Nama : Aldias Ibnu Habib

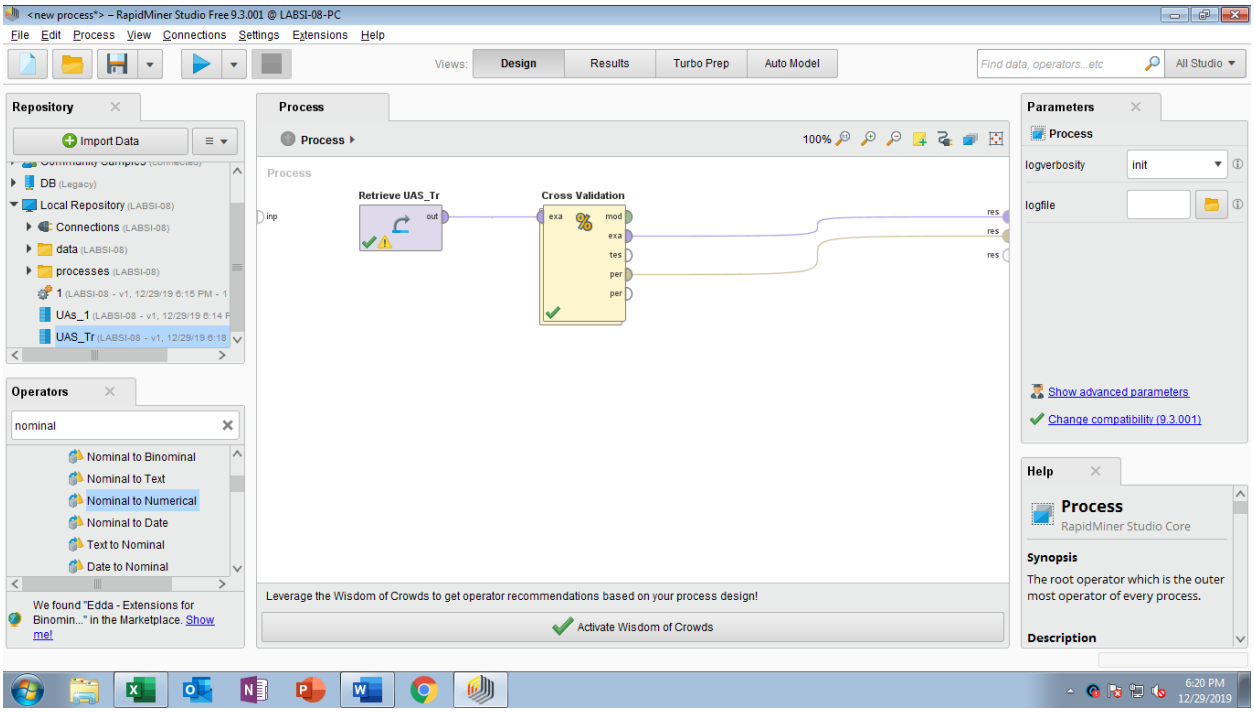
NIM : L200170166

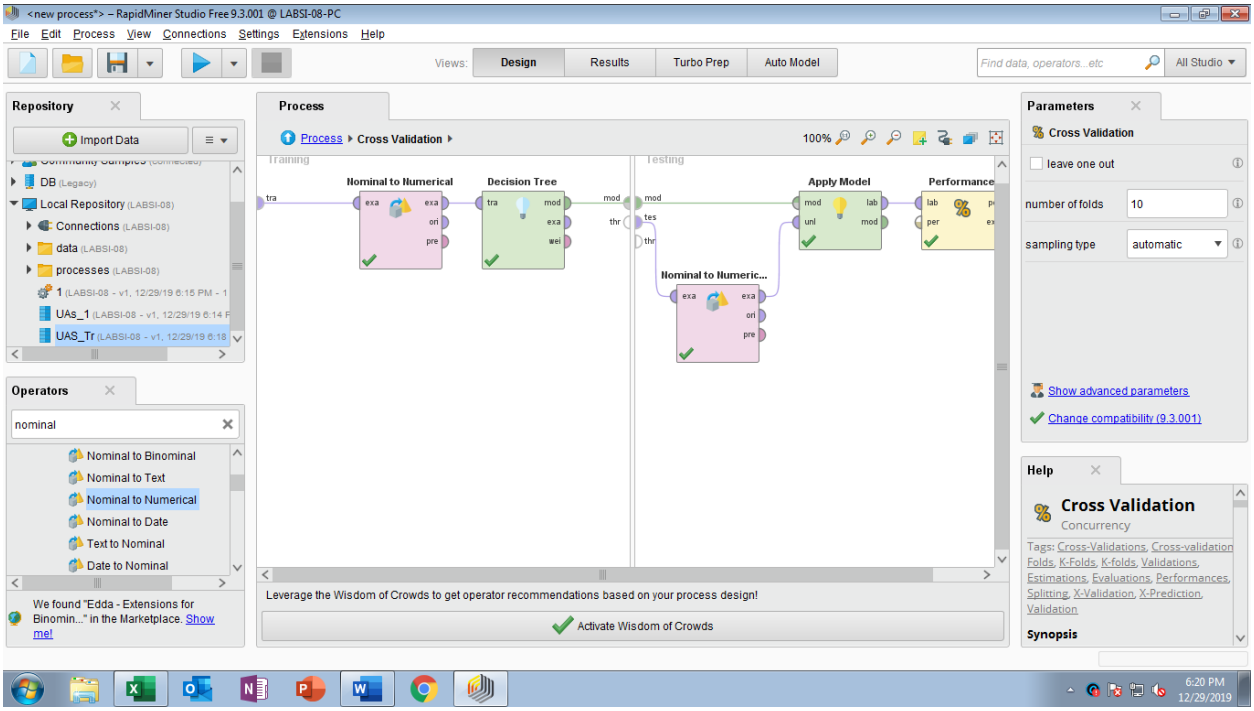
Kelas : ?

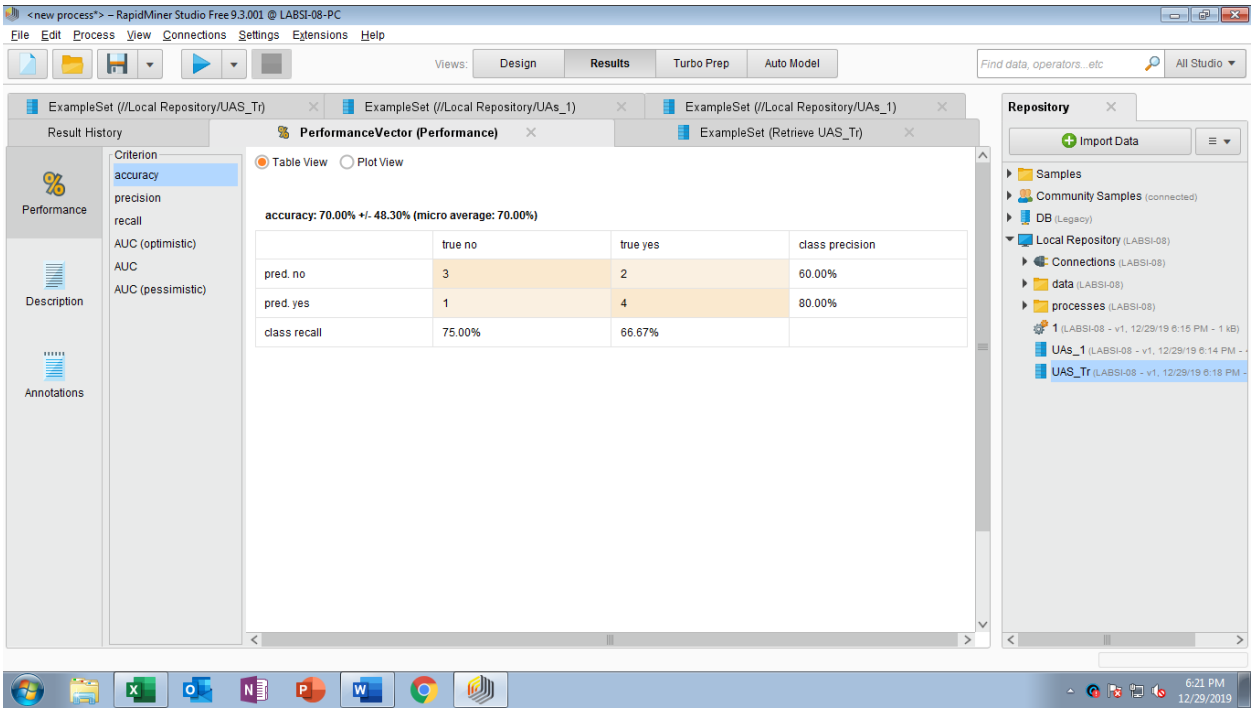
Ujian Akhir Semester Praktikum Data Warehouse Data Mining

