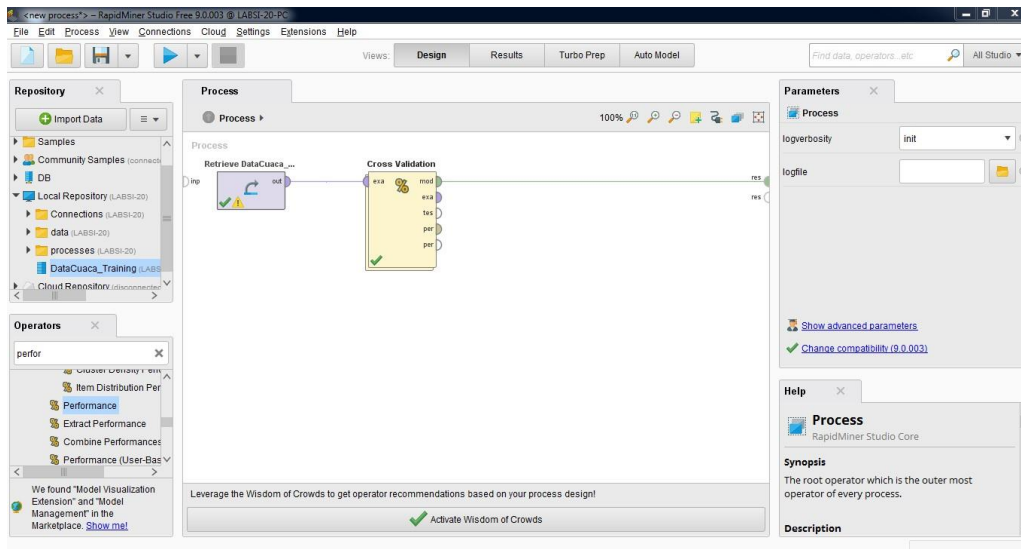


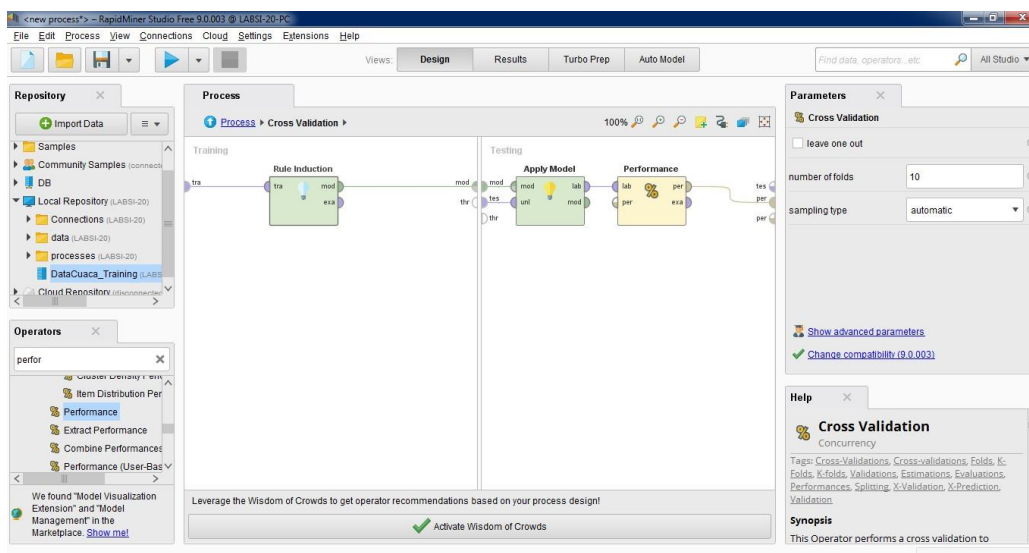
Nama : Ihsan Budiono  
NIM : L200170119  
Modul : 11

## Percobaan ( Induksi aturan data cuaca)

Buat pada bagian proses area dengan memasukkukkan DataCuaca\_Training kemudian beri operator Cross Validation



Kemudian buka pada Cross Validation dan tambahkan operator rule induction, apply model dan performance



Kemudian run pada process itu dan akan menunjukkan hasil sebagai berikut

The screenshot shows the RapidMiner Studio interface with the 'Results' tab selected. The main window displays the 'RuleModel (Rule Induction)' results. The left sidebar shows 'Description' and 'Annotations'. The right sidebar shows the 'Repository' with various data sources.

**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 Sibuk ≤ 70.500 then YA (0 / 1)
else TIDAK (0 / 0)

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

The screenshot shows the RapidMiner Studio interface with the 'Results' tab selected. The main window displays the 'PerformanceVector (Performance)' results. The left sidebar shows 'Performance' and 'Annotations'. The right sidebar shows the 'Repository' with various data sources.

