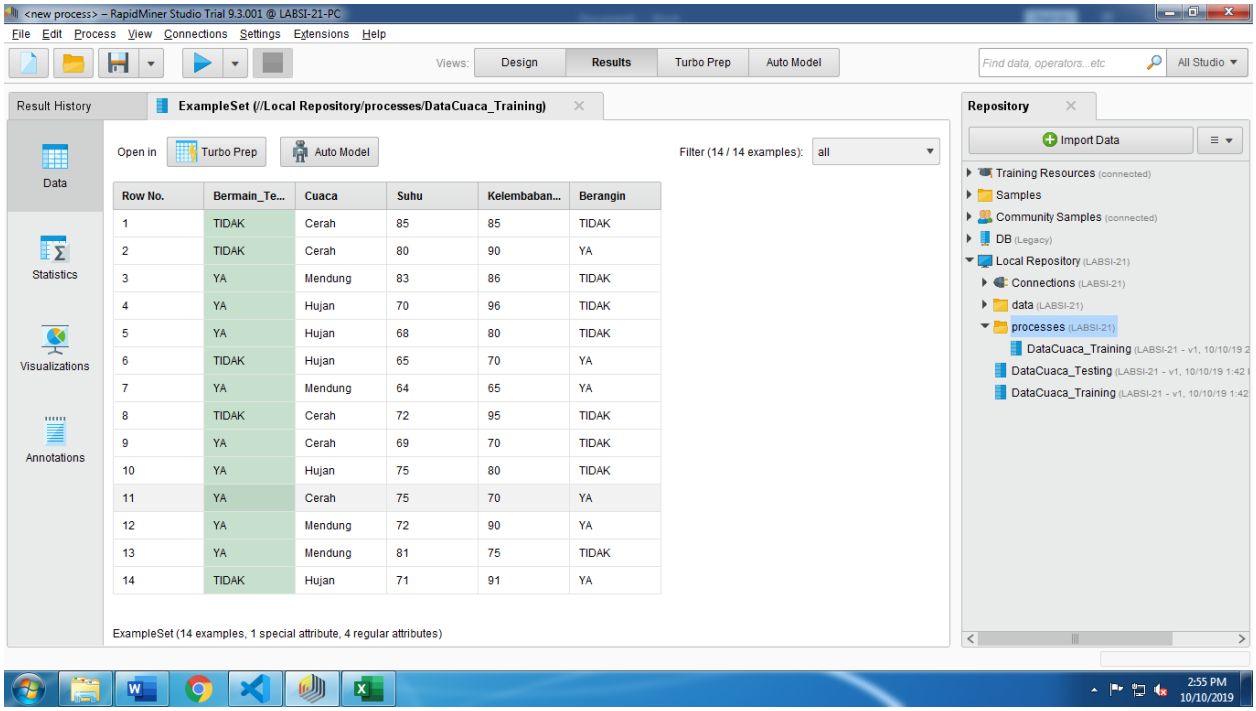
75.000

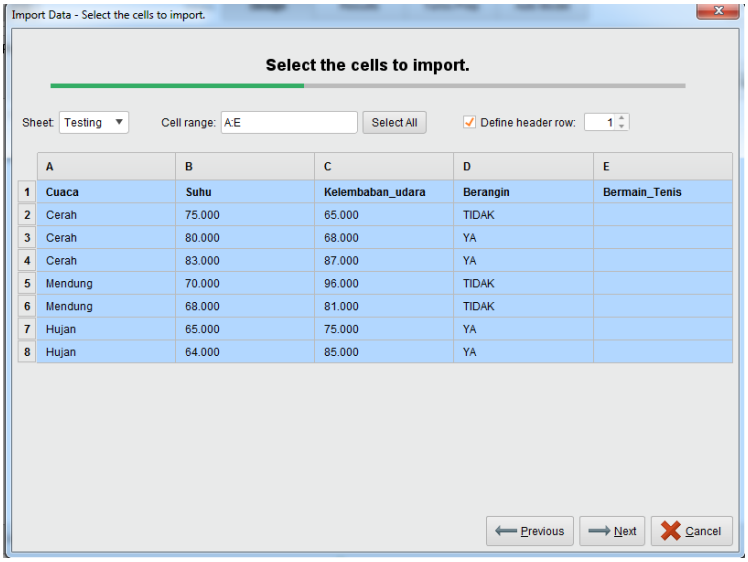
Previous | Next | Cancel

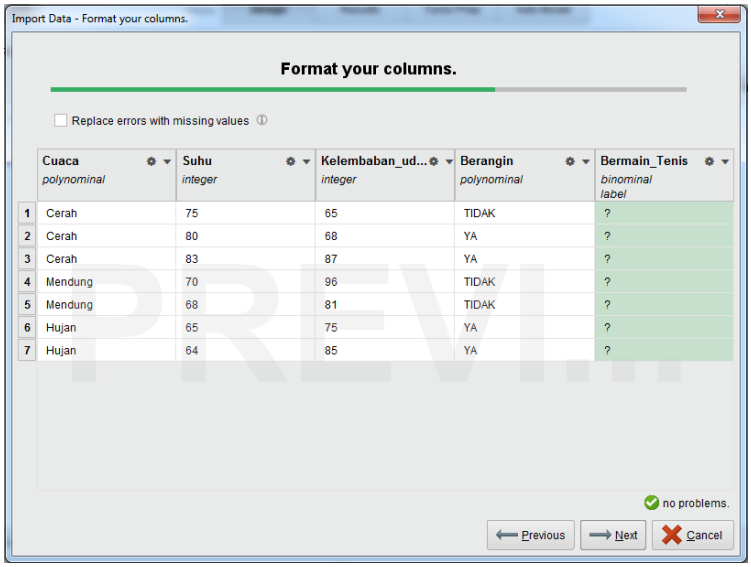

Import Data - Format your columns.
Format your columns.
Replace errors with missing values
Cuaca polynominal
Suhu integer
Kelembaban_u... integer
Berangin polynominal
Bermain_Tenis binominal
1 Cerah 85 85 TIDAK TIDAK
2 Cerah 80 90 YA TIDAK
3 Mendung 83 86 TIDAK YA
4 Hujan 70 96 TIDAK YA
5 Hujan 68 80 TIDAK YA
6 Hujan 65 70 YA TIDAK
7 Mendung 64 65 YA YA
8 Cerah 72 95 TIDAK TIDAK
9 Cerah 69 70 TIDAK YA
10 Hujan 75 80 TIDAK YA
11 Cerah 75 70 YA YA
12 Mendung 72 90 YA YA
13 Mendung 81 75 TIDAK YA
no problems.
Previous
Next
Cancel

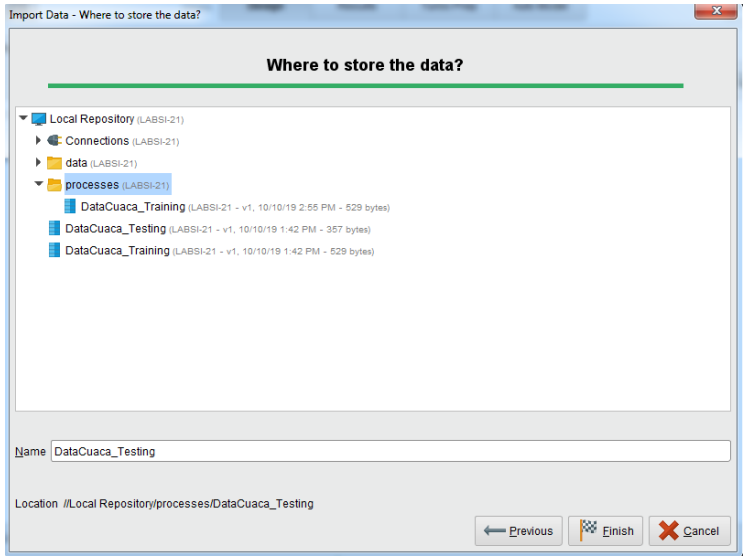

Import Data - Format your columns.
Format your columns.
Replace errors with missing values
Cuaca polynominal
Suhu integer
Kelembaban_u... integer
Berangin polynominal
Bermain_Tenis binominal label
1 Cerah 85 85 TIDAK TIDAK
2 Cerah 80 90 YA TIDAK
3 Mendung 83 86 TIDAK YA
4 Hujan 70 96 TIDAK YA
5 Hujan 68 80 TIDAK YA
6 Hujan 65 70 YA TIDAK
7 Mendung 64 65 YA YA
8 Cerah 72 95 TIDAK TIDAK
9 Cerah 69 70 TIDAK YA
10 Hujan 75 80 TIDAK YA
11 Cerah 75 70 YA YA
12 Mendung 72 90 YA YA
13 Mendung 81 75 TIDAK YA
no problems.
Previous
Next
Cancel

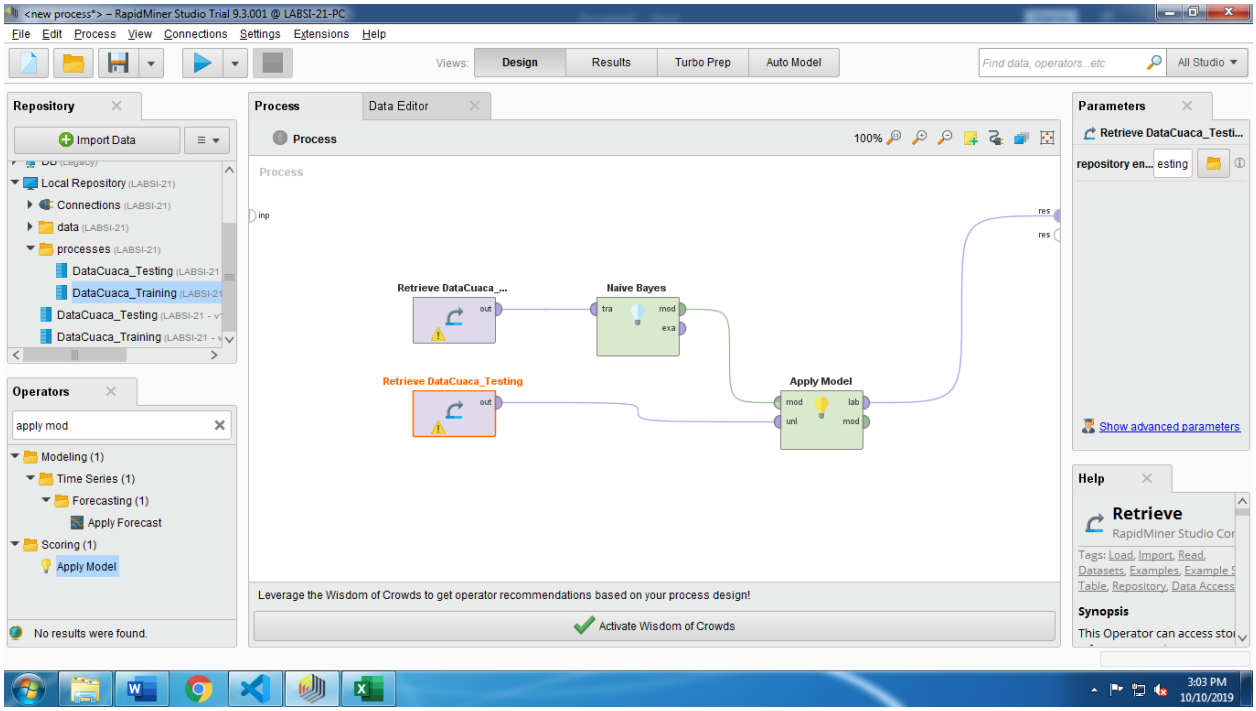

Import Data - Where to store the data?
Where to store the data?
Local Repository (LABSI-21)
Connections (LABSI-21)
data (LABSI-21)
processes (LABSI-21)
DataCuaca_Testing (LABSI-21 - v1, 10/10/19 1:42 PM - 357 bytes)
DataCuaca_Training (LABSI-21 - v1, 10/10/19 1:42 PM - 529 bytes)
Name DataCuaca_Training
Location //Local Repository/processes/DataCuaca_Training
Previous
Finish
Cancel

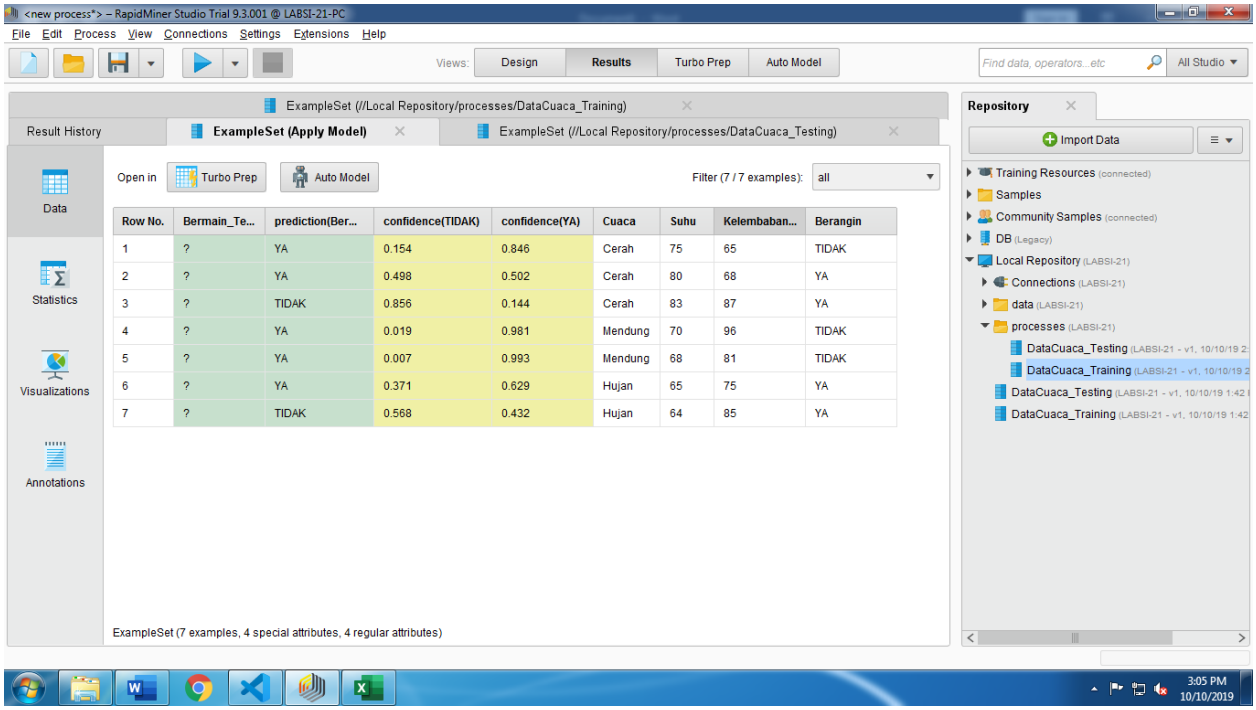

<new process> – RapidMiner Studio Trial 9.3.001 @ LABSI-21-PC
File Edit Process View Connections Settings Extensions Help
Views: Design Results Turbo Prep Auto Model
Find data, operators...etc All Studio
Result History
ExampleSet (//Local Repository/processes/DataCuaca_Training)
Data
Statistics
Visualizations
Annotations
Open in Turbo Prep Auto Model
Filter (14 / 14 examples): all
Row No. | Bermain_Te... | Cuaca | Suhu | Kelembaban... | Berangin
1 | TIDAK | Cerah | 85 | 85 | TIDAK
2 | TIDAK | Cerah | 80 | 90 | YA
3 | YA | Mendung | 83 | 86 | TIDAK
4 | YA | Hujan | 70 | 96 | TIDAK
5 | YA | Hujan | 68 | 80 | TIDAK
6 | TIDAK | Hujan | 65 | 70 | YA
7 | YA | Mendung | 64 | 65 | YA
8 | TIDAK | Cerah | 72 | 95 | TIDAK
9 | YA | Cerah | 69 | 70 | TIDAK
10 | YA | Hujan | 75 | 80 | TIDAK
11 | YA | Cerah | 75 | 70 | YA
12 | YA | Mendung | 72 | 90 | YA
13 | YA | Mendung | 81 | 75 | TIDAK
14 | TIDAK | Hujan | 71 | 91 | YA
ExampleSet (14 examples, 1 special attribute, 4 regular attributes)
Repository
Import Data
Training Resources (connected)
Samples
Community Samples (connected)
DB (Legacy)
Local Repository (LABSI-21)
Connections (LABSI-21)
data (LABSI-21)
processes (LABSI-21)
DataCuaca_Training (LABSI-21 - v1, 10/10/19
DataCuaca_Testing (LABSI-21 - v1, 10/10/19
DataCuaca_Training (LABSI-21 - v1, 10/10/19
2:55 PM
10/10/2019

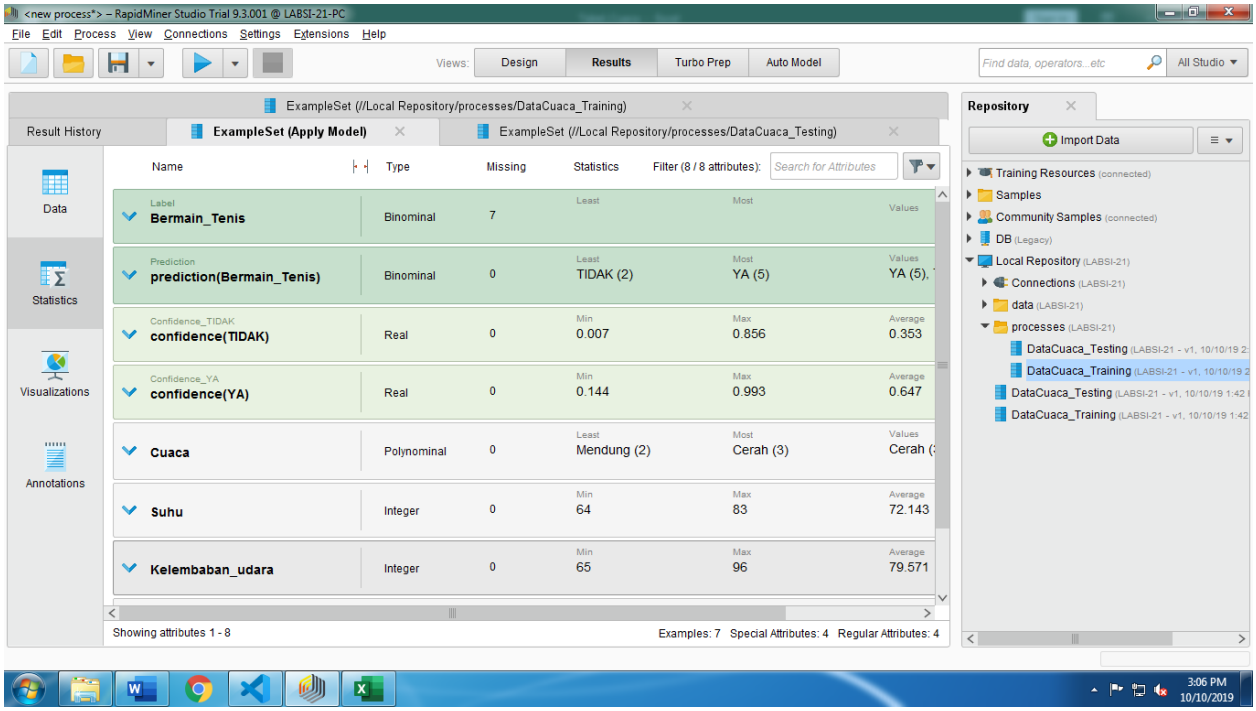

Import Data - Select the cells to import.
Select the cells to import.
Sheet: Testing
Cell range: A:E
Select All
Define header row: 1
A | B | C | D | E
1 | Cuaca | Suhu | Kelembaban_udara | Berangin | Bermain_Tenis
2 | Cerah | 75.000 | 65.000 | TIDAK
3 | Cerah | 80.000 | 68.000 | YA
4 | Cerah | 83.000 | 87.000 | YA
5 | Mendung | 70.000 | 96.000 | TIDAK
6 | Mendung | 68.000 | 81.000 | TIDAK
7 | Hujan | 65.000 | 75.000 | YA
8 | Hujan | 64.000 | 85.000 | YA
Previous
Next
Cancel


Import Data - Format your columns.
Format your columns.
Replace errors with missing values
Cuaca
polynominal
Suhu
integer
Kelembaban_ud...
integer
Berangin
polynominal
Bermain_Tenis
binominal
label
1 Cerah 75 65 TIDAK ?
2 Cerah 80 68 YA ?
3 Cerah 83 87 YA ?
4 Mendung 70 96 TIDAK ?
5 Mendung 68 81 TIDAK ?
6 Hujan 65 75 YA ?
7 Hujan 64 85 YA ?
no problems.
Previous
Next
Cancel

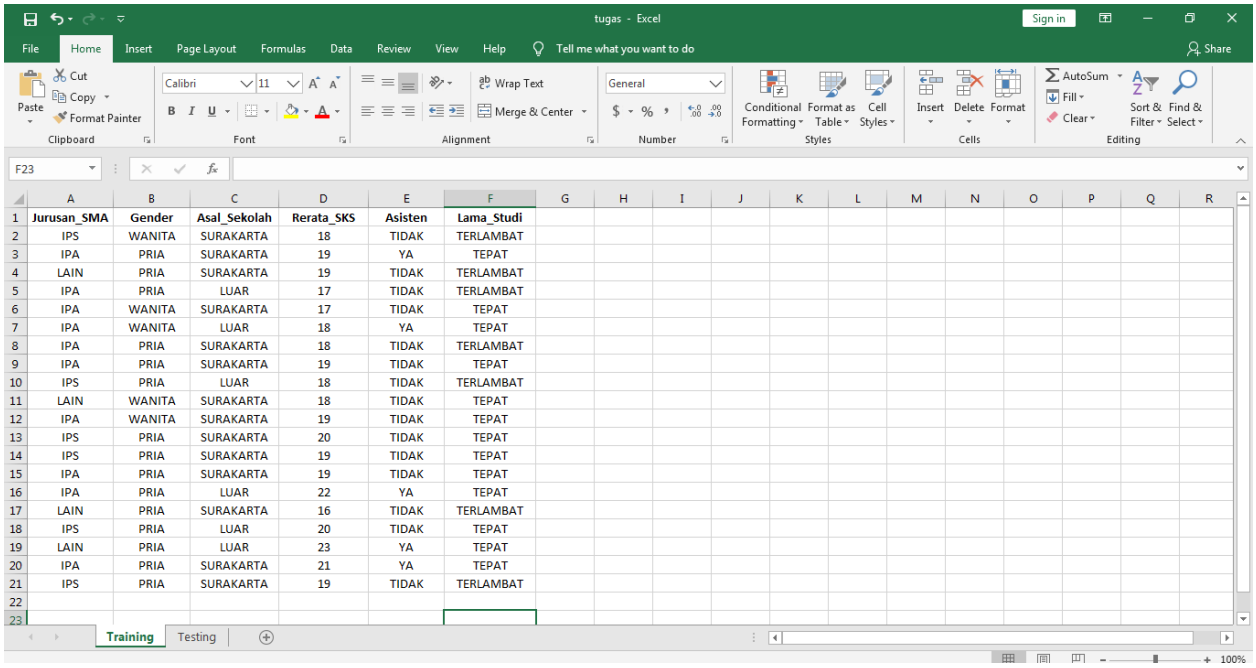

Import Data - Where to store the data?
Where to store the data?
Local Repository (LABSI-21)
Connections (LABSI-21)
data (LABSI-21)
processes (LABSI-21)
DataCuaca_Training (LABSI-21 - v1, 10/10/19 2:55 PM - 529 bytes)
DataCuaca_Testing (LABSI-21 - v1, 10/10/19 1:42 PM - 357 bytes)
DataCuaca_Training (LABSI-21 - v1, 10/10/19 1:42 PM - 529 bytes)
Name DataCuaca_Testing
Location //Local Repository/processes/DataCuaca_Testing
Previous
Finish
Cancel


<new process*> – RapidMiner Studio Trial 9.3.001 @ LABSI-21-PC
File Edit Process View Connections Settings Extensions Help
Views: Design Results Turbo Prep Auto Model
Find data, operators...etc All Studio
Repository
Import Data
Local Repository (LABSI-21)
Connections (LABSI-21)
data (LABSI-21)
processes (LABSI-21)
DataCuaca_Testing (LABSI-21
DataCuaca_Training (LABSI-21
DataCuaca_Testing (LABSI-21 - v
DataCuaca_Training (LABSI-21 - v
Operators
apply mod
Modeling (1)
Time Series (1)
Forecasting (1)
Apply Forecast
Scoring (1)
Apply Model
No results were found.
Process
Data Editor
Process
100%
Process
inp
res
Retrieve DataCuaca_...
Naive Bayes
Retrieve DataCuaca_Testing
Apply Model
Leverage the Wisdom of Crowds to get operator recommendations based on your process design!
Activate Wisdom of Crowds
Parameters
Retrieve DataCuaca_Testi...
repository en... esting
Show advanced parameters
Help
Retrieve
RapidMiner Studio Cor
Tags: Load, Import, Read,
Datasets, Examples, Example S
Table, Repository, Data Access
Synopsis
This Operator can access sto
3:03 PM
10/10/2019

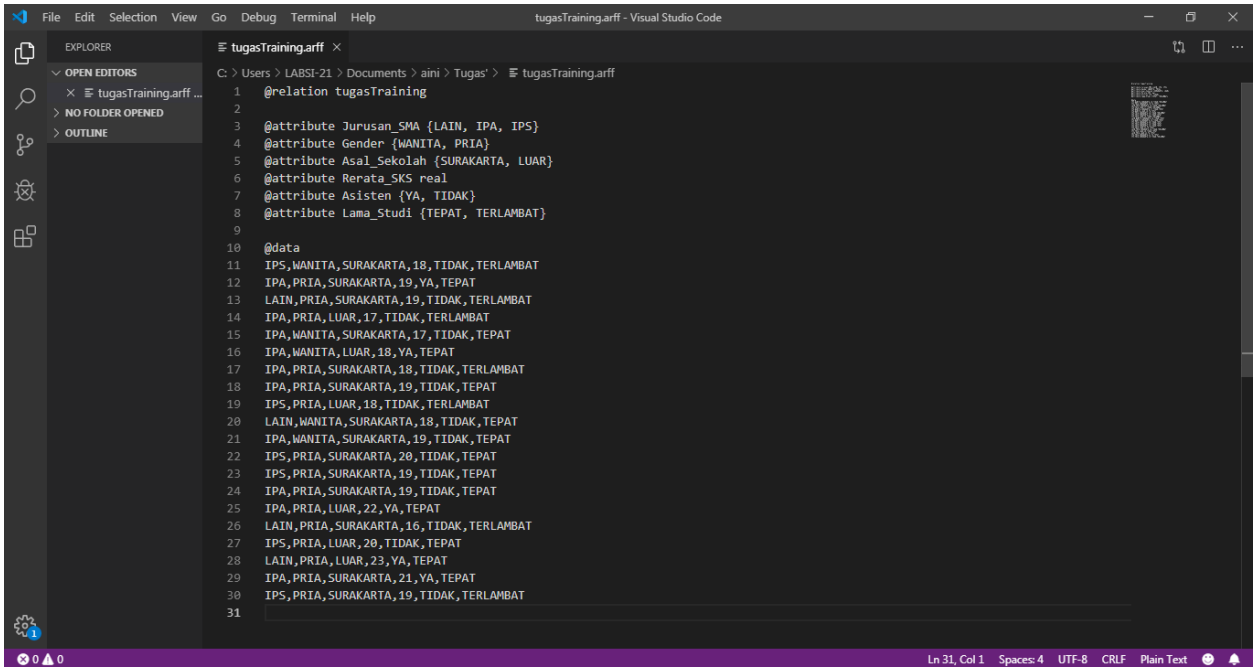

<new process*> – RapidMiner Studio Trial 9.3.001 @ LABSI-21-PC
File Edit Process View Connections Settings Extensions Help
Views: Design Results Turbo Prep Auto Model
Find data, operators...etc All Studio
ExampleSet (//Local Repository/processes/DataCuaca_Training)
Result History
ExampleSet (Apply Model)
ExampleSet (//Local Repository/processes/DataCuaca_Testing)
Data
Statistics
Visualizations
Annotations
Open in Turbo Prep Auto Model
Filter (7 / 7 examples): all
Row No. | Bermain_Te... | prediction(Ber... | confidence(TIDAK) | confidence(YA) | Cuaca | Suhu | Kelembaban... | Berangin
1 | ? | YA | 0.154 | 0.846 | Cerah | 75 | 65 | TIDAK
2 | ? | YA | 0.498 | 0.502 | Cerah | 80 | 68 | YA
3 | ? | TIDAK | 0.856 | 0.144 | Cerah | 83 | 87 | YA
4 | ? | YA | 0.019 | 0.981 | Mendung | 70 | 96 | TIDAK
5 | ? | YA | 0.007 | 0.993 | Mendung | 68 | 81 | TIDAK
6 | ? | YA | 0.371 | 0.629 | Hujan | 65 | 75 | YA
7 | ? | TIDAK | 0.568 | 0.432 | Hujan | 64 | 85 | YA
ExampleSet (7 examples, 4 special attributes, 4 regular attributes)
Repository
Import Data
Training Resources (connected)
Samples
Community Samples (connected)
DB (Legacy)
Local Repository (LABSI-21)
Connections (LABSI-21)
data (LABSI-21)
processes (LABSI-21)
DataCuaca_Testing (LABSI-21 - v1, 10/10/19
DataCuaca_Training (LABSI-21 - v1, 10/10/19
DataCuaca_Testing (LABSI-21 - v1, 10/10/19 1:42
DataCuaca_Training (LABSI-21 - v1, 10/10/19 1:42
3:05 PM
10/10/2019