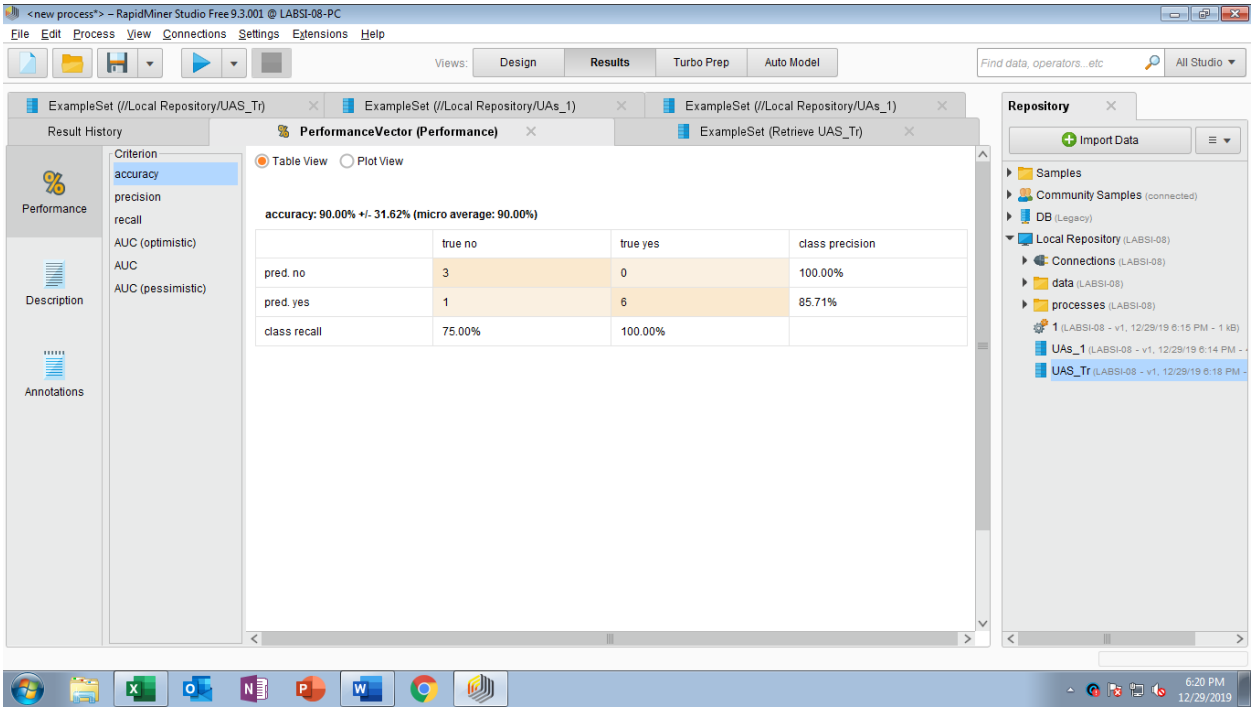
NOMOR 1

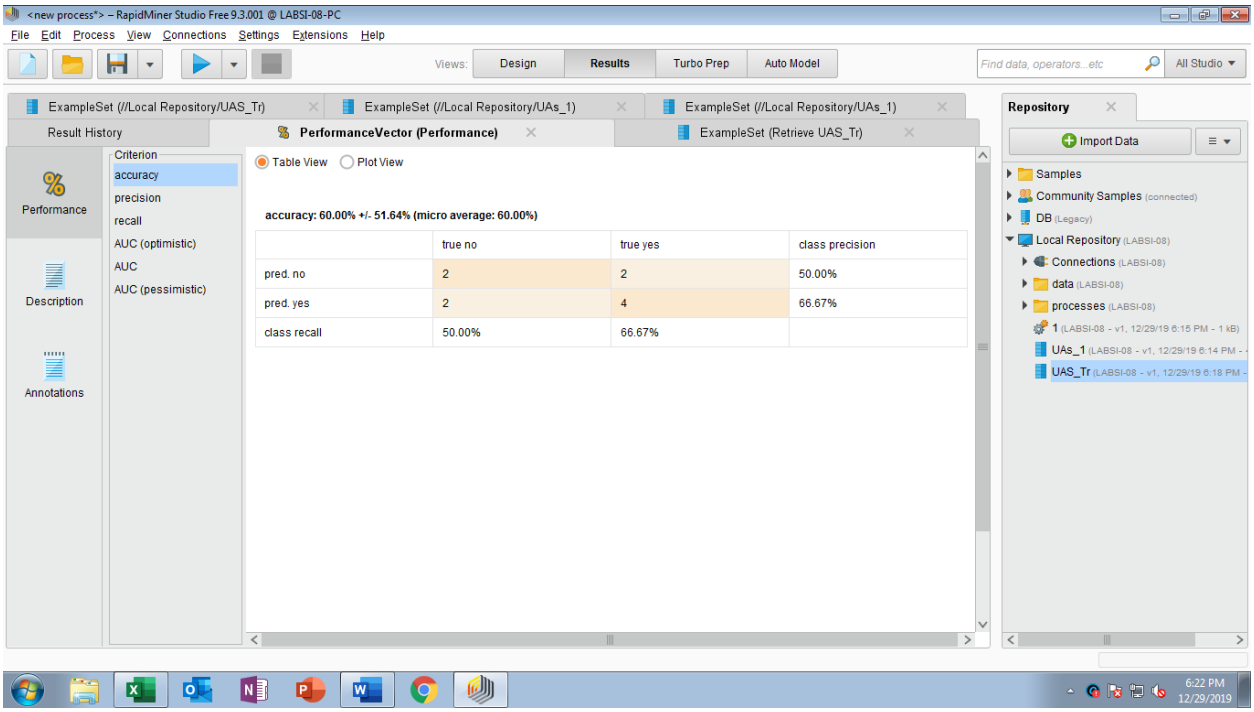
Role model daripada rangkaian naïve bayes, decision tree, dan neural nets operator pada cross validation daiganti dengan masing2 operator yang diingkinkan naïve bayes/decision tree/neural net.




