Experiment-3.2

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Aim of the Experiment :

Aim of the Experiment is to finding Association Rules for the Crime data using Apriori Algorithm and perform the result analysis.

Objective of the Experiment :

Task to be done for this experiment is that we have to perform following tasks:

a) Download Crime data set from kaggle and import data table in WEKA tool.

b) Apply Apriori algorithm and perform the result analysis.

Algorithm/ Steps for Experiment :

Step 1: Download the **Crime dataset** from the Kaggle website.

Step 2: Open the WEKA Tool and open the **'Explorer'** tab.

Home | Crime_data.csv

Menu | Home | Insert | Page Layout | Formulas | Data | Review | View | Tools | Smart

Format Painter | Paste | Calibri | 11 | Wrap Text | Orientation | Merge and Center

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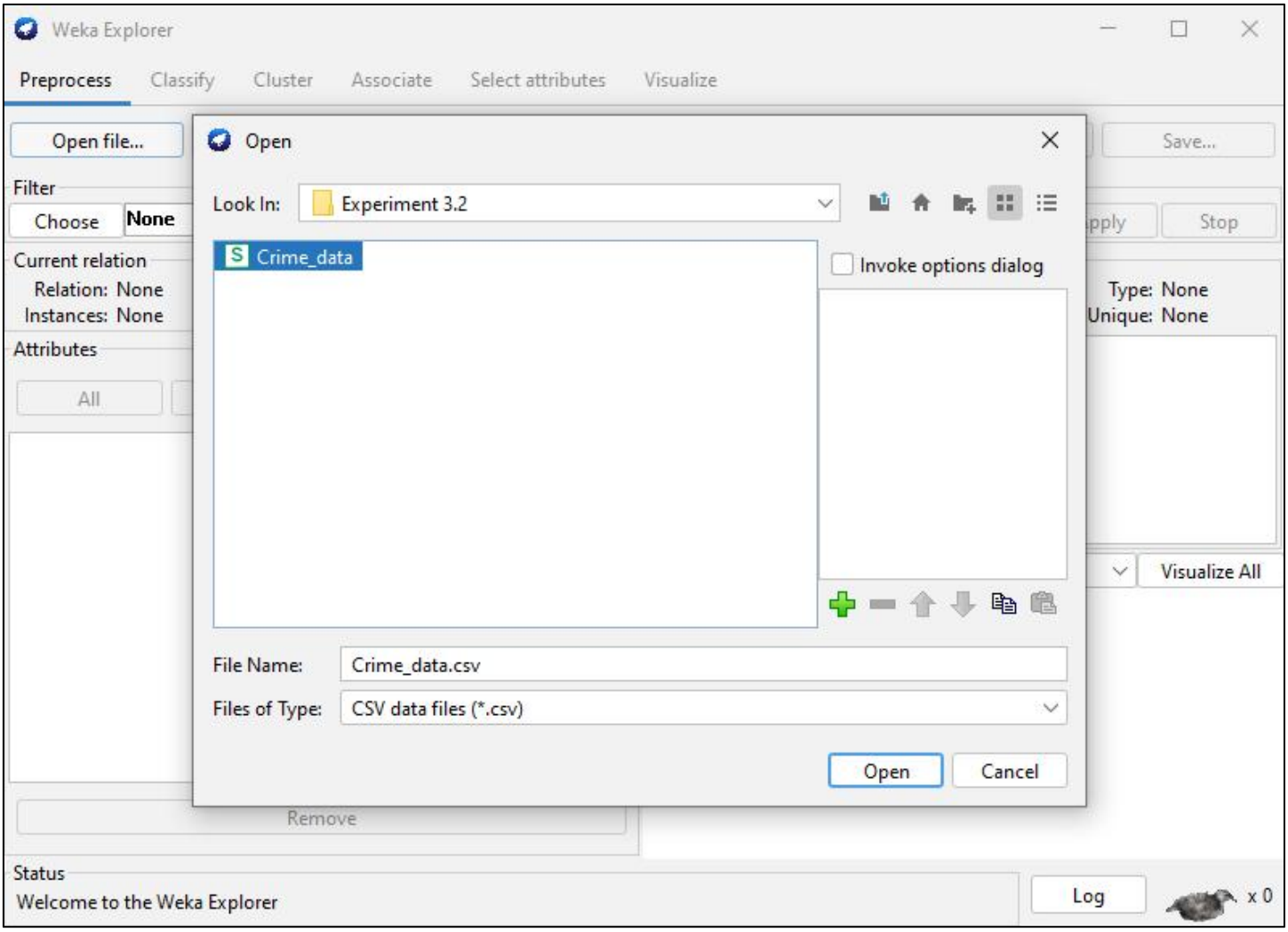
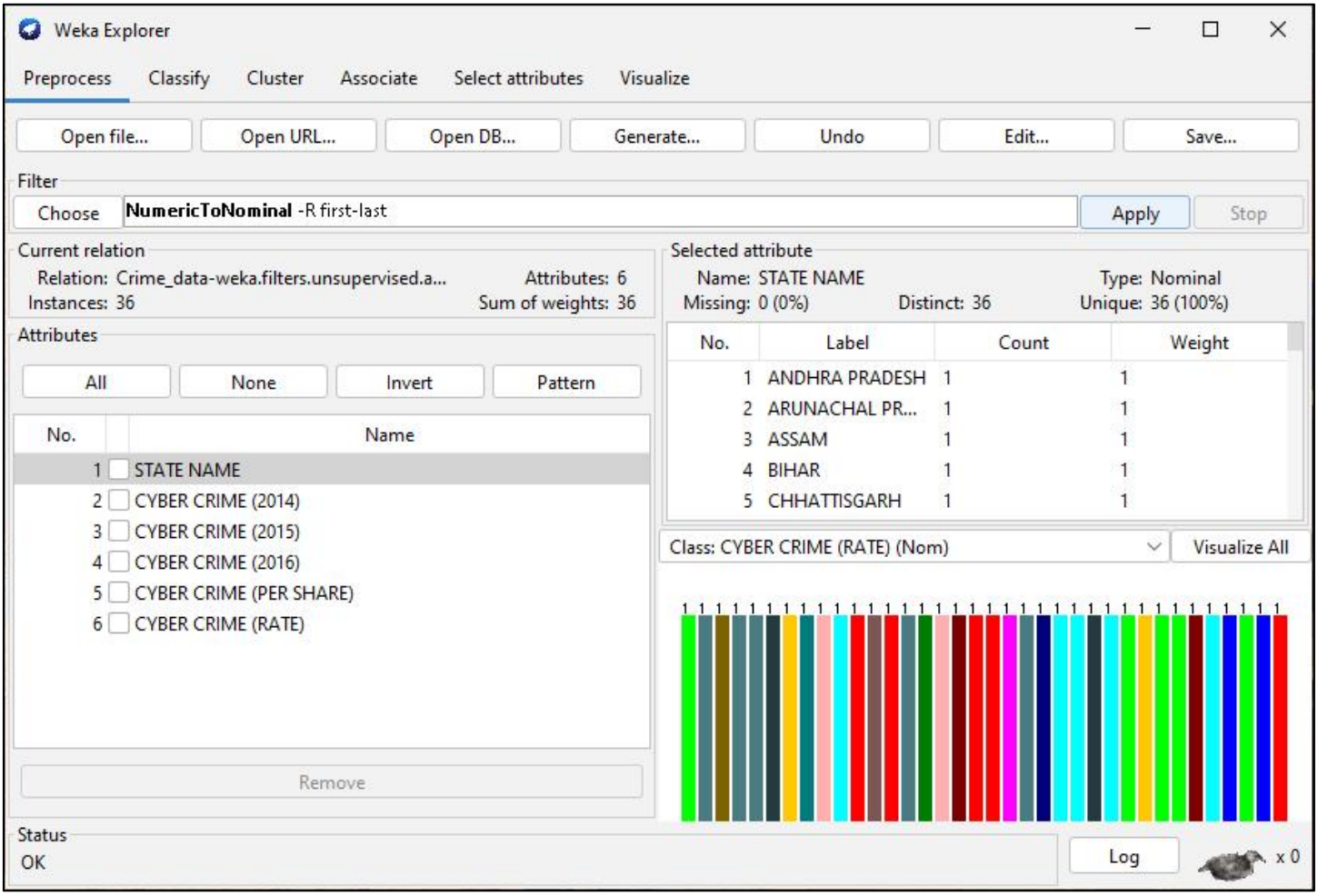
	A	B	C	D	E	F
1	STATE NAME	CYBER CRIME (2014)	CYBER CRIME (2015)	CYBER CRIME (2016)	CYBER CRIME (PER SHARE)	CYBER CRIME (RATE)
2	ANDHRA PRADESH	282	536	616	5	1.2
3	ARUNACHAL PRADESH	18	6	4	0	0.3
4	ASSAM	379	483	696	5.7	2.1
5	BIHAR	114	242	309	2.5	0.3
6	CHHATTISGARH	123	103	90	0.7	0.3
7	GOA	62	17	31	0.3	1.6
8	GUJARAT	227	242	362	2.9	0.6
9	HARYANA	151	224	401	3.3	1.5
10	HIMACHAL PRADESH	38	50	31	0.3	0.4
11	JAMMU & KASHMIR	37	34	28	0.2	0.2
12	JHARKHAND	93	180	259	2.1	0.8
13	KARNATAKA	1020	1447	1101	8.9	1.8
14	KERALA	450	290	283	2.3	0.8
15	MADHYA PRADESH	289	231	258	2.1	0.3

