

**LAPORAN PRAKTIKUM  
DATA WAREHOUSING DAN DATA MINING**

**PERTEMUAN 11  
“INDUKSI DAN ATURAN ASOSIASI”**



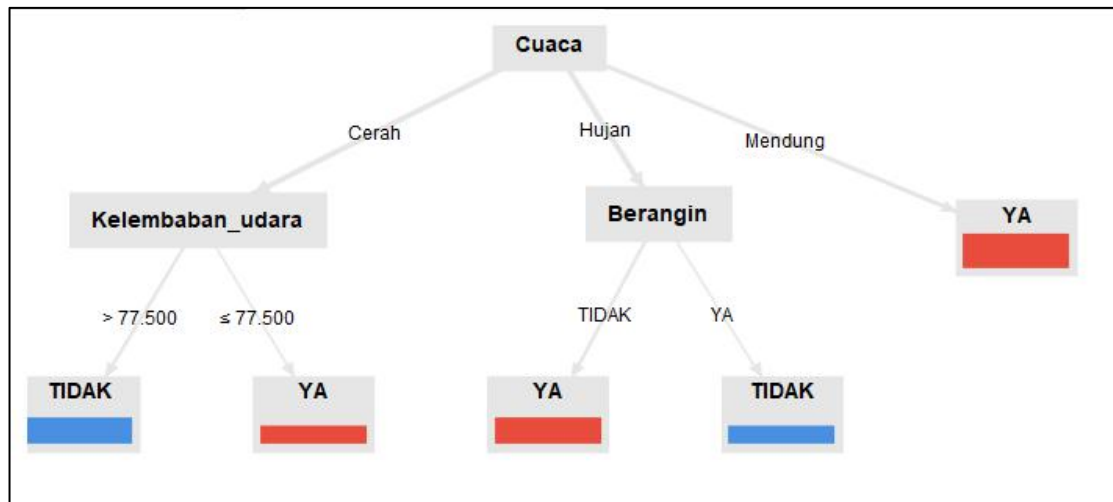
**Oleh:**

**NAMA : Daffa Putra Alwansyah  
NIM : L200190031  
KELAS : B  
PRODI : INFORMATIKA**

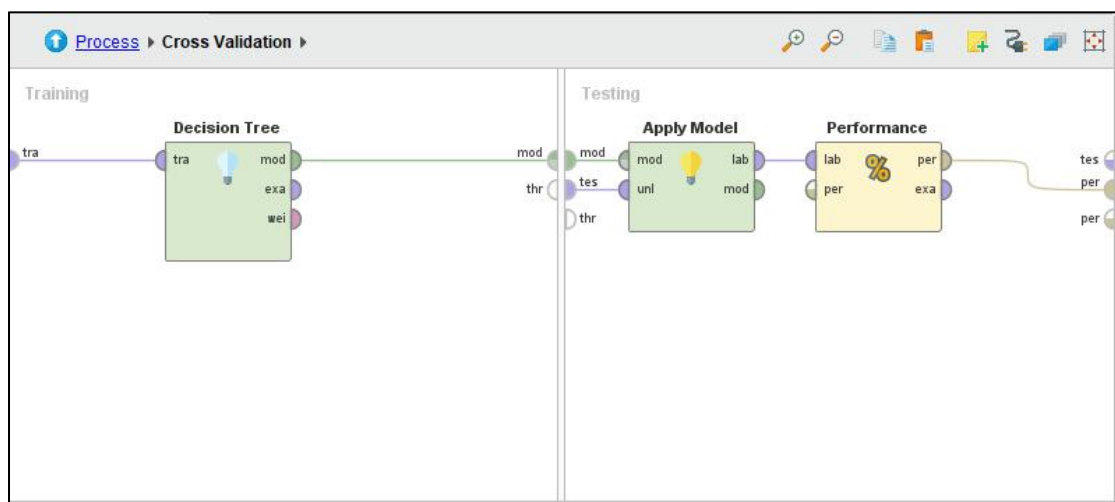
**Fakultas Komunikasi dan Informatika  
Universitas Muhammadiyah Surakarta**

### 11.4.1 Induksi Aturan Data Cuaca

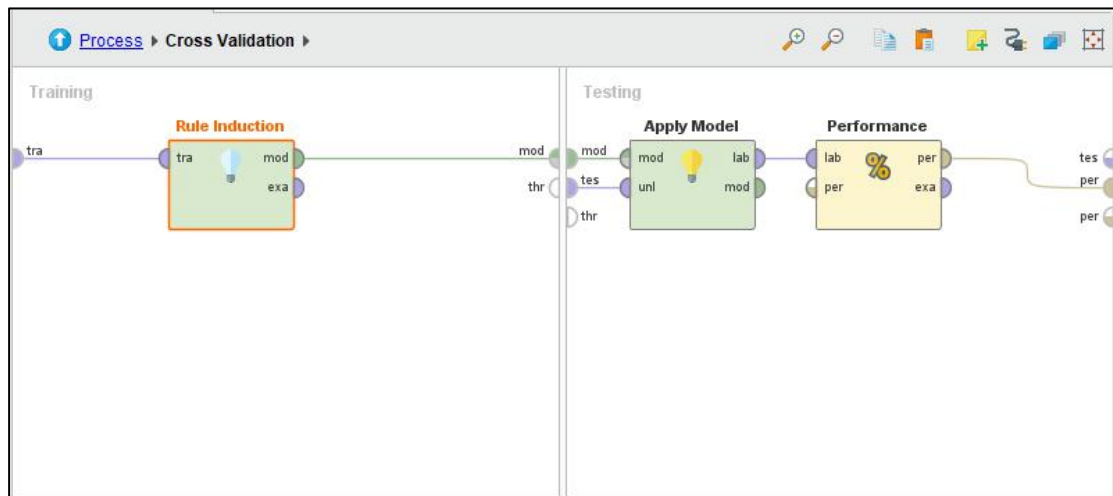
1. Buka kembali data mining modul 9 kegiatan 9.4.2, dari hasil tersebut dihasilkan berikut:



2. Kembali ke Process - Cross Validation



3. klik kanan operator Decision Tree lalu pilih Replace Operator - Modeling  
- Predictive - Rules - Rule Induction, lalu klik Run tanpa mengubah apapun.