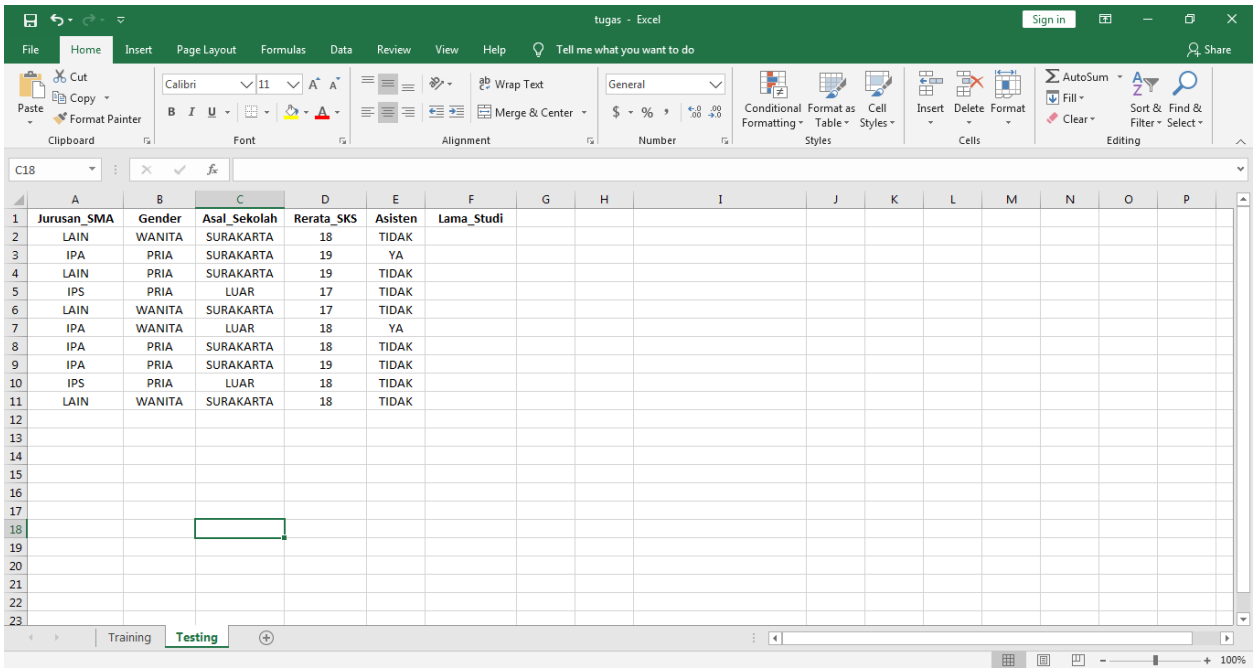


➢ Tugas

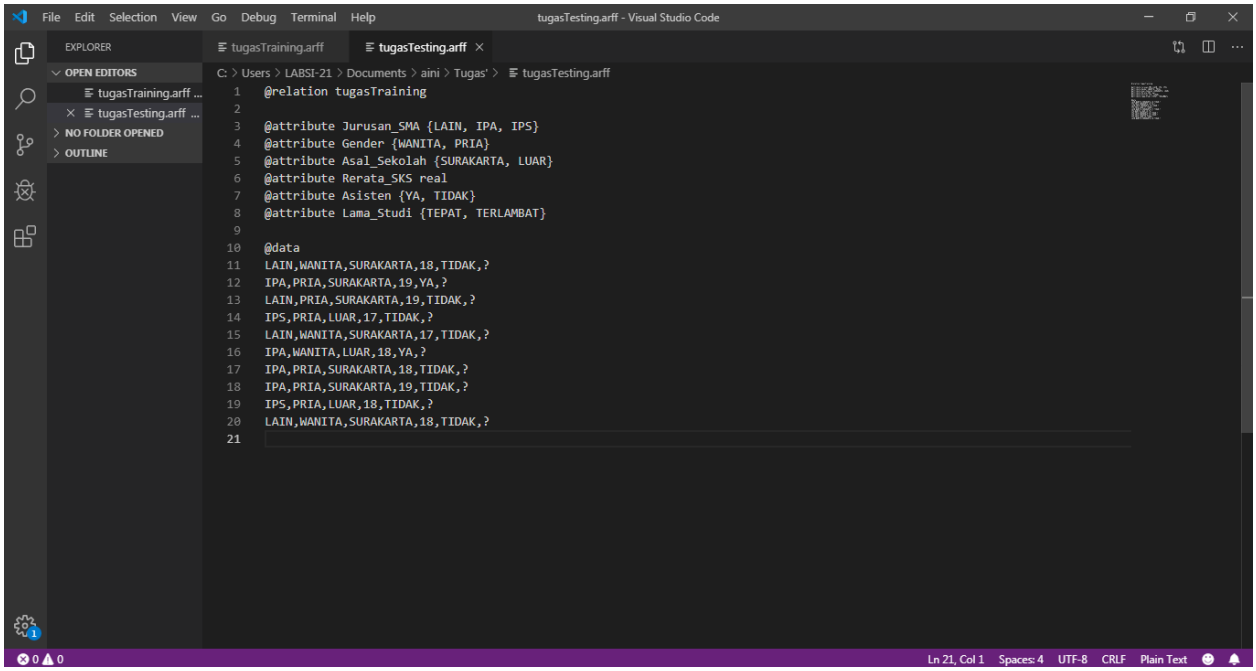


	A	B	C	D	E	F
1	Jurusan_SMA	Gender	Asal_Sekolah	Rerata_SKS	Asisten	Lama_Studi
2	IPS	WANITA	SURAKARTA	18	TIDAK	TERLAMBAT
3	IPA	PRIA	SURAKARTA	19	YA	TEPAT
4	LAIN	PRIA	SURAKARTA	19	TIDAK	TERLAMBAT
5	IPA	PRIA	LUAR	17	TIDAK	TERLAMBAT
6	IPA	WANITA	SURAKARTA	17	TIDAK	TEPAT
7	IPA	WANITA	LUAR	18	YA	TEPAT
8	IPA	PRIA	SURAKARTA	18	TIDAK	TERLAMBAT
9	IPA	PRIA	SURAKARTA	19	TIDAK	TEPAT
10	IPS	PRIA	LUAR	18	TIDAK	TERLAMBAT
11	LAIN	WANITA	SURAKARTA	18	TIDAK	TEPAT
12	IPA	WANITA	SURAKARTA	19	TIDAK	TEPAT
13	IPS	PRIA	SURAKARTA	20	TIDAK	TEPAT
14	IPS	PRIA	SURAKARTA	19	TIDAK	TEPAT
15	IPA	PRIA	SURAKARTA	19	TIDAK	TEPAT
16	IPA	PRIA	LUAR	22	YA	TEPAT
17	LAIN	PRIA	SURAKARTA	16	TIDAK	TERLAMBAT
18	IPS	PRIA	LUAR	20	TIDAK	TEPAT
19	LAIN	PRIA	LUAR	23	YA	TEPAT
20	IPA	PRIA	SURAKARTA	21	YA	TEPAT
21	IPS	PRIA	SURAKARTA	19	TIDAK	TERLAMBAT
22						
23						

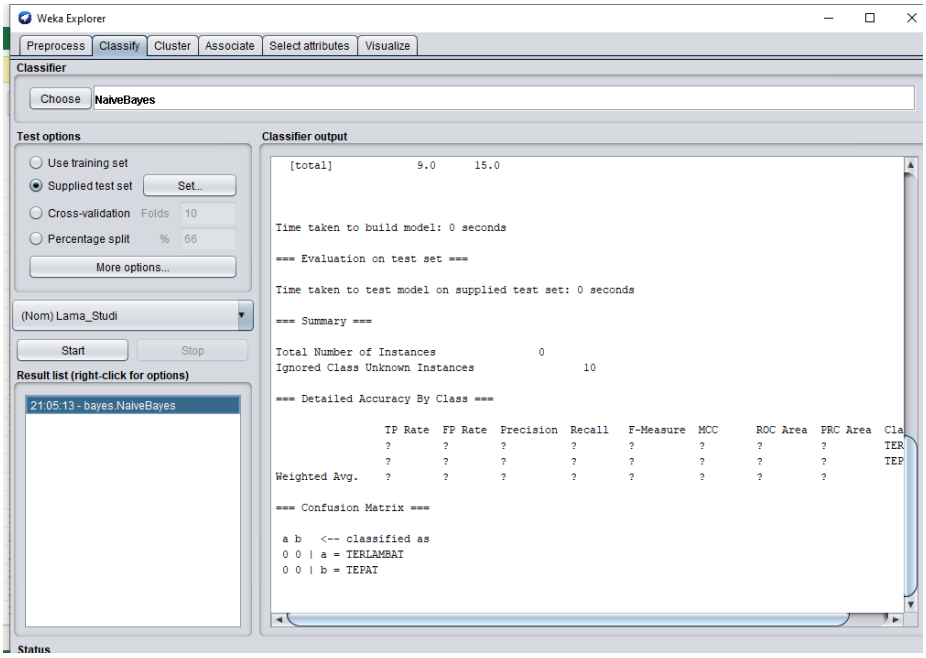


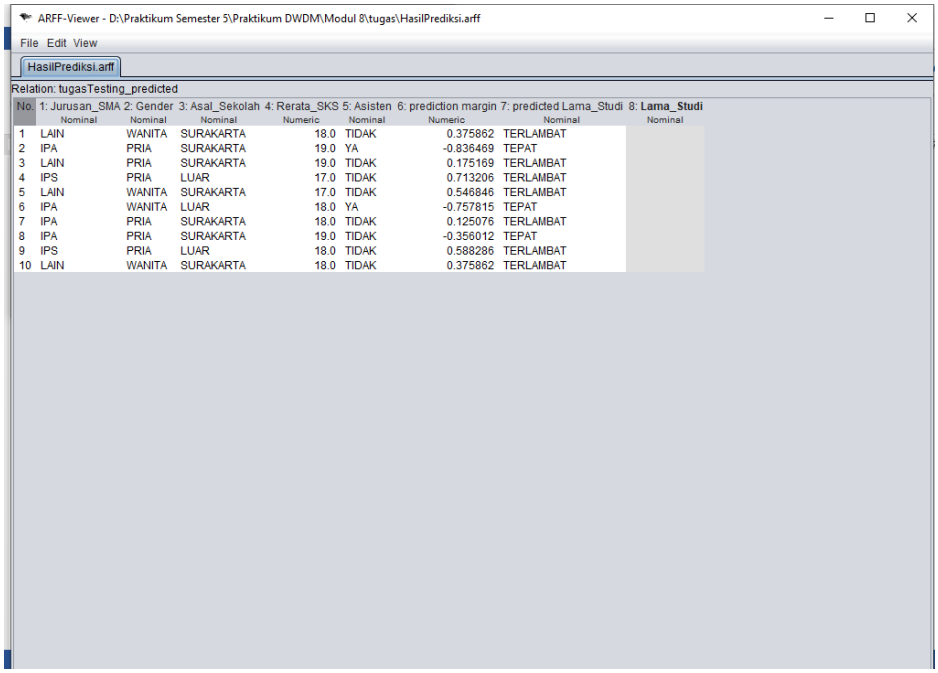


	A	B	C	D	E	F
1	Jurusan_SMA	Gender	Asal_Sekolah	Rerata_SKS	Asisten	Lama_Studi
2	LAIN	WANITA	SURAKARTA	18	TIDAK	
3	IPA	PRIA	SURAKARTA	19	YA	
4	LAIN	PRIA	SURAKARTA	19	TIDAK	
5	IPS	PRIA	LUAR	17	TIDAK	
6	LAIN	WANITA	SURAKARTA	17	TIDAK	
7	IPA	WANITA	LUAR	18	YA	
8	IPA	PRIA	SURAKARTA	18	TIDAK	
9	IPA	PRIA	SURAKARTA	19	TIDAK	
10	IPS	PRIA	LUAR	18	TIDAK	
11	LAIN	WANITA	SURAKARTA	18	TIDAK	

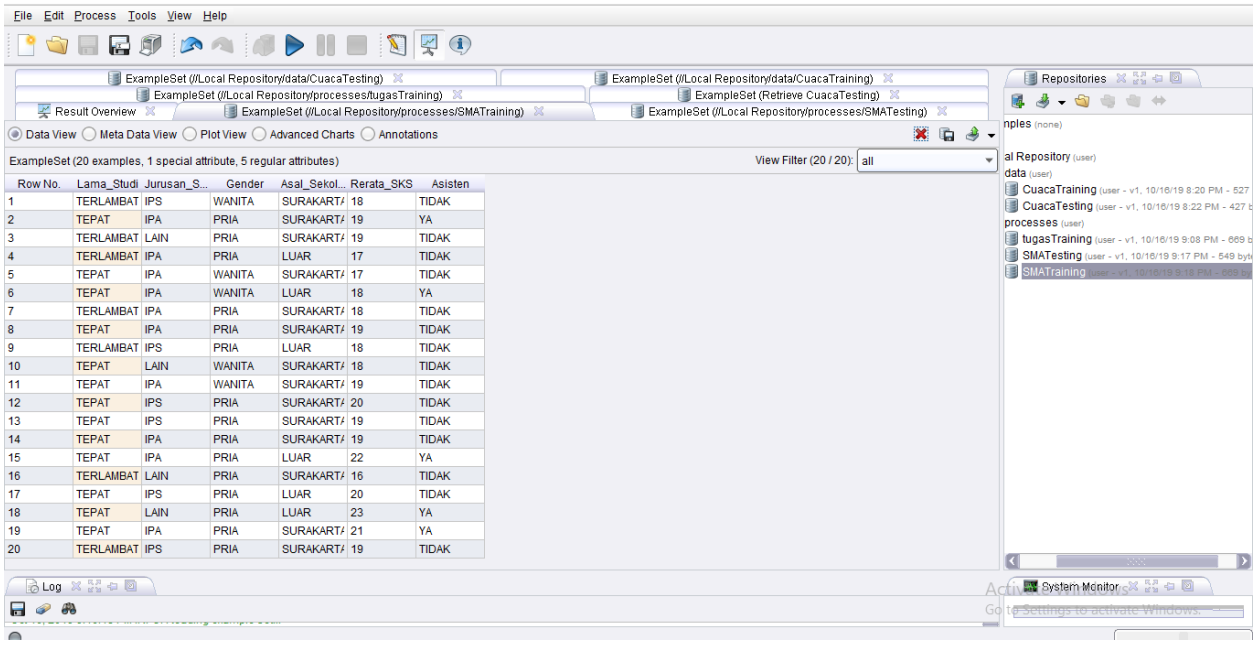


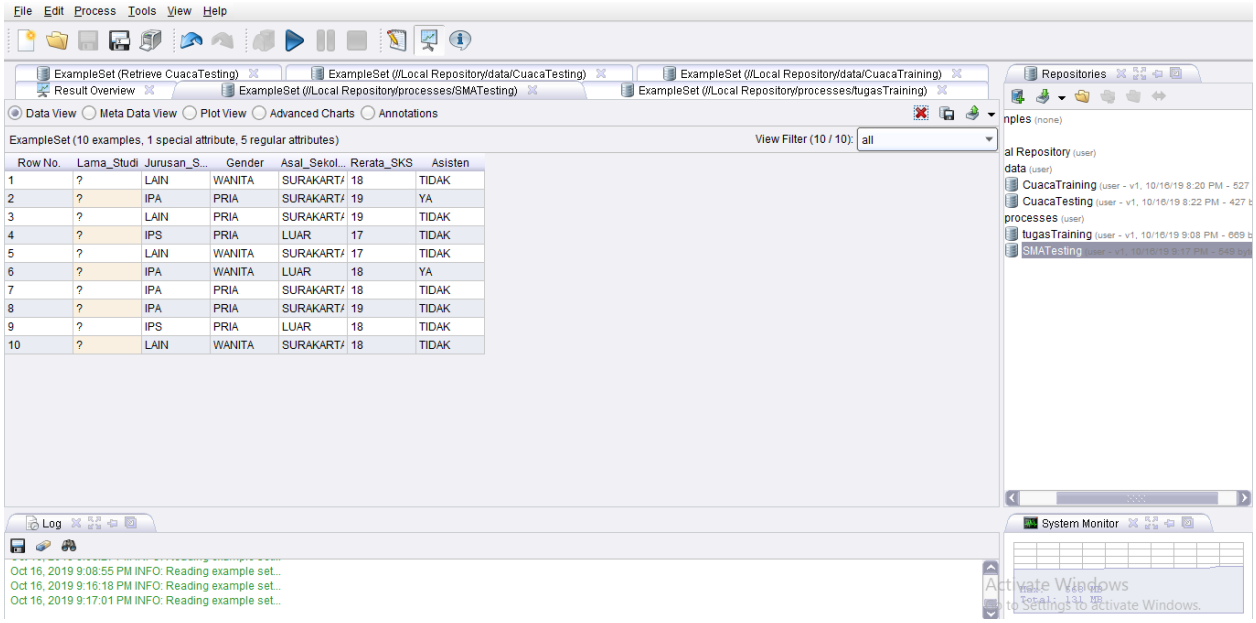
Implementasi Naive Bayes dengan WEKA

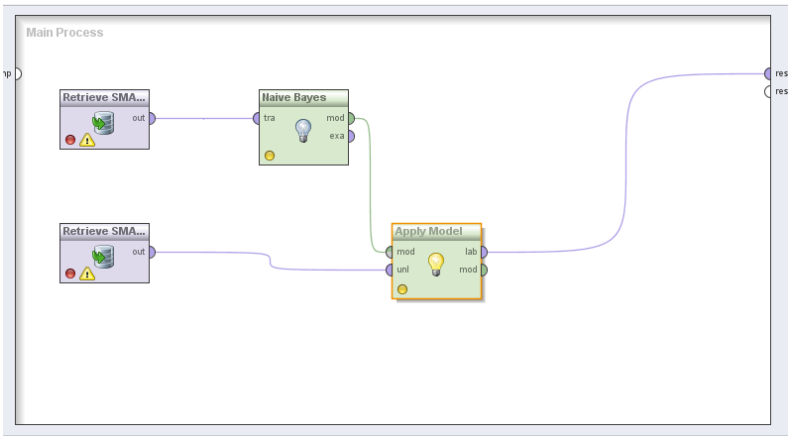


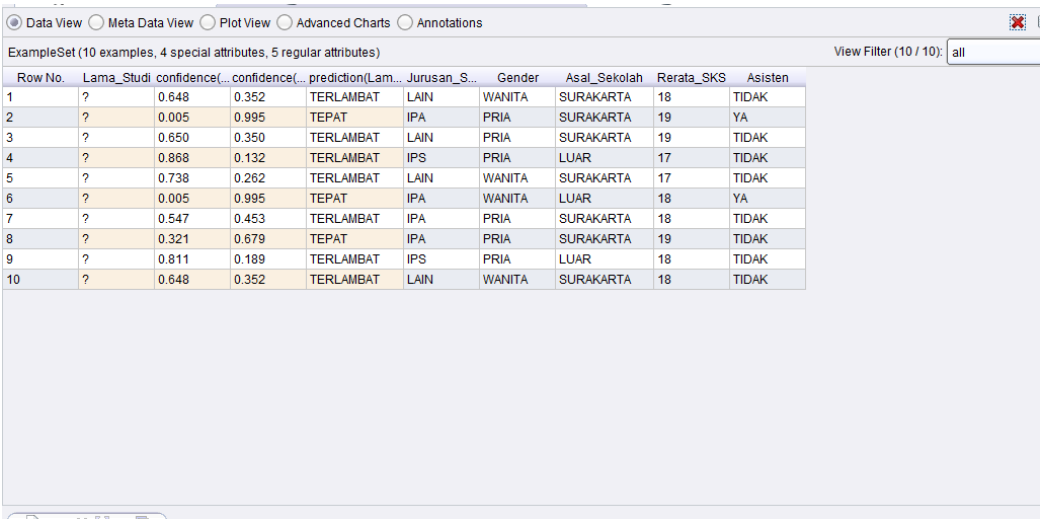


Implementasi Naive Bayes dengan RapidMiner









Row No.	Lama_Studi	confidence(...	confidence(...	prediction(Lam...	Jurusan_S...	Gender	Asal_Sekolah	Rerata_SKS	Asisten
1	?	0.648	0.352	TERLAMBAT	LAIN	WANITA	SURAKARTA	18	TIDAK
2	?	0.005	0.995	TEPAT	IPA	PRIA	SURAKARTA	19	YA
3	?	0.650	0.350	TERLAMBAT	LAIN	PRIA	SURAKARTA	19	TIDAK
4	?	0.868	0.132	TERLAMBAT	IPS	PRIA	LUAR	17	TIDAK
5	?	0.738	0.262	TERLAMBAT	LAIN	WANITA	SURAKARTA	17	TIDAK
6	?	0.005	0.995	TEPAT	IPA	WANITA	LUAR	18	YA
7	?	0.547	0.453	TERLAMBAT	IPA	PRIA	SURAKARTA	18	TIDAK
8	?	0.321	0.679	TEPAT	IPA	PRIA	SURAKARTA	19	TIDAK
9	?	0.811	0.189	TERLAMBAT	IPS	PRIA	LUAR	18	TIDAK
10	?	0.648	0.352	TERLAMBAT	LAIN	WANITA	SURAKARTA	18	TIDAK

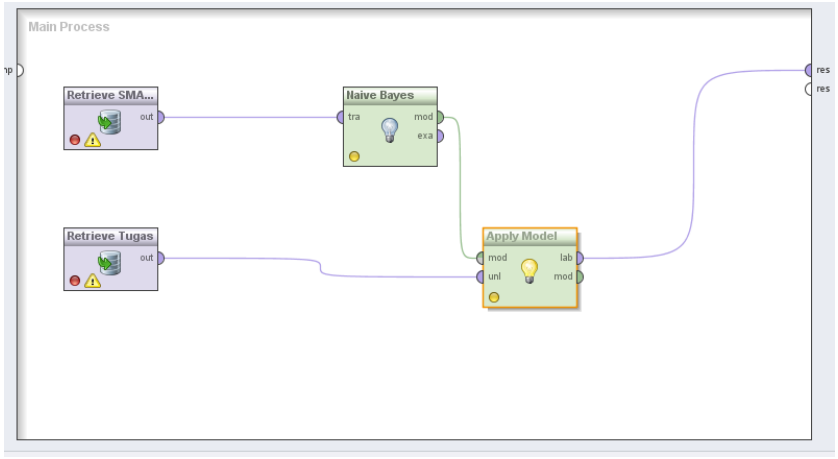
confidence_TERLAMBAT	confidence(TERLAMBAT)	real	avg = 0.524 +/- 0.312	[0.005 ; 0.868]	0
confidence_TEPAT	confidence(TEPAT)	real	avg = 0.476 +/- 0.312	[0.132 ; 0.995]	0
prediction	prediction(Lama_Studi)	binominal	mode = TERLAMBAT (7), least = TEPAT (3)	TERLAMBAT (7), TEPAT	0

- Nilai rerata confidence TEPAT = 0.476
- Nilai rerata confidence TERLAMBAT = 0.524
- Orang yang lulus TEPAT = 3

- Orang yang lulus TERLAMBAT = 7
- Prediksi dari Dewi dan Jono

ExampleSet (2 examples, 1 special attribute, 5 regular attributes)

Row No.	Lama_Studi	Jurusan_S...	Gender	Asal_Sekol...	Rerata_SKS	Asisten
1	?	IPA	WANITA	LUAR	18	TIDAK
2	?	LAIN	PRIA	SURAKARTA	17	YA



ExampleSet (2 examples, 4 special attributes, 5 regular attributes)

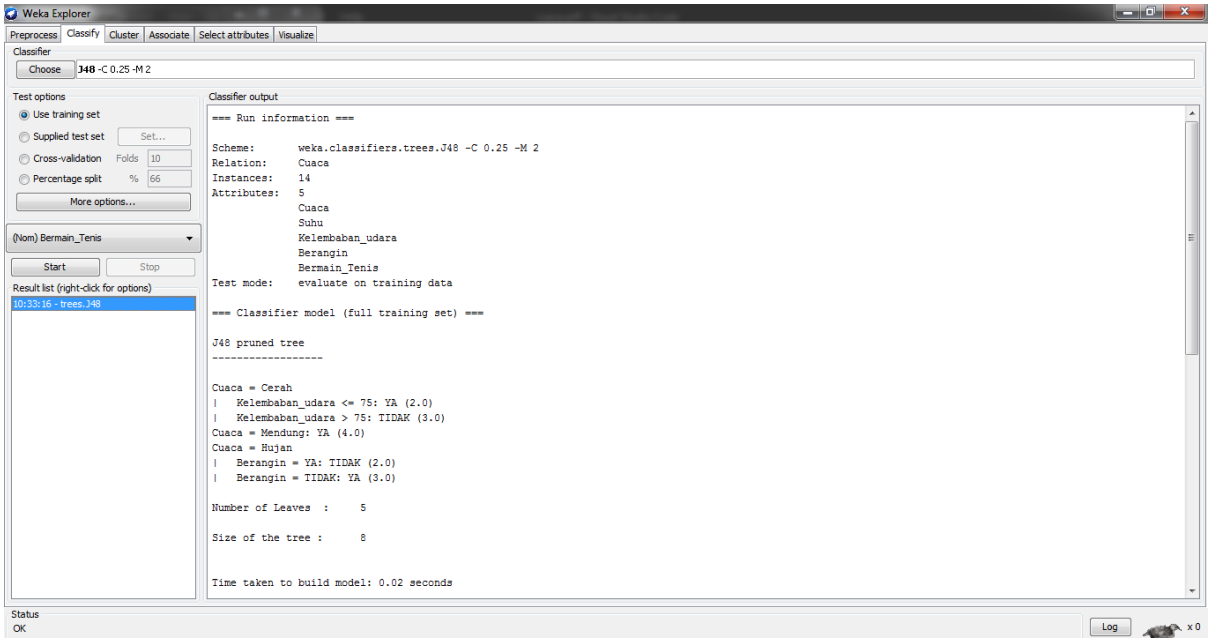
Row No.	Lama_Studi	confidence(...	confidence(...	prediction(L...	Jurusan_S...	Gender	Asal_Sekol...	Rerata_SKS	Asisten
1	?	0.298	0.702	TEPAT	IPA	WANITA	LUAR	18	TIDAK
2	?	0.076	0.924	TEPAT	LAIN	PRIA	SURAKARTA	17	YA

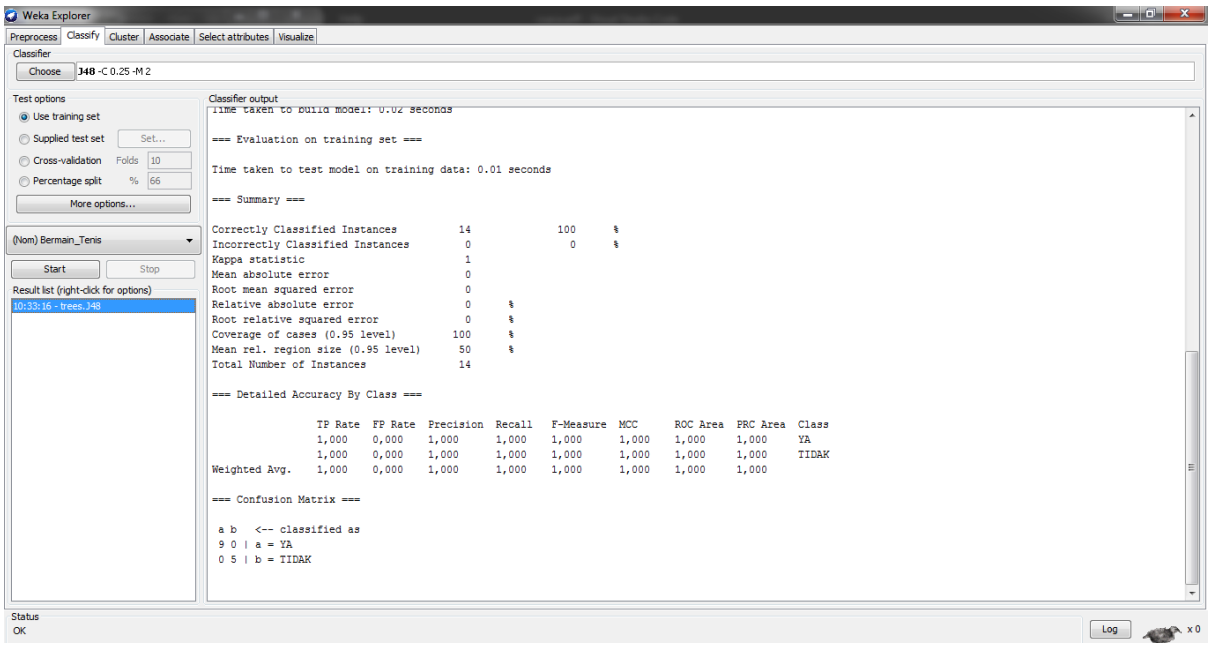
Hasil prediksi menyatakan bahwa Dewi dan Jono akan lulus dengan TEPAT