<new process*> – RapidMiner Studio Free 9.3.001 @ LABSI-08-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
DB (Legacy)
Local Repository (LABSI-08)
Connections (LABSI-08)
data (LABSI-08)
processes (LABSI-08)
UAs_1 (LABSI-08 - v1, 12/29/19 6:14 F
UAS_Tr (LABSI-08 - v1, 12/29/19 6:18
Operators
nominal
Nominal to Binominal
Nominal to Text
Nominal to Numerical
Nominal to Date
Text to Nominal
Date to Nominal
We found "Edda - Extensions for Binomin..." in the Marketplace. Show me!
Process
Process Cross Validation
100%
Training
Testing
Nominal to Numerical
Decision Tree
Apply Model
Performance
Nominal to Numeric...
Leverage the Wisdom of Crowds to get operator recommendations based on your process design!
Activate Wisdom of Crowds
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-validation, Folds, K-Folds, K-folds, Validations, Estimations, Evaluations, Performances, Splitting, X-Validation, X-Prediction, Validation
Synopsis
6:20 PM
12/29/2019


<new process*> – RapidMiner Studio Free 9.3.001 @ LABSI-08-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/UAS_Tr)
ExampleSet (//Local Repository/UAs_1)
ExampleSet (//Local Repository/UAs_1)
Result History
PerformanceVector (Performance)
ExampleSet (Retrieve UAS_Tr)
Performance
Description
Annotations
Criterion
accuracy
precision
recall
AUC (optimistic)
AUC
AUC (pessimistic)
Table View
Plot View
accuracy: 70.00% +/- 48.30% (micro average: 70.00%)
true no
true yes
class precision
pred. no
3
2
60.00%
pred. yes
1
4
80.00%
class recall
75.00%
66.67%
Repository
Import Data
Samples
Community Samples (connected)
DB (Legacy)
Local Repository (LABSI-08)
Connections (LABSI-08)
data (LABSI-08)
processes (LABSI-08)
UAs_1 (LABSI-08 - v1, 12/29/19 6:14 PM -
UAS_Tr (LABSI-08 - v1, 12/29/19 6:18 PM -
6:21 PM
12/29/2019





Dari komparasi menggunkana algoritma klasifikasi (Naïve Bates VS Decission Tree VS Neural Nets) didapatkan hasil seperti gambar diatas, dengan begitu didapatkan Decission tree yang memiliki nilai akurasi lebih baik dibandingkan algoritma klasifikasi yang lain.