4. Akan diperoleh hasil induksi aturan dari data training yang disebut Rule Model (Rule Induction).

Result History

RuleModel (Rule Induction)

RuleModel

else YA (4 / 8)

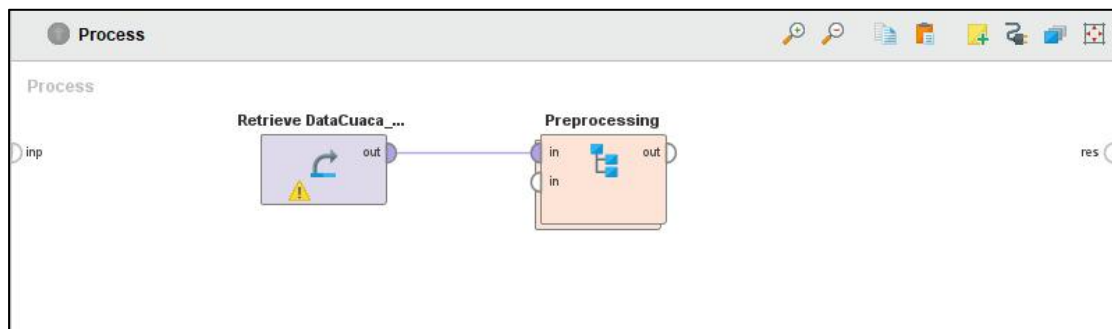
correct: 8 out of 12 training examples.

5. Model Rule Induction juga bisa ditunjukan hasil Performance Vector

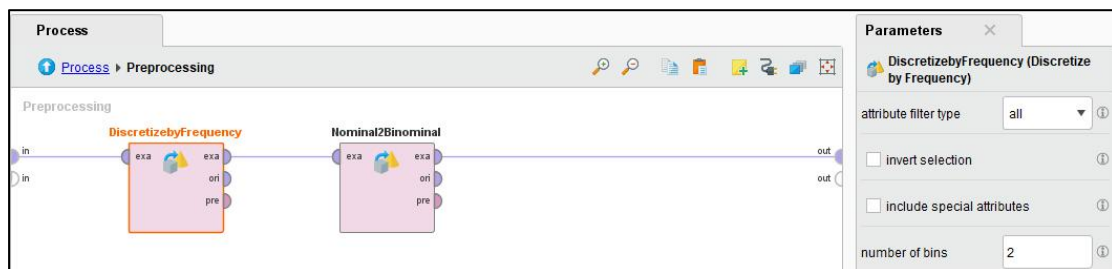
Result History	RuleModel (Rule Induction)	PerformanceVector (Performance)																	
<div> <div>Performance</div> <div> <div>Criterion</div> <div> <div>accuracy</div> <div>precision</div> <div>recall</div> <div>AUC (optimistic)</div> <div>AUC</div> <div>AUC (pessimistic)</div> </div> </div> </div>	<div> <div>Table View</div> <div>Plot View</div> </div>	<div> <div>accuracy: 65.00% +/- 47.43% (micro average: 71.43%)</div> <table> <tr> <th></th><th>true TIDAK</th><th>true YA</th><th>class precision</th></tr> <tr> <td>pred. TIDAK</td><td>2</td><td>1</td><td>66.67%</td></tr> <tr> <td>pred. YA</td><td>3</td><td>8</td><td>72.73%</td></tr> <tr> <td>class recall</td><td>40.00%</td><td>88.89%</td><td></td></tr> </table> </div>		true TIDAK	true YA	class precision	pred. TIDAK	2	1	66.67%	pred. YA	3	8	72.73%	class recall	40.00%	88.89%		
	true TIDAK	true YA	class precision																
pred. TIDAK	2	1	66.67%																
pred. YA	3	8	72.73%																
class recall	40.00%	88.89%																	

## 11.4.2 Aturan Asosiasi Data Cuaca

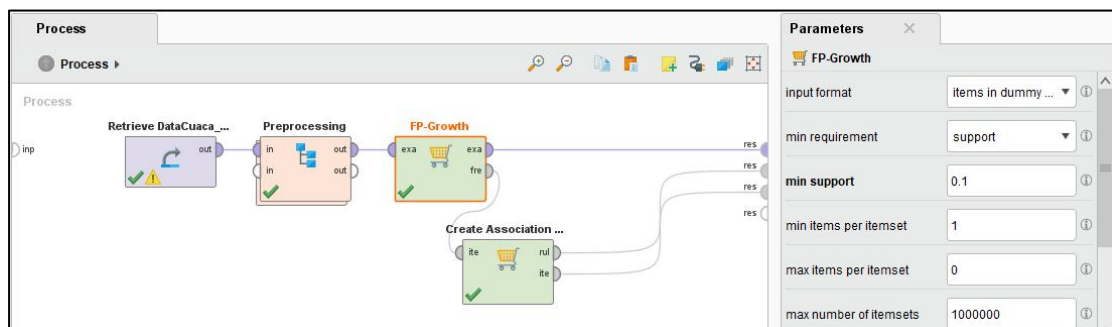
1. Masih menggunakan DataCuaca\_Training, masukan operator *Subprocess*, lalu ubah nama tersebut menjadi *Preprocessing*.



2. Klik 2x pada Preprocessing, masukan Discretize by Frequency dan Nominal To Binomial, ubah nama tersebut Menjadi DiscretizebyFrequency (biarkan *number of bins* = 2), dan Nominal2Binomial.



3. Kembali ke *main process*, tambahkan FP-Growth (min support = 0.1), dan tambahkan Create Association Rules, hubungkan port sesuai di modul lalu tekan f11.



#### 4. Hasil-hasil aturan asosiasi sebagai berikut:

##### a) Frequent Item Set (FP-Growth).

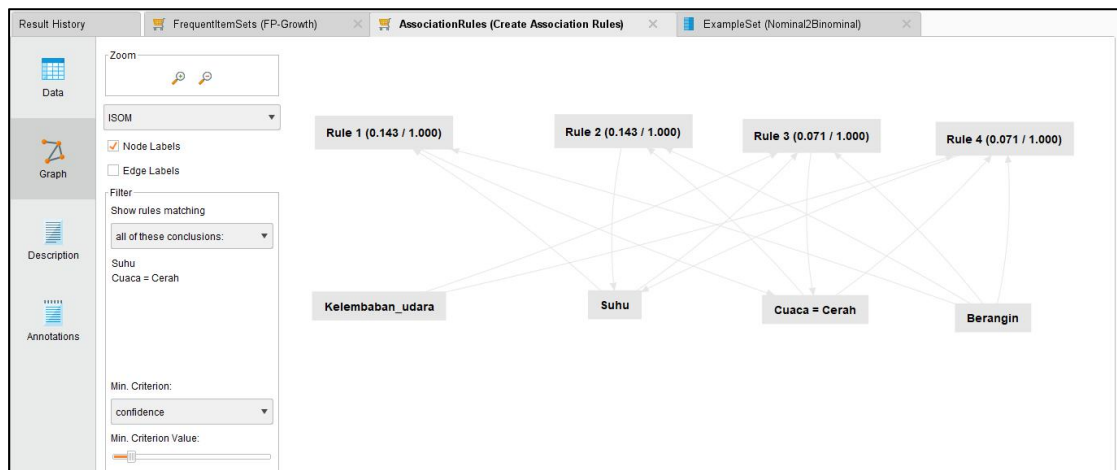
No. of Sets: 26 Total Max. Size: 4	Size	Support	Item 1	Item 2	Item 3	Item 4
Min. Size: 1	1	0.500	Kelembaban_udara			
Max. Size: 4	1	0.429	Berangin			
Contains Item:	1	0.429	Suhu			
Update View	1	0.357	Cuaca = Cerah			
	1	0.357	Cuaca = Hujan			
	1	0.286	Cuaca = Mendung			
	2	0.214	Kelembaban_udara	Berangin		
	2	0.214	Kelembaban_udara	Suhu		
	2	0.214	Kelembaban_udara	Cuaca = Cerah		
	2	0.143	Kelembaban_udara	Cuaca = Hujan		
	2	0.143	Kelembaban_udara	Cuaca = Mendung		
	2	0.143	Berangin	Suhu		
	2	0.143	Berangin	Cuaca = Cerah		
	2	0.143	Berangin	Cuaca = Hujan		
	2	0.143	Berangin	Cuaca = Mendung		
	2	0.214	Suhu	Cuaca = Cerah		
	2	0.071	Suhu	Cuaca = Hujan		