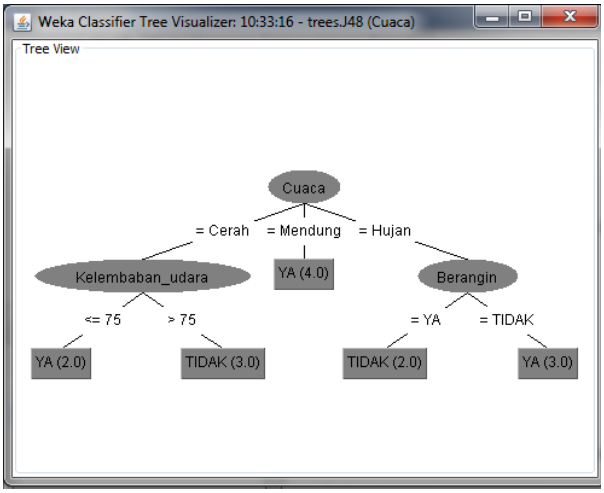
MODUL 9

➢ Kegiatan

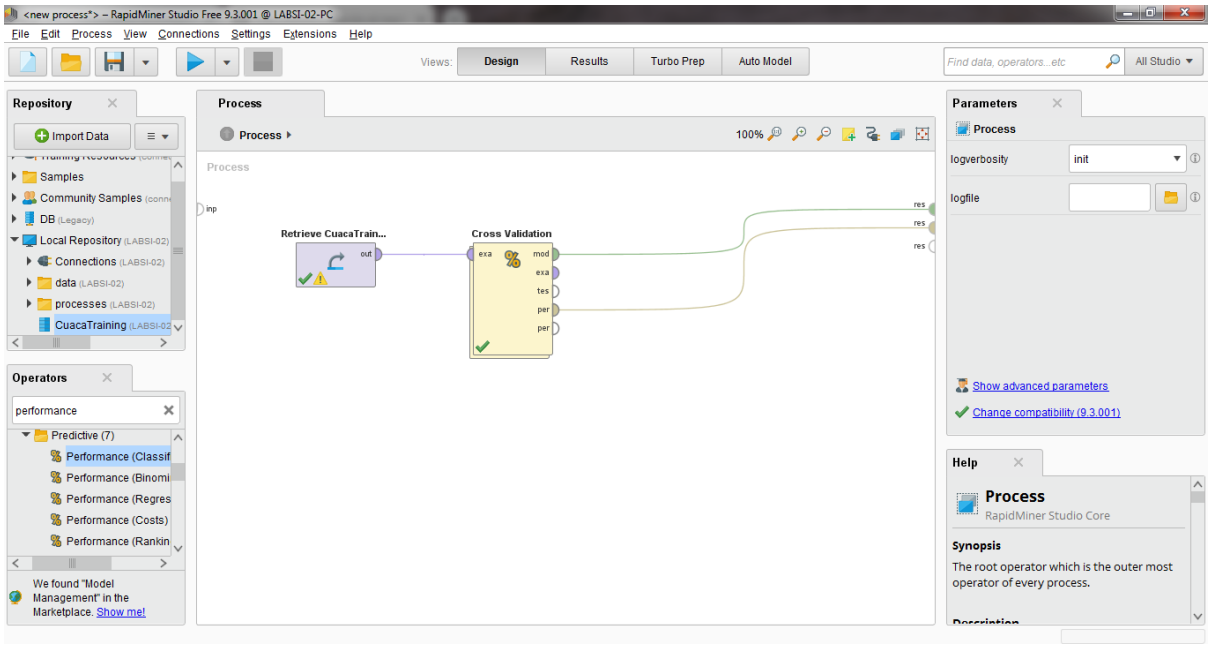
Menggunakan WEKA

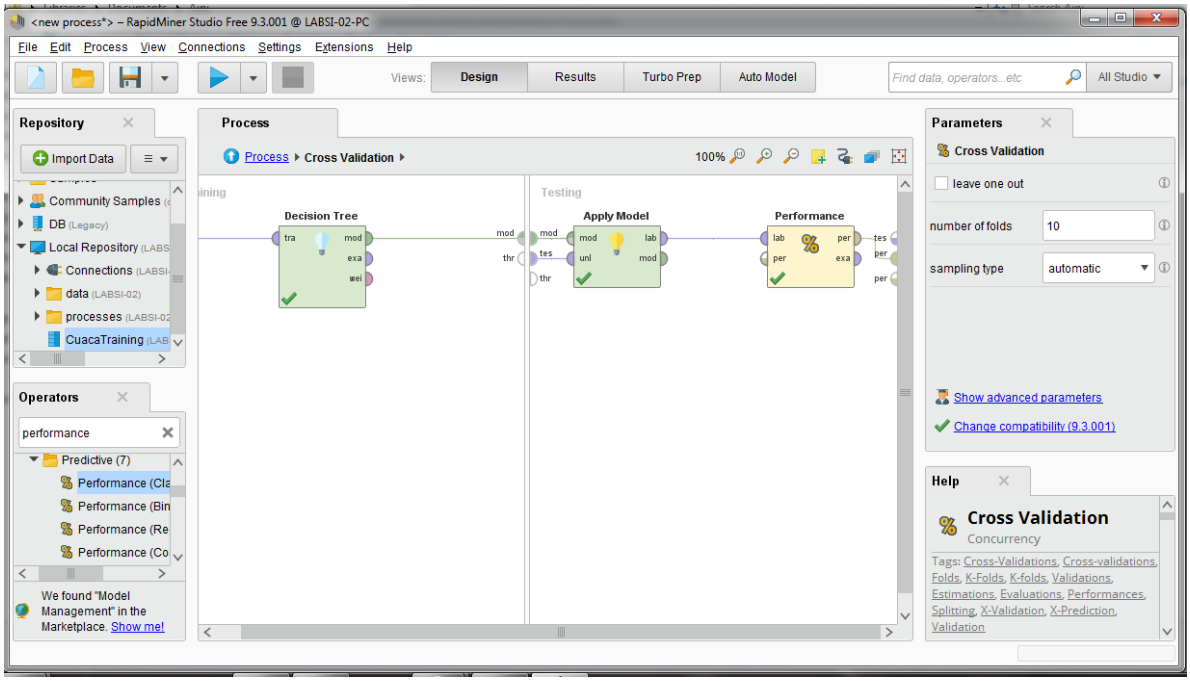


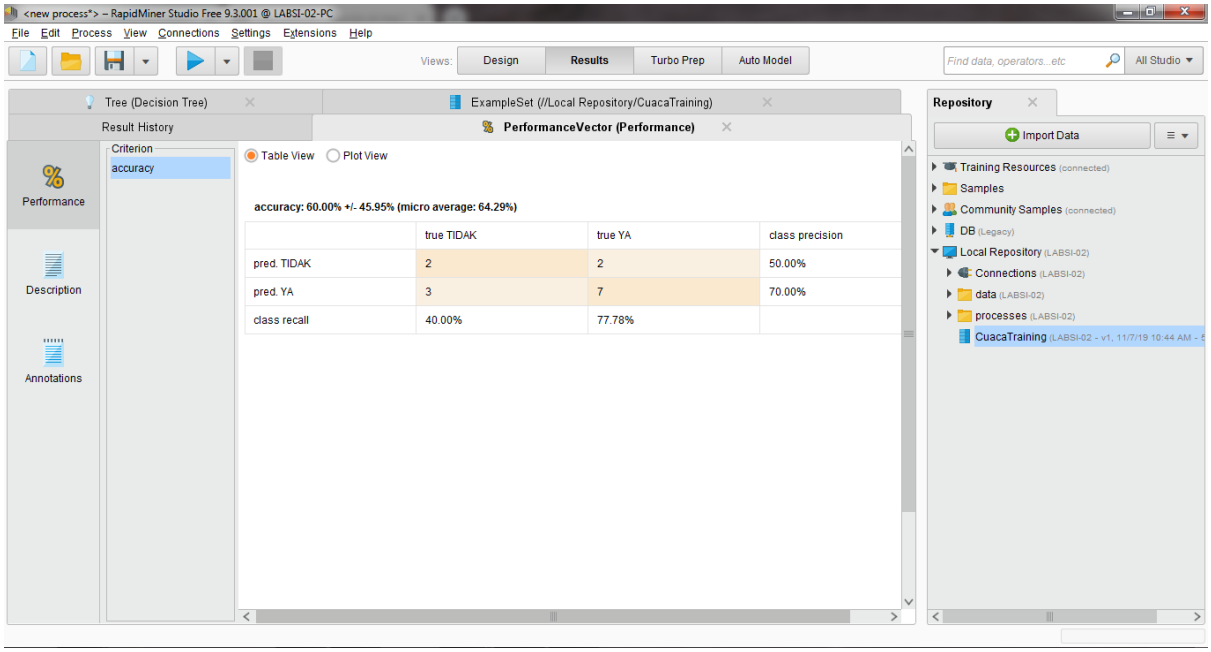


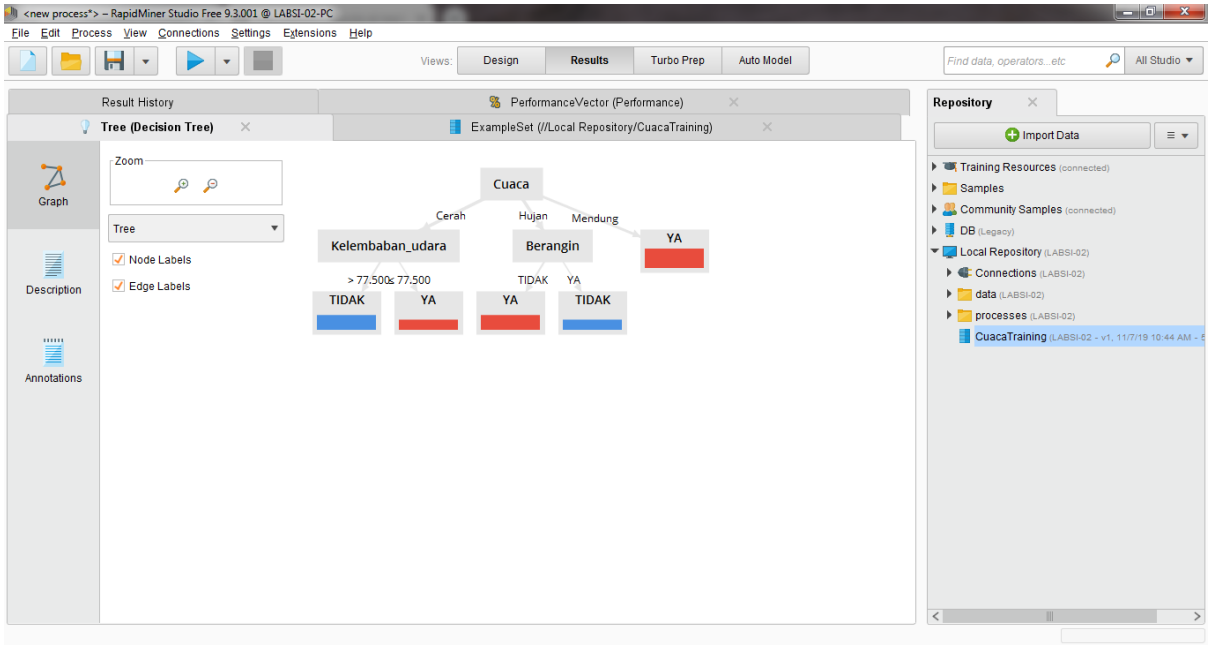


Menggunakan RapidMiner




<new process*> – RapidMiner Studio Free 9.3.001 @ LABSI-02-PC
File Edit Process View Connections Settings Extensions Help
Views: Design Results Turbo Prep Auto Model
Find data, operators...etc
All Studio
Repository
Import Data
Community Samples
DB (Legacy)
Local Repository
Connections
data (LABSI-02)
processes (LABSI-02)
CuacaTraining
Operators
performance
Predictive (7)
Performance (Cla
Performance (Bin
Performance (Re
Performance (Co
We found "Model Management" in the Marketplace. Show me!
Process
Process ▸ Cross Validation ▸
100%
Training
Testing
Decision Tree
Apply Model
Performance
Parameters
Cross Validation
leave one out
number of folds
10
sampling type
automatic
Show advanced parameters
Change compatibility (9.3.001)
Help
Cross Validation
Concurrency
Tags: Cross-Validations, Cross-validations, Folds, K-Folds, K-folds, Validations, Estimations, Evaluations, Performances, Splitting, X-Validation, X-Prediction, Validation


<new process*> – RapidMiner Studio Free 9.3.001 @ LABSI-02-PC
File Edit Process View Connections Settings Extensions Help
Views: Design Results Turbo Prep Auto Model
Find data, operators...etc
All Studio
Tree (Decision Tree)
ExampleSet (//Local Repository/CuacaTraining)
Result History
PerformanceVector (Performance)
Performance
Description
Annotations
Criterion
accuracy
Table View
Plot View
accuracy: 60.00% +/- 45.95% (micro average: 64.29%)
true TIDAK
true YA
class precision
pred. TIDAK
2
2
50.00%
pred. YA
3
7
70.00%
class recall
40.00%
77.78%
Repository
Import Data
Training Resources (connected)
Samples
Community Samples (connected)
DB (Legacy)
Local Repository (LABSI-02)
Connections (LABSI-02)
data (LABSI-02)
processes (LABSI-02)
CuacaTraining (LABSI-02 - v1, 11/7/19 10:44 AM

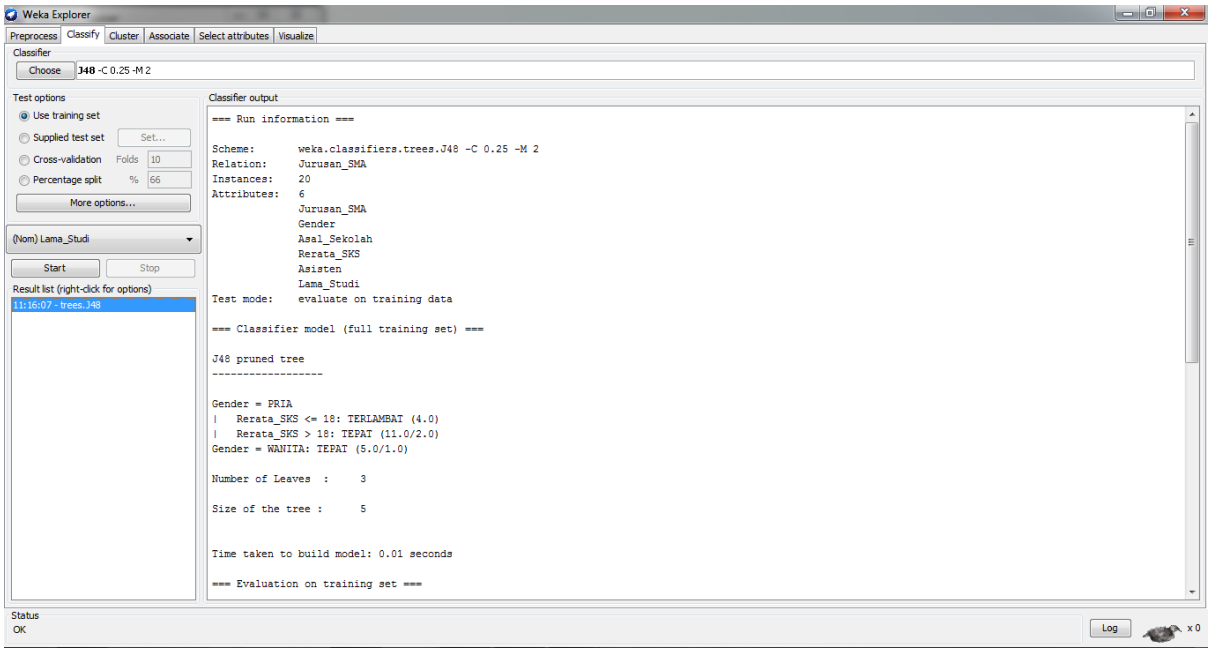


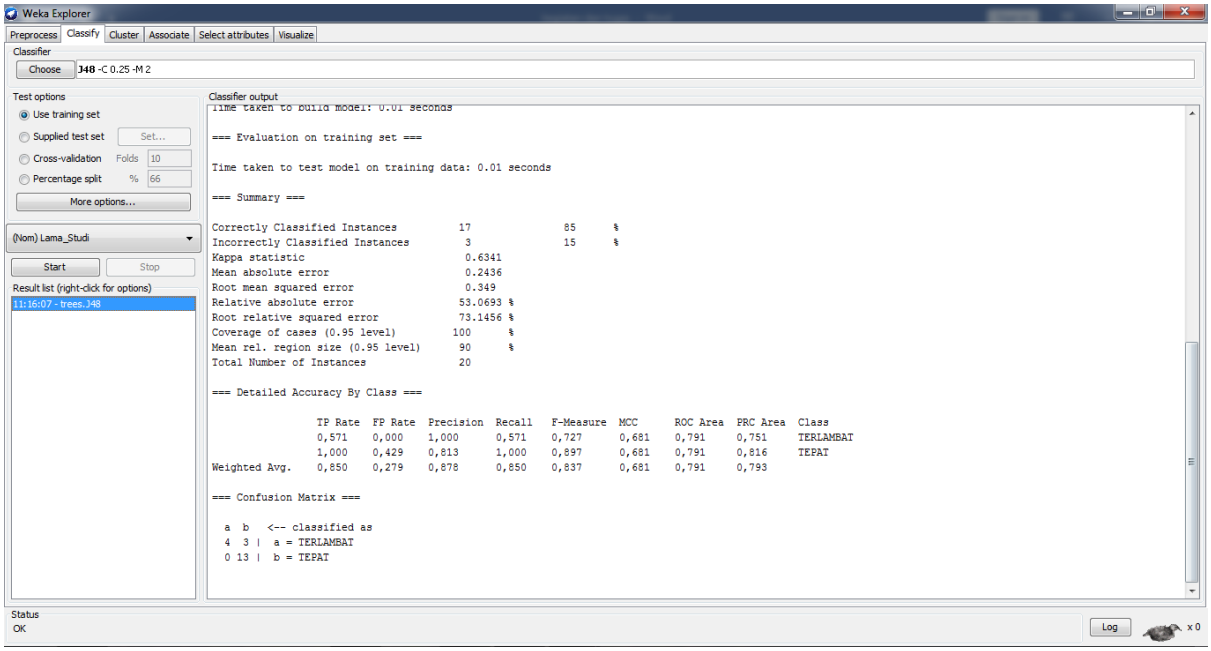
➢ Tugas

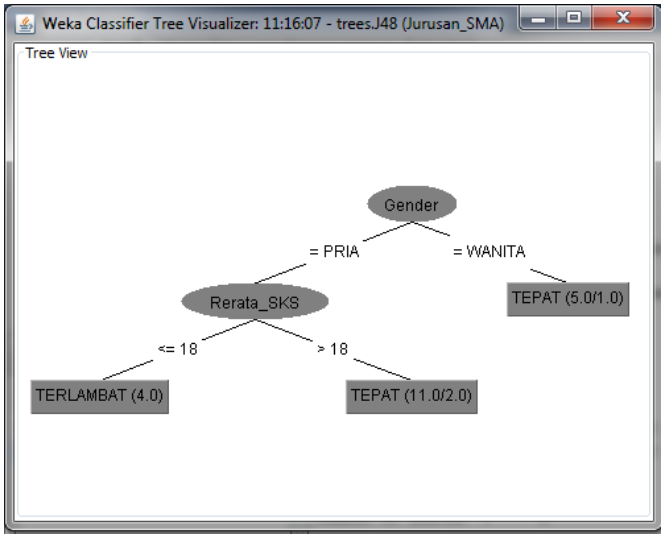
1. Table

Cuaca	Suhu	Kelembaban_udara	Berangin	Bermain_Tenis
Cerah	75	65	TIDAK	YA
Cerah	80	68	YA	YA
Cerah	83	87	YA	TIDAK
Mendung	70	96	TIDAK	YA
Mendung	68	81	TIDAK	YA
Hujan	65	75	TIDAK	YA
Hujan	64	85	YA	TIDAK

2. Weka
   a. Tree

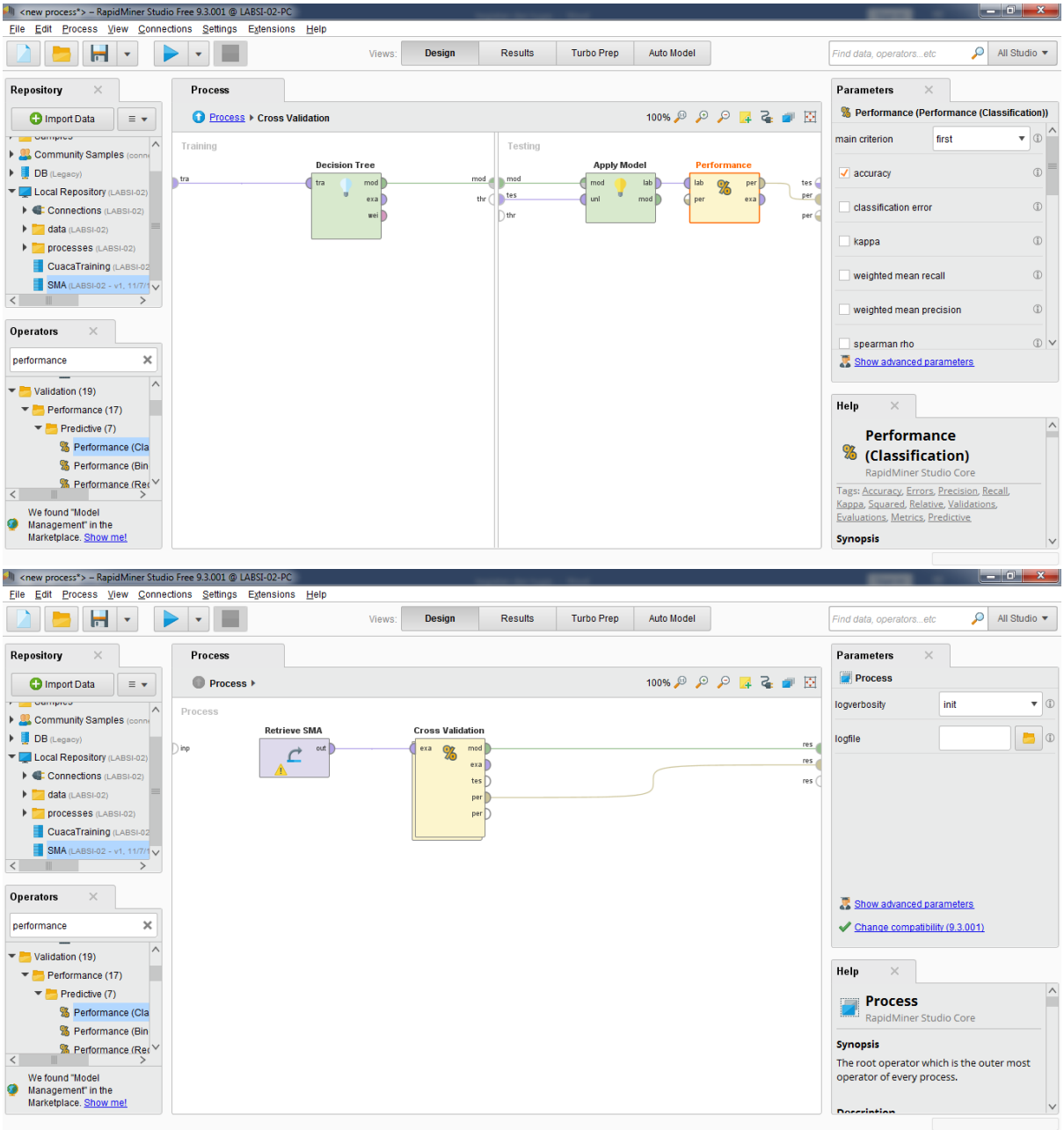


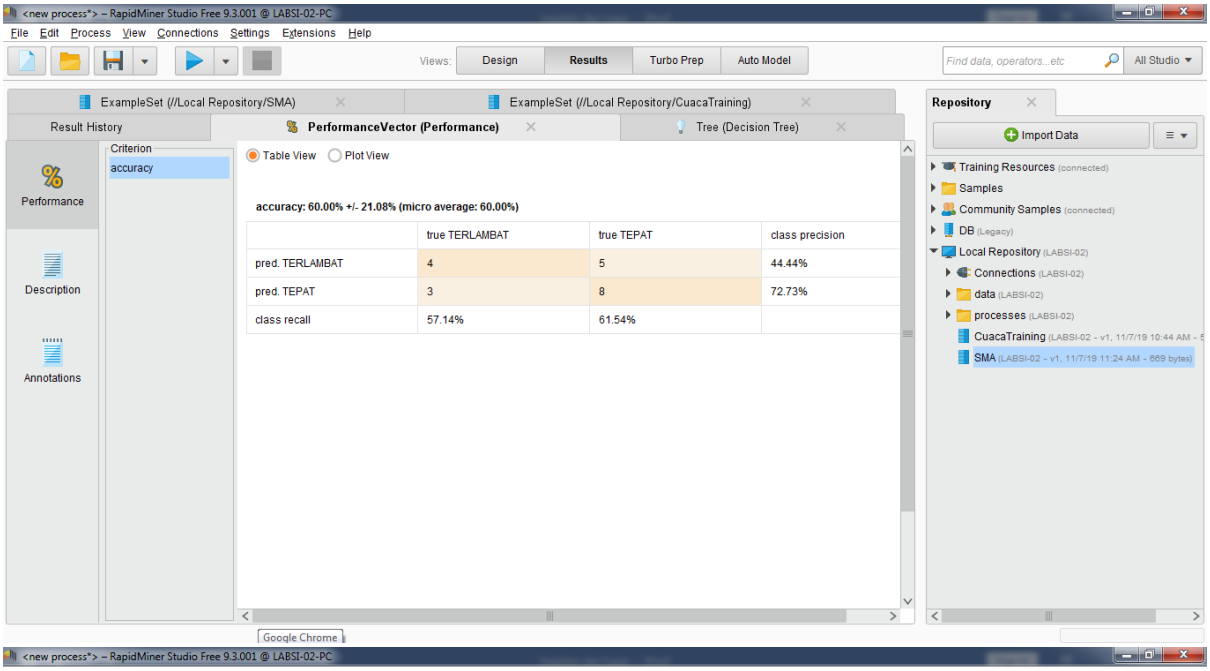


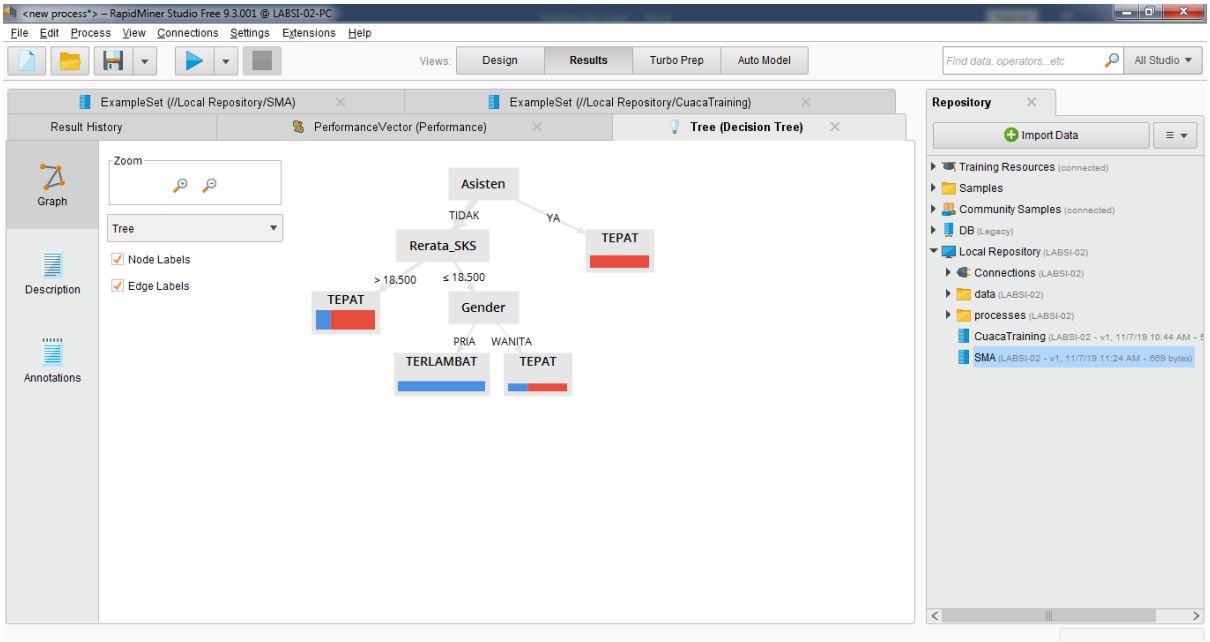


b. Carilah nilai-nilai parameter berikut:
   i. Jumlah simpul daun pada pohon keputusan = **3**
   ii. Jumlah simpul keseluruhan pada pohon kerputusan = **5**
   iii. Waktu yang dibutuhkan untuk proses pelatihan = **0.01** detik
   iv. Tingkat ketepatan klasifikasi = **85** %
   v. Tingkat ketidaktepatan klasifikasi = **15** %

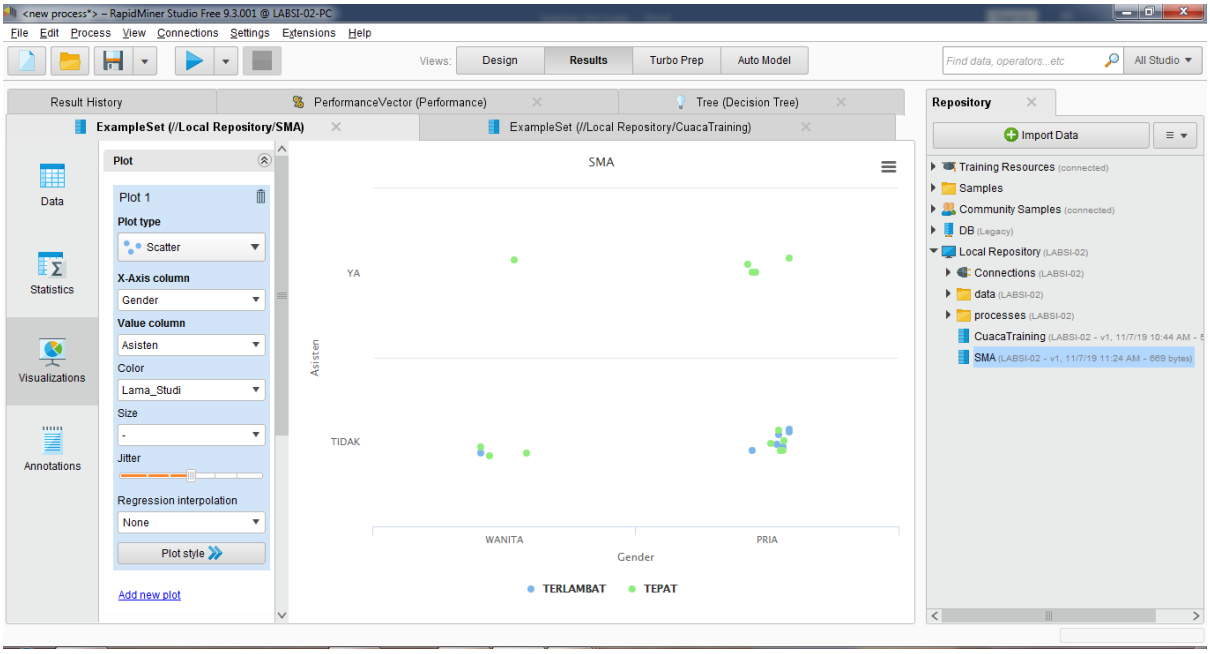
3. RapidMiner
    a. Pohon




<new process*> – RapidMiner Studio Free 9.3.001 @ LABSI-02-PC
File Edit Process View Connections Settings Extensions Help
Views: Design Results Turbo Prep Auto Model
Find data, operators...etc All Studio
ExampleSet (//Local Repository/SMA)
ExampleSet (//Local Repository/CuacaTraining)
Result History
PerformanceVector (Performance)
Tree (Decision Tree)
Criterion
accuracy
Table View
Plot View
accuracy: 60.00% +/- 21.08% (micro average: 60.00%)
true TERLAMBAT
true TEPAT
class precision
pred. TERLAMBAT 4 5 44.44%
pred. TEPAT 3 8 72.73%
class recall 57.14% 61.54%
Performance
Description
Annotations
Repository
Import Data
Training Resources (connected)
Samples
Community Samples (connected)
DB (Legacy)
Local Repository (LABSI-02)
Connections (LABSI-02)
data (LABSI-02)
processes (LABSI-02)
CuacaTraining (LABSI-02 - v1, 11/7/19 10:44 AM - 5
SMA (LABSI-02 - v1, 11/7/19 11:24 AM - 669 bytes)
Google Chrome