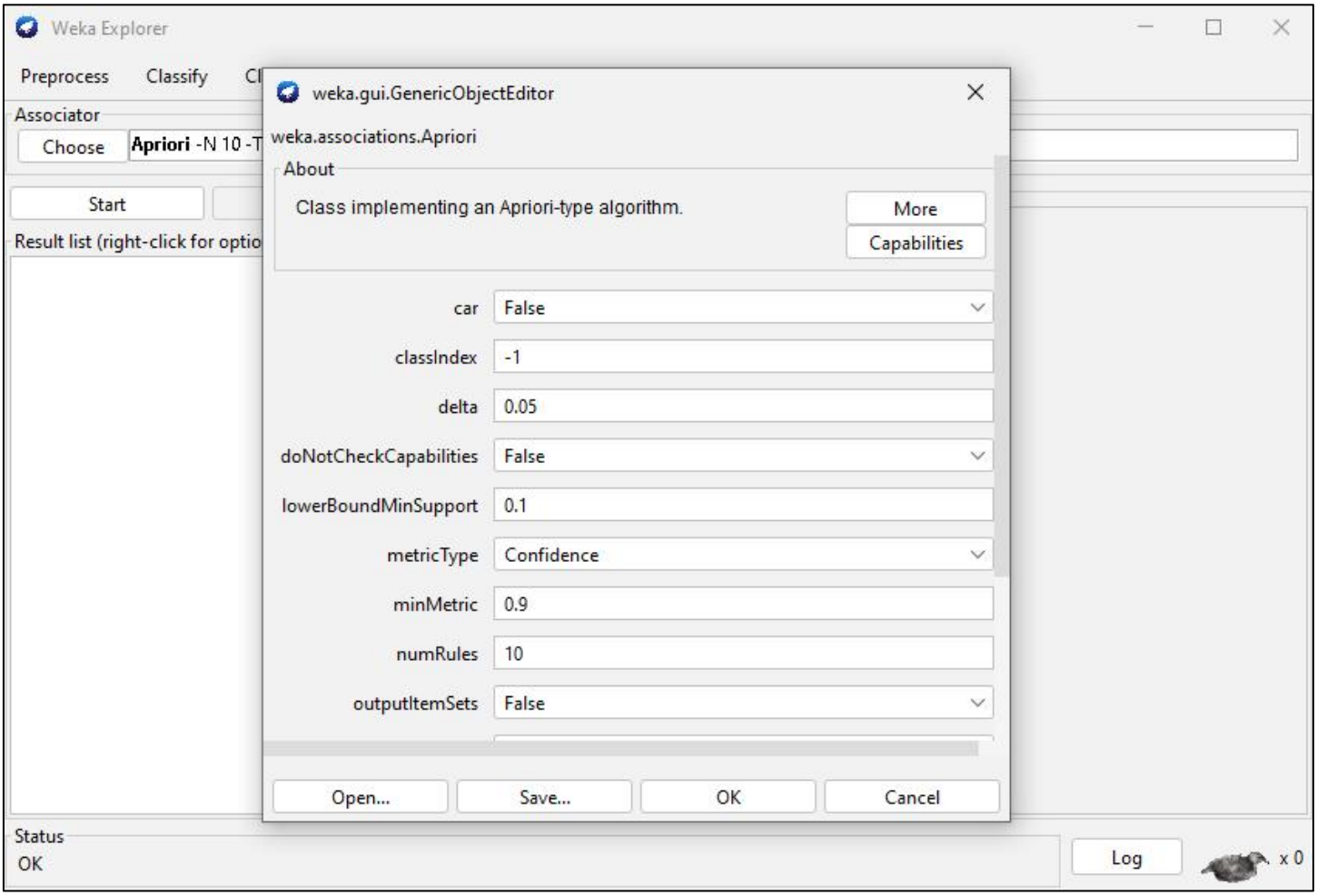
Step 3: Click on the **'Open file'** Option >> Select Crime dataset >> Click on **Open**.