##### b) Association Rules (Create Association Rules)

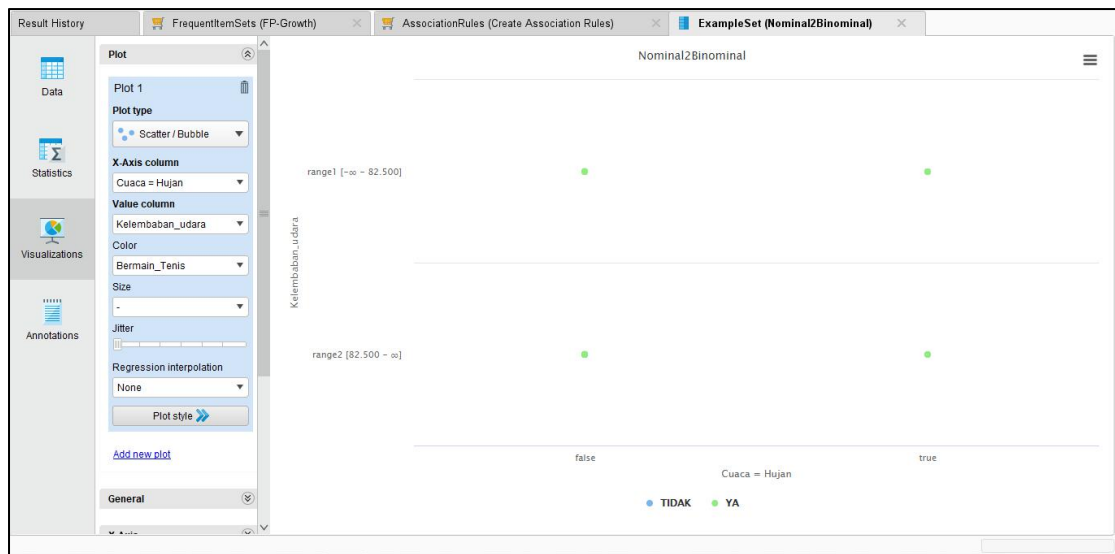
###### i. Table View

No.	Premises	Conclusion	Support	Confidence	LaPlace	Gain	p-s
1	Berangin, Suhu	Cuaca = Cerah	0.143	1	1	-0.143	0.09
2	Berangin, Cuaca = Cerah	Suhu	0.143	1	1	-0.143	0.08
3	Kelembaban_udara, Berangin, Suhu	Cuaca = Cerah	0.071	1	1	-0.071	0.04
4	Kelembaban_udara, Berangin, Cuaca = Cerah	Suhu	0.071	1	1	-0.071	0.04

###### ii. Graph View



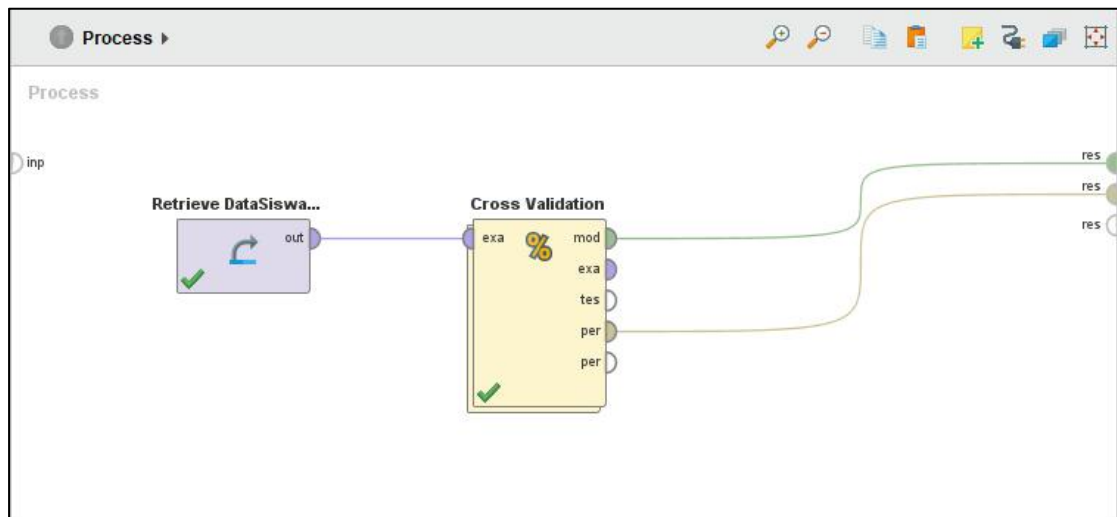
c) ExampleSet (Nominal2Binominal)