<new process*> – RapidMiner Studio Free 9.3.001 @ LABSI-02-PC
File Edit Process View Connections Settings Extensions Help
Views: Design Results Turbo Prep Auto Model
Find data, operators...etc All Studio
ExampleSet (//Local Repository/SMA)
ExampleSet (//Local Repository/CuacaTraining)
Result History
PerformanceVector (Performance)
Tree (Decision Tree)
Zoom
Tree
Node Labels
Edge Labels
Asisten
TIDAK
YA
TEPAT
Rerata_SKS
> 18.500
≤ 18.500
TEPAT
Gender
PRIA
WANITA
TERLAMBAT
TEPAT
Graph
Description
Annotations
Repository
Import Data
Training Resources (connected)
Samples
Community Samples (connected)
DB (Legacy)
Local Repository (LABSI-02)
Connections (LABSI-02)
data (LABSI-02)
processes (LABSI-02)
CuacaTraining (LABSI-02 - v1, 11/7/19 10:44 AM - 5
SMA (LABSI-02 - v1, 11/7/19 11:24 AM - 669 bytes)

b. Plot View

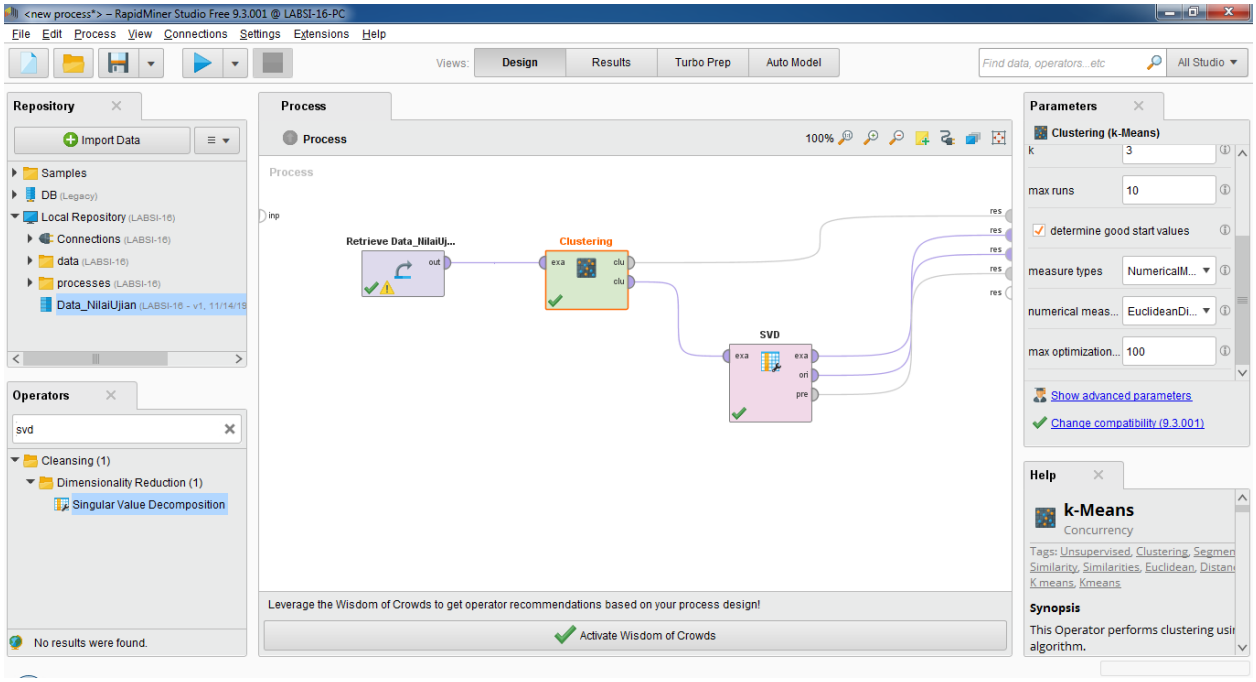


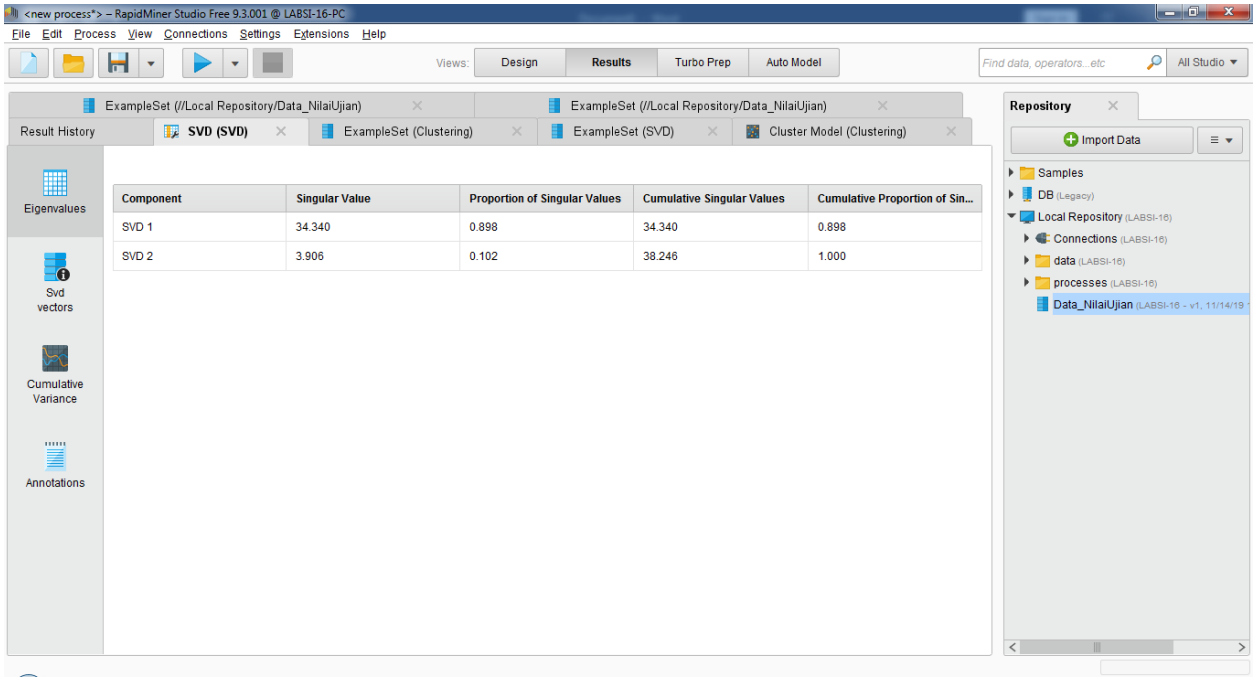
4. Klasifikasi yang terbentuk yaitu :
   i. Seseorang akan lama_studi (TERLAMBAT) jika kondisi sebagai berikut:
      - Gender = PRIA, Rerata_SKS <= 18 (nilai atribut lain diabaikan)
   ii. Seseorang akan lama_studi (TERLAMBAT) jika kondisi sebagai berikut:
      - Gender = WANITA (nilai atribut lain diabaikan)
      - Gender = PRIA, Rerata_SKS > 18 (nilai atribut lain diabaikan)

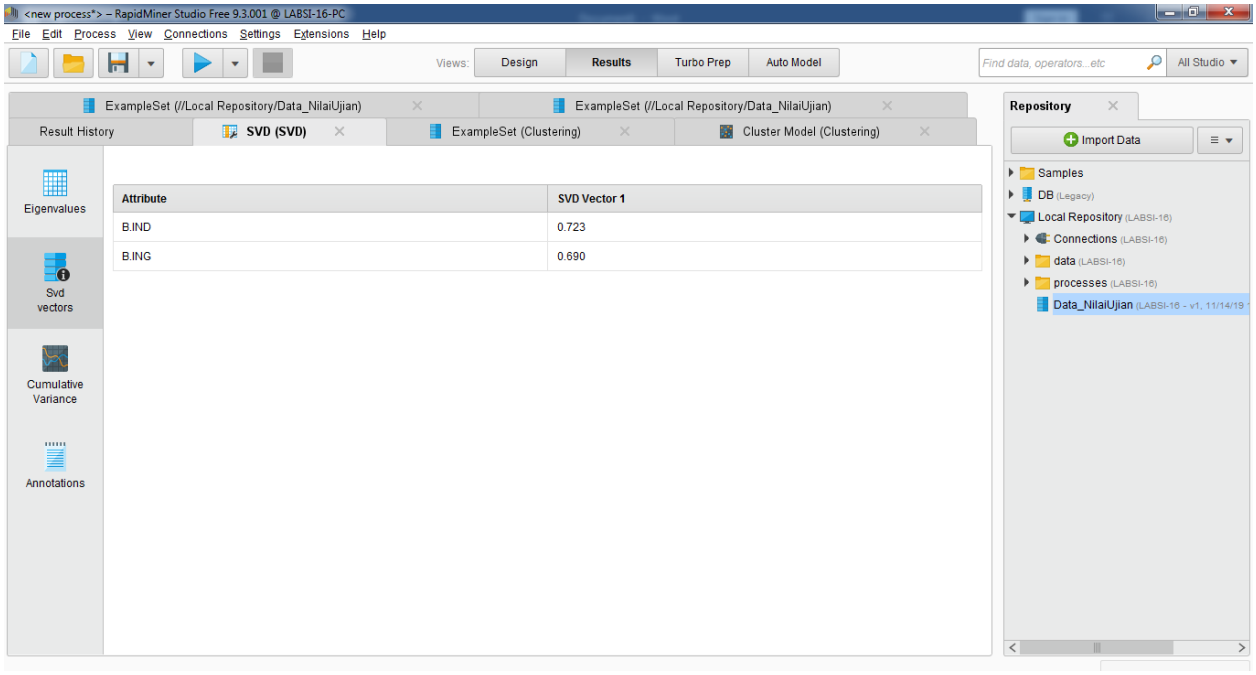
MODUL 10

➢ Kegiatan

	A	B	C	D	E	F	G
1	NO_SISWA	NAMA	B.IND	B.ING			
2	S_101	JOKO	8,54	8,4			
3	S_102	AGUS	9,98	6,81			
4	S_103	SUSI	6,2	9,15			
5	S_104	DYAH	5,24	7,26			
6	S_105	WATI	5,7	5,71			
7	S_106	IKA	8,57	5,87			
8	S_107	EKO	7,7	7,71			
9	S_108	YANTO	6,6	5,7			
10	S_109	WAWAN	9	8,12			
11	S_110	MAHMUD	9,81	9,58			
12							
13							
14							
15							




<new process*> – RapidMiner Studio Free 9.3.001 @ LABSI-16-PC
File Edit Process View Connections Settings Extensions Help
Views: Design Results Turbo Prep Auto Model
Find data, operators...etc All Studio
ExampleSet (//Local Repository/Data_NilaiUjian)
ExampleSet (//Local Repository/Data_NilaiUjian)
Result History
SVD (SVD)
ExampleSet (Clustering)
ExampleSet (SVD)
Cluster Model (Clustering)
Eigenvalues
Svd vectors
Cumulative Variance
Annotations
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
Repository
Import Data
Samples
DB (Legacy)
Local Repository (LABSI-16)
Connections (LABSI-16)
data (LABSI-16)
processes (LABSI-16)
Data_NilaiUjian (LABSI-16 - v1, 11/14/19


<new process*> – RapidMiner Studio Free 9.3.001 @ LABSI-16-PC
File Edit Process View Connections Settings Extensions Help
Views: Design Results Turbo Prep Auto Model
Find data, operators...etc All Studio
ExampleSet (//Local Repository/Data_NilaiUjian)
ExampleSet (//Local Repository/Data_NilaiUjian)
Result History
SVD (SVD)
ExampleSet (Clustering)
Cluster Model (Clustering)
Eigenvalues
Svd vectors
Cumulative Variance
Annotations
Attribute | SVD Vector 1
B.IND | 0.723
B.ING | 0.690
Repository
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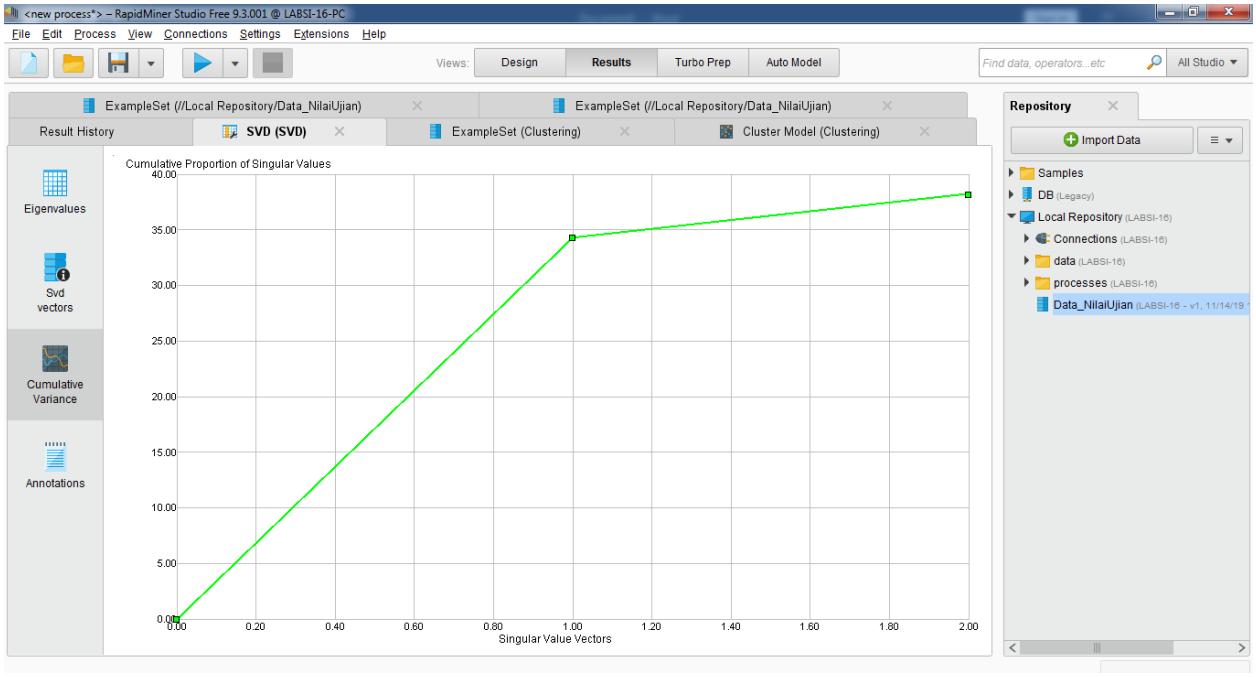
DB (Legacy)
Local Repository (LABSI-16)
Connections (LABSI-16)
data (LABSI-16)
processes (LABSI-16)
Data_NilaiUjian (LABSI-16 - v1, 11/14/19


<new process*> – RapidMiner Studio Free 9.3.001 @ LABSI-16-PC
File Edit Process View Connections Settings Extensions Help
Views: Design Results Turbo Prep Auto Model
Find data, operators...etc All Studio
ExampleSet (//Local Repository/Data_NilaiUjian)
ExampleSet (//Local Repository/Data_NilaiUjian)
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ExampleSet (Clustering)
Cluster Model (Clustering)
Eigenvalues
Svd vectors
Cumulative Variance
Annotations
Cumulative Proportion of Singular Values
40.00
35.00
30.00
25.00
20.00
15.00
10.00
5.00
0.00
0.00 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00
Singular Value Vectors
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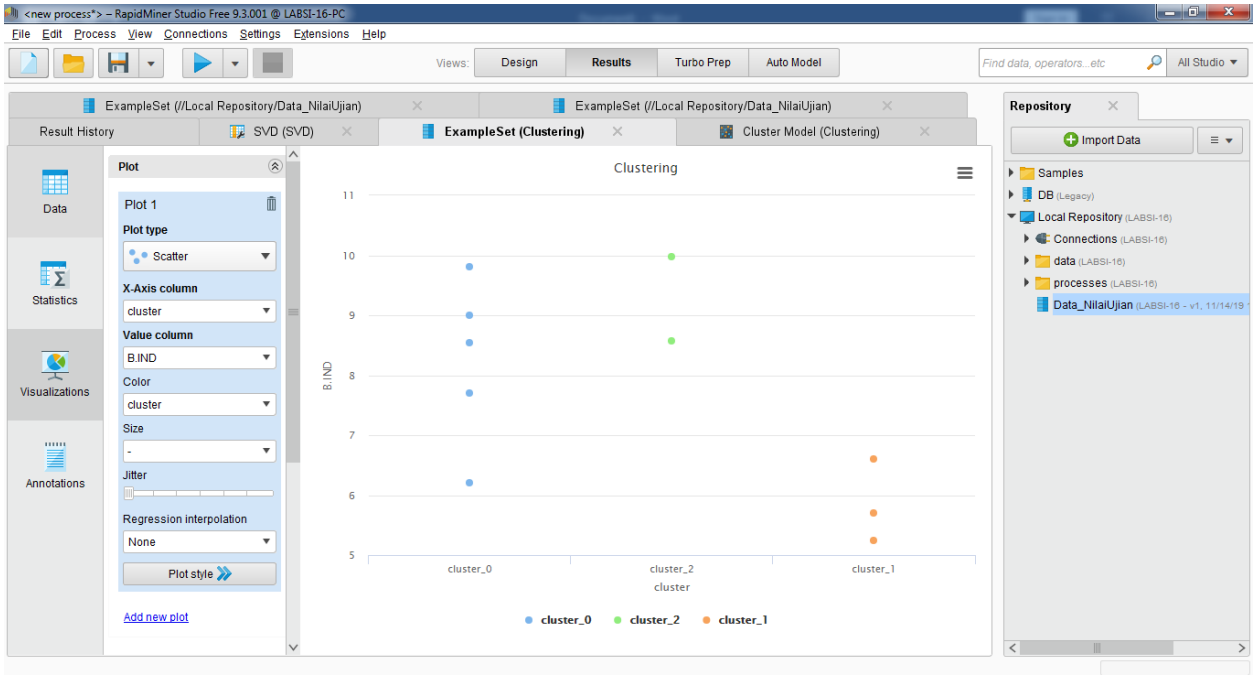
Data_NilaiUjian (LABSI-16 - v1, 11/14/19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File Edit Process View Connections Settings Extensions Help
Views: Design Results Turbo Prep Auto Model
Find data, operators...etc All Studio
ExampleSet (//Local Repository/Data_NilaiUjian)
ExampleSet (//Local Repository/Data_NilaiUjian)
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ExampleSet (Clustering)
Cluster Model (Clustering)
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Plot type
Scatter
X-Axis column
cluster
Value column
B.IND
Color
cluster
Size
-
Jitter
Regression interpolation
None
Plot style
Add new plot
Clustering
B.IND
11
10
9
8
7
6
5
cluster_0
cluster_2
cluster_1
cluster
cluster_0 cluster_2 cluster_1
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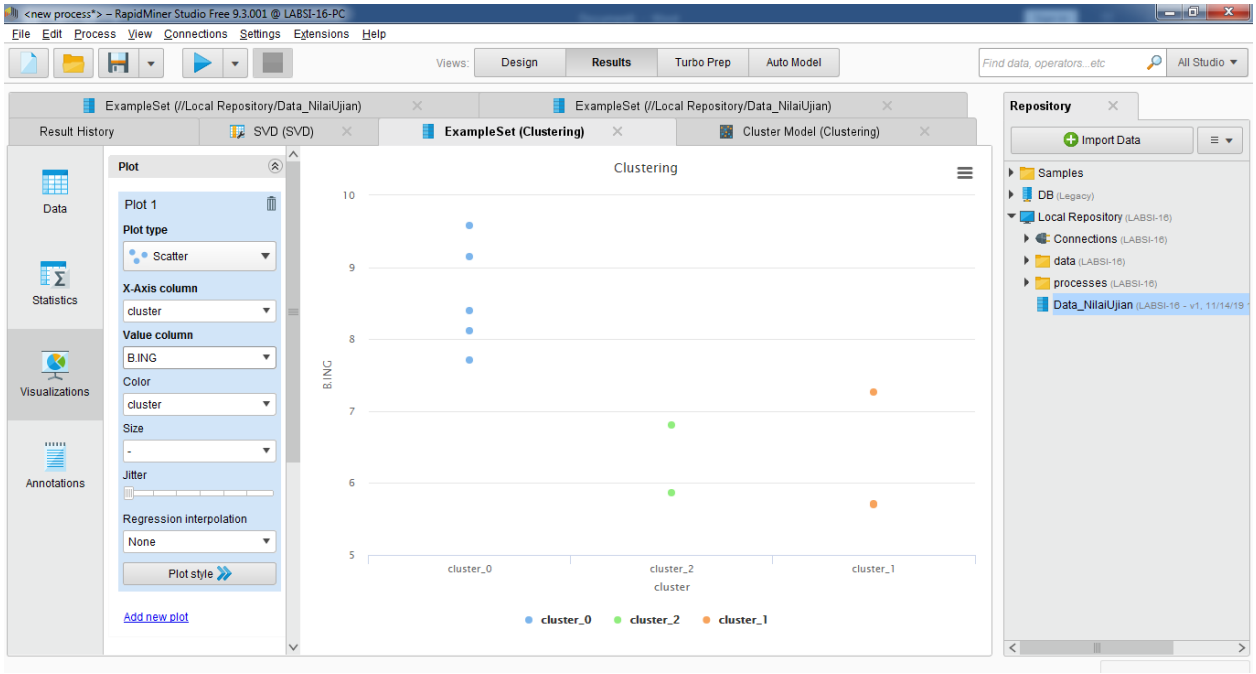
<new process*> – RapidMiner Studio Free 9.3.001 @ LABSI-16-PC
File Edit Process View Connections Settings Extensions Help
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Find data, operators...etc All Studio
ExampleSet (//Local Repository/Data_NilaiUjian)
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ExampleSet (Clustering)
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Plot 1
Plot type
Scatter
X-Axis column
cluster
Value column
B.ING
Color
cluster
Size
-
Jitter
Regression interpolation
None
Plot style
Add new plot
Clustering
B.ING
10
9
8
7
6
5
cluster_0
cluster_2
cluster_1
cluster
cluster_0 cluster_2 cluster_1
Repository
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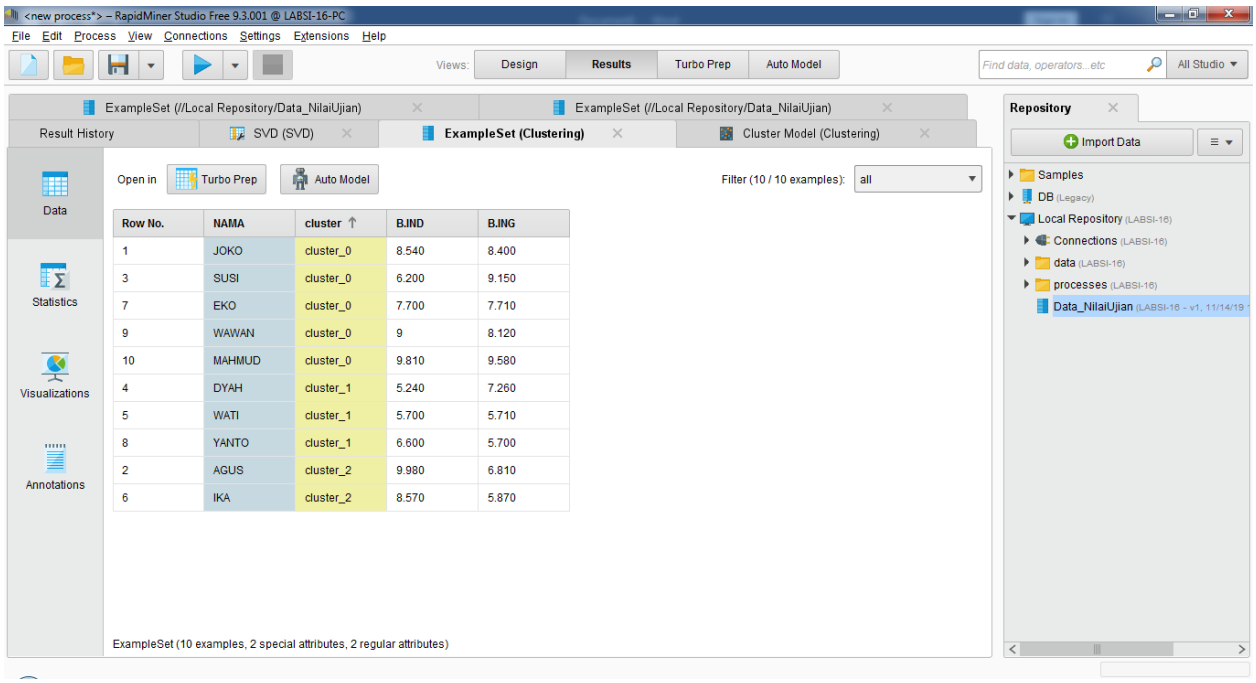
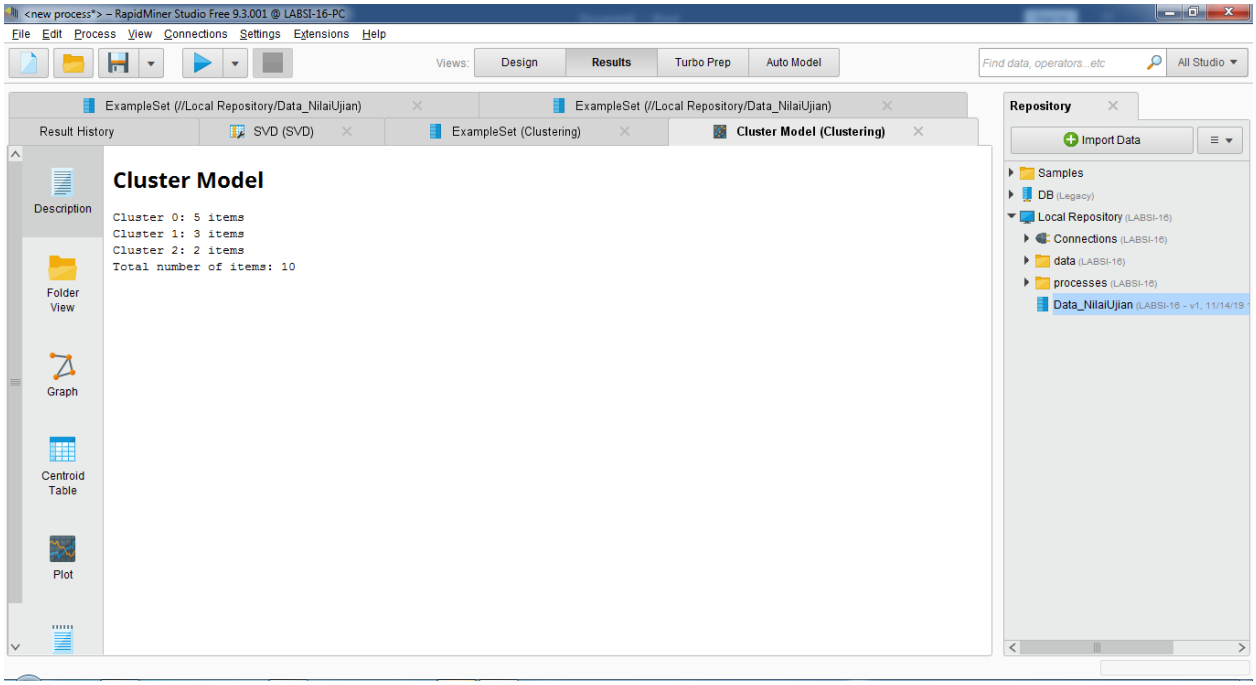
Local Repository (LABSI-16)
Connections (LABSI-16)
data (LABSI-16)
processes (LABSI-16)
Data_NilaiUjian (LABSI-16 - v1, 11/14/19


<new process*> – RapidMiner Studio Free 9.3.001 @ LABSI-16-PC
File Edit Process View Connections Settings Extensions Help
Views: Design Results Turbo Prep Auto Model
Find data, operators...etc All Studio
ExampleSet (//Local Repository/Data_NilaiUjian)
ExampleSet (//Local Repository/Data_NilaiUjian)
Result History
SVD (SVD)
ExampleSet (Clustering)
Cluster Model (Clustering)
Data
Statistics
Visualizations
Annotations
Open in Turbo Prep Auto Model
Filter (10 / 10 examples): all
Row No. NAMA cluster B.IND B.ING
1 JOKO cluster_0 8.540 8.400
3 SUSI cluster_0 6.200 9.150
7 EKO cluster_0 7.700 7.710
9 WAWAN cluster_0 9 8.120
10 MAHMUD cluster_0 9.810 9.580
4 DYAH cluster_1 5.240 7.260
5 WATI cluster_1 5.700 5.710
8 YANTO cluster_1 6.600 5.700
2 AGUS cluster_2 9.980 6.810
6 IKA cluster_2 8.570 5.870
ExampleSet (10 examples, 2 special attributes, 2 regular attributes)
Repository
Import Data
Samples
DB (Legacy)
Local Repository (LABSI-16)
Connections (LABSI-16)
data (LABSI-16)
processes (LABSI-16)
Data_NilaiUjian (LABSI-16 - v1, 11/14/19


<new process*> – RapidMiner Studio Free 9.3.001 @ LABSI-16-PC
File Edit Process View Connections Settings Extensions Help
Views: Design Results Turbo Prep Auto Model
Find data, operators...etc All Studio
ExampleSet (//Local Repository/Data_NilaiUjian)
ExampleSet (//Local Repository/Data_NilaiUjian)
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ExampleSet (Clustering)
Cluster Model (Clustering)
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Centroid Table
Plot
Cluster Model
Cluster 0: 5 items
Cluster 1: 3 items
Cluster 2: 2 items
Total number of items: 10
Repository
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data (LABSI-16)
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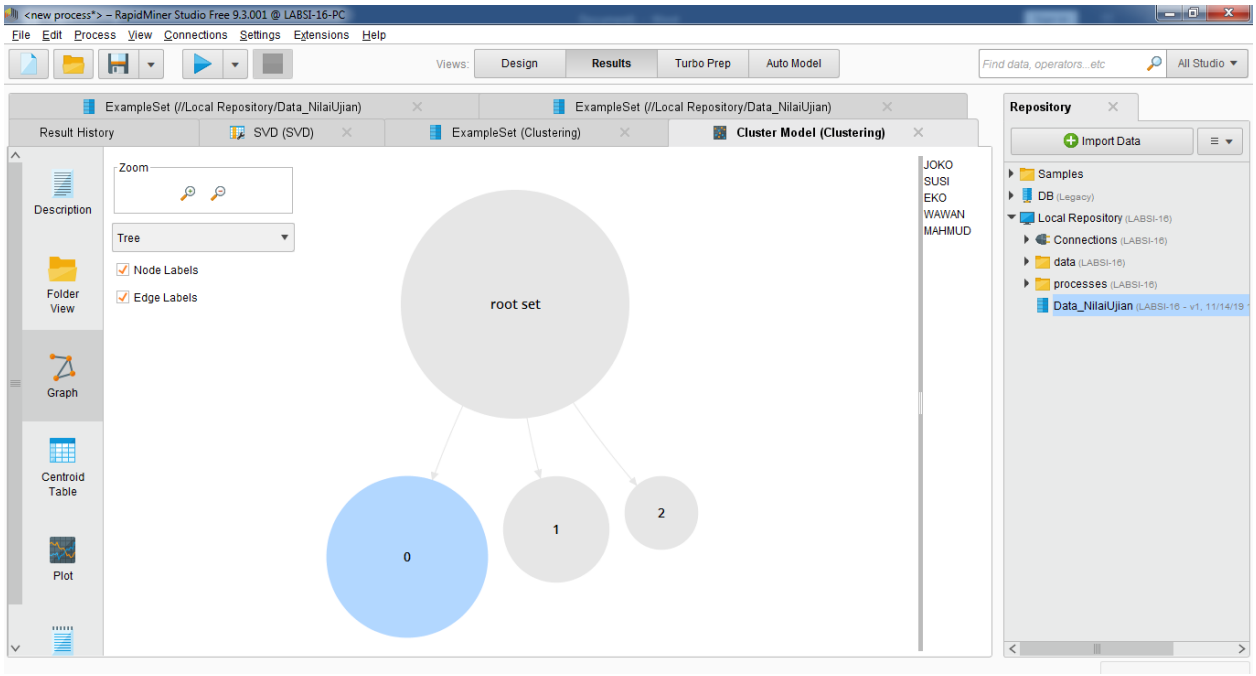
Data_NilaiUjian (LABSI-16 - v1, 11/14/19


<new process*> – RapidMiner Studio Free 9.3.001 @ LABSI-16-PC
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ExampleSet (//Local Repository/Data_NilaiUjian)
ExampleSet (//Local Repository/Data_NilaiUjian)
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root set
0
1
2
JOKO
SUSI
EKO
WAWAN
MAHMUD
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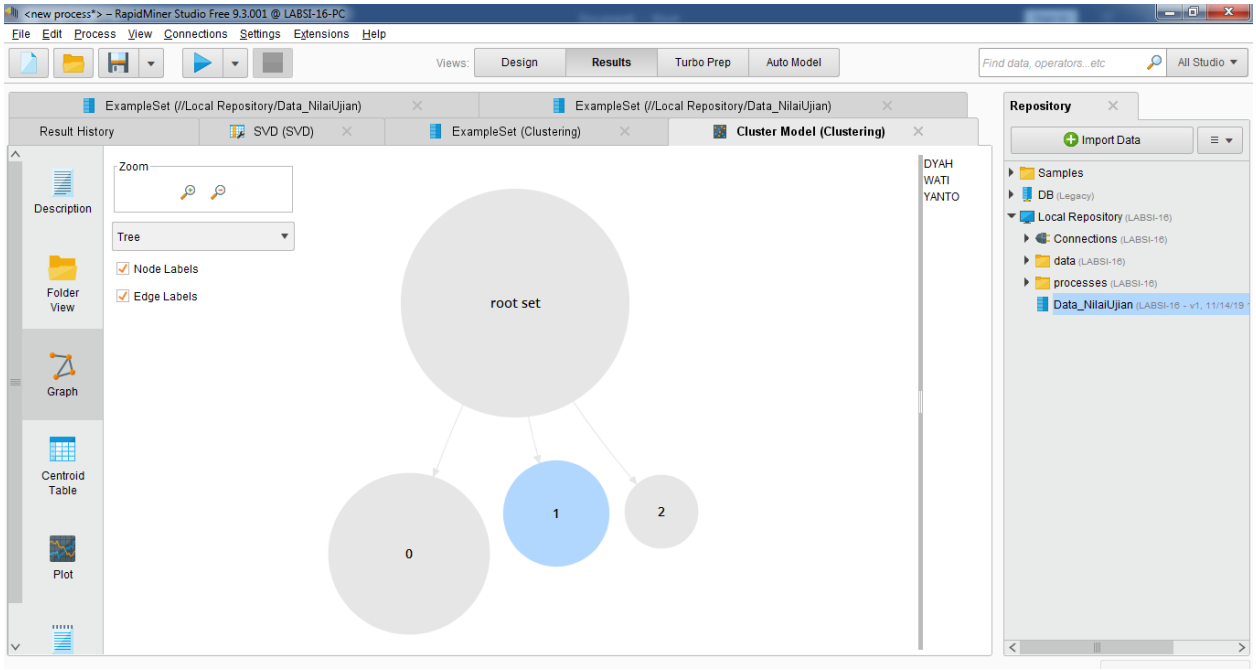
data (LABSI-16)
processes (LABSI-16)
Data_NilaiUjian (LABSI-16 - v1, 11/14/19