**PerformanceVector (Performance)**

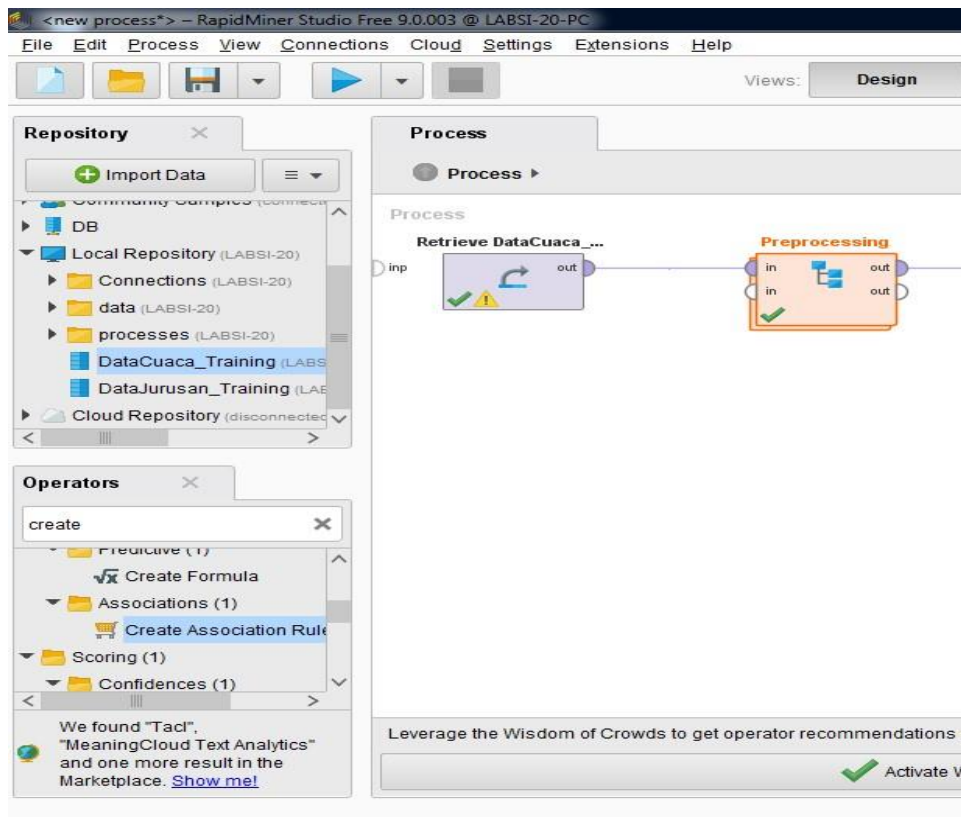
Table View Plot View

accuracy: 65.00% +/- 45.00% (micro average: 71.43%)

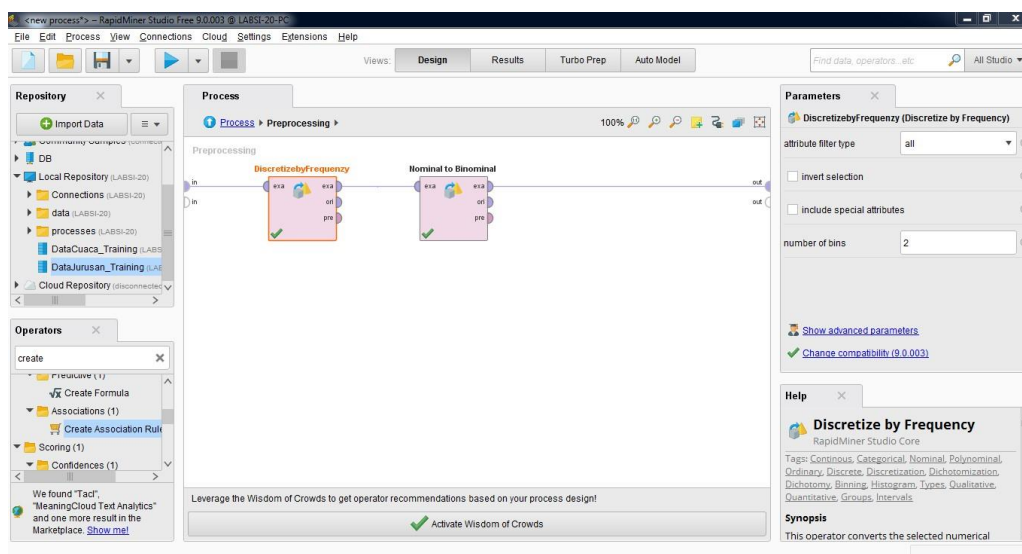
	true TIDAK	true YA	class precision
pred. TIDAK	2	1	66.67%
pred. YA	3	8	72.73%
class recall	40.00%	88.89%	

Percobaan ( Aturan asosiasi data cuaca)

Gunakan kembali DataCuaca\_Training dan tambahkan operator pada proses area dengan operator Subprocess



Kemudian tambahkan operator pada bagian Preprocessing dengan klik operator tersebut dan tambahkan operator didalamnya dengan DiscretizebyFrequency (ganti number of bins dengan angka 2, Nominal to Binominal)



Setelah itu ke menu utama dan tambahkan operator FP-Growth(min support diganti 0.1) , Create Association Rules

The screenshot shows the RapidMiner Studio interface. The main process canvas displays a workflow: Retrieve DataCuaca... → Preprocessing → FP-Growth → Create Association... The FP-Growth operator is highlighted, and its parameters are shown in the right-hand pane. The parameters are as follows:

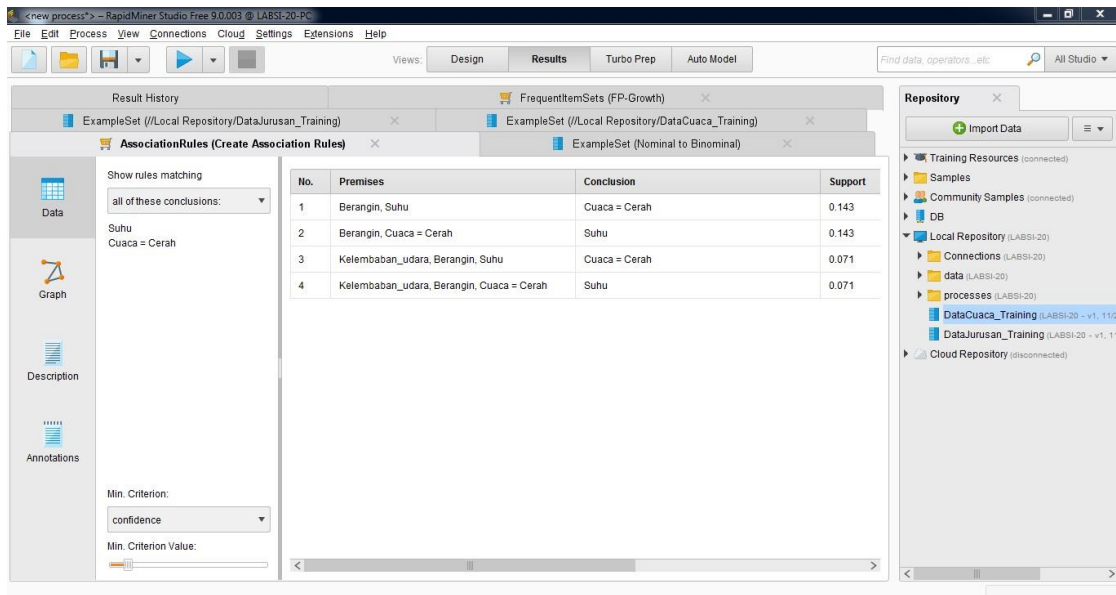
Parameter	Value
Input format	Items in dummy cod...
min requirement	support
min support	0.1
min items per itemset	1
max items per itemset	0
max number of itemsets	1000000

The Help pane on the right provides information about the FP-Growth operator, including its concurrency and a synopsis: "This Operator efficiently calculates all frequently-occurring itemsets in an ExampleSet. use the FP-".

Hasil dari proses diatas

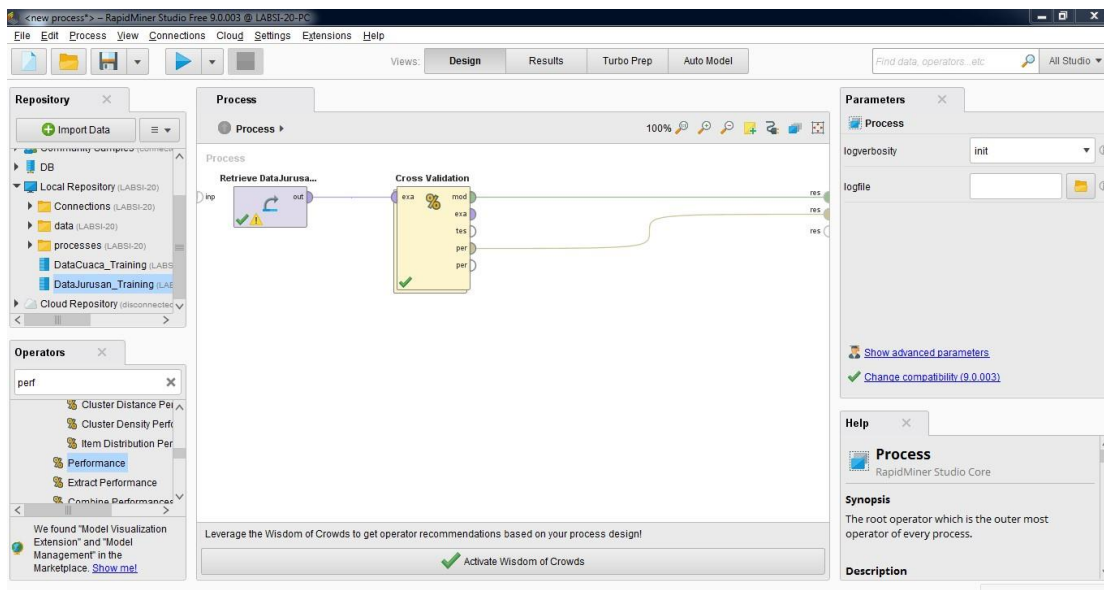
The screenshot shows the Results view of RapidMiner Studio. The main table displays the FrequentItemSets (FP-Growth) results. The table has the following columns: No. of Sets, Size, Support, Item 1, Item 2, Item 3, and Item 4. The results are as follows:

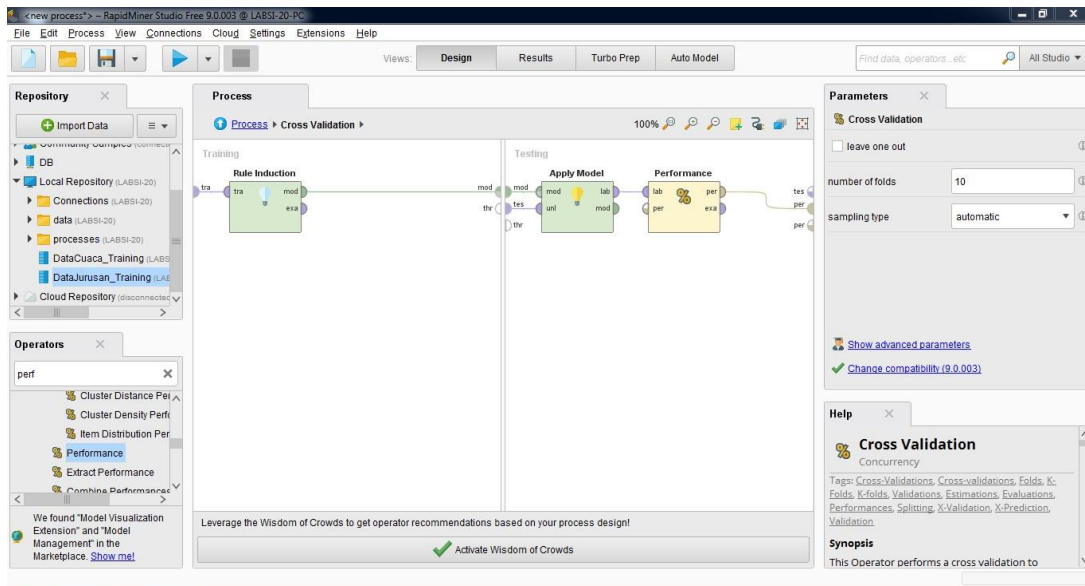
No. of Sets	Size	Support	Item 1	Item 2	Item 3	Item 4
1	0.500		Kelembaban_udara			
1	0.429		Berangin			
1	0.429		Suhu			
1	0.357		Cuaca = Cerah			
1	0.357		Cuaca = Hujan			
1	0.286		Cuaca = Mendung			
2	0.214		Kelembaban_udara	Berangin		
2	0.214		Kelembaban_udara	Suhu		
2	0.214		Kelembaban_udara	Cuaca = 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		



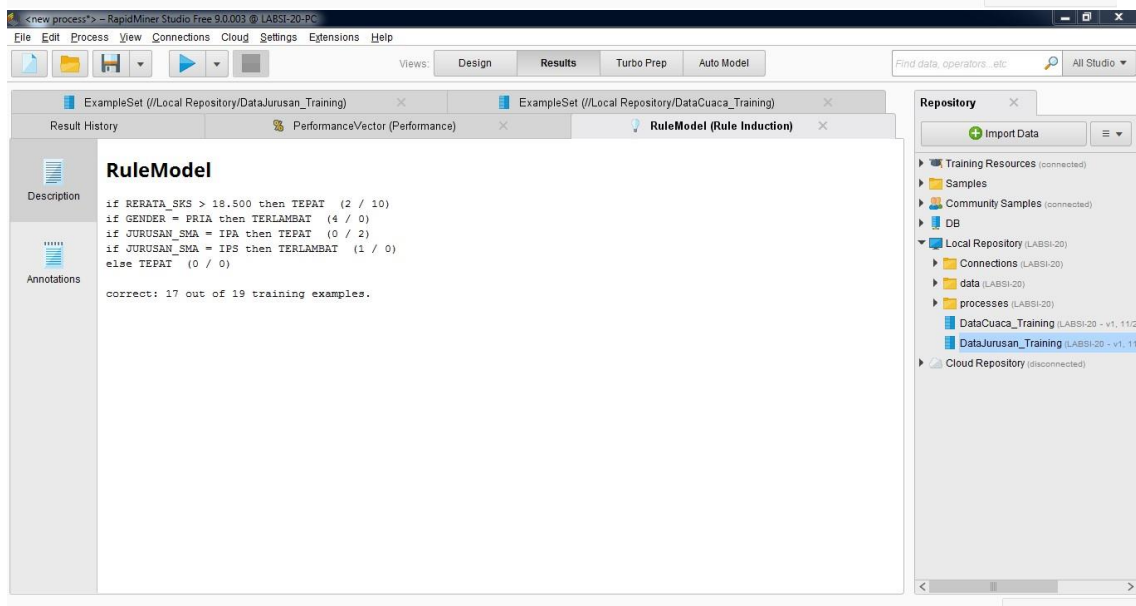
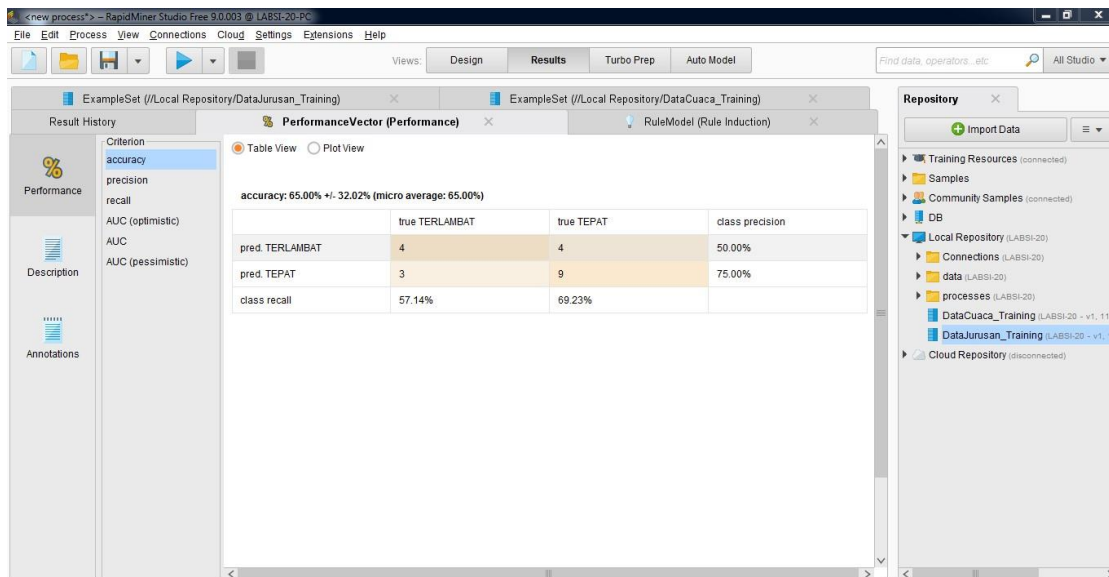
## Tugas no 2