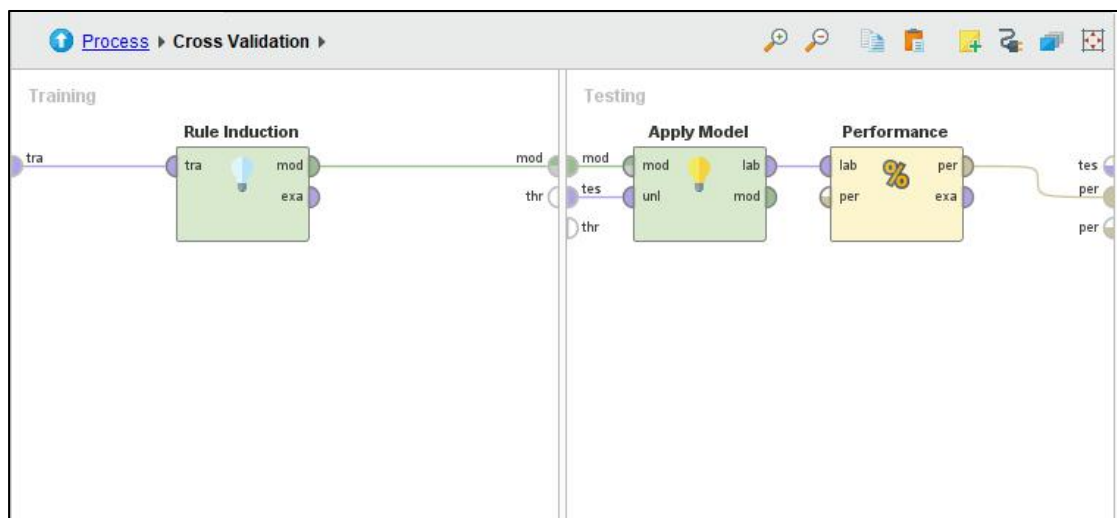
## 11.5. Tugas

### ● Rule Induction

1. Buka kembali Modul 6 Soal No 1, cari pola hubungan *Rule Induction* (*Rule Model*) dan nilai *Performanc Vector*.



2. Replace menjadi *Rule Induction* seperti percobaan.



3. Akan diperoleh hasil induksi aturan dari data training yang disebut Rule Model (Rule Induction).

**RuleModel (Rule Induction)**

**RuleModel**

else TEPAT (6 / 11)

correct: 11 out of 17 training examples.

4. Model Rule Induction juga bisa ditunjukkan hasil Performance Vector

**PerformanceVector (Performance)**

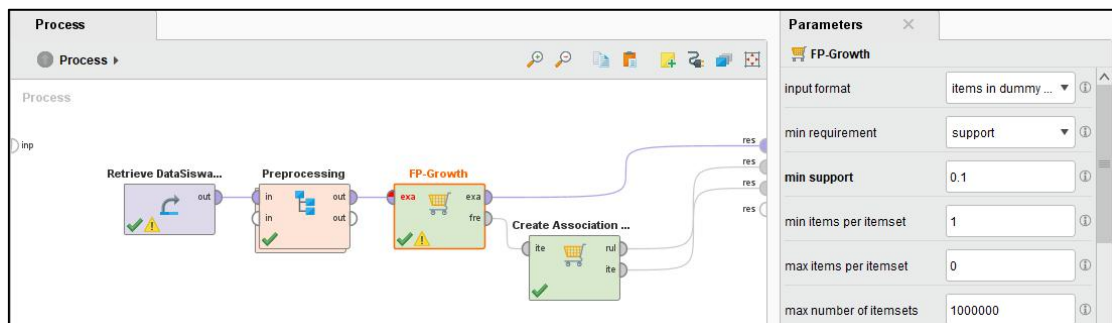
Criterion: accuracy, precision, recall, AUC (optimistic), AUC, AUC (pessimistic)

Table View | Plot View

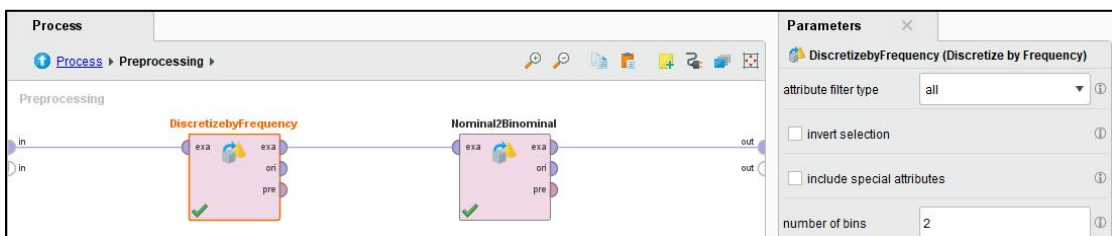
accuracy: 65.00% +/- 33.75% (micro average: 65.00%)

	true TERLAMBAT	true TEPAT	class precision
pred. TERLAMBAT	4	4	50.00%
pred. TEPAT	3	9	75.00%
class recall	57.14%	69.23%	

## ● Discretize by Frequency



➤ **Number of bins = 2**





Hasil-hasil aturan asosiasi sebagai berikut:

a) Frequent Item Set (FP-Growth).

Result History

FrequentItemSets (FP-Growth)

AssociationRules (Create Association Rules)

ExampleSet (Nominal2Binominal)

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 = IPA				
1	0.300	Asal_Sekolah				
1	0.300	Jurusan_SMA = IPS				
1	0.250	Asisten				
1	0.250	Rerata_SKS				
1	0.200	Jurusan_SMA = LAIN				
2	0.350	Gender	Jurusan_SMA = IPA			
2	0.250	Gender	Asal_Sekolah			
2	0.250	Gender	Jurusan_SMA = IPS			
2	0.200	Gender	Asisten			
2	0.250	Gender	Rerata_SKS			
2	0.150	Gender	Jurusan_SMA = LAIN			
2	0.150	Jurusan_SMA = IPA	Asal_Sekolah			
2	0.200	Jurusan_SMA = IPA	Asisten			
2	0.100	Jurusan_SMA = IPA	Rerata_SKS			
2	0.100	Asal_Sekolah	Jurusan_SMA = IPS			

b) Association Rules (Create Association Rules)

i. Table View

Result History

FrequentItemSets (FP-Growth)

AssociationRules (Create Association Rules)

ExampleSet (Nominal2Binominal)

Show rules matching  
all of these conclusions:

Gender  
Jurusan\_SMA = IPA  
Asal\_Sekolah  
Asisten  
Rerata\_SKS

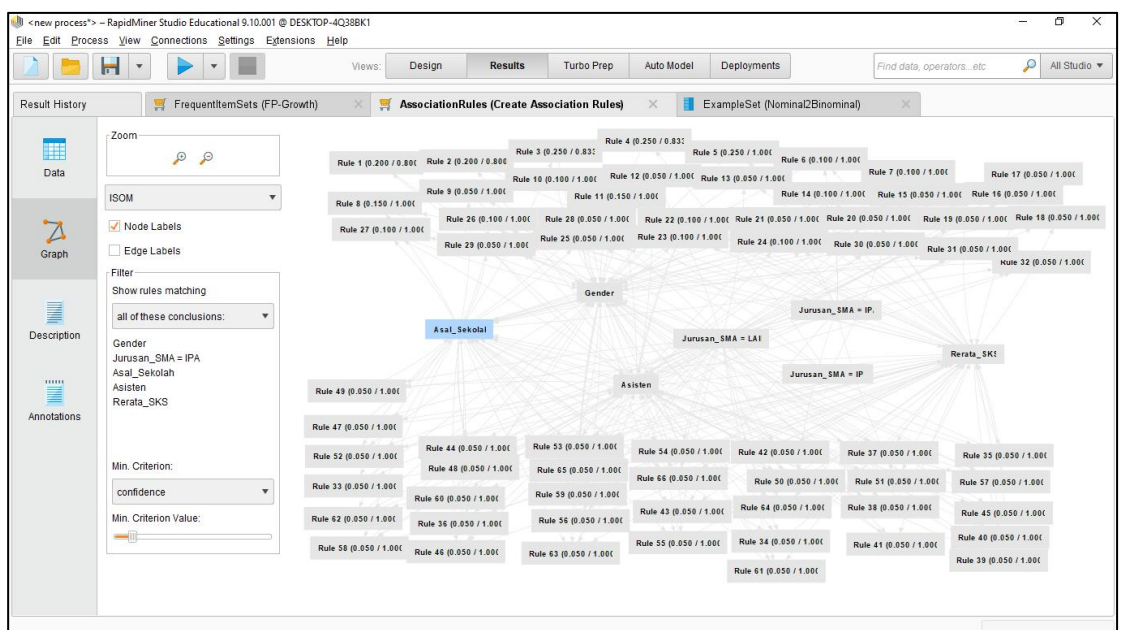
Min. Criterion:  
confidence  
Min. Criterion Value:

No.	Premises	Conclusion	Support	Confidence	LaPlace	Gain	p
3	Asal_Sekolah	Gender	0.250	0.833	0.962	-0.350	0
4	Jurusan_SMA = IPS	Gender	0.250	0.833	0.962	-0.350	0
5	Rerata_SKS	Gender	0.250	1	1	-0.250	0
6	Jurusan_SMA = IPA, Rerata_SKS	Gender	0.100	1	1	-0.100	0
7	Asal_Sekolah, Jurusan_SMA = IPS	Gender	0.100	1	1	-0.100	0
8	Asal_Sekolah, Rerata_SKS	Gender	0.150	1	1	-0.150	0
9	Asal_Sekolah, Jurusan_SMA = LAIN	Gender	0.050	1	1	-0.050	0
10	Jurusan_SMA = IPS, Rerata_SKS	Gender	0.100	1	1	-0.100	0
11	Asisten, Rerata_SKS	Gender	0.150	1	1	-0.150	0
12	Asisten, Jurusan_SMA = LAIN	Gender	0.050	1	1	-0.050	0
13	Rerata_SKS, Jurusan_SMA = LAIN	Gender	0.050	1	1	-0.050	0
14	Jurusan_SMA = IPA, Rerata_SKS	Asisten	0.100	1	1	-0.100	0
15	Asal_Sekolah, Jurusan_SMA = LAIN	Asisten	0.050	1	1	-0.050	0
16	Asisten, Jurusan_SMA = LAIN	Asal_Sekolah	0.050	1	1	-0.050	0
17	Asal_Sekolah, Jurusan_SMA = LAIN	Rerata_SKS	0.050	1	1	-0.050	0
18	Rerata_SKS, Jurusan_SMA = LAIN	Asal_Sekolah	0.050	1	1	-0.050	0
19	Asisten, Jurusan_SMA = LAIN	Rerata_SKS	0.050	1	1	-0.050	0

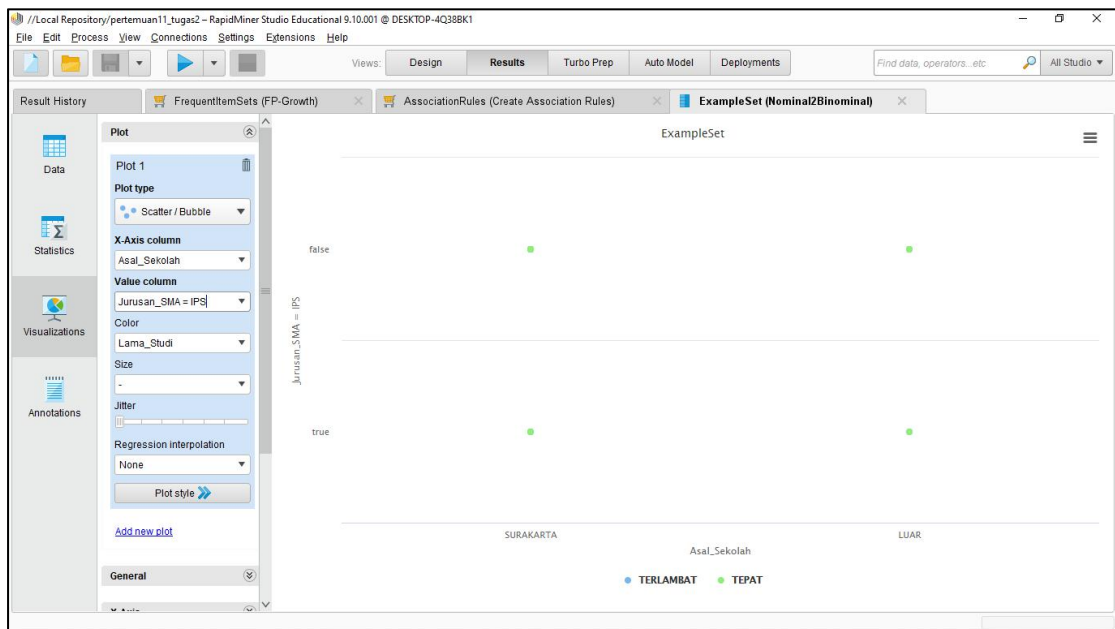
Result History								
FrequentItemSets (FP-Growth)								
AssociationRules (Create Association Rules)								
ExampleSet (Nominal2Binominal)								
No.	Premises	Conclusion	Support	Confidence	LaPlace	Gain	p	
20	Rerata_SKS, Jurusan_SMA = LAIN	Asisten	0.050	1	1	-0.050	0	
21	Jurusan_SMA = IPA, Asal_Sekolah, Rerata_SKS	Gender	0.050	1	1	-0.050	0	
22	Jurusan_SMA = IPA, Rerata_SKS	Gender, Asisten	0.100	1	1	-0.100	0	
23	Gender, Jurusan_SMA = IPA, Rerata_SKS	Asisten	0.100	1	1	-0.100	0	
24	Jurusan_SMA = IPA, Asisten, Rerata_SKS	Gender	0.100	1	1	-0.100	0	
25	Asal_Sekolah, Jurusan_SMA = IPS, Rerata_SKS	Gender	0.050	1	1	-0.050	0	
26	Gender, Asal_Sekolah, Asisten	Rerata_SKS	0.100	1	1	-0.100	0	
27	Asal_Sekolah, Asisten, Rerata_SKS	Gender	0.100	1	1	-0.100	0	
28	Asal_Sekolah, Jurusan_SMA = LAIN	Gender, Asisten	0.050	1	1	-0.050	0	
29	Gender, Asal_Sekolah, Jurusan_SMA = LAIN	Asisten	0.050	1	1	-0.050	0	
30	Asisten, Jurusan_SMA = LAIN	Gender, Asal_Sekolah	0.050	1	1	-0.050	0	
31	Gender, Asisten, Jurusan_SMA = LAIN	Asal_Sekolah	0.050	1	1	-0.050	0	
32	Asal_Sekolah, Asisten, Jurusan_SMA = LAIN	Gender	0.050	1	1	-0.050	0	
33	Asal_Sekolah, Jurusan_SMA = LAIN	Gender, Rerata_SKS	0.050	1	1	-0.050	0	
34	Gender, Asal_Sekolah, Jurusan_SMA = LAIN	Rerata_SKS	0.050	1	1	-0.050	0	
35	Rerata_SKS, Jurusan_SMA = LAIN	Gender, Asal_Sekolah	0.050	1	1	-0.050	0	
36	Gender, Rerata_SKS, Jurusan_SMA = LAIN	Asal_Sekolah	0.050	1	1	-0.050	0	