<new process*> – RapidMiner Studio Free 9.3.001 @ LABSI-16-PC
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Views: Design Results Turbo Prep Auto Model
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ExampleSet (//Local Repository/Data_NilaiUjian)
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ExampleSet (Clustering)
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Edge Labels
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DYAH
WATI
YANTO
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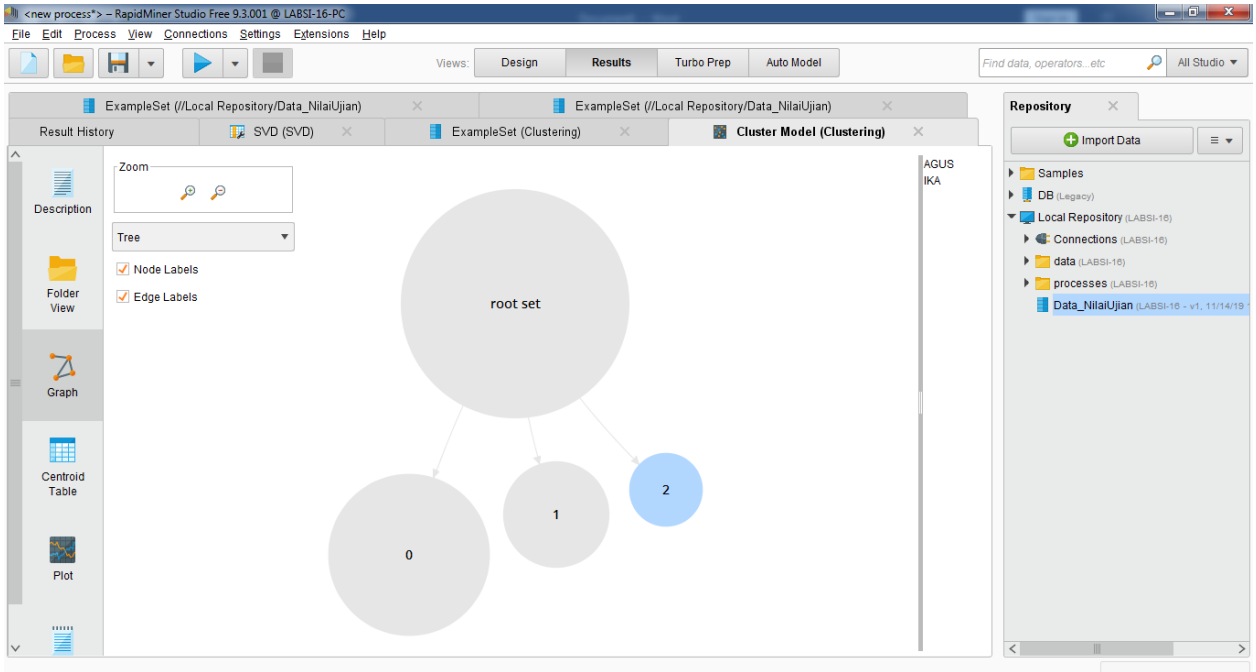
Data_NilaiUjian (LABSI-16 - v1, 11/14/19


<new process*> – RapidMiner Studio Free 9.3.001 @ LABSI-16-PC
File Edit Process View Connections Settings Extensions Help
Views: Design Results Turbo Prep Auto Model
Find data, operators...etc All Studio
ExampleSet (//Local Repository/Data_NilaiUjian)
ExampleSet (//Local Repository/Data_NilaiUjian)
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AGUS
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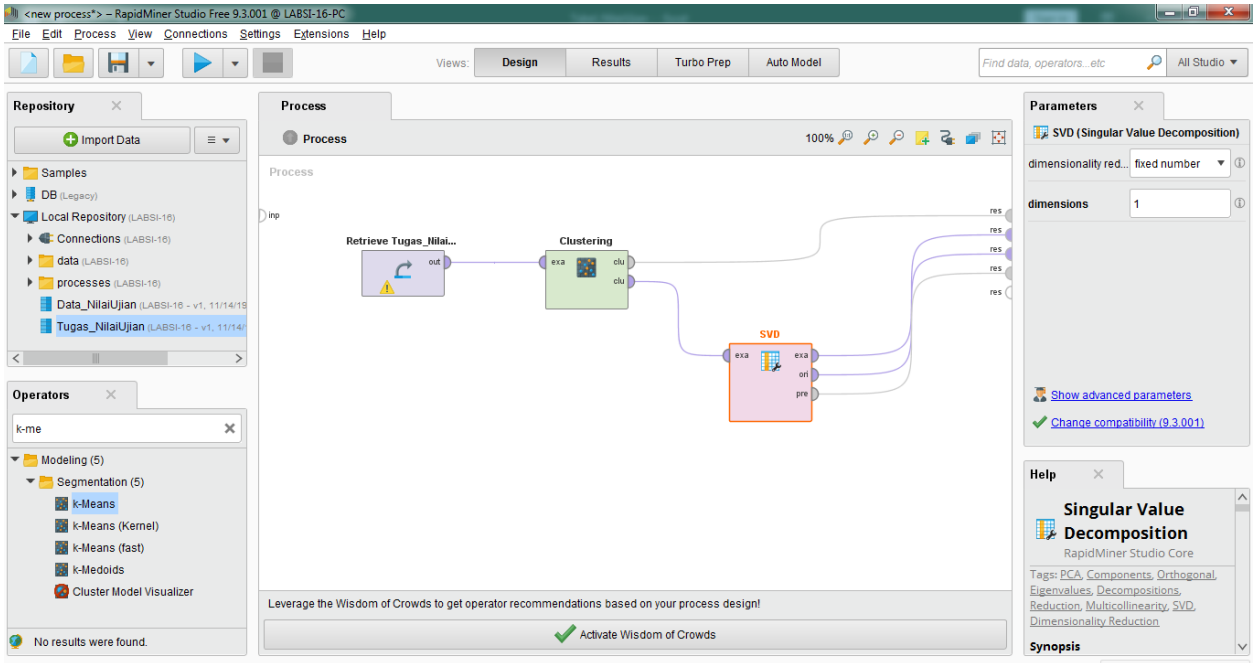
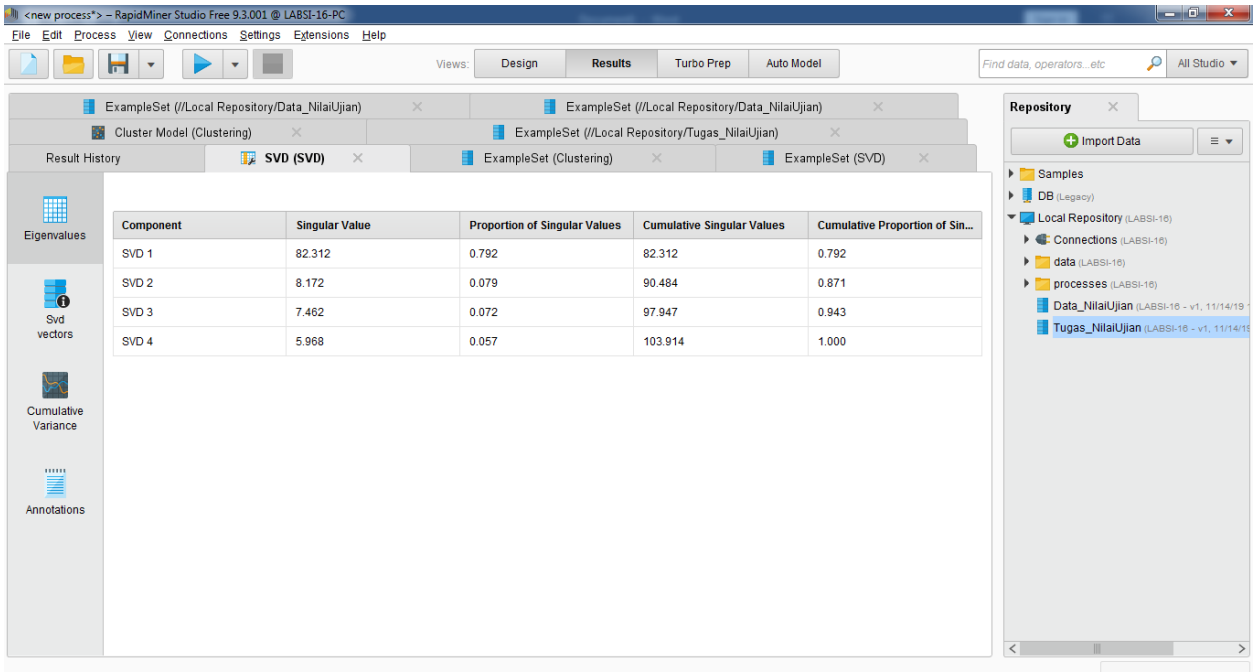
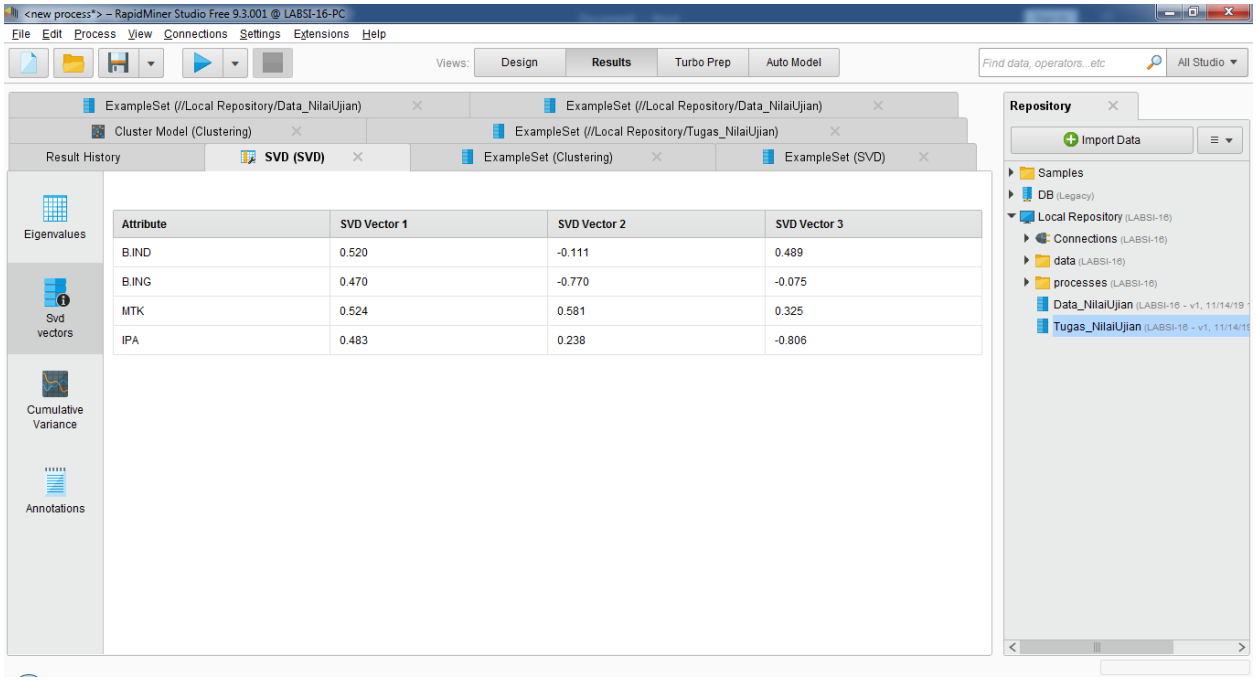
- **Tugas**
  1. Tabel nilai ujian 3 siswa secara random

	A	B	C	D	E	F	G
1	**NO_SISWA**	**NAMA**	**B.IND**	**B.ING**	**MTK**	**IPA**	
2	S_101	JOKO	9,95	5,40	7,41	8,32	
3	S_102	AGUS	9,37	5,91	8,56	6,43	
4	S_103	SUSI	8,77	5,14	5,38	5,94	
5	S_104	DYAH	7,62	6,02	5,38	9,02	
6	S_105	WATI	9,61	6,45	7,94	8,39	
7	S_106	IKA	7,72	7,22	6,24	8,89	
8	S_107	EKO	5,07	8,25	5,73	7,81	
9	S_108	YANTO	7,42	9,97	8,87	9,70	
10	S_109	WAWAN	5,50	7,04	8,91	8,33	
11	S_110	MAHMUD	8,82	9,13	8,51	9,64	
12	S_111	BUDI	9,17	8,05	5,74	5,55	
13	S_112	SANTI	6,77	5,11	5,52	6,80	
14	S_113	DIAN	7,85	9,90	9,37	5,10	
15	S_114	DANI	8,60	6,21	7,38	7,83	
16	S_115	AHMAD	6,31	8,64	9,23	6,14	
17	S_116	BAYU	8,86	6,67	8,81	5,35	
18	S_117	RISA	6,18	6,86	6,42	7,78	
19	S_118	RANI	9,04	8,00	9,82	7,16	
20	S_119	YANI	5,20	5,24	5,59	8,50	
21	S_120	RATIH	7,96	5,64	8,72	6,15	
22	S_121	INDAH	7,45	6,29	8,15	9,06	
23	S_122	JONO	6,76	8,89	6,39	8,09	
24	S_123	SARAH	8,51	7,64	6,95	6,06	
25	S_124	RAMA	6,42	6,07	7,63	5,89	
26	S_125	BAMBANG	9,06	7,71	8,52	7,41	
27	S_126	HADI	5,41	5,65	6,66	5,48	
28	S_127	NANA	5,81	8,43	7,01	6,43	
29	S_128	FEBRI	7,56	7,84	8,25	7,67	
30	S_129	DENI	9,51	9,82	7,64	6,70	

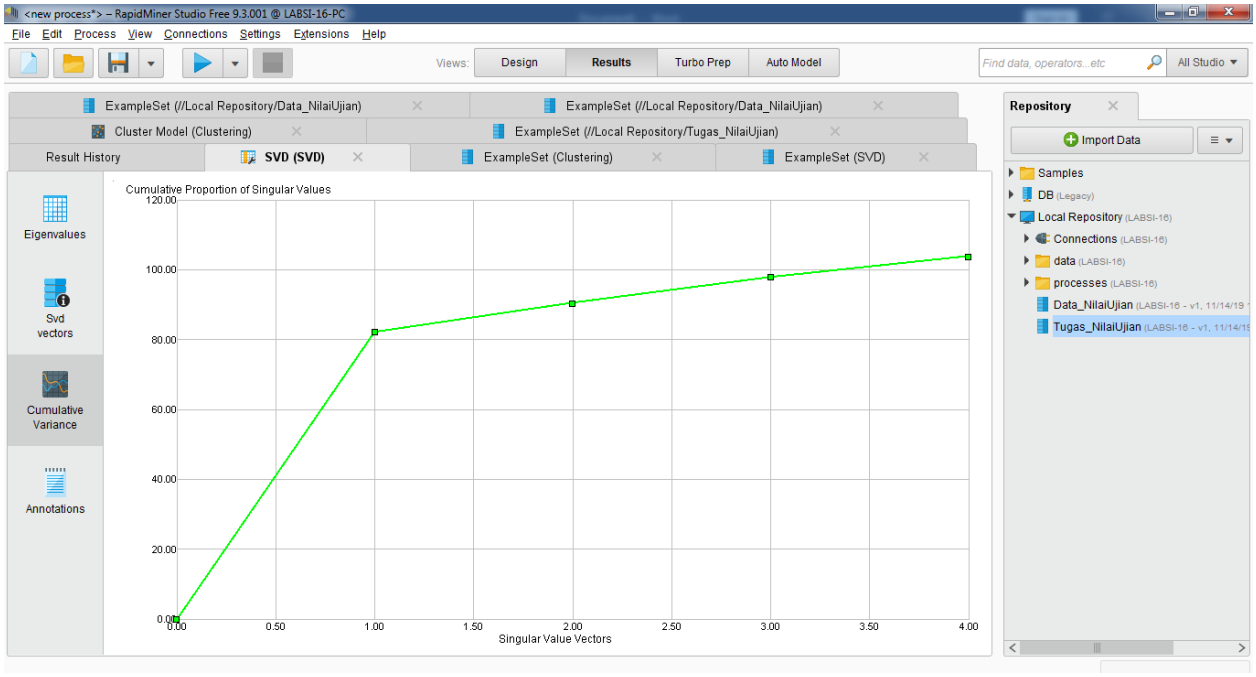
2. RapidMiner

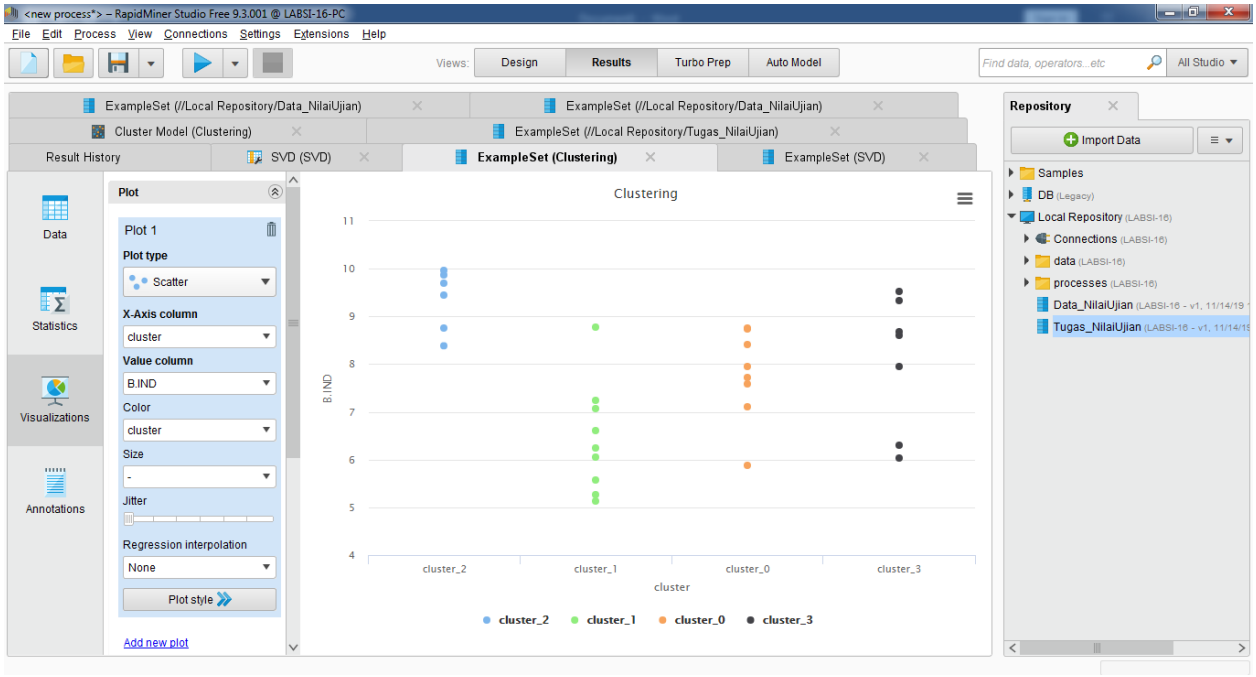






Attribute	SVD Vector 1	SVD Vector 2	SVD Vector 3
B.IND	0.520	-0.111	0.489
B.ING	0.470	-0.770	-0.075
MTK	0.524	0.581	0.325
IPA	0.483	0.238	-0.806




<new process*> – RapidMiner Studio Free 9.3.001 @ LABSI-16-PC
File Edit Process View Connections Settings Extensions Help
Views: Design Results Turbo Prep Auto Model
Find data, operators...etc All Studio
ExampleSet (//Local Repository/Data_NilaiUjian)
ExampleSet (//Local Repository/Data_NilaiUjian)
Cluster Model (Clustering)
ExampleSet (//Local Repository/Tugas_NilaiUjian)
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ExampleSet (Clustering)
ExampleSet (SVD)
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Tugas_NilaiUjian (LABSI-16 - v1, 11/14/19
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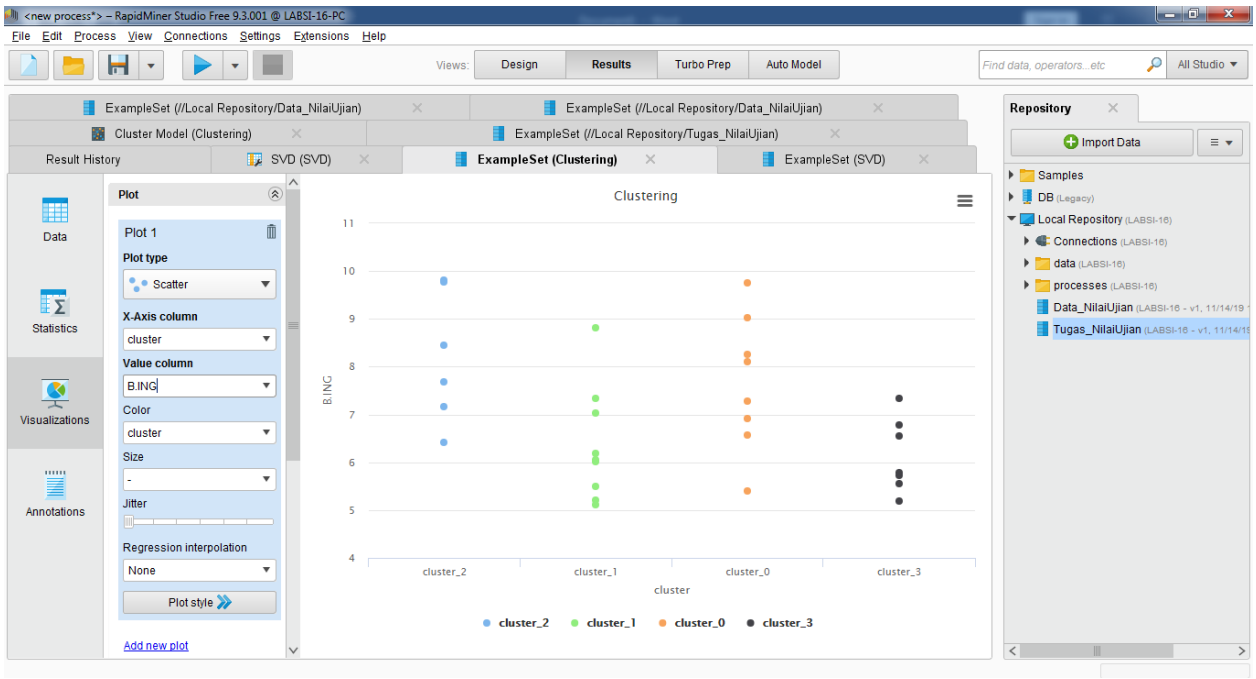
Plot 1
Plot type
Scatter
X-Axis column
cluster
Value column
B.IND
Color
cluster
Size
-
Jitter
Regression interpolation
None
Plot style
Add new plot
Clustering
B.IND
cluster
cluster_2
cluster_1
cluster_0
cluster_3


<new process*> – RapidMiner Studio Free 9.3.001 @ LABSI-16-PC
File Edit Process View Connections Settings Extensions Help
Views: Design Results Turbo Prep Auto Model
Find data, operators...etc All Studio
ExampleSet (//Local Repository/Data_NilaiUjian)
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Cluster Model (Clustering)
ExampleSet (//Local Repository/Tugas_NilaiUjian)
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ExampleSet (Clustering)
ExampleSet (SVD)
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processes (LABSI-16)
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Plot 1
Plot type
Scatter
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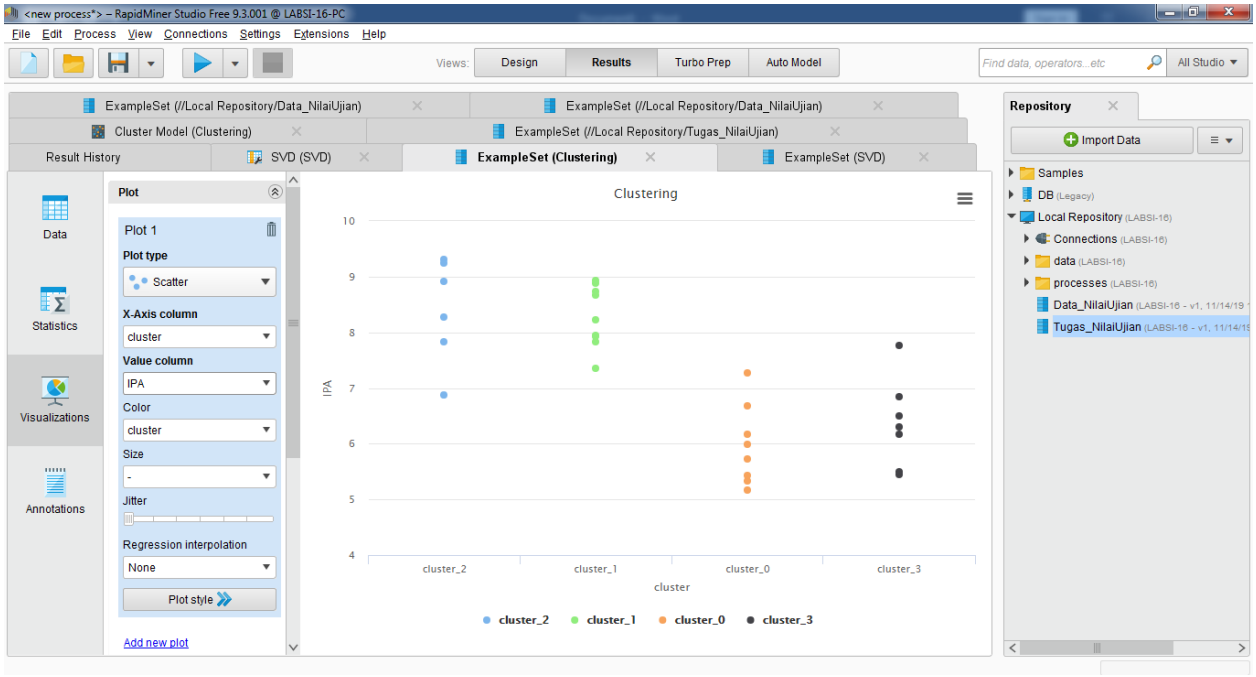
cluster
Value column
B.ING
Color
cluster
Size
-
Jitter
Regression interpolation
None
Plot style
Add new plot
Clustering
B.ING
cluster
cluster_2
cluster_1
cluster_0
cluster_3