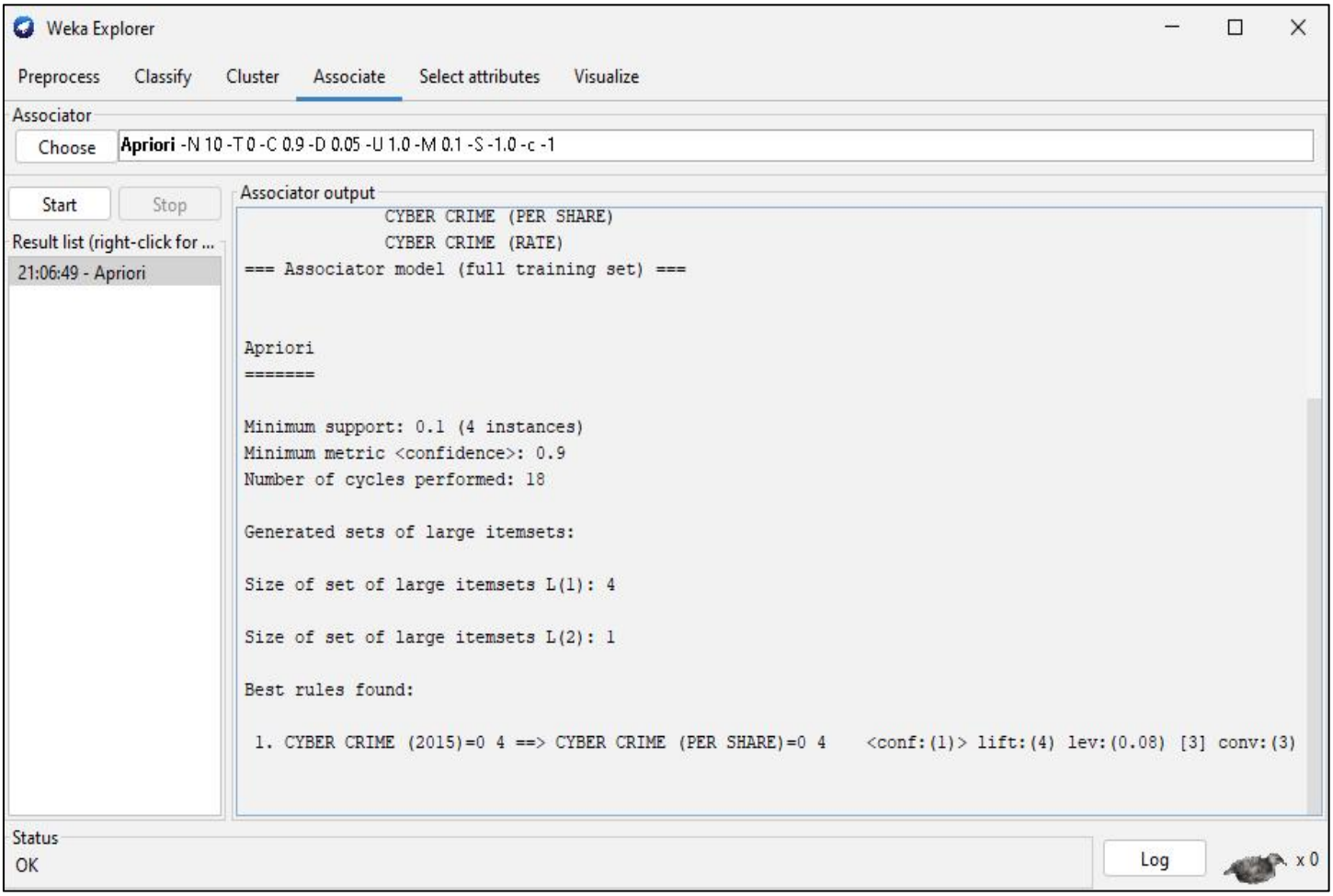
Step 4: Change the dataset from Numeric to Nominal. In **'Filter'** Section, click on **'Choose'** >> Unsupervised >> Attribute >> **Numeric to Nominal**. Click on **'Apply'** Option.