Dengan menggunakan DataJurusan\_Training pada modul 6 dan buat pada bagian proses area dengan memasukkan DataJurusan\_Training kemudian beri operator Cross Validation kemudian buka pada Cross Validation dan tambahkan operator rule induction, apply model dan performance





## Hasil dari tugas no 1





## Tugas no 2

<new process> - RapidMiner Studio Free 9.0.003 @ LABSI-20-PC

File Edit Process View Connections Cloud Settings Extensions Help

Views: Design

**Repository**

- Import Data
- Community Samples (connected)
- DB
- Local Repository (LABSI-20)
  - Connections (LABSI-20)
  - data (LABSI-20)
  - processes (LABSI-20)
    - DataCuaca\_Training (LABSI-20)
    - DataJurusan\_Training (LABSI-20)
- Cloud Repository (disconnected)

**Process**

Process

Retrieve DataJurusan... Preprocessing

We found "Tadl", "MeaningCloud Text Analytics" and one more result in the Marketplace. [Show me!](#)

Leverage the Wisdom of Crowds to get operator recommendations based on your process design!

Activate Wisdom

ALT + click to disconnect.

<new process> - RapidMiner Studio Free 9.0.003 @ LABSI-20-PC

File Edit Process View Connections Cloud Settings Extensions Help

Views: Design Results Turbo Prep Auto Model

Find data, operators, etc. All Studio

**Repository**

- Import Data
- Community Samples (connected)
- DB
- Local Repository (LABSI-20)
  - Connections (LABSI-20)
  - data (LABSI-20)
  - processes (LABSI-20)
    - DataCuaca\_Training (LABSI-20)
    - DataJurusan\_Training (LABSI-20)
- Cloud Repository (disconnected)

**Process**

Process

Retrieve DataJurusan... Preprocessing FP-Growth Create Association...

**Parameters**

**FP-Growth**

input format: items in dummy cod...  
min requirement: support  
min support: 0.1  
min items per itemset: 1  
max items per itemset: 0  
max number of itemsets: 1000000  
[Show advanced parameters](#)

**Help**

**FP-Growth**  
Concurrency

Tags: Associations, Market, Basket, Upselling, Up-selling, Crossselling, Cross-selling, Itemset, Item-set, Item set, Mining, Frequent, Patterns

**Synopsis**

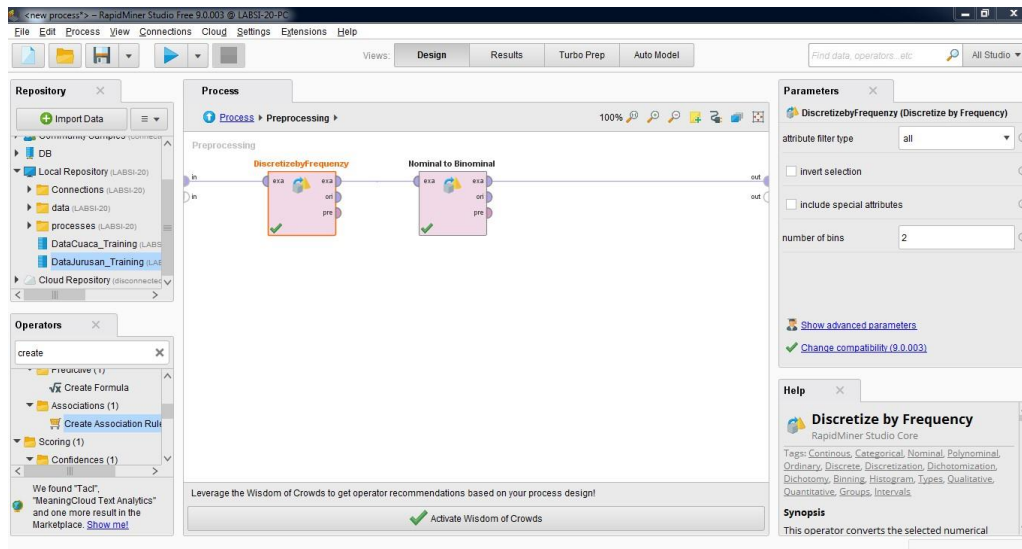
This Operator efficiently calculates all frequently-occurring itemsets in an ExampleSet, using the FP-

We found "Tadl", "MeaningCloud Text Analytics" and one more result in the Marketplace. [Show me!](#)