<new process*> – RapidMiner Studio Free 9.3.001 @ LABSI-16-PC
File Edit Process View Connections Settings Extensions Help
Views: Design Results Turbo Prep Auto Model
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ExampleSet (//Local Repository/Data_NilaiUjian)
ExampleSet (//Local Repository/Data_NilaiUjian)
Cluster Model (Clustering)
ExampleSet (//Local Repository/Tugas_NilaiUjian)
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ExampleSet (SVD)
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data (LABSI-16)
processes (LABSI-16)
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Tugas_NilaiUjian (LABSI-16 - v1, 11/14/19
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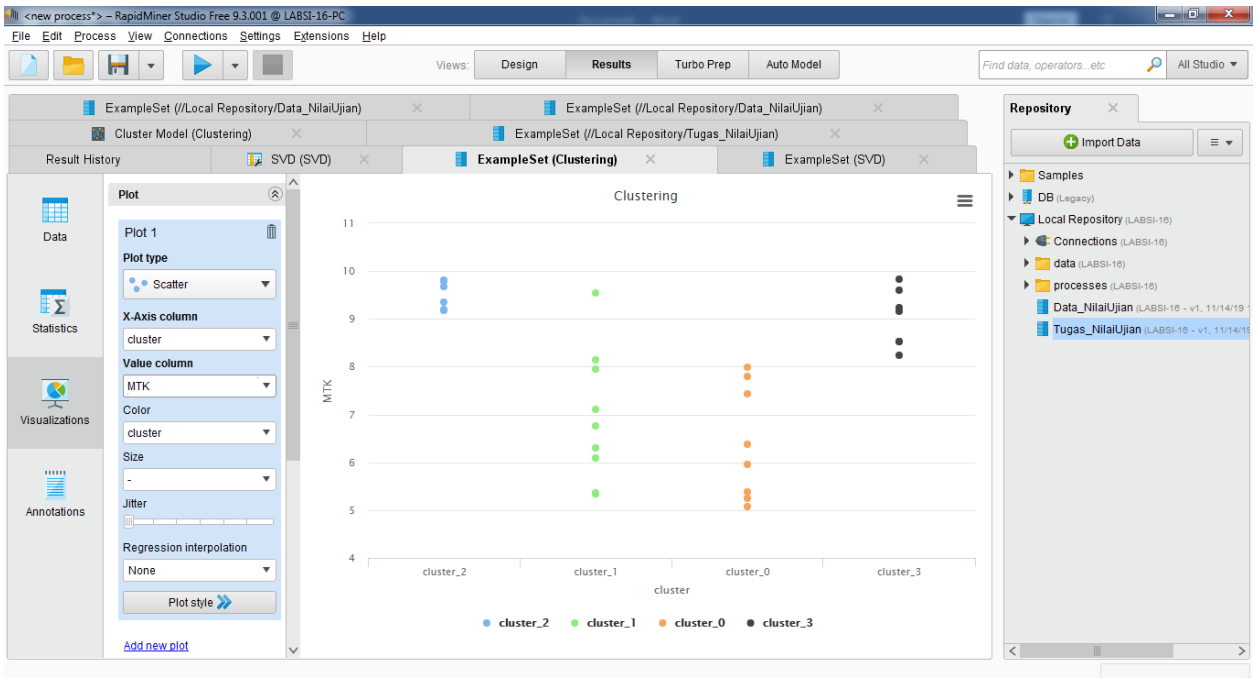
Annotations
Plot
Plot 1
Plot type
Scatter
X-Axis column
cluster
Value column
IPA
Color
cluster
Size
-
Jitter
Regression interpolation
None
Plot style
Add new plot
Clustering
IPA
cluster
cluster_2
cluster_1
cluster_0
cluster_3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ExampleSet (//Local Repository/Data_NilaiUjian)
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ExampleSet (//Local Repository/Tugas_NilaiUjian)
Result History
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ExampleSet (Clustering)
ExampleSet (SVD)
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Tugas_NilaiUjian (LABSI-16 - v1, 11/14/19
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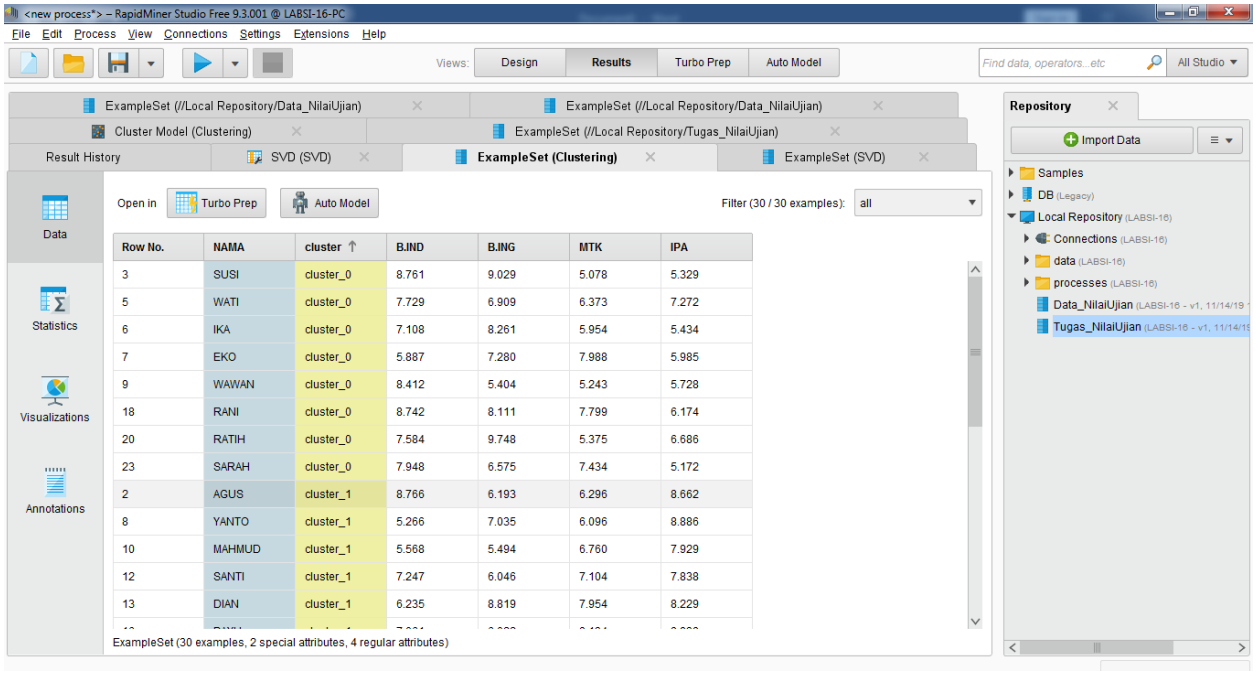
Plot
Plot 1
Plot type
Scatter
X-Axis column
cluster
Value column
MTK
Color
cluster
Size
-
Jitter
Regression interpolation
None
Plot style
Add new plot
Clustering
MTK
cluster
cluster_2
cluster_1
cluster_0
cluster_3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Views: Design Results Turbo Prep Auto Model
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ExampleSet (//Local Repository/Data_NilaiUjian)
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Cluster Model (Clustering)
ExampleSet (//Local Repository/Tugas_NilaiUjian)
Result History
SVD (SVD)
ExampleSet (Clustering)
ExampleSet (SVD)
Data
Statistics
Visualizations
Annotations
Open in Turbo Prep Auto Model
Filter (30 / 30 examples): all
Row No. NAMA cluster B.IND B.ING MTK IPA
3 SUSI cluster_0 8.761 9.029 5.078 5.329
5 WATI cluster_0 7.729 6.909 6.373 7.272
6 IKA cluster_0 7.108 8.261 5.954 5.434
7 EKO cluster_0 5.887 7.280 7.988 5.985
9 WAWAN cluster_0 8.412 5.404 5.243 5.728
18 RANI cluster_0 8.742 8.111 7.799 6.174
20 RATIH cluster_0 7.584 9.748 5.375 6.686
23 SARAH cluster_0 7.948 6.575 7.434 5.172
2 AGUS cluster_1 8.766 6.193 6.296 8.662
8 YANTO cluster_1 5.266 7.035 6.096 8.886
10 MAHMUD cluster_1 5.568 5.494 6.760 7.929
12 SANTI cluster_1 7.247 6.046 7.104 7.838
13 DIAN cluster_1 6.235 8.819 7.954 8.229
ExampleSet (30 examples, 2 special attributes, 4 regular attributes)
Repository
Import Data
Samples
DB (Legacy)
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Connections (LABSI-16)
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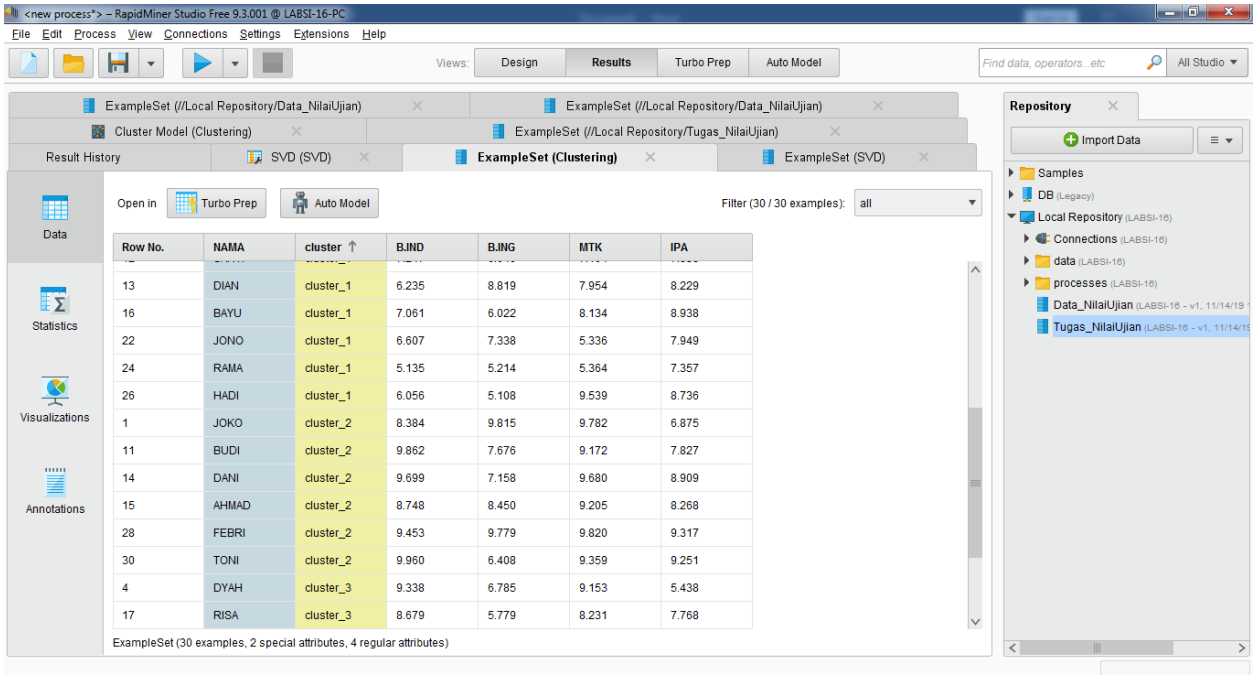
Tugas_NilaiUjian (LABSI-16 - v1, 11/14/19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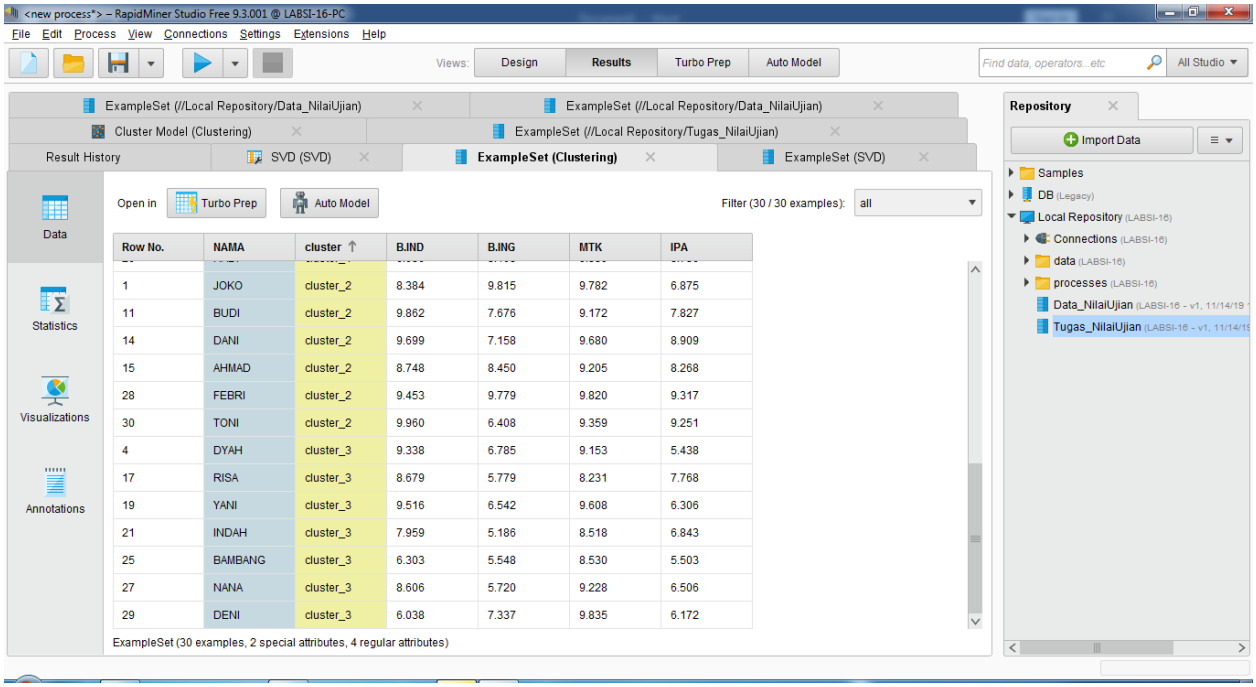
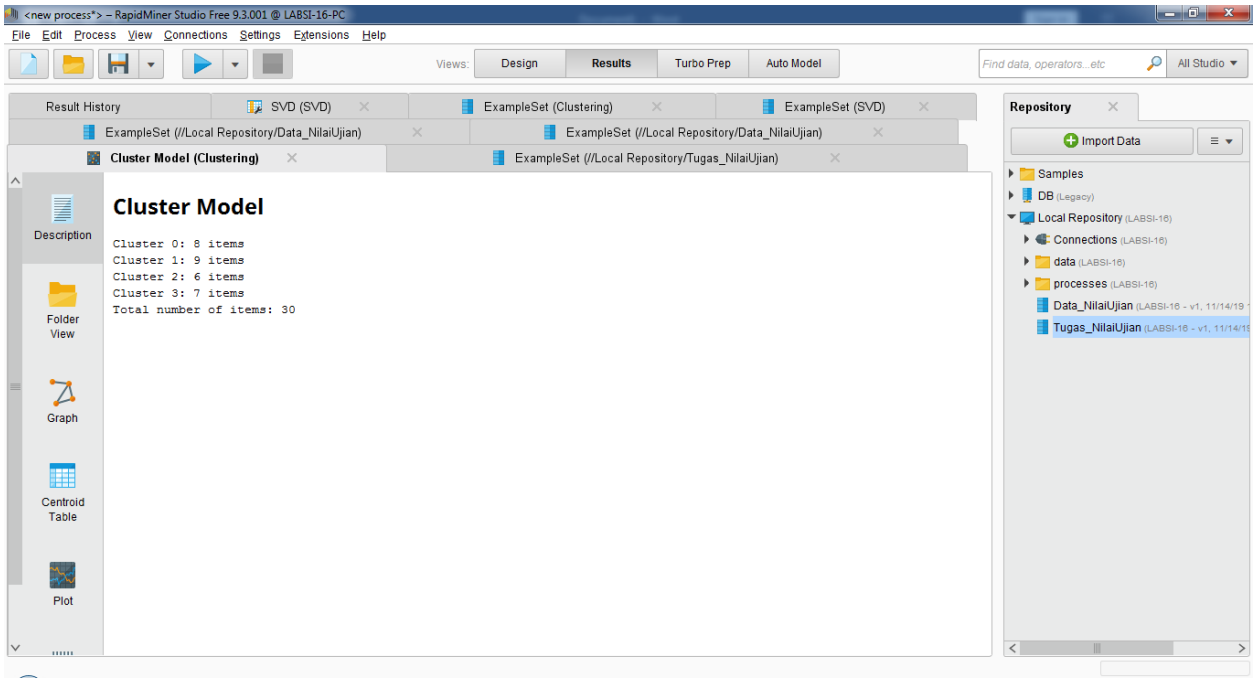
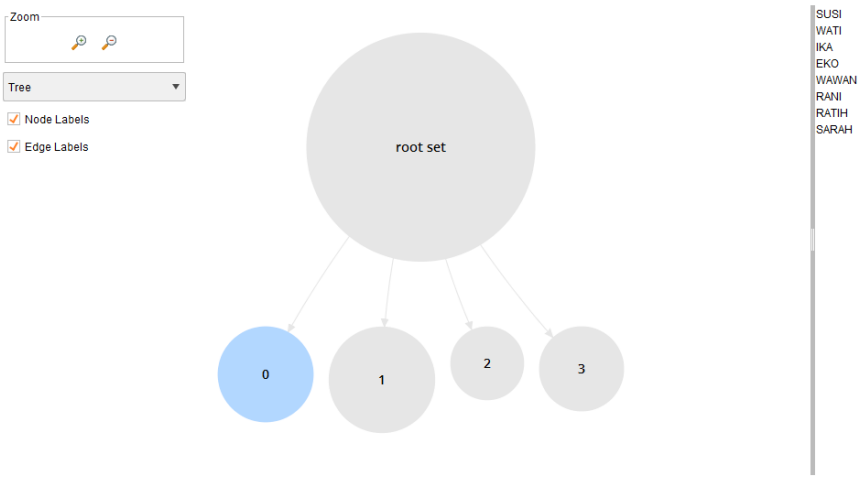
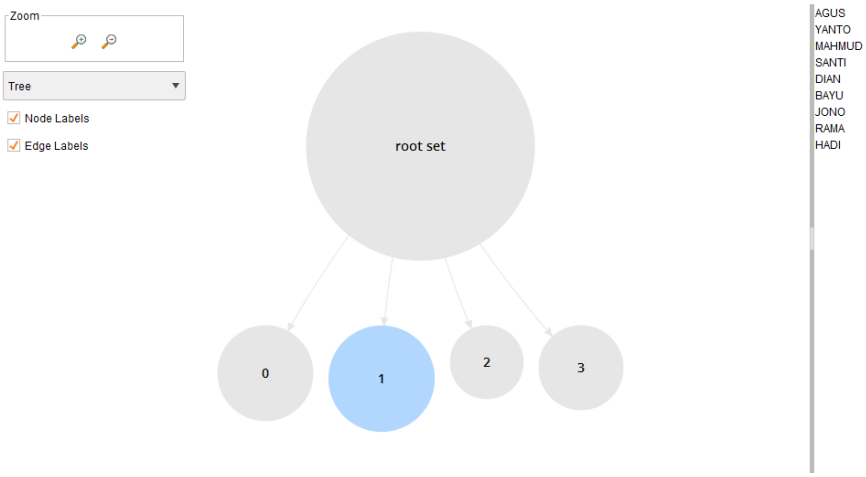
Open in Turbo Prep Auto Model
Filter (30 / 30 examples): all
Row No. NAMA cluster B.IND B.ING MTK IPA
13 DIAN cluster_1 6.235 8.819 7.954 8.229
16 BAYU cluster_1 7.061 6.022 8.134 8.938
22 JONO cluster_1 6.607 7.338 5.336 7.949
24 RAMA cluster_1 5.135 5.214 5.364 7.357
26 HADI cluster_1 6.056 5.108 9.539 8.736
1 JOKO cluster_2 8.384 9.815 9.782 6.875
11 BUDI cluster_2 9.862 7.676 9.172 7.827
14 DANI cluster_2 9.699 7.158 9.680 8.909
15 AHMAD cluster_2 8.748 8.450 9.205 8.268
28 FEBRI cluster_2 9.453 9.779 9.820 9.317
30 TONI cluster_2 9.960 6.408 9.359 9.251
4 DYAH cluster_3 9.338 6.785 9.153 5.438
17 RISA cluster_3 8.679 5.779 8.231 7.768
ExampleSet (30 examples, 2 special attributes, 4 regular attributes)
Repository
Import Data
Samples
DB (Legacy)
Local Repository (LABSI-16)
Connections (LABSI-16)
data (LABSI-16)
processes (LABSI-16)
Data_NilaiUjian (LABSI-16 - v1, 11/14/19
Tugas_NilaiUjian (LABSI-16 - v1, 11/14/19

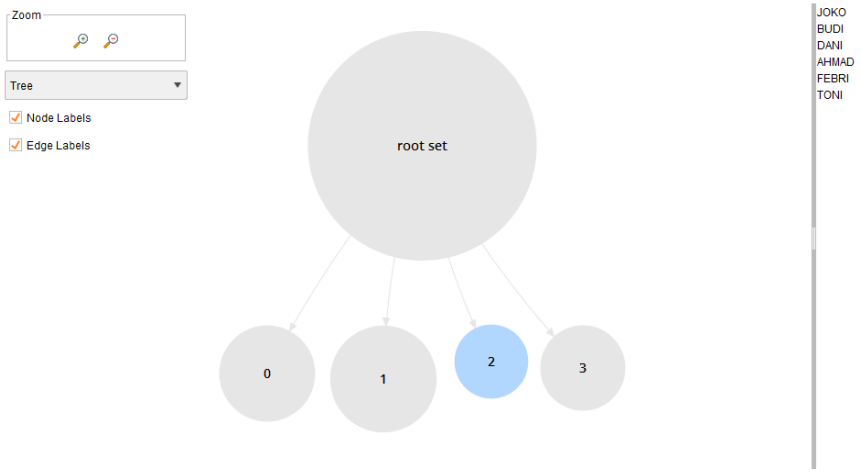




3. Nama siswa yang terdapat dalam cluster :
    a. Cluster 0 : Susi, Wati, Ika, Eko, Wawan, Rani, Ratih, Sarah
    b. Cluster 1 : Agus, Yanto, Mahmud, Santi, Dian, Bayu, Jono, Rama, Hadi
    c. Cluster 2 : Joko, Budi, Dani, Ahmad, Febri, Toni
    d. Cluster 3 : Dyah, Risa, Yani, Indah, Bambang, Nana, Deni


Zoom
Tree
Node Labels
Edge Labels
root set
0
1
2
3
SUSI
WATI
IKA
EKO
WAWAN
RANI
RATIH
SARAH

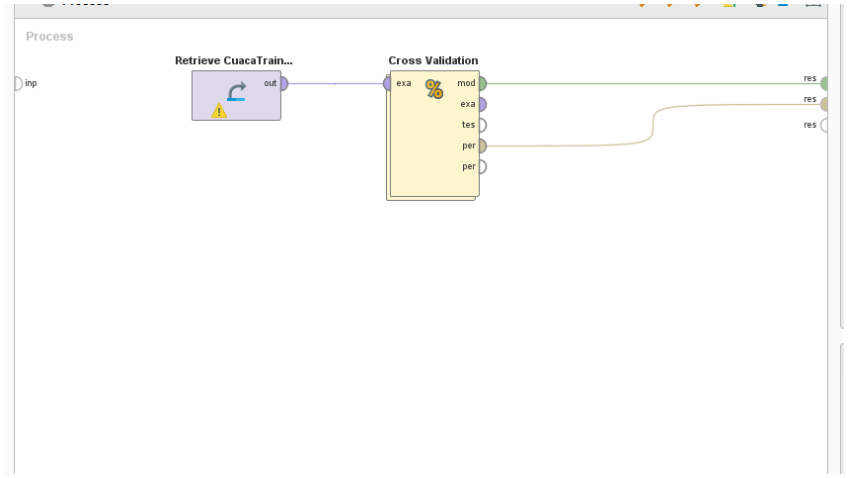

Zoom
Tree
Node Labels
Edge Labels
root set
0
1
2
3
AGUS
YANTO
MAHMUD
SANTI
DIAN
BAYU
JONO
RAMA
HADI

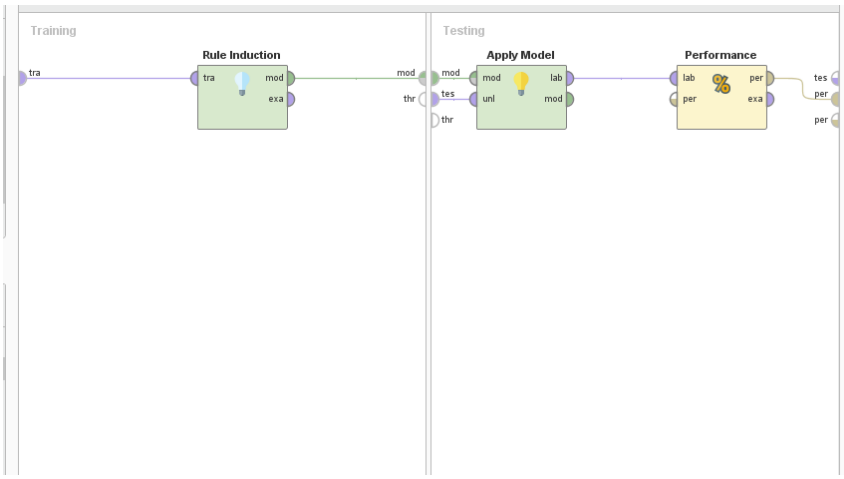

Zoom
Tree
Node Labels
Edge Labels
root set
0
1
2
3
JOKO
BUDI
DANI
AHMAD
FEBRI
TONI


Zoom
Tree
Node Labels
Edge Labels
root set
0
1
2
3
DYAH
RISA
YANI
INDAH
BAMBANG
NANA
DENI

MODUL 11

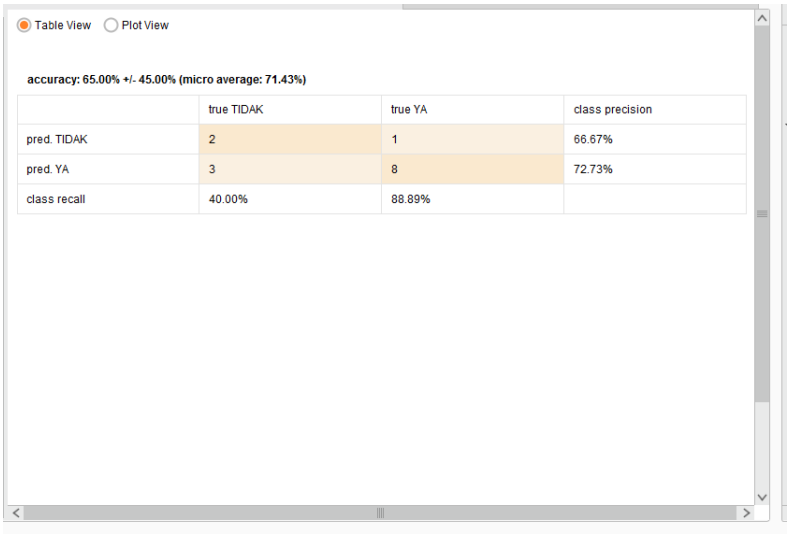
- **Kegiatan**
  1. Induksi Aturan Cuaca



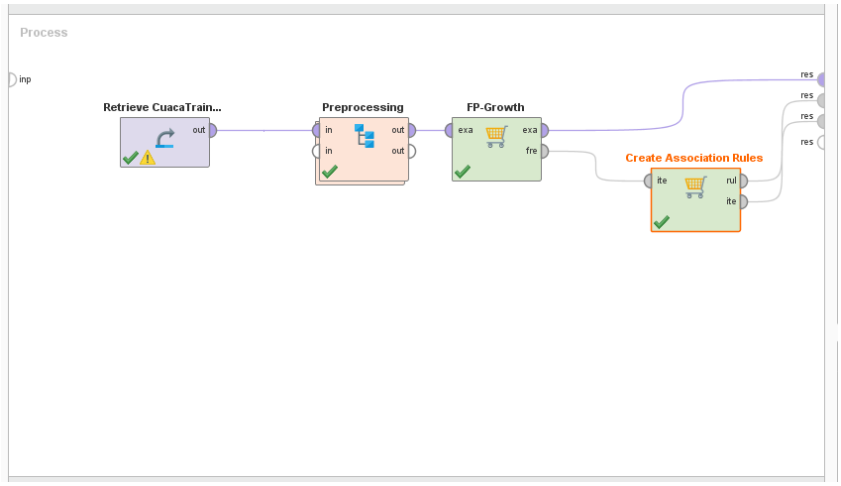


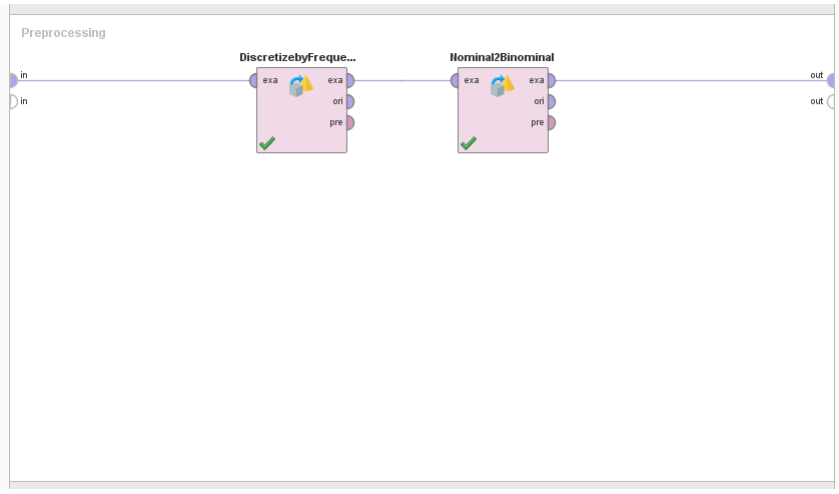
RuleModel

```
if Kelembaban_udara ≤ 82.500 then YA  (1 / 6)
if Cuaca = Cerah then TIDAK  (3 / 0)
if Cuaca = Mendung then YA  (0 / 2)
if Suhu ≤ 70.500 then YA  (0 / 1)
else TIDAK  (0 / 0)

correct: 12 out of 13 training examples.
```

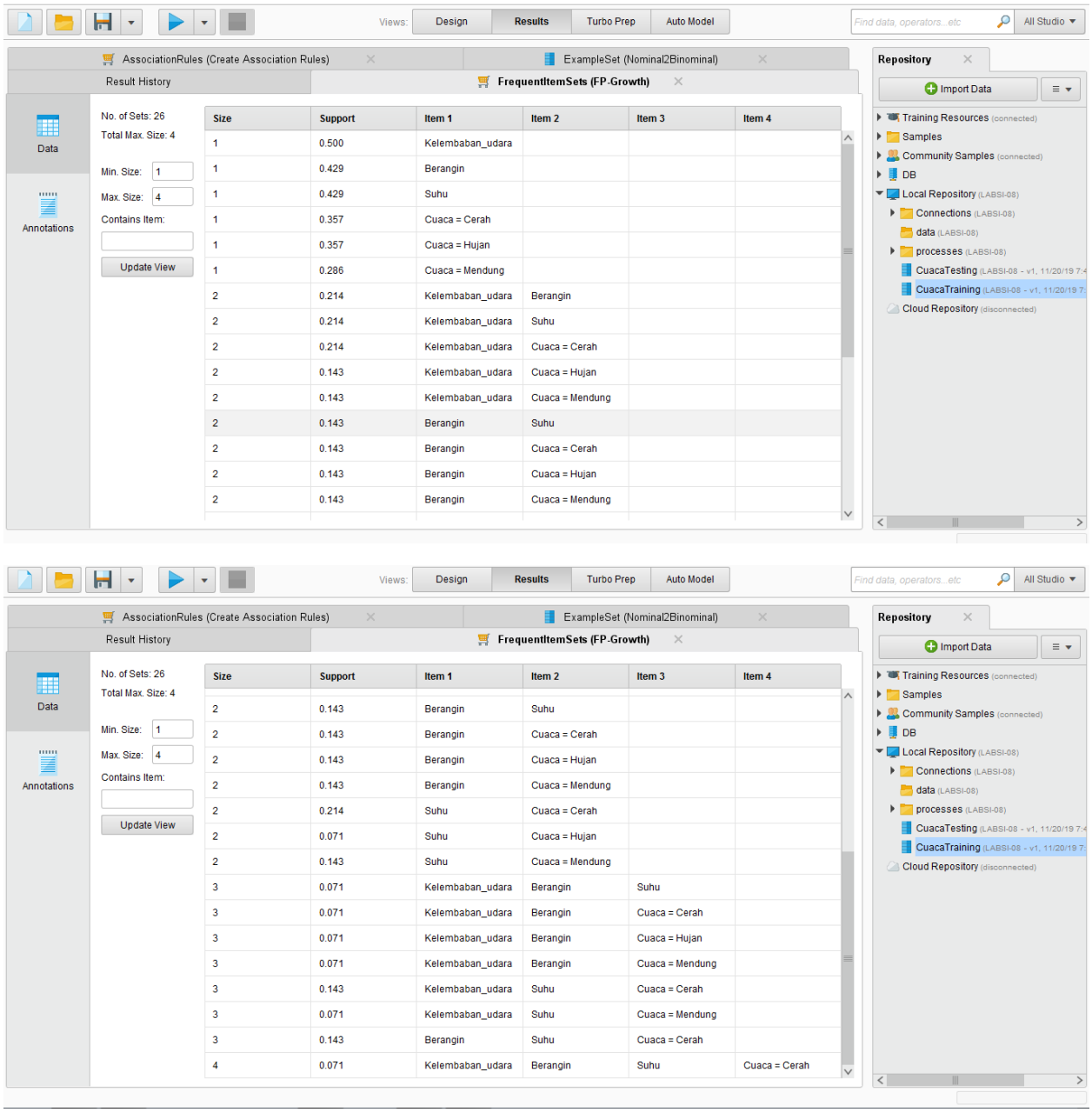


2. Aturan Asosiasi Data Cuaca





a) Frequent Item Set



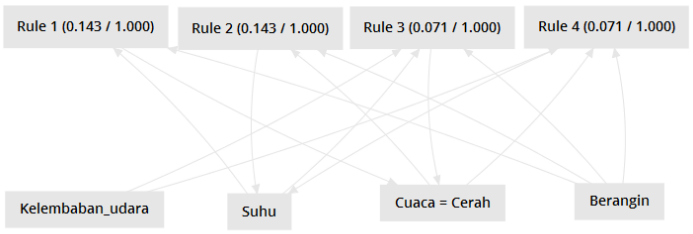
b) Association Rules

i. Table View

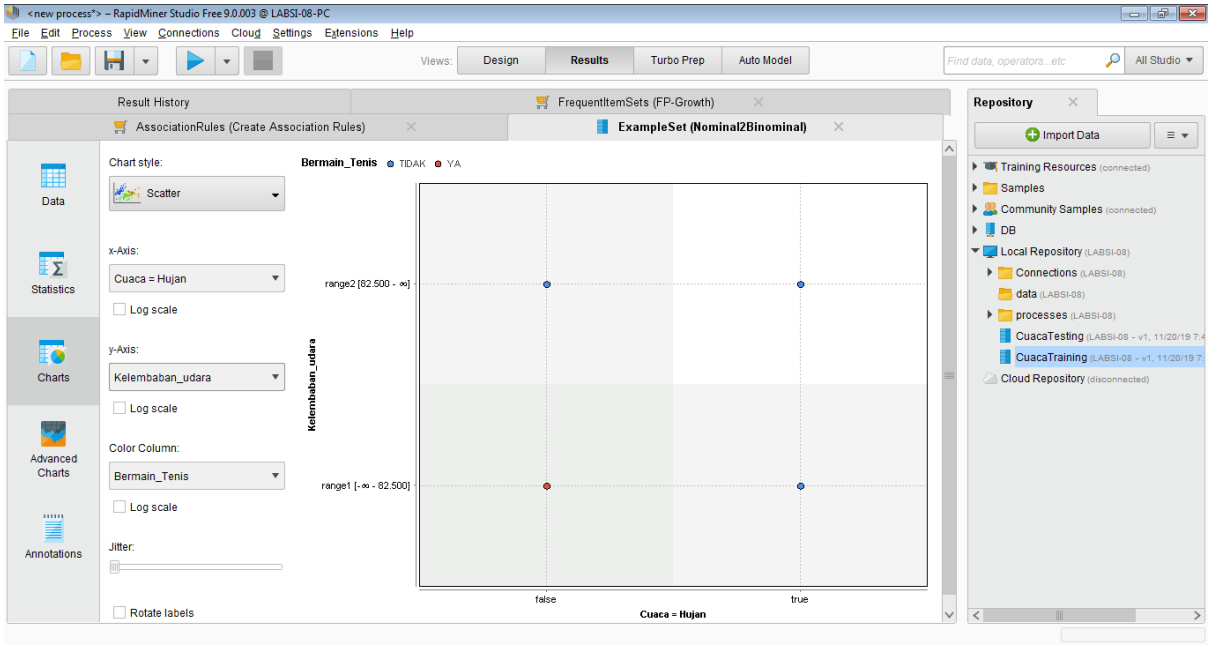
No.	Premises	Conclusion	Support
1	Berangin, Suhu	Cuaca = Cerah	0.143
2	Berangin, Cuaca = Cerah	Suhu	0.143
3	Kelembaban_udara, Berangin, Suhu	Cuaca = Cerah	0.071
4	Kelembaban_udara, Berangin, Cuaca = Cerah	Suhu	0.071