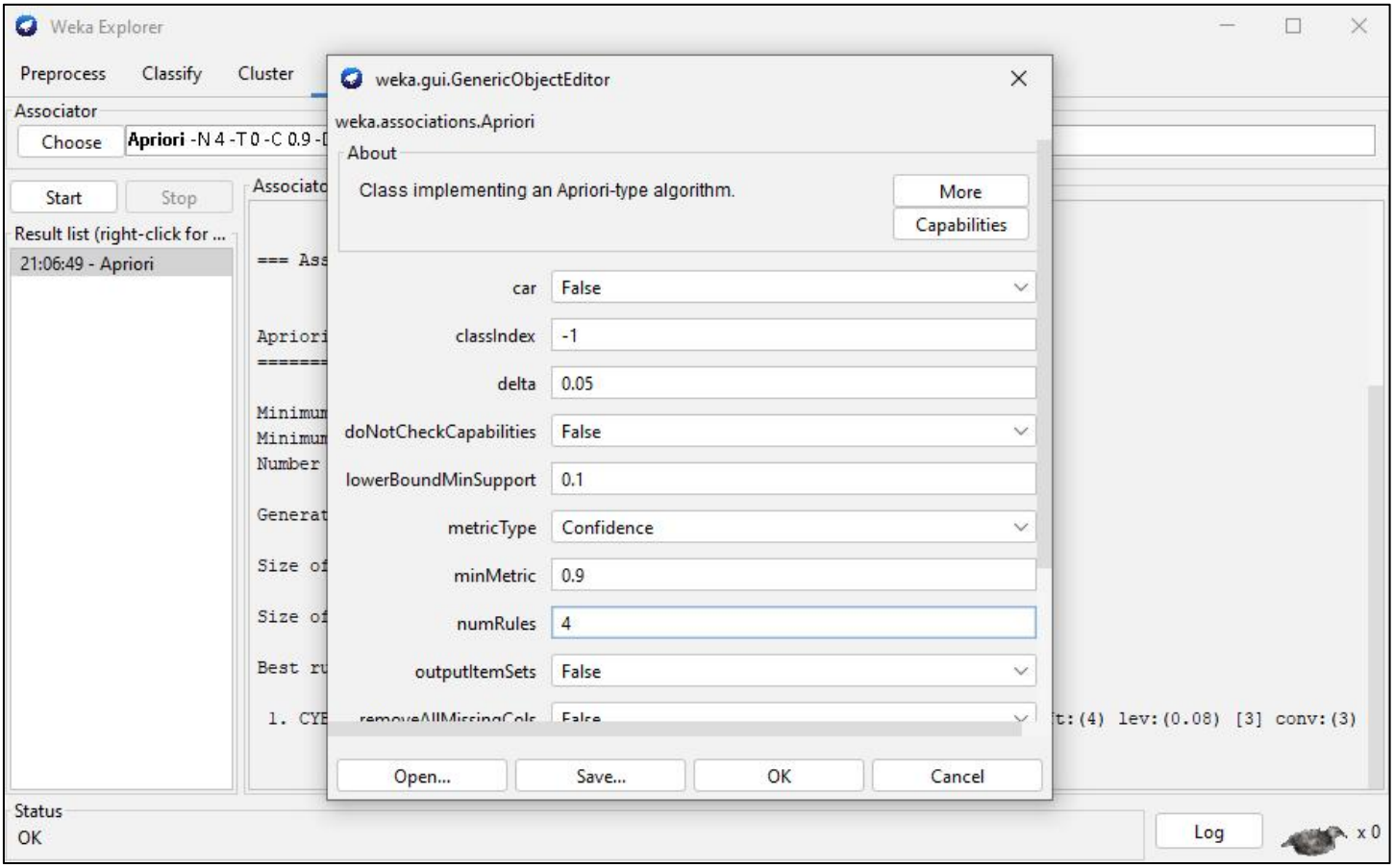
Step 5: Click on the **'Associate'** Tab >>Choose and select Apriori algorithm from **'Associator'** Section.