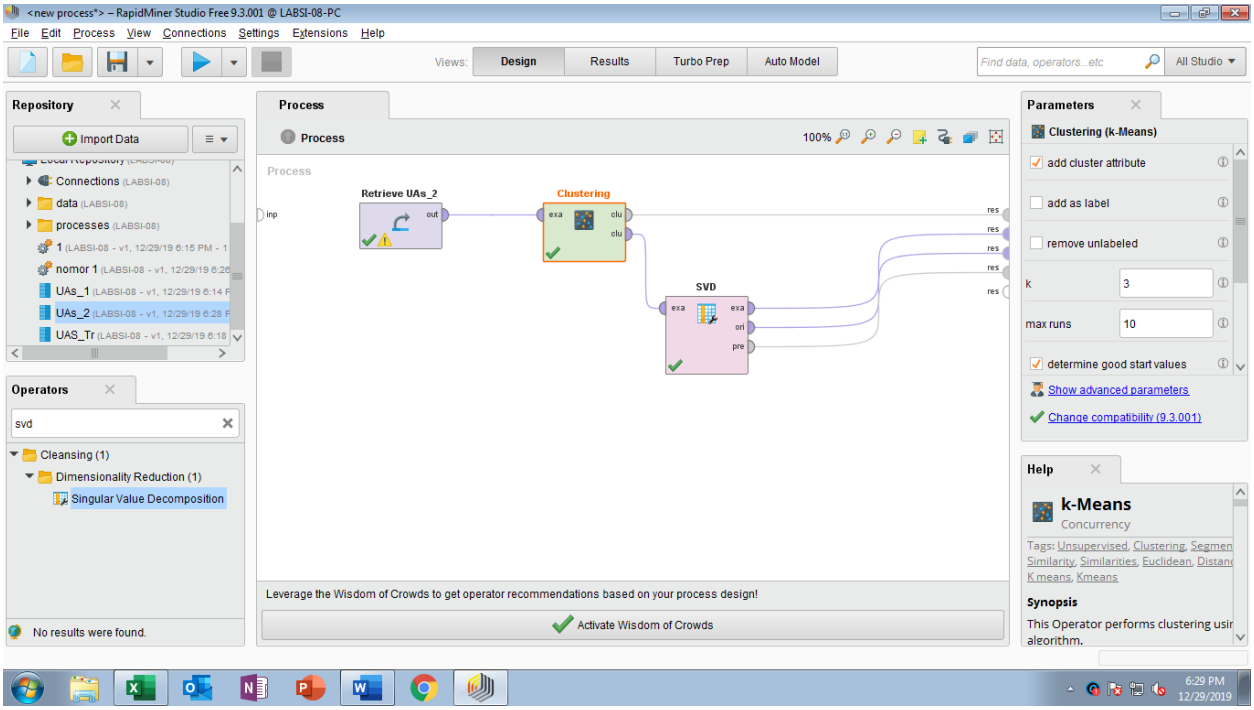
Naïve Bayes = 70%

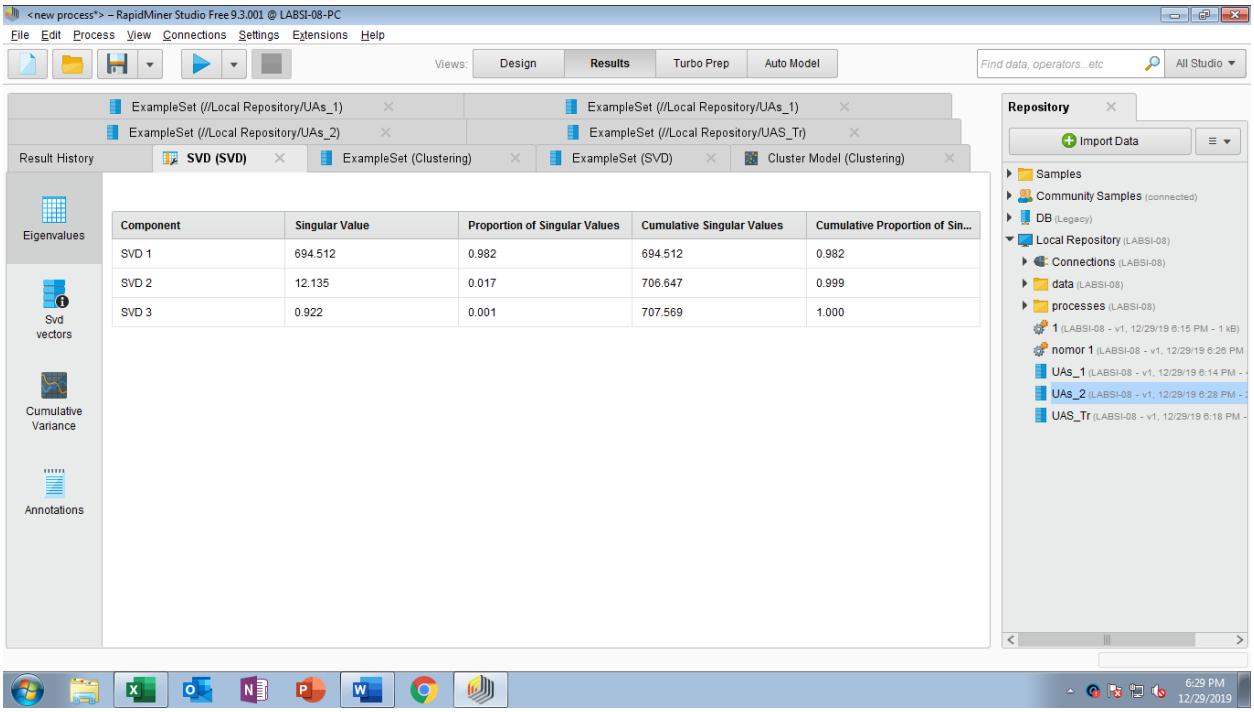
Decission Tree = 90%

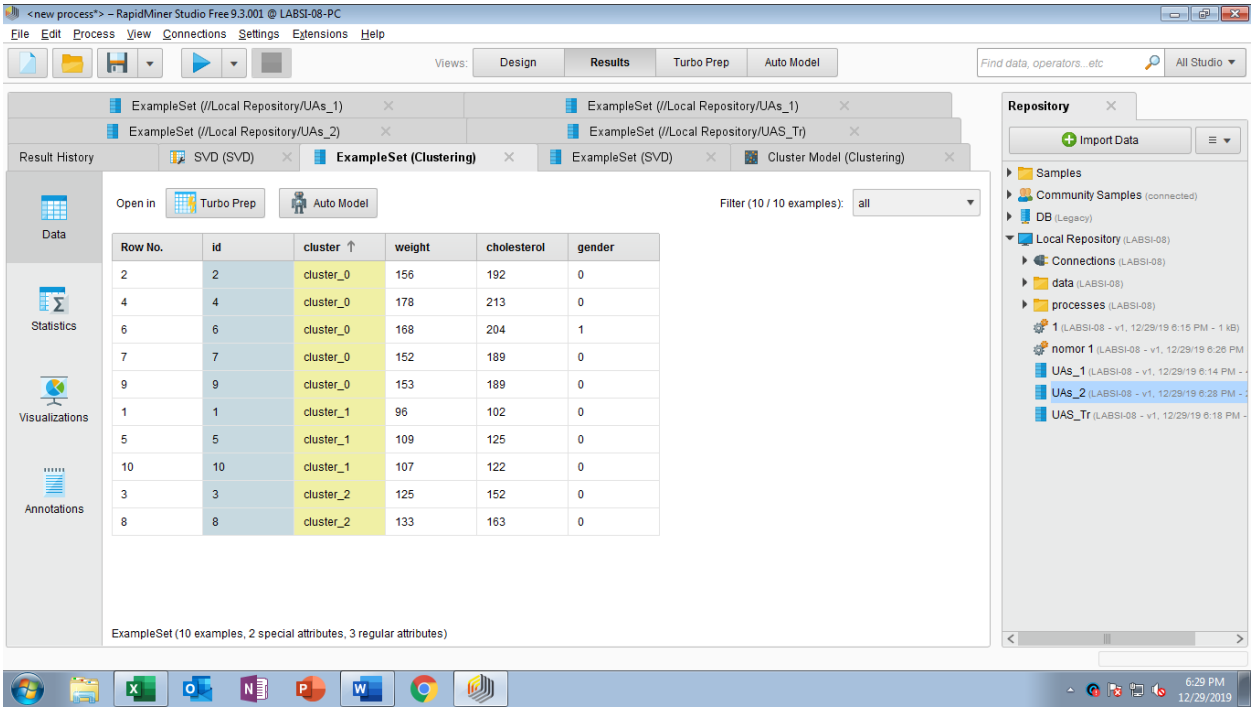
Neural Nets = 60%

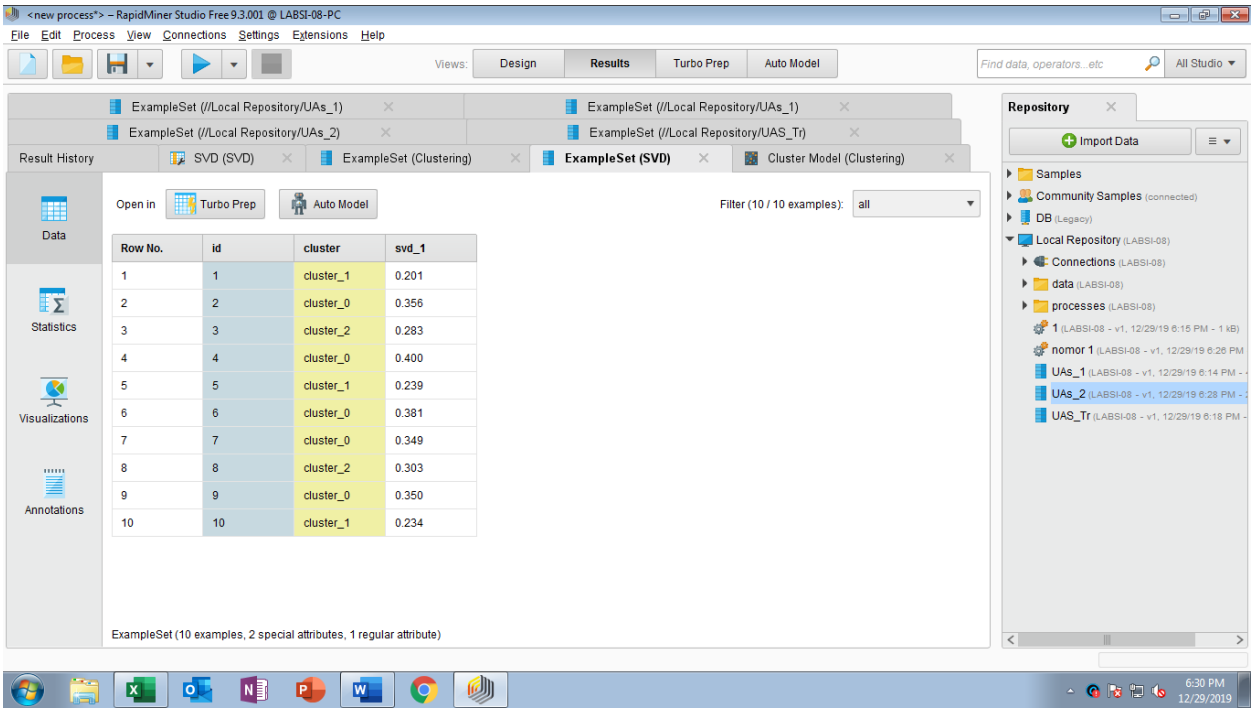
NOMOR 2

Pengelompokkan menjadi tiga kelompok pada dataset ini dengan **K-means**