	Support	Confidence	LaPlace	Gain	p-s	Lift	Convicti...
	0.143	1	1	-0.143	0.092	2.800	∞
	0.143	1	1	-0.143	0.082	2.333	∞
	0.071	1	1	-0.071	0.046	2.800	∞
	0.071	1	1	-0.071	0.041	2.333	∞

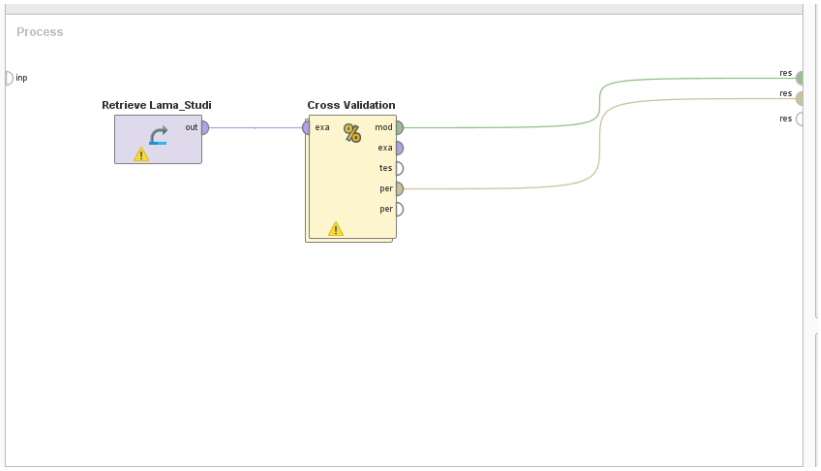
ii. Graph View

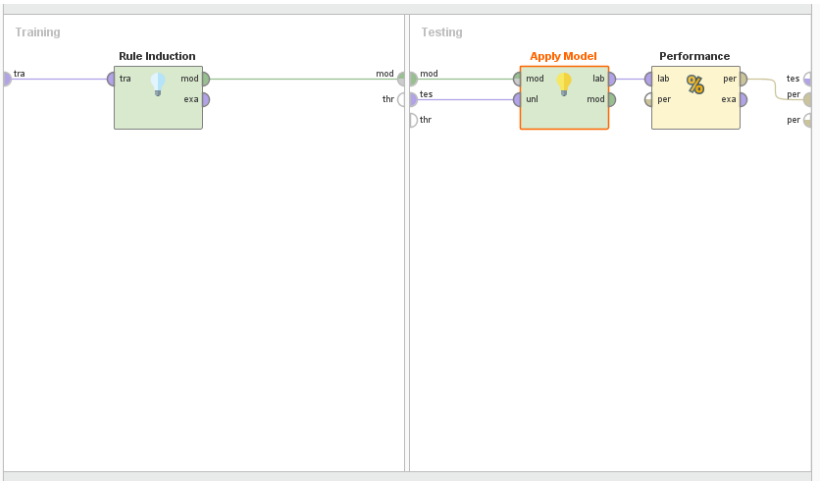


c) Example set



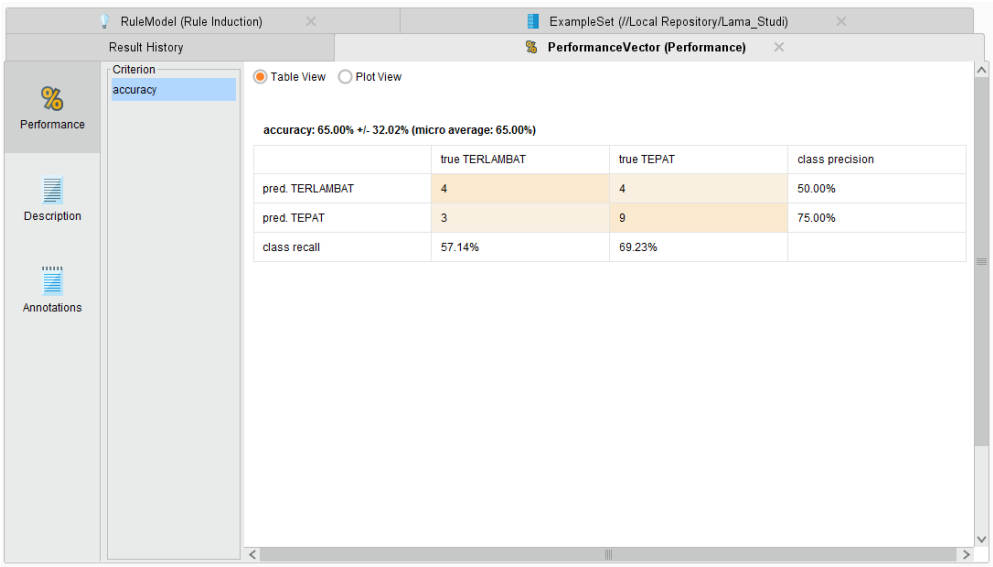
- **Tugas**
  1. Rule Model dan Nilai Performance Vector



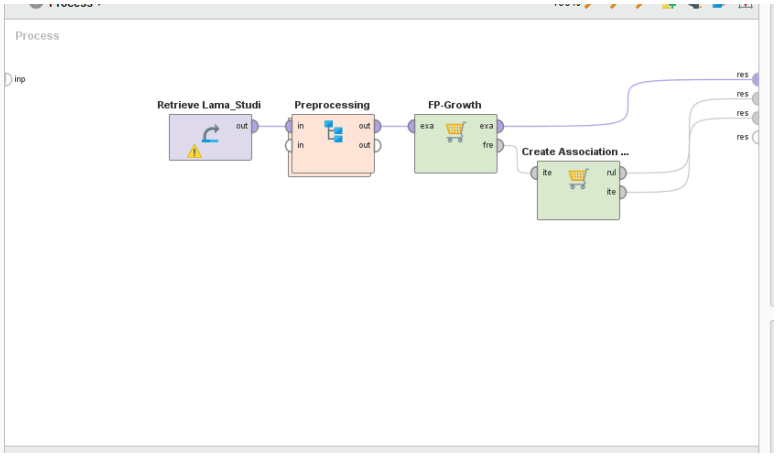


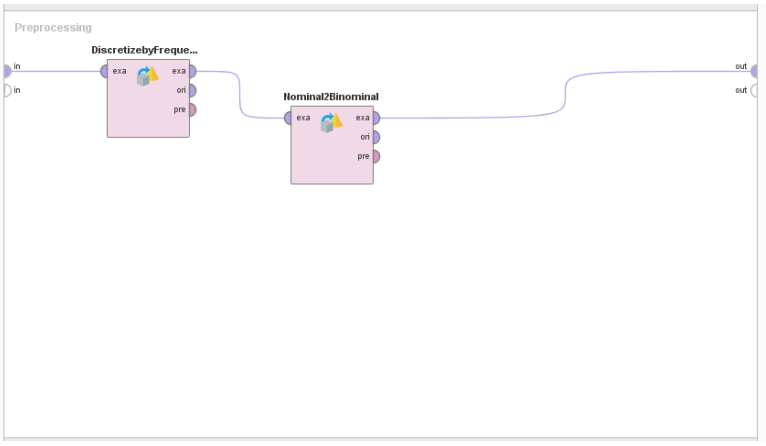
RuleModel

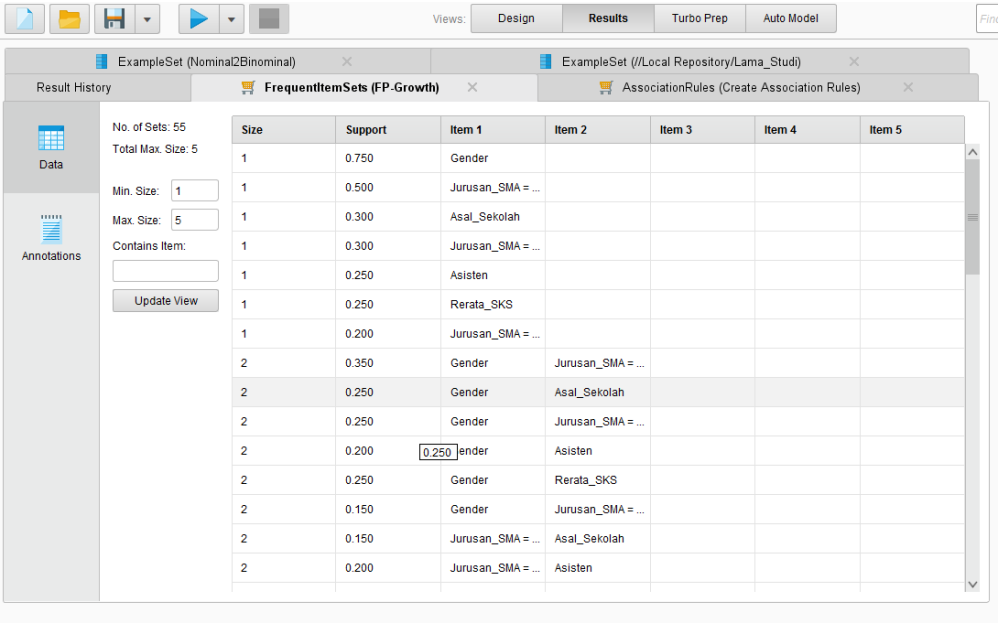
```
if Rerata_SKS > 18.500 then TEPAT  (2 / 10)
if Gender = PRIA then TERLAMBAT  (4 / 0)
if Jurusan_SMA = IPA then TEPAT  (0 / 2)
if Jurusan_SMA = IPS then TERLAMBAT  (1 / 0)
else TEPAT  (0 / 0)

correct: 17 out of 19 training examples.
```

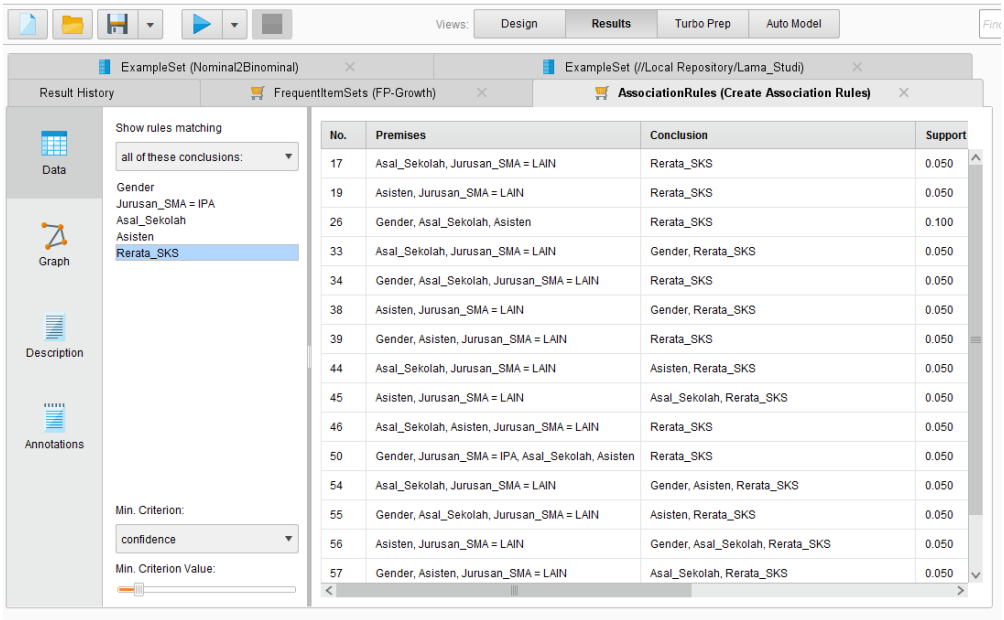


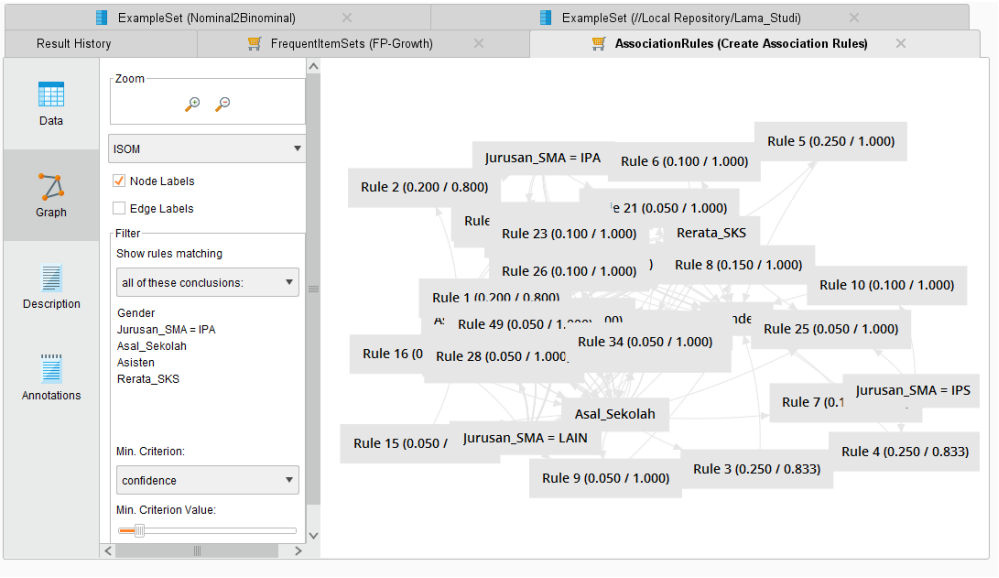
2. Nilai :
   a) *number of bins* = 2

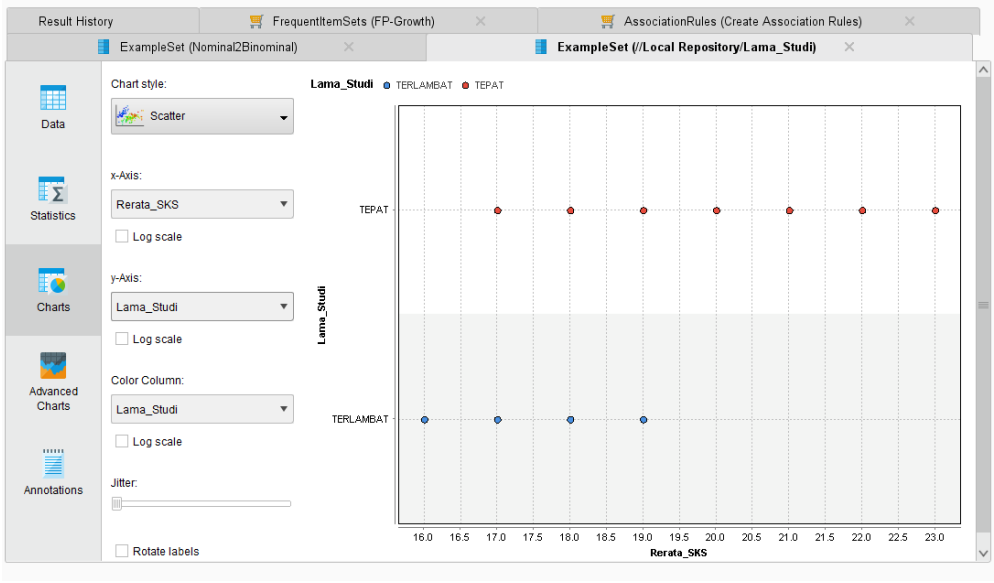




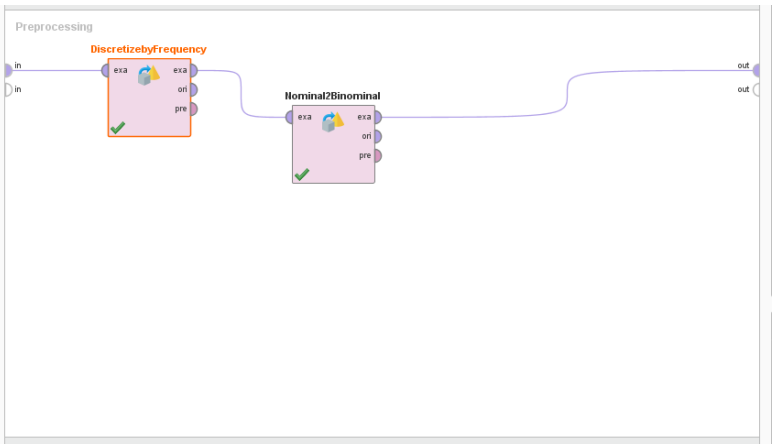

Views:
Design
Results
Turbo Prep
Auto Model
ExampleSet (Nominal2Binominal)
ExampleSet (//Local Repository/Lama_Studi)
Result History
FrequentItemSets (FP-Growth)
AssociationRules (Create Association Rules)
Data
Annotations
No. of Sets: 55
Total Max. Size: 5
Min. Size: 1
Max. Size: 5
Contains Item:
Update View
Size
Support
Item 1
Item 2
Item 3
Item 4
Item 5
1 0.750 Gender
1 0.500 Jurusan_SMA = ...
1 0.300 Asal_Sekolah
1 0.300 Jurusan_SMA = ...
1 0.250 Asisten
1 0.250 Rerata_SKS
1 0.200 Jurusan_SMA = ...
2 0.350 Gender Jurusan_SMA = ...
2 0.250 Gender Asal_Sekolah
2 0.250 Gender Jurusan_SMA = ...
2 0.200 0.250 ender Asisten
2 0.250 Gender Rerata_SKS
2 0.150 Gender Jurusan_SMA = ...
2 0.150 Jurusan_SMA = ... Asal_Sekolah
2 0.200 Jurusan_SMA = ... Asisten

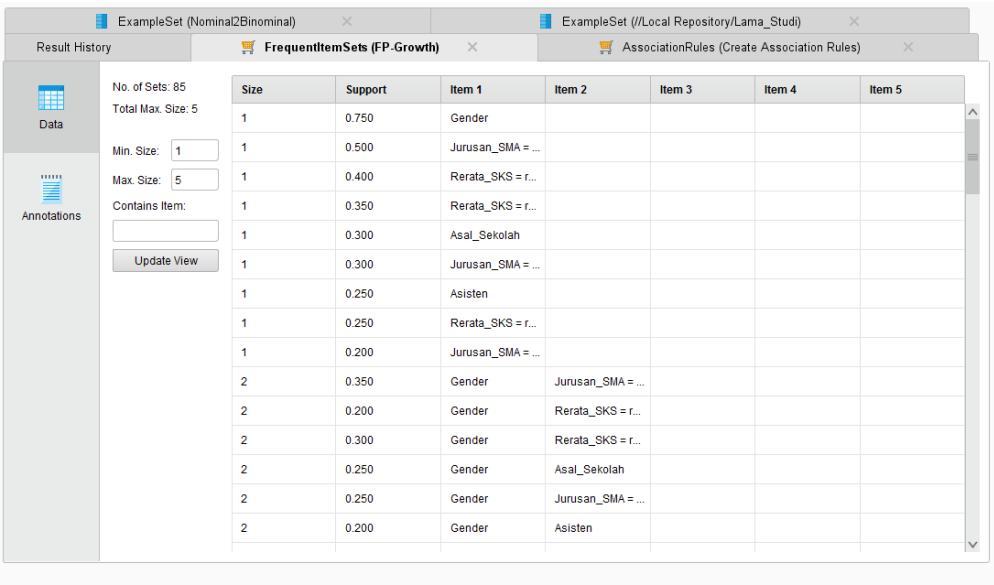

Views:
Design
Results
Turbo Prep
Auto Model
ExampleSet (Nominal2Binominal)
ExampleSet (//Local Repository/Lama_Studi)
Result History
FrequentItemSets (FP-Growth)
AssociationRules (Create Association Rules)
Data
Graph
Description
Annotations
Show rules matching
all of these conclusions:
Gender
Jurusan_SMA = IPA
Asal_Sekolah
Asisten
Rerata_SKS
Min. Criterion:
confidence
Min. Criterion Value:
No.
Premises
Conclusion
Support
17 Asal_Sekolah, Jurusan_SMA = LAIN Rerata_SKS 0.050
19 Asisten, Jurusan_SMA = LAIN Rerata_SKS 0.050
26 Gender, Asal_Sekolah, Asisten Rerata_SKS 0.100
33 Asal_Sekolah, Jurusan_SMA = LAIN Gender, Rerata_SKS 0.050
34 Gender, Asal_Sekolah, Jurusan_SMA = LAIN Rerata_SKS 0.050
38 Asisten, Jurusan_SMA = LAIN Gender, Rerata_SKS 0.050
39 Gender, Asisten, Jurusan_SMA = LAIN Rerata_SKS 0.050
44 Asal_Sekolah, Jurusan_SMA = LAIN Asisten, Rerata_SKS 0.050
45 Asisten, Jurusan_SMA = LAIN Asal_Sekolah, Rerata_SKS 0.050
46 Asal_Sekolah, Asisten, Jurusan_SMA = LAIN Rerata_SKS 0.050
50 Gender, Jurusan_SMA = IPA, Asal_Sekolah, Asisten Rerata_SKS 0.050
54 Asal_Sekolah, Jurusan_SMA = LAIN Gender, Asisten, Rerata_SKS 0.050
55 Gender, Asal_Sekolah, Jurusan_SMA = LAIN Asisten, Rerata_SKS 0.050
56 Asisten, Jurusan_SMA = LAIN Gender, Asal_Sekolah, Rerata_SKS 0.050
57 Gender, Asisten, Jurusan_SMA = LAIN Asal_Sekolah, Rerata_SKS 0.050

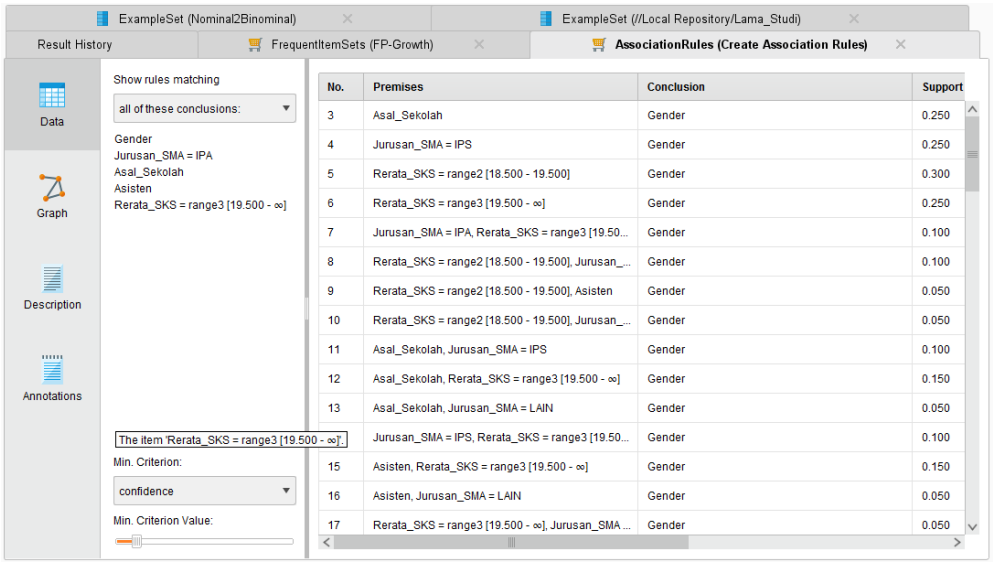


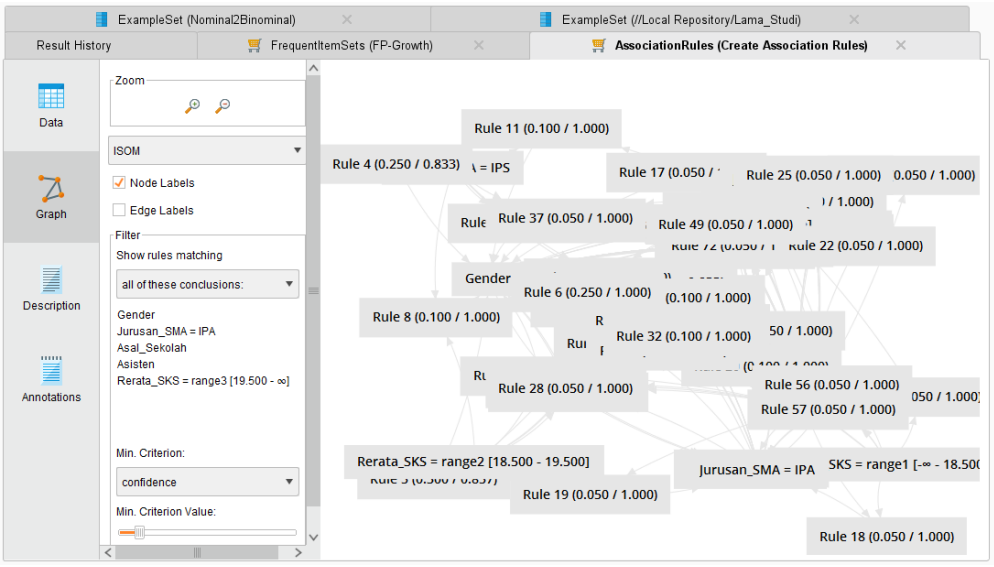


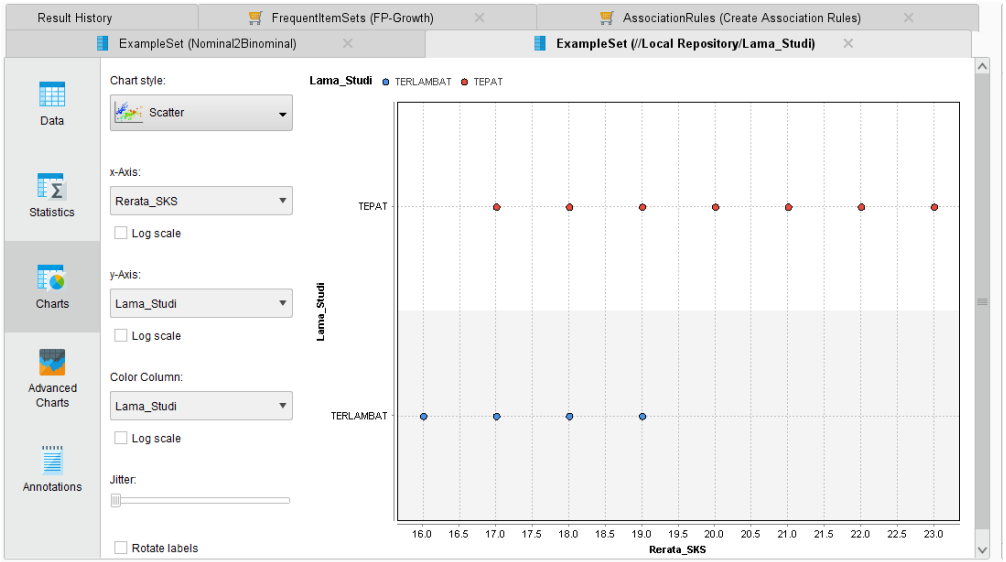
b) *number of bins* = 3




ExampleSet (Nominal2Binominal)
ExampleSet (//Local Repository/Lama_Studi)
Result History
FrequentItemSets (FP-Growth)
AssociationRules (Create Association Rules)
Data
Annotations
No. of Sets: 85
Total Max. Size: 5
Min. Size: 1
Max. Size: 5
Contains Item:
Update View
Size | Support | Item 1 | Item 2 | Item 3 | Item 4 | Item 5
1 | 0.750 | Gender
1 | 0.500 | Jurusan_SMA = ...
1 | 0.400 | Rerata_SKS = r...
1 | 0.350 | Rerata_SKS = r...
1 | 0.300 | Asal_Sekolah
1 | 0.300 | Jurusan_SMA = ...
1 | 0.250 | Asisten
1 | 0.250 | Rerata_SKS = r...
1 | 0.200 | Jurusan_SMA = ...
2 | 0.350 | Gender | Jurusan_SMA = ...
2 | 0.200 | Gender | Rerata_SKS = r...
2 | 0.300 | Gender | Rerata_SKS = r...
2 | 0.250 | Gender | Asal_Sekolah
2 | 0.250 | Gender | Jurusan_SMA = ...
2 | 0.200 | Gender | Asisten