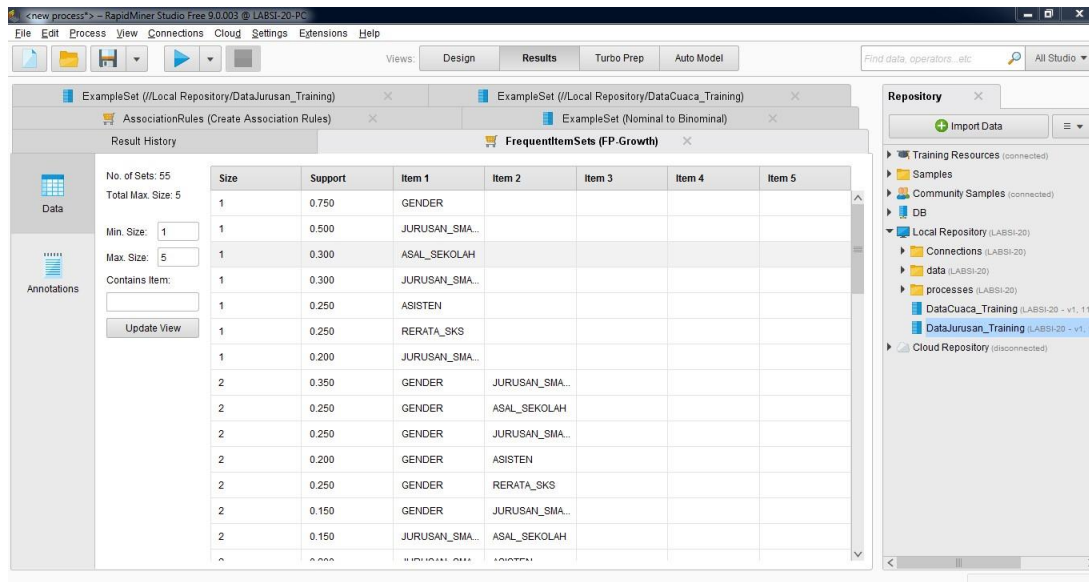
Leverage the Wisdom of Crowds to get operator recommendations based on your process design!

Activate Wisdom of Crowds

2A dengan number of bins = 2



Hasilnya



Jumlah set aturan asosiasi dan total max size yang terbentuk berdasarkan FP-Growth

No. of Sets: 55  
Total Max. Size: 5

Min. Size:   
Max. Size:

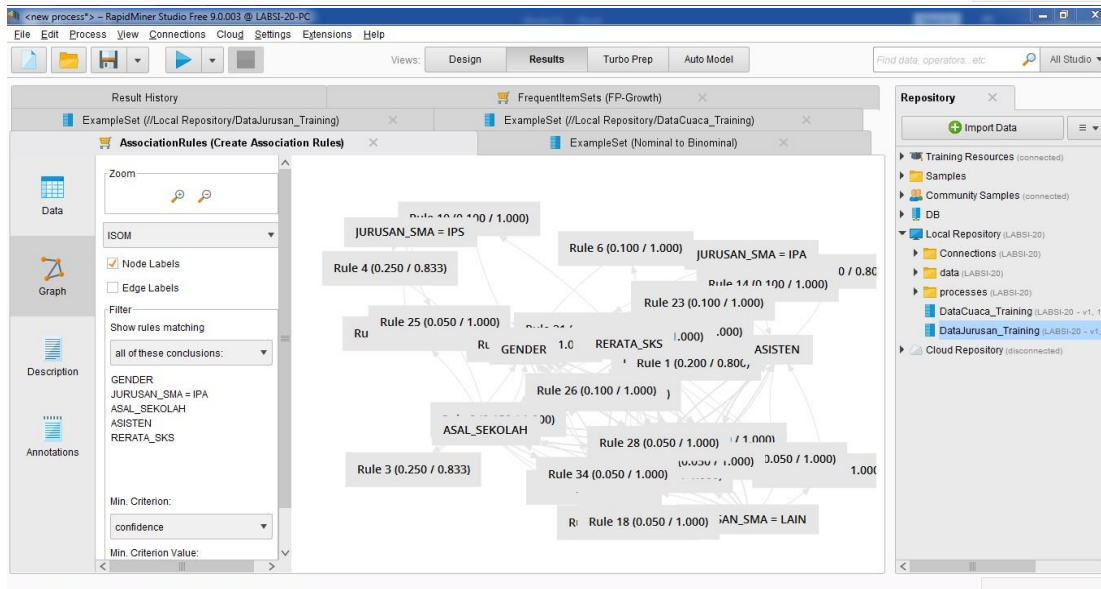
Contains Item:



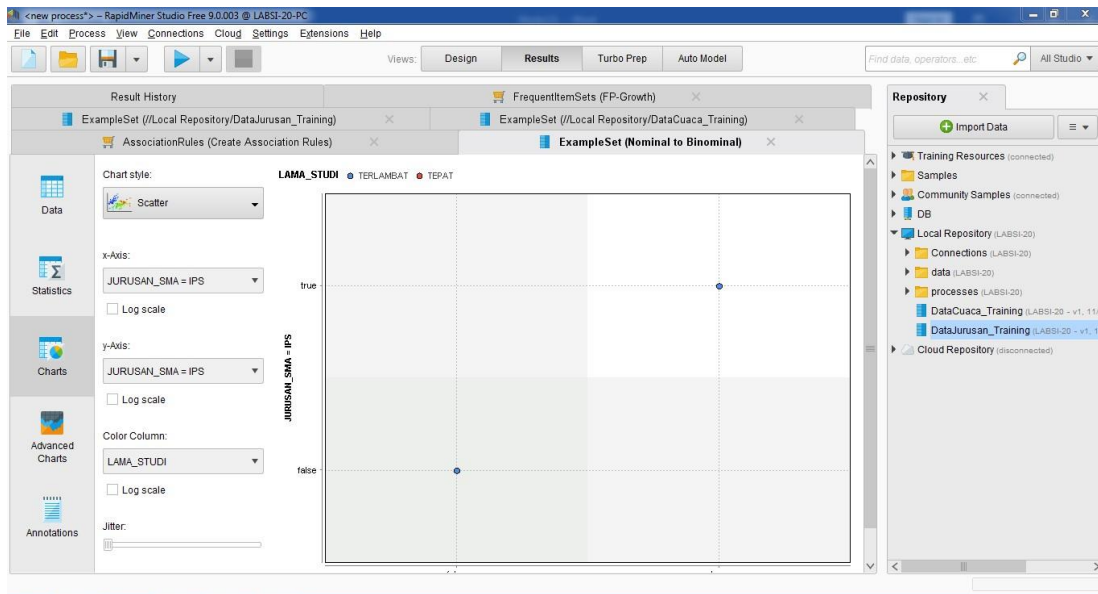
## Jumlah data pasangan premis dan kesimpulan pada Association Rules