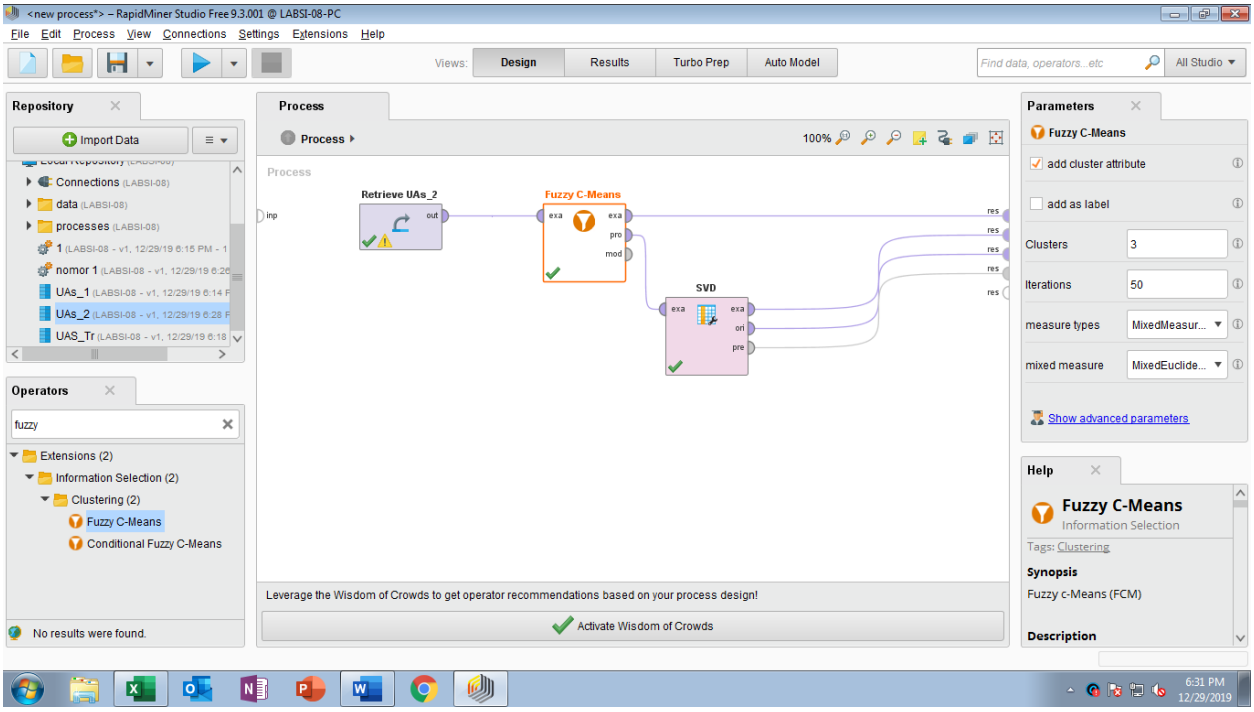


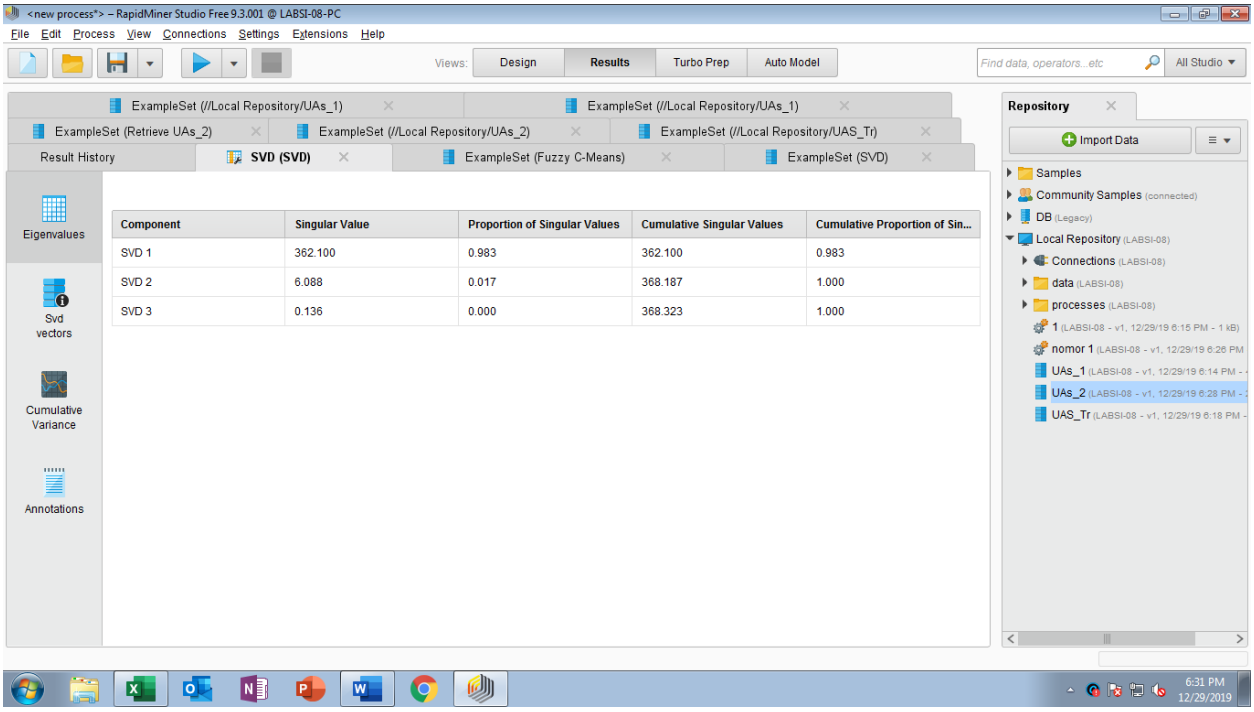


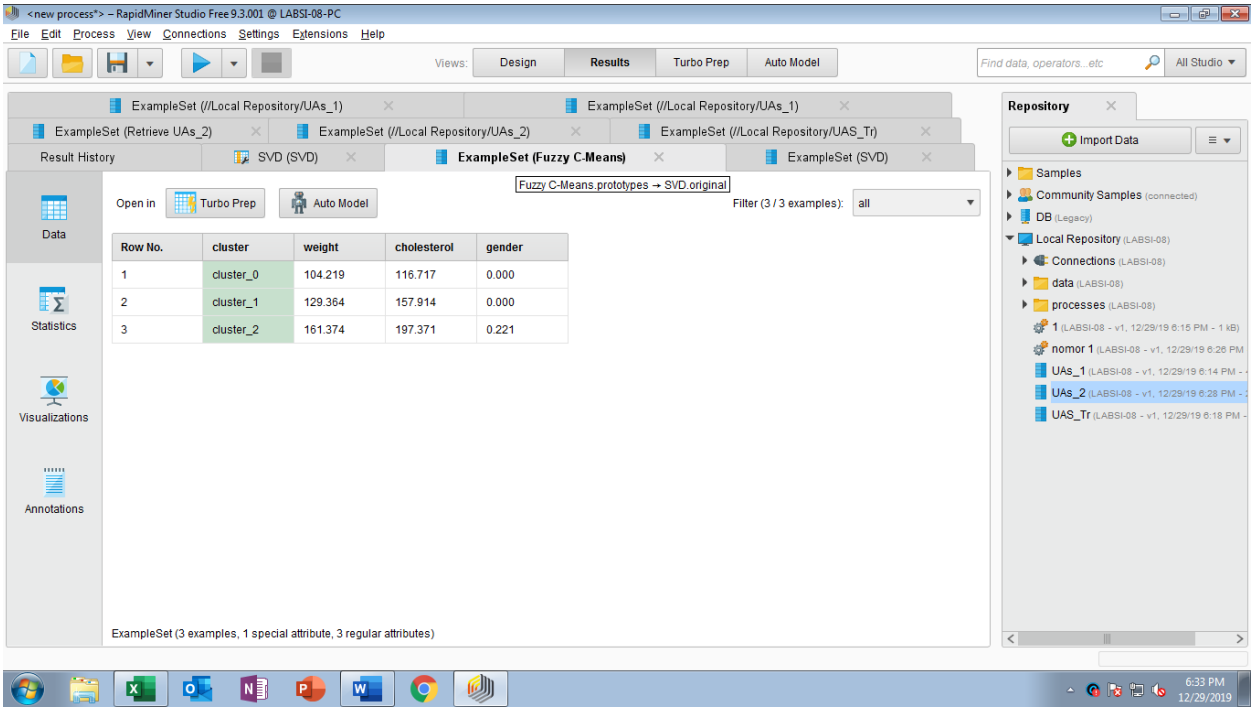
Cluster Model

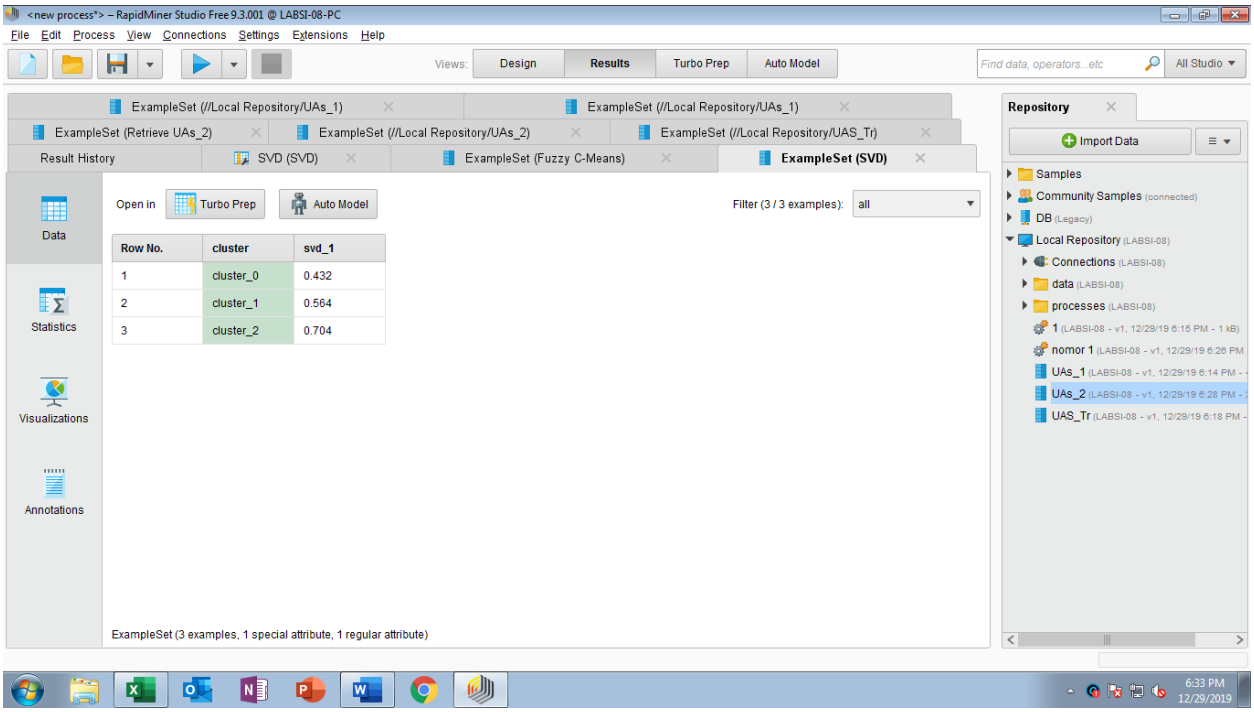
```
Cluster 0: 5 items
Cluster 1: 3 items
Cluster 2: 2 items
Total number of items: 10
```