ExampleSet (Nominal2Binominal)
ExampleSet (//Local Repository/Lama_Studi)
Result History
FrequentItemSets (FP-Growth)
AssociationRules (Create Association Rules)
Data
Graph
Description
Annotations
Show rules matching
all of these conclusions:
Gender
Jurusan_SMA = IPA
Asal_Sekolah
Asisten
Rerata_SKS = range3 [19.500 - ∞]
The item 'Rerata_SKS = range3 [19.500 - ∞]'.
Min. Criterion:
confidence
Min. Criterion Value:
No. | Premises | Conclusion | Support
3 | Asal_Sekolah | Gender | 0.250
4 | Jurusan_SMA = IPS | Gender | 0.250
5 | Rerata_SKS = range2 [18.500 - 19.500] | Gender | 0.300
6 | Rerata_SKS = range3 [19.500 - ∞] | Gender | 0.250
7 | Jurusan_SMA = IPA, Rerata_SKS = range3 [19.50... | Gender | 0.100
8 | Rerata_SKS = range2 [18.500 - 19.500], Jurusan_... | Gender | 0.100
9 | Rerata_SKS = range2 [18.500 - 19.500], Asisten | Gender | 0.050
10 | Rerata_SKS = range2 [18.500 - 19.500], Jurusan_... | Gender | 0.050
11 | Asal_Sekolah, Jurusan_SMA = IPS | Gender | 0.100
12 | Asal_Sekolah, Rerata_SKS = range3 [19.500 - ∞] | Gender | 0.150
13 | Asal_Sekolah, Jurusan_SMA = LAIN | Gender | 0.050
14 | Jurusan_SMA = IPS, Rerata_SKS = range3 [19.50... | Gender | 0.100
15 | Asisten, Rerata_SKS = range3 [19.500 - ∞] | Gender | 0.150
16 | Asisten, Jurusan_SMA = LAIN | Gender | 0.050
17 | Rerata_SKS = range3 [19.500 - ∞], Jurusan_SMA ... | Gender | 0.050

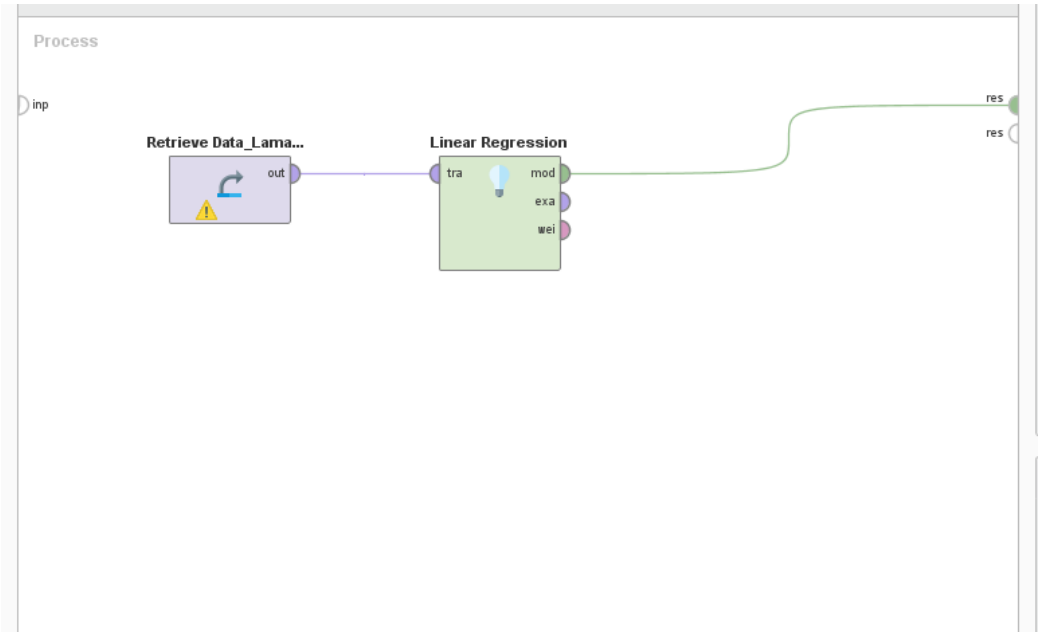

ExampleSet (Nominal2Binominal)
ExampleSet (//Local Repository/Lama_Studi)
Result History
FrequentItemSets (FP-Growth)
AssociationRules (Create Association Rules)
Data
Graph
Description
Annotations
Zoom
ISOM
Node Labels
Edge Labels
Filter
Show rules matching
all of these conclusions:
Gender
Jurusan_SMA = IPA
Asal_Sekolah
Asisten
Rerata_SKS = range3 [19.500 - ∞]
Min. Criterion:
confidence
Min. Criterion Value:
Rule 11 (0.100 / 1.000)
Rule 4 (0.250 / 0.833)
Rule 17 (0.050 /
Rule 25 (0.050 / 1.000)
0.050 / 1.000)
Rule 37 (0.050 / 1.000)
Rule 49 (0.050 / 1.000)
Rule 22 (0.050 / 1.000)
Gender
Rule 6 (0.250 / 1.000)
(0.100 / 1.000)
Rule 8 (0.100 / 1.000)
Rule 32 (0.100 / 1.000)
50 / 1.000)
Rule 28 (0.050 / 1.000)
Rule 56 (0.050 / 1.000)
Rule 57 (0.050 / 1.000)
Rerata_SKS = range2 [18.500 - 19.500]
Jurusan_SMA = IPA
Rule 19 (0.050 / 1.000)
Rule 18 (0.050 / 1.000)


Result History
FrequentItemSets (FP-Growth)
AssociationRules (Create Association Rules)
ExampleSet (Nominal2Binominal)
ExampleSet (//Local Repository/Lama_Studi)
Data
Statistics
Charts
Advanced Charts
Annotations
Chart style:
Scatter
x-Axis:
Rerata_SKS
Log scale
y-Axis:
Lama_Studi
Log scale
Color Column:
Lama_Studi
Log scale
Jitter:
Rotate labels
Lama_Studi
TERLAMBAT
TEPAT
TEPAT
TERLAMBAT
16.0
16.5
17.0
17.5
18.0
18.5
19.0
19.5
20.0
20.5
21.0
21.5
22.0
22.5
23.0
Rerata_SKS

MODUL 12

- **Kegiatan**
  1. Mencari nilai t-hitung dan model regresi linear

	A	B	C	D	E
1	**NO_SISWA**	**NAMA**	**LAMA BELAJAR (JAM)**	**NILAI**	
2	S-101	JOKO	15	783	
3	S-102	AGUS	18	877	
4	S-103	SUSI	7	505	
5	S-104	DYAH	9	860	
6	S-105	WATI	15	968	
7	S-106	IKA	17	793	
8	S-107	EKO	10	752	
9	S-108	YANTO	5	571	
10	S-109	WAWAN	8	667	
11	S-110	MAHMUD	15	723	
12					



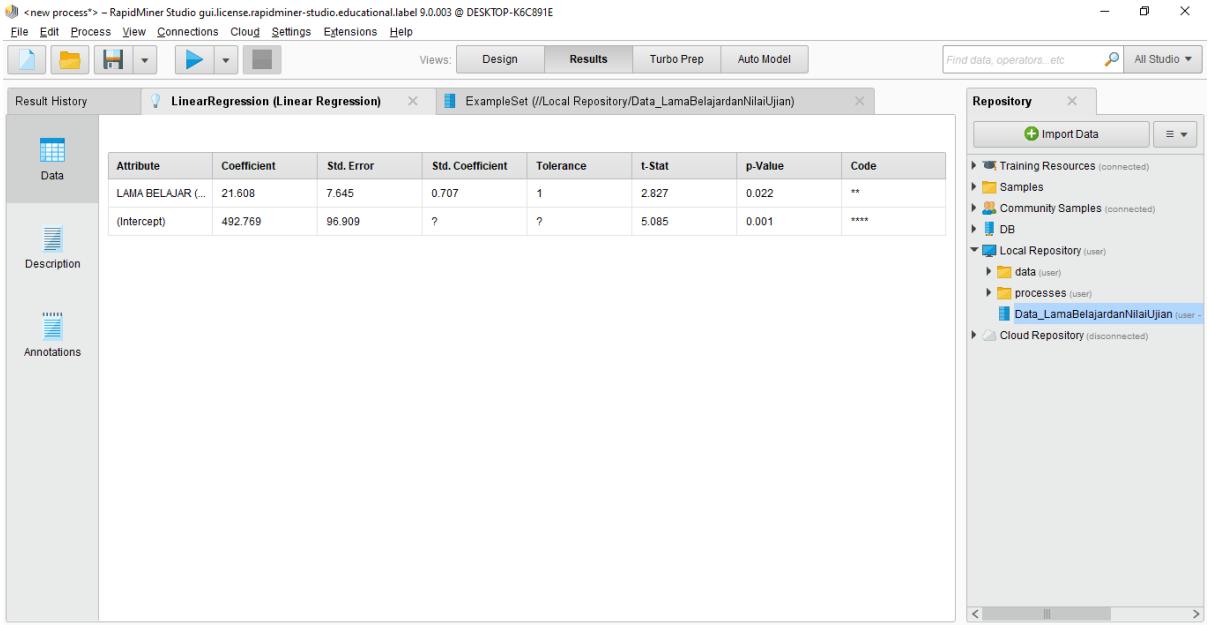
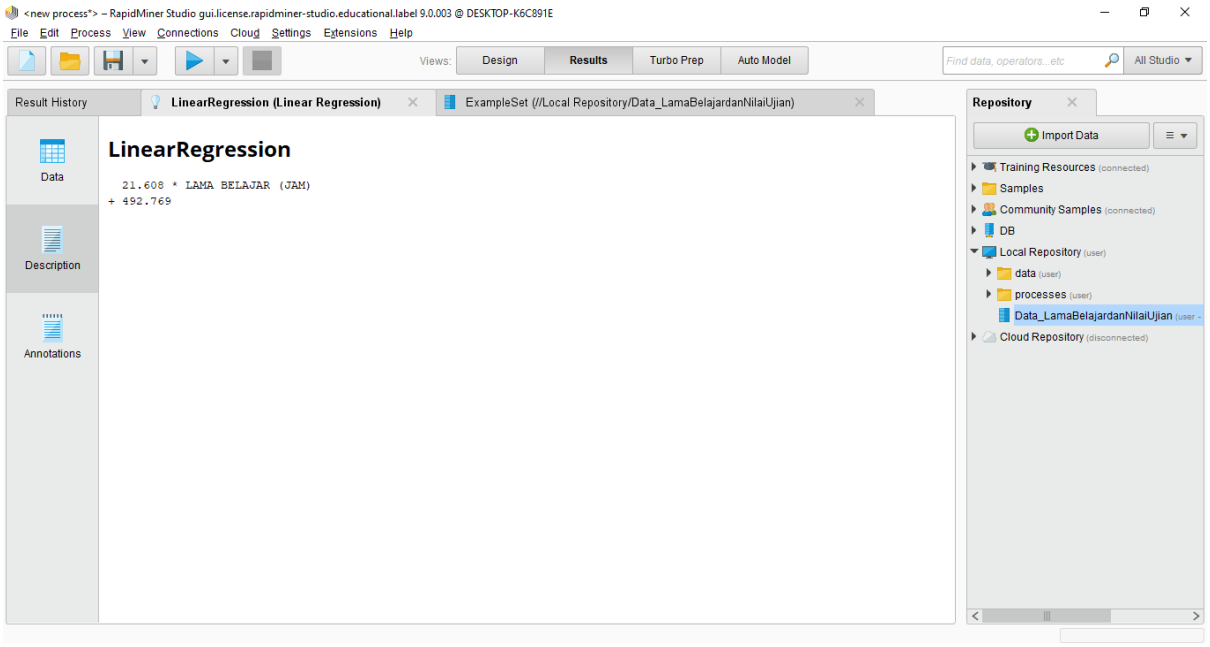


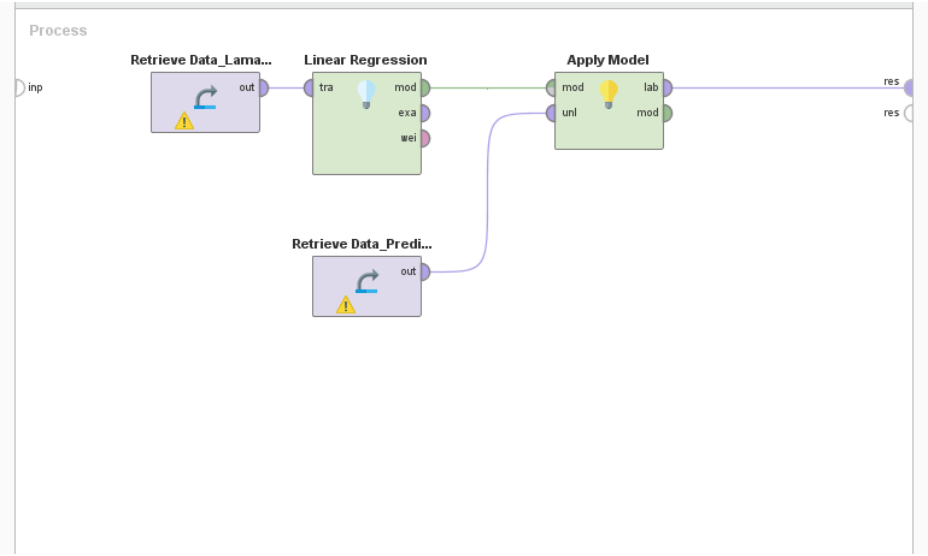
Table View



Text View

2. Mencari nilai t dan model regresi linier menggunakan RapidMiner

	A	B	C	D
1	NO_SISWA	NAMA	LAMA BELAJAR (JAM)	
2	S-111	BUDI	12	
3	S-112	SANTI	13	
4	S-113	DIAN	14	
5	S-114	DANI	11	
6	S-115	AHMAD	5	
7	S-116	BAYU	13	
8	S-117	RISA	9	
9	S-118	RANI	10	
10	S-119	YANI	10	
11	S-120	RATIH	9	
12				


Process
Retrieve Data_Lama...
Linear Regression
Apply Model
inp
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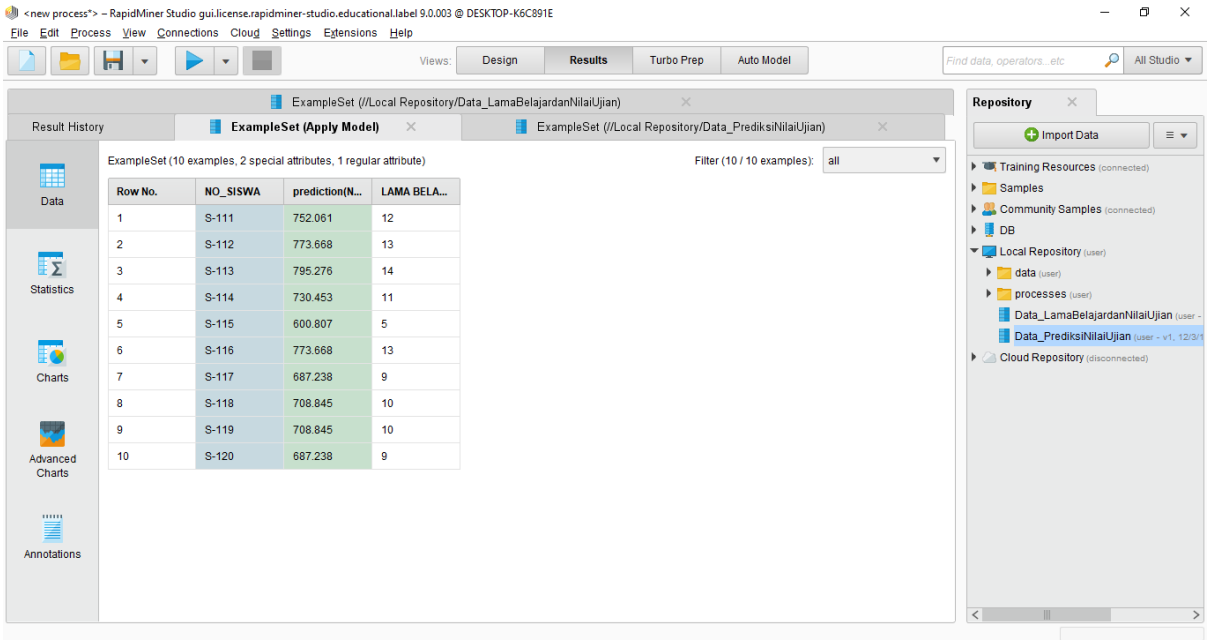
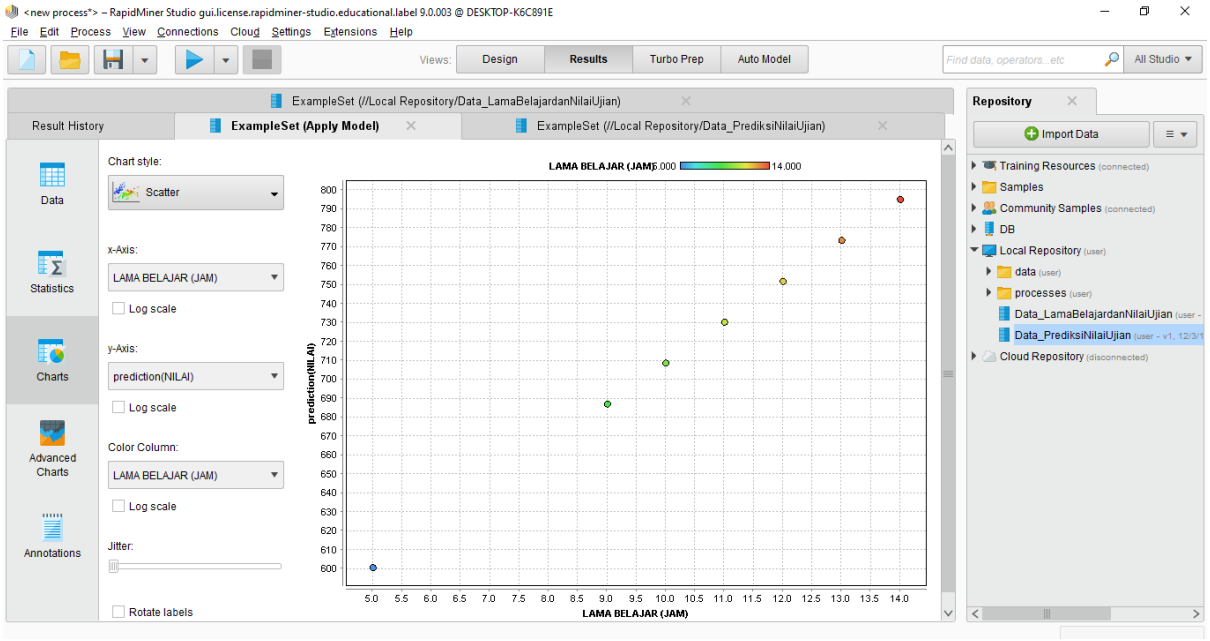
res
res
Retrieve Data_Predi...
out


<new process*> – RapidMiner Studio gui.license.rapidminer-studio.educational.label 9.0.003 @ DESKTOP-K6C891E
File Edit Process View Connections Cloud Settings Extensions Help
Views: Design Results Turbo Prep Auto Model
Find data, operators...etc
All Studio
ExampleSet (//Local Repository/Data_LamaBelajardanNilaiUjian)
Result History
ExampleSet (Apply Model)
ExampleSet (//Local Repository/Data_PrediksiNilaiUjian)
Data
Statistics
Charts
Advanced Charts
Annotations
ExampleSet (10 examples, 2 special attributes, 1 regular attribute)
Filter (10 / 10 examples): all
Row No. NO_SISWA prediction(N... LAMA BELA...
1 S-111 752.061 12
2 S-112 773.668 13
3 S-113 795.276 14
4 S-114 730.453 11
5 S-115 600.807 5
6 S-116 773.668 13
7 S-117 687.238 9
8 S-118 708.845 10
9 S-119 708.845 10
10 S-120 687.238 9
Repository
Import Data
Training Resources (connected)
Samples
Community Samples (connected)
DB
Local Repository (user)
data (user)
processes (user)
Data_LamaBelajardanNilaiUjian
Data_PrediksiNilaiUjian
Cloud Repository (disconnected)



3. Pembuktian Model Regresi

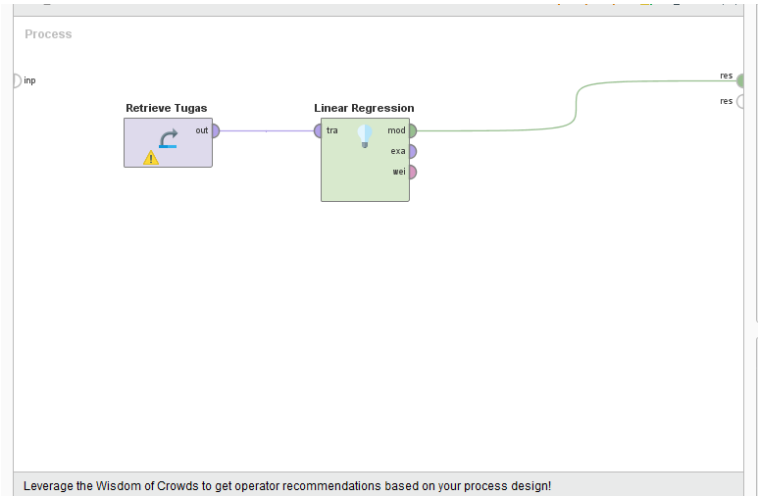
	A	B	C	D	E	F
1	NO_SISWA	NAMA	LAMA BELAJAR (JAM)	Prediction(NILAI)	Prediction(NILAI)	
2				Tabel	Model Regresi	
3	S-111	BUDI	12	752,061	752,065	
4	S-112	SANTI	13	773,668	773,673	
5	S-113	DIAN	14	795,276	795,281	
6	S-114	DANI	11	730,453	730,457	
7	S-115	AHMAD	5	600,807	600,809	
8	S-116	BAYU	13	773,668	773,673	
9	S-117	RISA	9	687,238	687,241	
10	S-118	RANI	10	708,845	708,849	
11	S-119	YANI	10	708,845	708,849	
12	S-120	RATIH	9	687,238	687,241	
13						

➢ Tugas

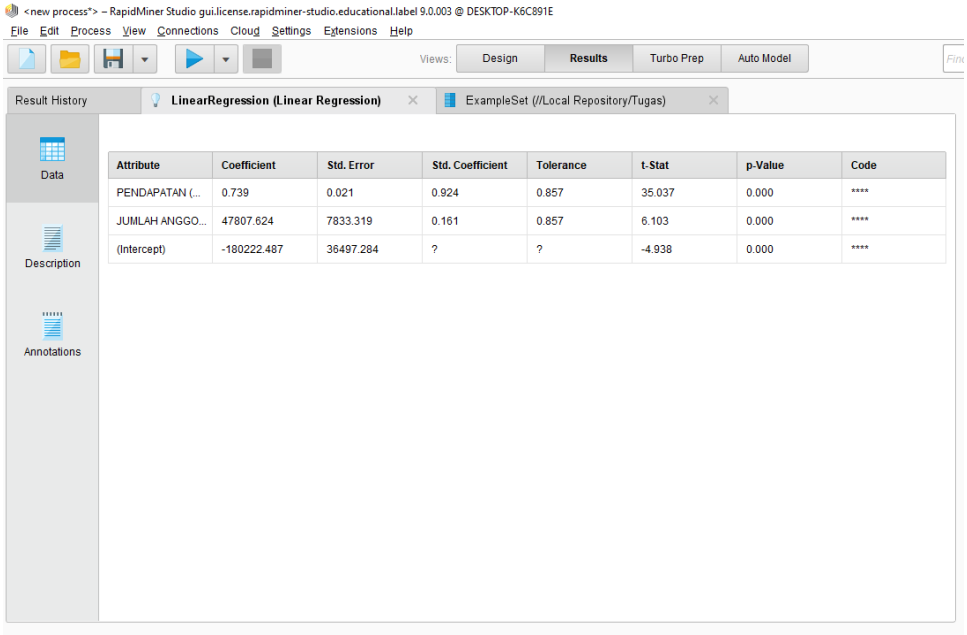
1. Excel

	A	B	C	D	E
1	NO. RESPONDEN	PENDAPATAN (RUPIAH)	JUMLAH ANGGOTA KELUARGA	DAYA BELI (RUPIAH)	
2	1	1.000.000	6	834.000	
3	2	1.400.000	7	1.200.000	
4	3	200.000	3	134.000	
5	4	1.400.000	6	1.167.000	
6	5	500.000	3	334.000	
7	6	1.700.000	5	1.360.000	
8	7	400.000	3	267.000	
9	8	1.900.000	5	1.520.000	
10	9	300.000	3	200.000	
11	10	500.000	4	375.000	
12	11	700.000	7	600.000	
13	12	1.900.000	3	1.267.000	
14	13	800.000	4	600.000	
15	14	1.500.000	4	1.125.000	
16	15	1.300.000	7	1.115.000	
17					
18					

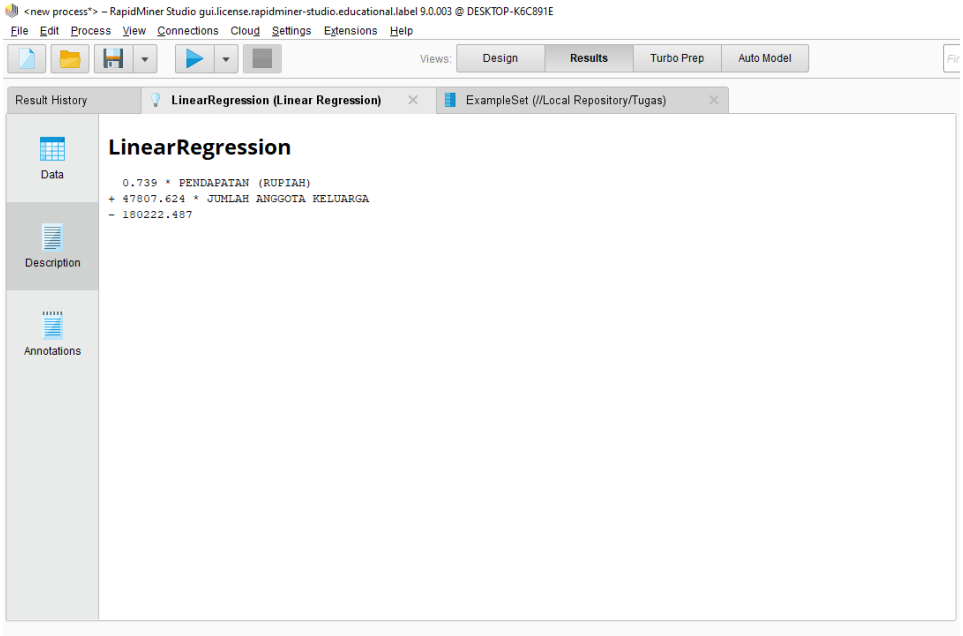
2. Proses Regresi Linier Sederhana


Process
inp
Retrieve Tugas
out
Linear Regression
tra
mod
exa
wei
res
res
Leverage the Wisdom of Crowds to get operator recommendations based on your process design!

a. Table View

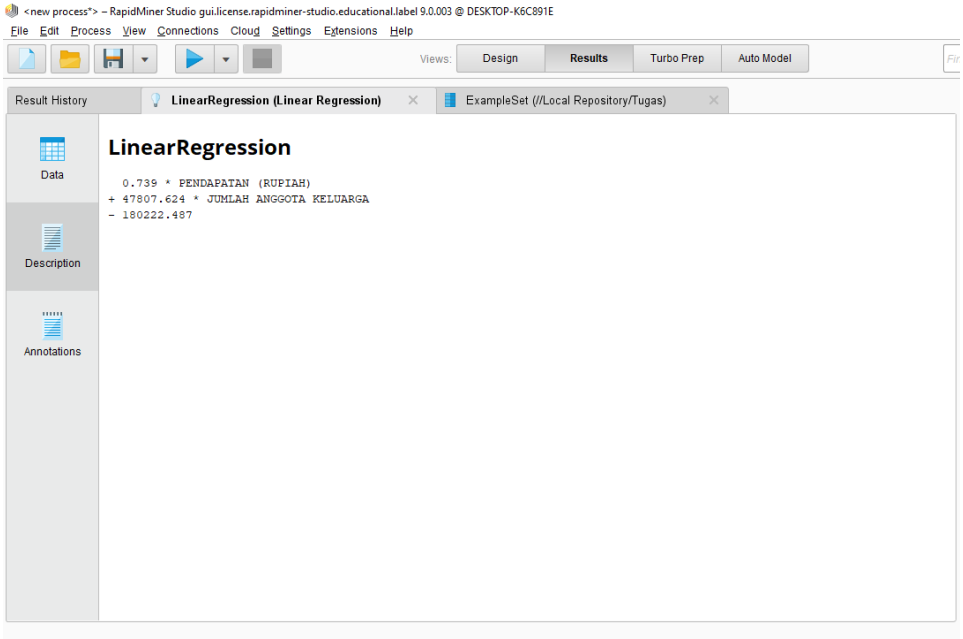


b. Text View



3. Berdasarkan aturan statistik, variable x tidak mempengaruhi secara signifikan terhadap y karena nilai t-hitung > t-table

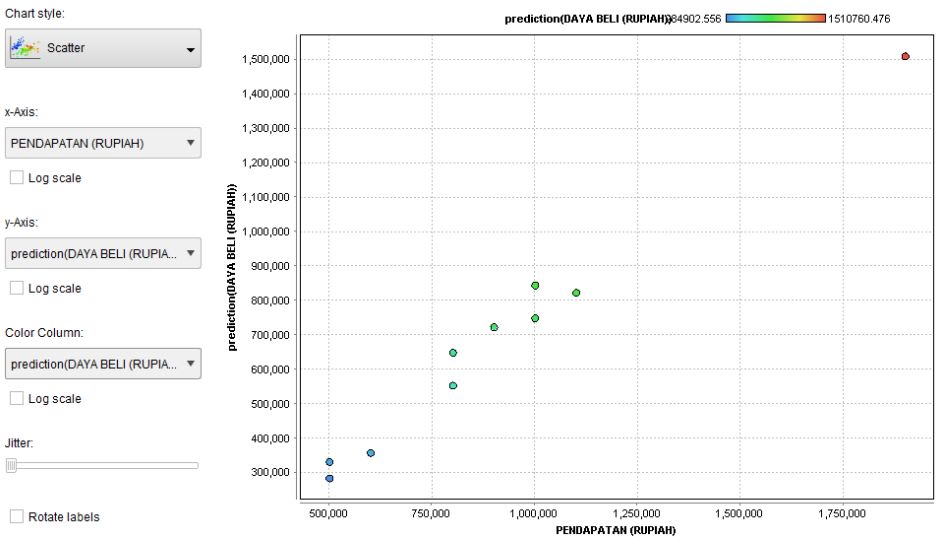
4. Model persamaan regresi linier sederhana yang terbentuk



5. Data Testing

	A	B	C	D	E	F
1	NO. RESPONDEN	PENDAPATAN (RUPIAH)	JUMLAH ANGGOTA KELUARGA	Prediction(Daya Beli(Rupiah))	Prediction(Daya Beli(Rupiah))	
2				Tabel	Model Regresi	
3	1	900.000	5	723933,263	723915,633	
4	2	800.000	3	554416,056	554400,385	
5	3	500.000	2	284902,556	284892,761	
6	4	1.900.000	6	1510760,476	1510723,257	
7	5	600.000	2	358804,515	358792,761	
8	6	800.000	5	650031,304	650015,633	
9	7	1.000.000	6	845642,845	845623,257	
10	8	1.100.000	4	823929,557	823908,009	
11	9	1.000.000	4	750027,598	750008,009	
12	10	500.000	3	332710,179	332700,385	
13						
14						

6. Plot View
   a) x-Axis = Pendapatan (Rupiah),
      y-Axis = Prediction (Daya Beli (Rupiah)),
      Color Column = Prediction (Daya Beli (Rupiah))



b) x-Axis = Jumlah Angota Keluarga,
y-Axis = Prediction (Daya Beli (Rupiah)),
Color Column = Prediction (Daya Beli (Rupiah))