The screenshot displays the 'AssociationRules (Create Association Rules)' window in RapidMiner Studio. The 'Results' tab is active, showing a table of 16 association rules. The table columns are 'No.', 'Premises', 'Conclusion', and 'Support'. The rules are sorted by support value, ranging from 0.050 to 0.250. The 'Premises' column lists combinations of attributes like 'ASAL\_SEKOLAH', 'JURUSAN\_SMA', 'RERATA\_SKS', 'GENDER', and 'ASISTEN'. The 'Conclusion' column lists single attributes. The 'Support' column shows the frequency of each rule.

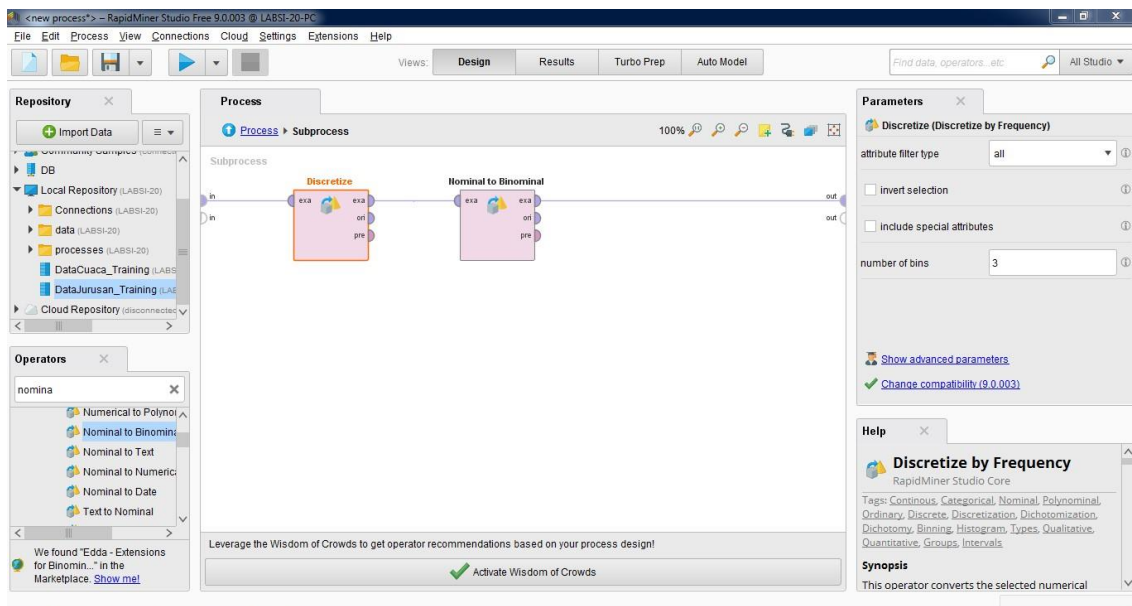
No.	Premises	Conclusion	Support
3	ASAL_SEKOLAH	GENDER	0.250
4	JURUSAN_SMA = IPS	GENDER	0.250
5	RERATA_SKS	GENDER	0.250
6	JURUSAN_SMA = IPA, RERATA_SKS	GENDER	0.100
7	ASAL_SEKOLAH, JURUSAN_SMA = IPS	GENDER	0.100
8	ASAL_SEKOLAH, RERATA_SKS	GENDER	0.150
9	ASAL_SEKOLAH, JURUSAN_SMA = LAIN	GENDER	0.050
10	JURUSAN_SMA = IPS, RERATA_SKS	GENDER	0.100
11	ASISTEN, RERATA_SKS	GENDER	0.150
12	ASISTEN, JURUSAN_SMA = LAIN	GENDER	0.050
13	RERATA_SKS, JURUSAN_SMA = LAIN	GENDER	0.050
14	JURUSAN_SMA = IPA, RERATA_SKS	ASISTEN	0.100
15	ASAL_SEKOLAH, JURUSAN_SMA = LAIN	ASISTEN	0.050
16	ASISTEN, JURUSAN_SMA = LAIN	ASAL_SEKOLAH	0.050