Pengelompokkan menjadi tiga kelompok pada dataset ini dengan **Fuzzy K-means.**





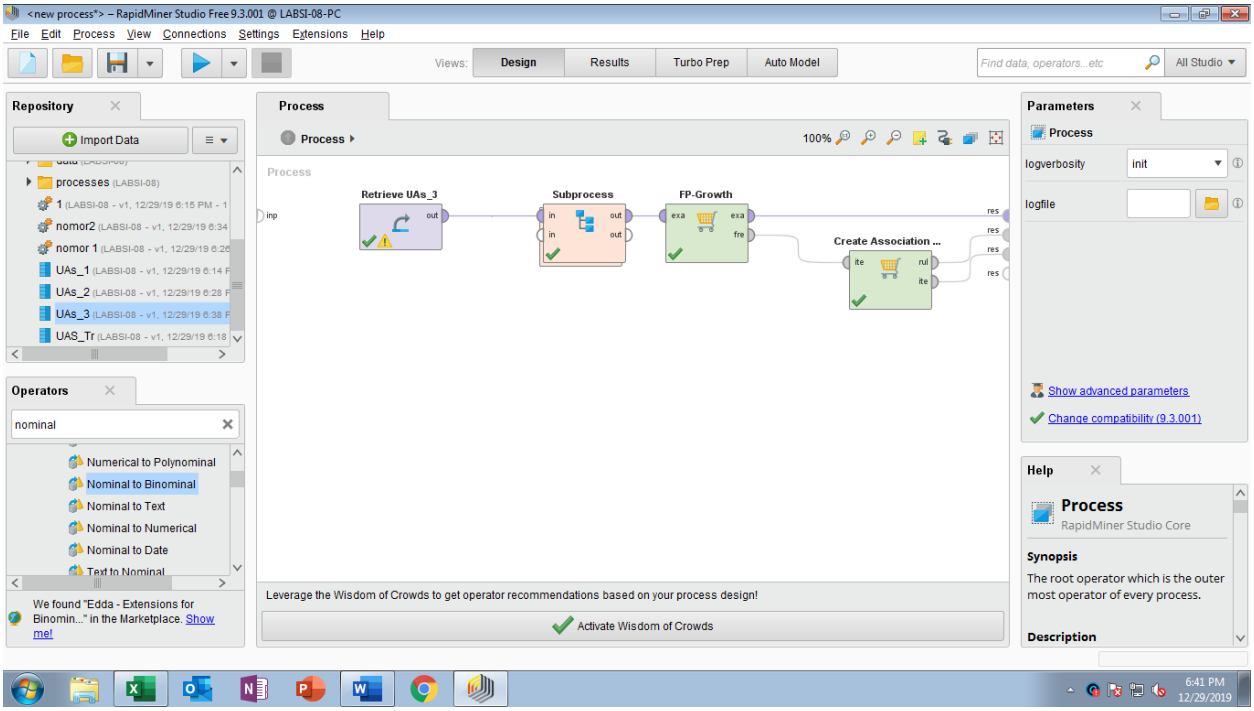




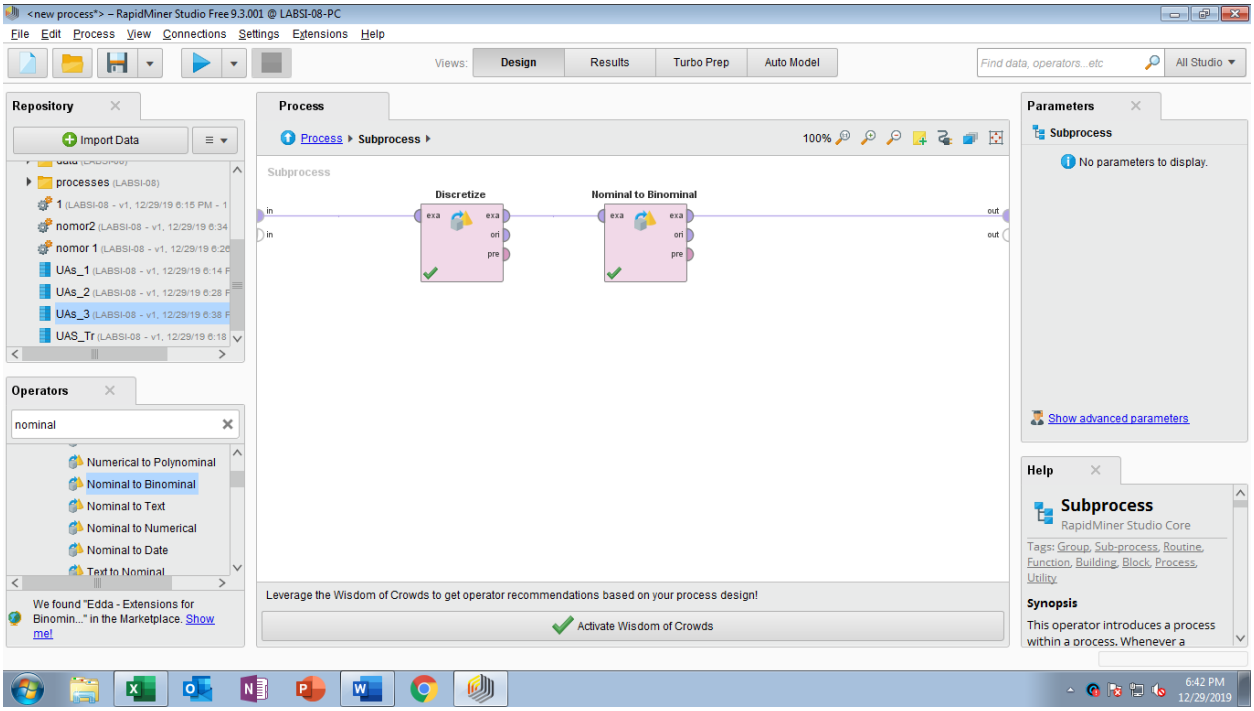
Dari gambar diatas dapat disimpulkan bahwa hasil dari kedua operasi tersebut k-means, dan fuzzy k-means mendapatkan hasil clustering lebih sedikit seperti gambar diatas dengan 3 cluster dab ketentuan dari svd seperti datas masing masing model.