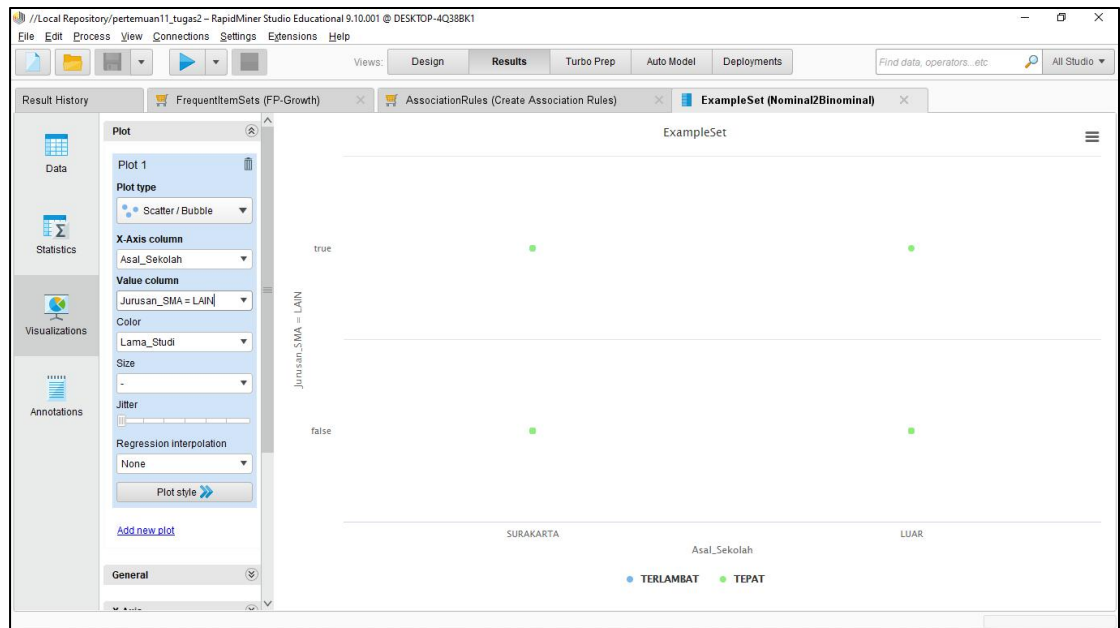
Result History								
FrequentItemSets (FP-Growth)								
AssociationRules (Create Association Rules)								
ExampleSet (Nominal2Binominal)								
No.	Premises	Conclusion	Support	Confidence	LaPlace	Gain	p	
50	Gender, Jurusan_SMA = IPA, Asal_Sekolah, Asisten	Rerata_SKS	0.050	1	1	-0.050	0	
51	Jurusan_SMA = IPA, Asal_Sekolah, Rerata_SKS	Gender, Asisten	0.050	1	1	-0.050	0	
52	Gender, Jurusan_SMA = IPA, Asal_Sekolah, Rerata_SKS	Asisten	0.050	1	1	-0.050	0	
53	Jurusan_SMA = IPA, Asal_Sekolah, Asisten, Rerata_SKS	Gender	0.050	1	1	-0.050	0	
54	Asal_Sekolah, Jurusan_SMA = LAIN	Gender, Asisten, Rerata_SKS	0.050	1	1	-0.050	0	
55	Gender, Asal_Sekolah, Jurusan_SMA = LAIN	Asisten, Rerata_SKS	0.050	1	1	-0.050	0	
56	Asisten, Jurusan_SMA = LAIN	Gender, Asal_Sekolah, Rerata_SKS	0.050	1	1	-0.050	0	
57	Gender, Asisten, Jurusan_SMA = LAIN	Asal_Sekolah, Rerata_SKS	0.050	1	1	-0.050	0	
58	Asal_Sekolah, Asisten, Jurusan_SMA = LAIN	Gender, Rerata_SKS	0.050	1	1	-0.050	0	
59	Gender, Asal_Sekolah, Asisten, Jurusan_SMA = LAIN	Rerata_SKS	0.050	1	1	-0.050	0	
60	Rerata_SKS, Jurusan_SMA = LAIN	Gender, Asal_Sekolah, Asisten	0.050	1	1	-0.050	0	
61	Gender, Rerata_SKS, Jurusan_SMA = LAIN	Asal_Sekolah, Asisten	0.050	1	1	-0.050	0	
62	Asal_Sekolah, Rerata_SKS, Jurusan_SMA = LAIN	Gender, Asisten	0.050	1	1	-0.050	0	
63	Gender, Asal_Sekolah, Rerata_SKS, Jurusan_SMA = LAIN	Asisten	0.050	1	1	-0.050	0	
64	Asisten, Rerata_SKS, Jurusan_SMA = LAIN	Gender, Asal_Sekolah	0.050	1	1	-0.050	0	
65	Gender, Asisten, Rerata_SKS, Jurusan_SMA = LAIN	Asal_Sekolah	0.050	1	1	-0.050	0	
66	Asal_Sekolah, Asisten, Rerata_SKS, Jurusan_SMA = LAIN	Gender	0.050	1	1	-0.050	0	