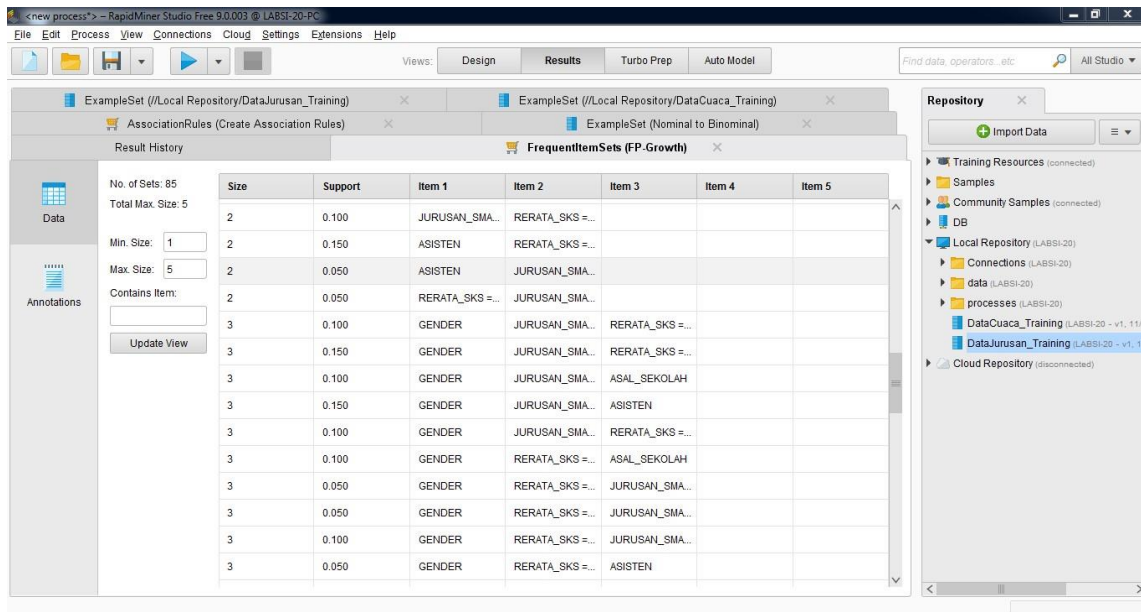
## Grafik Chart pola distribusi data



2B dengan number of bins = 3



## Hasilnya



The screenshot shows the RapidMiner Studio interface with the 'Results' view selected. The 'FrequentItemSets (FP-Growth)' process is running, and the results are displayed in a table. The table has columns for 'Size', 'Support', and five 'Item' columns (Item 1 to Item 5). The results show 15 frequent item sets, each with a size of 2 or 3 and a support value of 0.050, 0.100, or 0.150. The items are combinations of 'JURUSAN\_SMA...', 'RERATA\_SKS =...', 'ASISTEN', and 'GENDER'.

Size	Support	Item 1	Item 2	Item 3	Item 4	Item 5
2	0.100	JURUSAN_SMA...	RERATA_SKS =...			
2	0.150	ASISTEN	RERATA_SKS =...			
2	0.050	ASISTEN	JURUSAN_SMA...			
2	0.050	RERATA_SKS =...	JURUSAN_SMA...			
3	0.100	GENDER	JURUSAN_SMA...	RERATA_SKS =...		
3	0.150	GENDER	JURUSAN_SMA...	RERATA_SKS =...		
3	0.100	GENDER	JURUSAN_SMA...	ASAL_SEKOLAH		
3	0.150	GENDER	JURUSAN_SMA...	ASISTEN		
3	0.100	GENDER	JURUSAN_SMA...	RERATA_SKS =...		
3	0.100	GENDER	RERATA_SKS =...	ASAL_SEKOLAH		
3	0.050	GENDER	RERATA_SKS =...	JURUSAN_SMA...		
3	0.050	GENDER	RERATA_SKS =...	JURUSAN_SMA...		
3	0.100	GENDER	RERATA_SKS =...	JURUSAN_SMA...		
3	0.050	GENDER	RERATA_SKS =...	ASISTEN		

Jumlah set aturan asosiasi dan total max size yang terbentuk berdasarkan FP-Growth



The screenshot shows the 'Data' sidebar in RapidMiner Studio. It displays the 'No. of Sets: 85' and 'Total Max. Size: 5'. There are also input fields for 'Min. Size: 1' and 'Max. Size: 5', and a 'Contains Item:' field. An 'Update View' button is at the bottom.

Parameter	Value
No. of Sets	85
Total Max. Size	5
Min. Size	1
Max. Size	5
Contains Item	

# Jumlah data pasangan premis dan kesimpulan pada Association Rules

The screenshot displays the 'Results' tab in RapidMiner Studio. The main window shows a table of association rules generated from the 'ExampleSet (Nominal to Binominal)' dataset. The table has four columns: 'No.', 'Premises', 'Conclusion', and 'Support'. The 'Premises' column lists various conditions on attributes like 'ASAL\_SEKOLAH', 'JURUSAN\_SMA', and 'RERATA\_SKS'. The 'Conclusion' column shows the predicted 'GENDER'. The 'Support' column indicates the frequency of each rule. On the left, the 'Show rules matching' section shows the selected rule set. The right sidebar shows the 'Repository' with various data sources.

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 [19.500 - ∞]	GENDER	0.100
8	RERATA_SKS = range2 [18.500 - 19.500], JURUS...	GENDER	0.100
9	RERATA_SKS = range2 [18.500 - 19.500], ASISTEN	GENDER	0.050
10	RERATA_SKS = range2 [18.500 - 19.500], JURUS...	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 [19.500 - ∞]	GENDER	0.100
15	ASISTEN, RERATA_SKS = range3 [19.500 - ∞]	GENDER	0.150
16	ASISTEN, JURUSAN_SMA = LAIN	GENDER	0.050

The screenshot displays the 'Results' tab in RapidMiner Studio, showing a network diagram of association rules. The diagram illustrates the relationships between different rules, with nodes representing individual rules and edges representing their dependencies or overlaps. The nodes are labeled with rule numbers and their support values, such as 'Rule 26 (0.050 / 1.000)' and 'Rule 21 (0.050 / 1.000)'. The diagram shows a complex web of connections, indicating how different rules interact and build upon each other. The left sidebar shows the 'Show rules matching' section, and the right sidebar shows the 'Repository'.

# Grafik Chart pola distribusi data