NOMOR 3

Dengan algoritma FP-Growth untuk mendapatkan aturan asosiasi pada dataset berikut

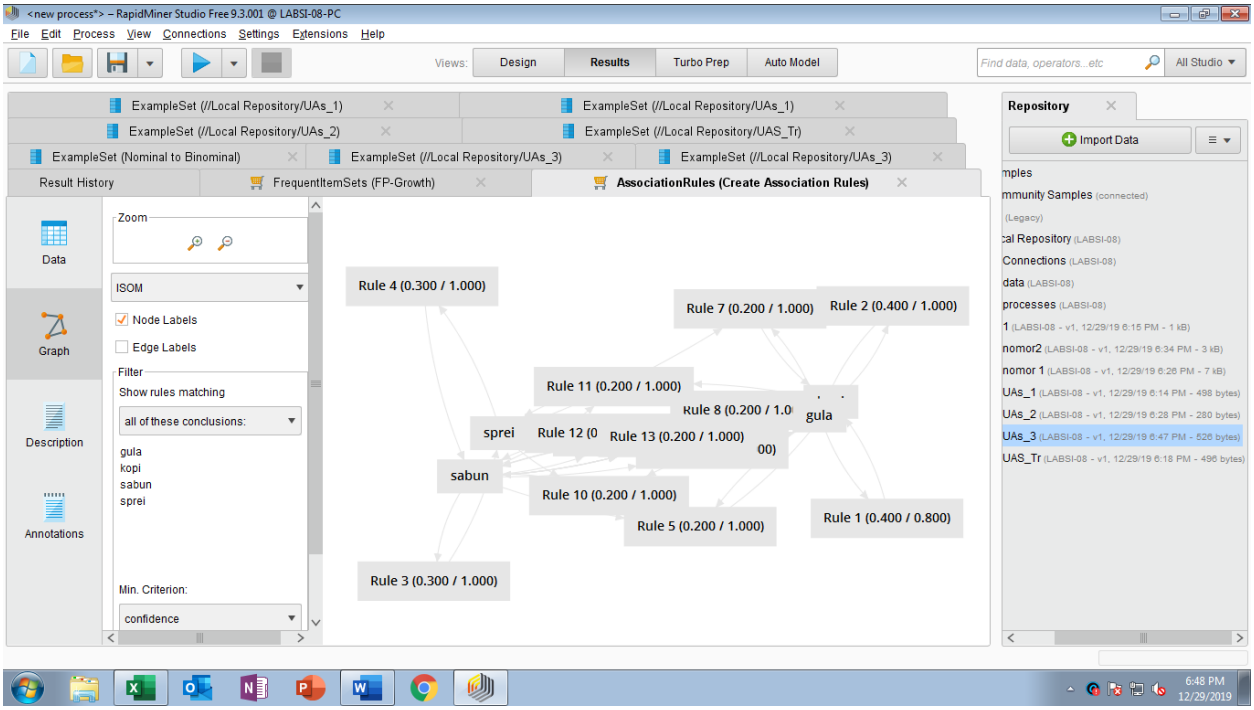


Klik ganda pada subprocess dan rule model sperti berikut



Hasil didapatkan frekuensiItemSet(FP-Growth) berikut

1	0.500	gula			
1	0.400	aqua			
1	0.400	kopi			
1	0.300	sabun			
1	0.300	sprei			
2	0.400	gula	kopi		
2	0.200	gula	sabun		
2	0.200	gula	sprei		
2	0.200	kopi	sabun		
2	0.200	kopi	sprei		
2	0.300	sabun	sprei		
3	0.200	gula	kopi	sabun	
3	0.200	gula	kopi	sprei	
3	0.200	gula	sabun	sprei	
3	0.200	kopi	sabun	sprei	
4	0.200	gula	kopi	sabun	sprei

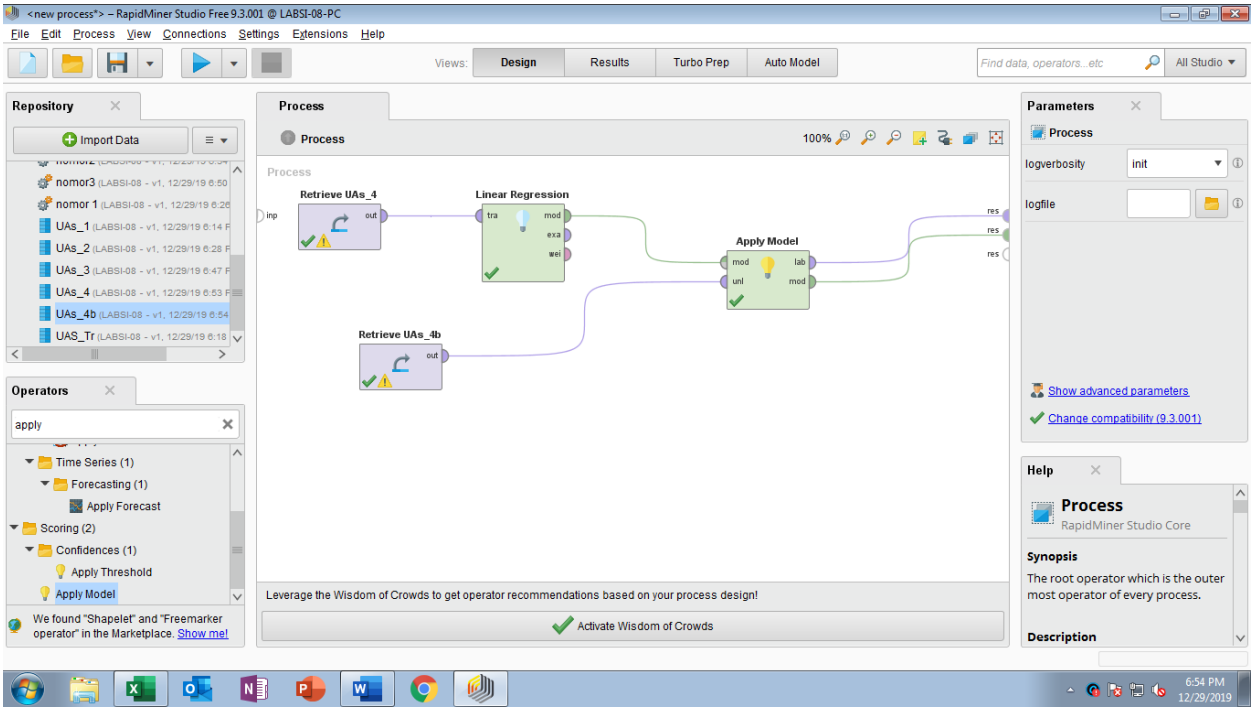


Didapatkan AssociationRules

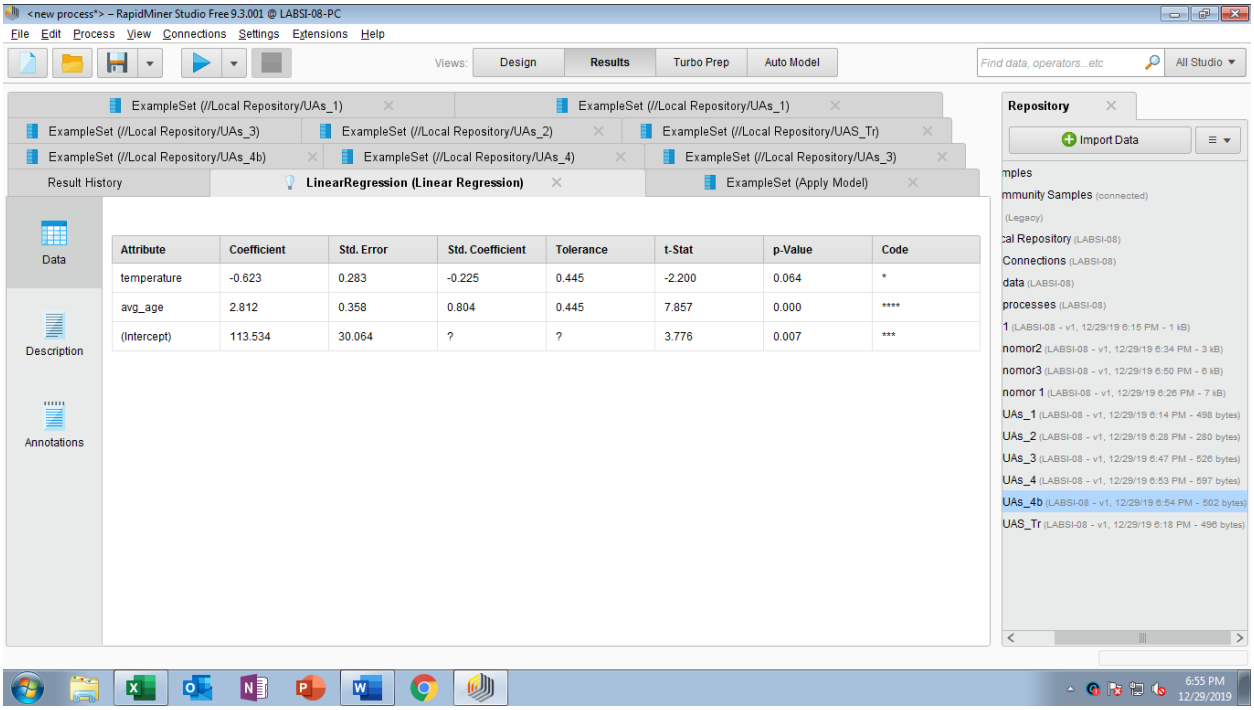
```
Association Rules
[gula] --> [kopi] (confidence: 0.800)
[kopi] --> [gula] (confidence: 1.000)
[sabun] --> [sprei] (confidence: 1.000)
[sprei] --> [sabun] (confidence: 1.000)
[gula, sabun] --> [kopi] (confidence: 1.000)
[kopi, sabun] --> [gula] (confidence: 1.000)
[gula, sprei] --> [kopi] (confidence: 1.000)
[kopi, sprei] --> [gula] (confidence: 1.000)
[gula, sabun] --> [sprei] (confidence: 1.000)
[gula, sprei] --> [sabun] (confidence: 1.000)
[kopi, sabun] --> [sprei] (confidence: 1.000)
[kopi, sprei] --> [sabun] (confidence: 1.000)
[gula, sabun] --> [kopi, sprei] (confidence: 1.000)
[kopi, sabun] --> [gula, sprei] (confidence: 1.000)
[gula, kopi, sabun] --> [sprei] (confidence: 1.000)
[gula, sprei] --> [kopi, sabun] (confidence: 1.000)
[kopi, sprei] --> [gula, sabun] (confidence: 1.000)
[gula, kopi, sprei] --> [sabun] (confidence: 1.000)
[gula, sabun, sprei] --> [kopi] (confidence: 1.000)
[kopi, sabun, sprei] --> [gula] (confidence: 1.000)
```