## ii. Graph View

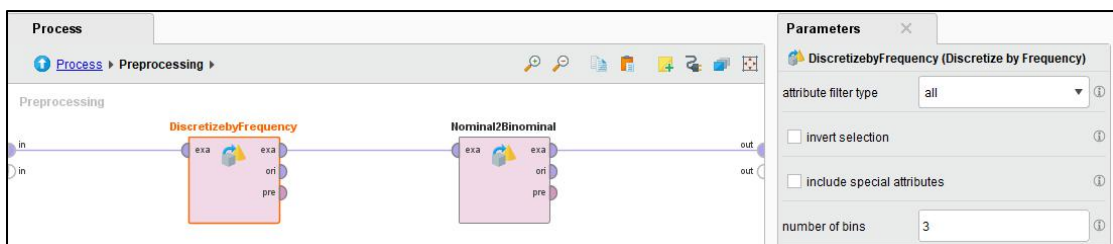


### c) ExampleSet (Nominal2Binominal)





➤ **Number of bins = 3**



Hasil-hasil aturan asosiasi sebagai berikut:

a) Frequent Item Set (FP-Growth).

The figure shows the 'FrequentItemSets (FP-Growth)' operator results in RapidMiner Studio. The 'Result History' tab is active, showing a table of frequent item sets. The table has columns: 'Size', 'Support', 'Item 1', 'Item 2', 'Item 3', 'Item 4', and 'Item 5'. The 'No. of Sets: 85' and 'Total Max. Size: 5' are highlighted in red. The table contains 25 rows of data.

Size	Support	Item 1	Item 2	Item 3	Item 4	Item 5
1	0.750	Gender				
1	0.500	Jurusan_SMA = IPA				
1	0.400	Rerata_SKS = range1 [...]				
1	0.350	Rerata_SKS = range2 [...]				
1	0.300	Asal_Sekolah				
1	0.300	Jurusan_SMA = IPS				
1	0.250	Asisten				
1	0.250	Rerata_SKS = range3 [...]				
1	0.200	Jurusan_SMA = LAIN				
2	0.350	Gender	Jurusan_SMA = IPA			
2	0.200	Gender	Rerata_SKS = range1 [...]			
2	0.300	Gender	Rerata_SKS = range2 [...]			
2	0.250	Gender	Asal_Sekolah			
2	0.250	Gender	Jurusan_SMA = IPS			
2	0.200	Gender	Asisten			
2	0.250	Gender	Rerata_SKS = range3 [...]			
2	0.150	Gender	Jurusan_SMA = LAIN			

## b) Association Rules (Create Association Rules)

### i. Table View

Result History | FrequentItemSets (FP-Growth) | **AssociationRules (Create Association Rules)** | ExampleSet (Nominal2Binominal)

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: 0.050

No.	Premises	Conclusion	Support	Confidence	LaPlace	Gain
3	Asal_Sekolah	Gender	0.250	0.833	0.962	-0.350
4	Jurusan_SMA = IPS	Gender	0.250	0.833	0.962	-0.350
5	Rerata_SKS = range2 [18.500 - 19.500]	Gender	0.300	0.857	0.963	-0.400
6	Rerata_SKS = range3 [19.500 - ∞]	Gender	0.250	1	1	-0.250
7	Jurusan_SMA = IPA, Rerata_SKS = range3 [19.500 - ∞]	Gender	0.100	1	1	-0.100
8	Rerata_SKS = range2 [18.500 - 19.500], Jurusan_SMA = IPA	Gender	0.100	1	1	-0.100
9	Rerata_SKS = range2 [18.500 - 19.500], Asisten	Gender	0.050	1	1	-0.050
10	Rerata_SKS = range2 [18.500 - 19.500], Jurusan_SMA = IPA	Gender	0.050	1	1	-0.050
11	Asal_Sekolah, Jurusan_SMA = IPS	Gender	0.100	1	1	-0.100
12	Asal_Sekolah, Rerata_SKS = range3 [19.500 - ∞]	Gender	0.150	1	1	-0.150
13	Asal_Sekolah, Jurusan_SMA = LAIN	Gender	0.050	1	1	-0.050
14	Jurusan_SMA = IPS, Rerata_SKS = range3 [19.500 - ∞]	Gender	0.100	1	1	-0.100
15	Asisten, Rerata_SKS = range3 [19.500 - ∞]	Gender	0.150	1	1	-0.150
16	Asisten, Jurusan_SMA = LAIN	Gender	0.050	1	1	-0.050
17	Rerata_SKS = range3 [19.500 - ∞], Jurusan_SMA = IPA	Gender	0.050	1	1	-0.050
18	Rerata_SKS = range1 [-∞ - 18.500], Asisten	Jurusan_SMA = IPA	0.050	1	1	-0.050
19	Rerata_SKS = range2 [18.500 - 19.500], Asisten	Jurusan_SMA = IPA	0.050	1	1	-0.050

Result History | FrequentItemSets (FP-Growth) | **AssociationRules (Create Association Rules)** | ExampleSet (Nominal2Binominal)

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: 0.050

No.	Premises	Conclusion	Support	Confidence	LaPlace	Gain
20	Jurusan_SMA = IPA, Rerata_SKS = range3 [19.500 - ∞]	Asisten	0.100	1	1	-0.100
21	Rerata_SKS = range1 [-∞ - 18.500], Asisten	Asal_Sekolah	0.050	1	1	-0.050
22	Asal_Sekolah, Jurusan_SMA = LAIN	Asisten	0.050	1	1	-0.050
23	Asisten, Jurusan_SMA = LAIN	Asal_Sekolah	0.050	1	1	-0.050
24	Asal_Sekolah, Jurusan_SMA = LAIN	Rerata_SKS = range3 [19.500 - ∞]	0.050	1	1	-0.050
25	Rerata_SKS = range3 [19.500 - ∞], Jurusan_SMA = IPA	Asal_Sekolah	0.050	1	1	-0.050
26	Asisten, Jurusan_SMA = LAIN	Rerata_SKS = range3 [19.500 - ∞]	0.050	1	1	-0.050
27	Rerata_SKS = range3 [19.500 - ∞], Jurusan_SMA = IPA	Asisten	0.050	1	1	-0.050
28	Rerata_SKS = range2 [18.500 - 19.500], Asisten	Gender, Jurusan_SMA = IPA	0.050	1	1	-0.050
29	Gender, Rerata_SKS = range2 [18.500 - 19.500], Asisten	Jurusan_SMA = IPA	0.050	1	1	-0.050
30	Jurusan_SMA = IPA, Rerata_SKS = range2 [18.500 - 19.500]	Gender	0.050	1	1	-0.050
31	Jurusan_SMA = IPA, Asal_Sekolah, Rerata_SKS = range3 [19.500 - ∞]	Gender	0.050	1	1	-0.050
32	Jurusan_SMA = IPA, Rerata_SKS = range3 [19.500 - ∞]	Gender, Asisten	0.100	1	1	-0.100
33	Gender, Jurusan_SMA = IPA, Rerata_SKS = range3 [19.500 - ∞]	Asisten	0.100	1	1	-0.100
34	Jurusan_SMA = IPA, Asisten, Rerata_SKS = range3 [19.500 - ∞]	Gender	0.100	1	1	-0.100
35	Gender, Rerata_SKS = range1 [-∞ - 18.500], Jurusan_SMA = IPA	Asal_Sekolah	0.050	1	1	-0.050
36	Rerata_SKS = range1 [-∞ - 18.500], Asal_Sekolah, Asisten	Gender	0.050	1	1	-0.050