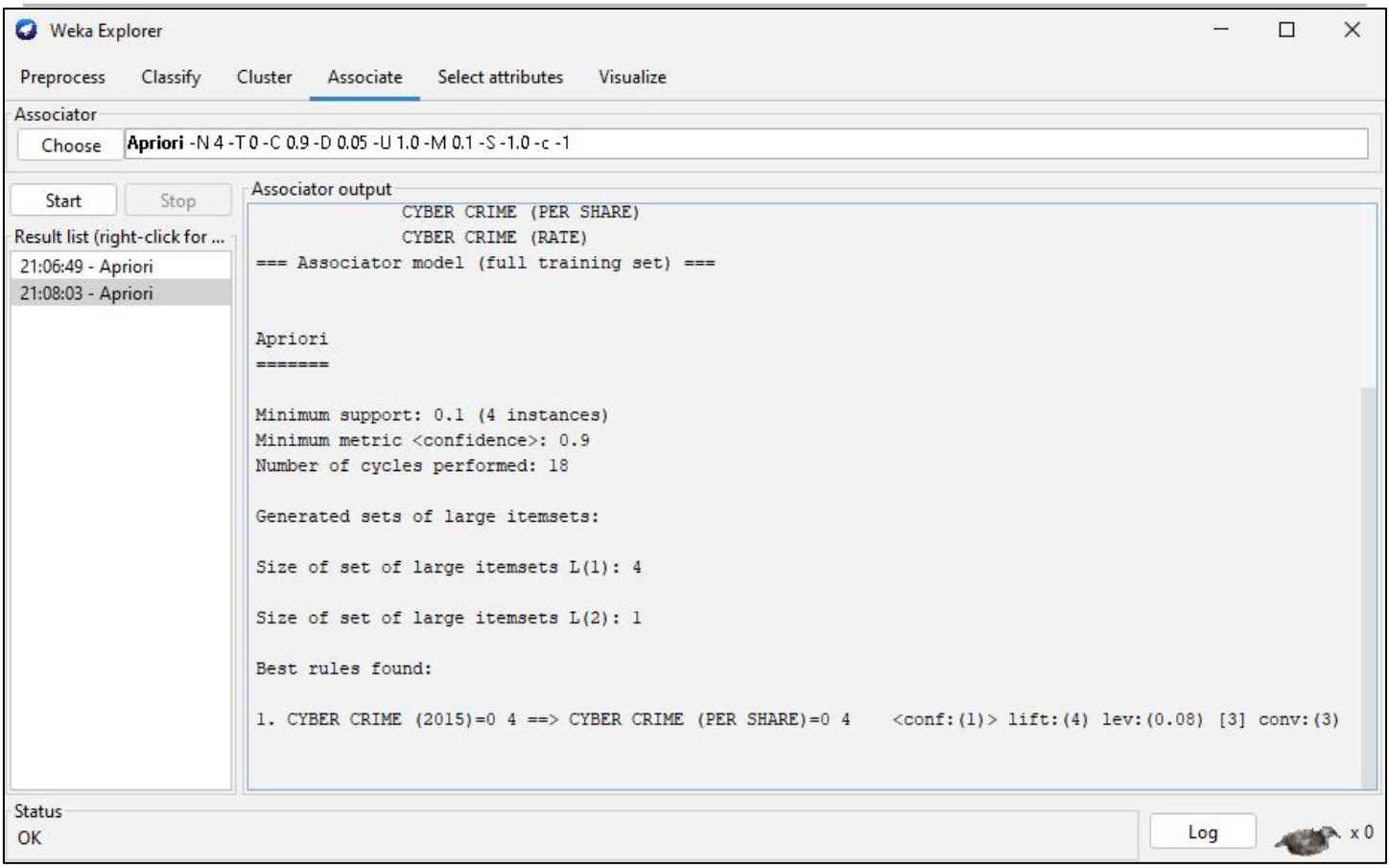
Step 6: Click Start to build the model. Associator output shows the model evaluation parameters.



Step 7: Click on the Apriori algorithm and change numrules from 10 to 4.



Step 8: Click Start to build the model. Associator output shows the model evaluation parameters.



Learning outcomes (What I have learnt):

1. I learnt about the WEKA Tool and its applications.
2. I learnt about how to use Explorer Tab in WEKA Tool.
3. I learnt about how to change attributes from Numeric to Nominal.
4. I learnt about how to perform Apriori algorithm on the dataset.
5. I learnt about how to change numrules in Apriori algorithm.