NOMOR 4

Algoritma linear regression pada dataset ini dengan role model berikut

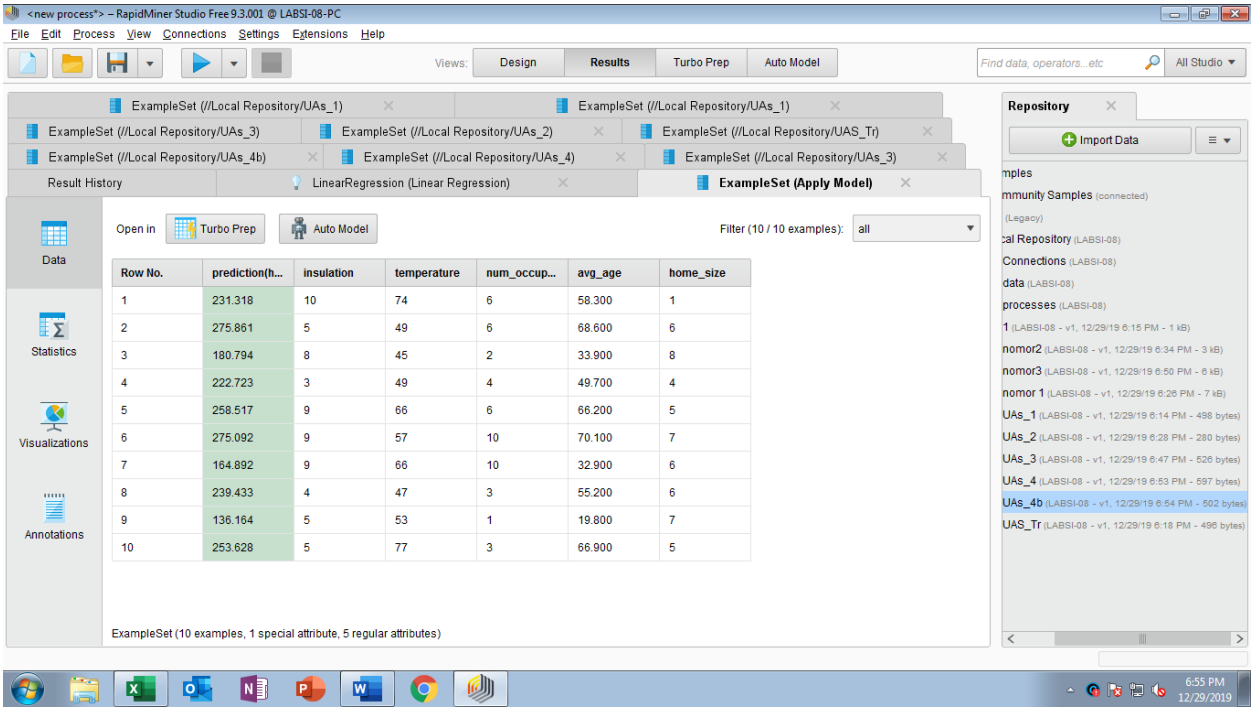


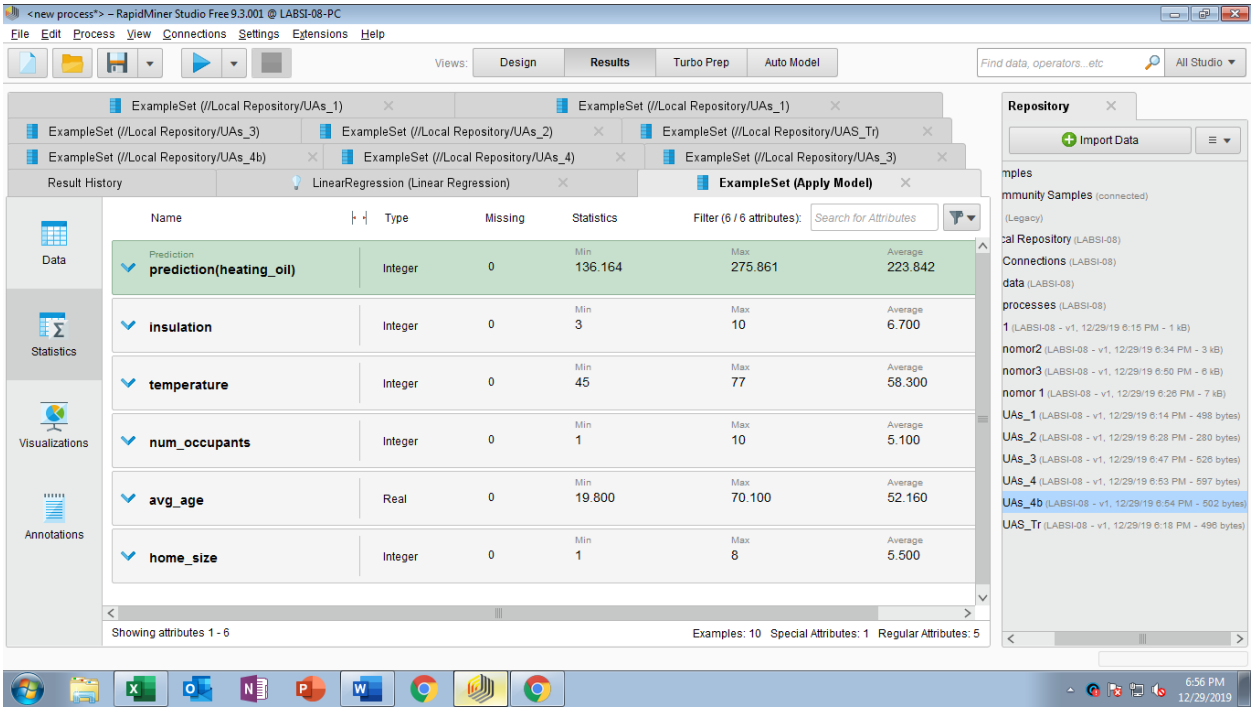
Didapatkan hasil seperti berikut



Dan hasil prediksi dari dataset testing sebagai berikut:

prediction:





LinearRegression

```
- 0.623 * temperature
+ 2.812 * avg_age
+ 113.534
```