Result History | FrequentItemSets (FP-Growth) | **AssociationRules (Create Association Rules)** | ExampleSet (Nominal2Binominal)

Show rules matching  
all of these conclusions: ▼

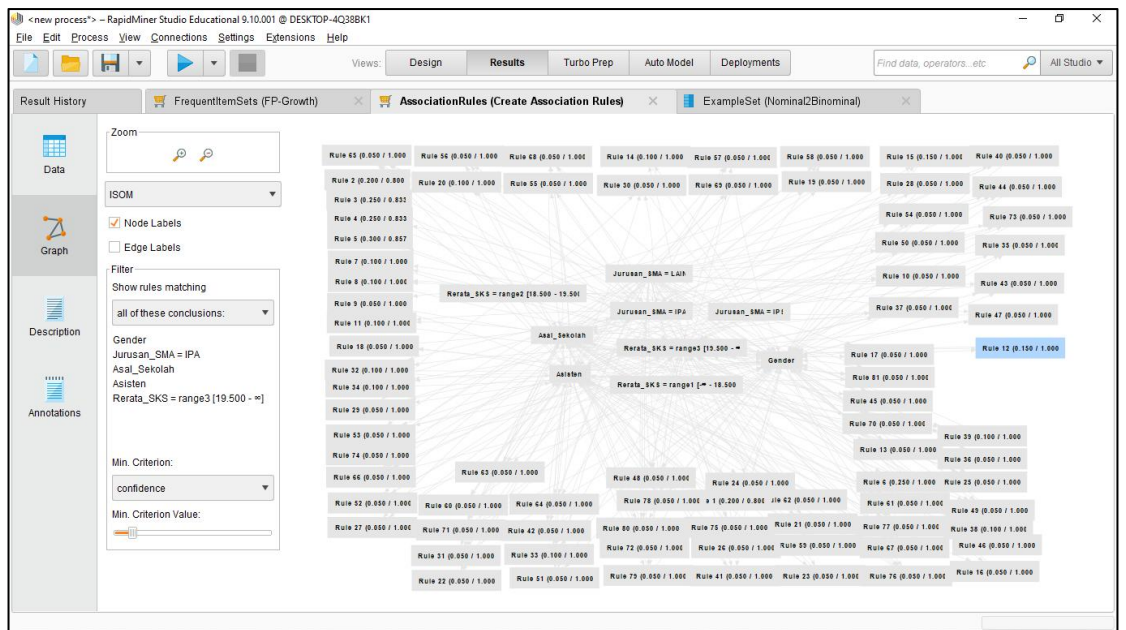
Gender  
Jurusan\_SMA = IPA  
Asal\_Sekolah  
Asisten  
Rerata\_SKS = range3 [19.500 - ∞]

Min. Criterion: confidence ▼  
Min. Criterion Value: 0.050

No.	Premises	Conclusion	Support	Confidence	LaPlace	Gain
65	Gender, Jurusan_SMA = IPA, Asal_Sekolah, Asisten	Rerata_SKS = range3 [19.500 - ∞]	0.050	1	1	-0.050
66	Jurusan_SMA = IPA, Asal_Sekolah, Rerata_SKS = range3 [19.500 - ∞]	Gender, Asisten	0.050	1	1	-0.050
67	Gender, Jurusan_SMA = IPA, Asal_Sekolah, Rerata_SKS = range3 [19.500 - ∞]	Asisten	0.050	1	1	-0.050
68	Jurusan_SMA = IPA, Asal_Sekolah, Asisten, Rerata_SKS = range3 [19.500 - ∞]	Gender	0.050	1	1	-0.050
69	Asal_Sekolah, Jurusan_SMA = LAIN	Gender, Asisten, Rerata_SKS = range3 [19.500 - ∞]	0.050	1	1	-0.050
70	Gender, Asal_Sekolah, Jurusan_SMA = LAIN	Asisten, Rerata_SKS = range3 [19.500 - ∞]	0.050	1	1	-0.050
71	Asisten, Jurusan_SMA = LAIN	Gender, Asal_Sekolah, Rerata_SKS = range3 [19.500 - ∞]	0.050	1	1	-0.050
72	Gender, Asisten, Jurusan_SMA = LAIN	Asal_Sekolah, Rerata_SKS = range3 [19.500 - ∞]	0.050	1	1	-0.050
73	Asal_Sekolah, Asisten, Jurusan_SMA = LAIN	Gender, Rerata_SKS = range3 [19.500 - ∞]	0.050	1	1	-0.050
74	Gender, Asal_Sekolah, Asisten, Jurusan_SMA = LAIN	Rerata_SKS = range3 [19.500 - ∞]	0.050	1	1	-0.050
75	Rerata_SKS = range3 [19.500 - ∞], Jurusan_SMA = IPA	Gender, Asal_Sekolah, Asisten	0.050	1	1	-0.050
76	Gender, Rerata_SKS = range3 [19.500 - ∞], Jurusan_SMA = IPA	Asal_Sekolah, Asisten	0.050	1	1	-0.050
77	Asal_Sekolah, Rerata_SKS = range3 [19.500 - ∞], Jurusan_SMA = IPA	Gender, Asisten	0.050	1	1	-0.050
78	Gender, Asal_Sekolah, Rerata_SKS = range3 [19.500 - ∞], Jurusan_SMA = IPA	Asisten	0.050	1	1	-0.050
79	Asisten, Rerata_SKS = range3 [19.500 - ∞], Jurusan_SMA = IPA	Gender, Asal_Sekolah	0.050	1	1	-0.050
80	Gender, Asisten, Rerata_SKS = range3 [19.500 - ∞], Jurusan_SMA = IPA	Asal_Sekolah	0.050	1	1	-0.050
81	Asal_Sekolah, Asisten, Rerata_SKS = range3 [19.500 - ∞], Jurusan_SMA = IPA	Gender	0.050	1	1	-0.050



## ii. Graph View



## c) ExampleSet (Nominal2Binominal)

