EX.NO:25
Date:

FREQUENT PATTERN MINING USING ASSOCIATION RULE

THROUGH WEKA AND R -TOOLS

AIM:

To create frequent pattern mining using association rule through weka and

R-tools.

DESCRIPTION:

Consider a dataset of 2015.csv file of which it contains the attributes are Reference Number, Grid ref: Easting, Grid Ref: Northing, Number of vehicles, Accident date, Time(24 hr), 1st Road class, Road Surface, Lighting conditions, Weather conditions, casuality class, Sex of casuality, Age of casuality, Type of casuality for the performance of the dataset by applying the Apriori algorithm in weka and as well using R- tool.

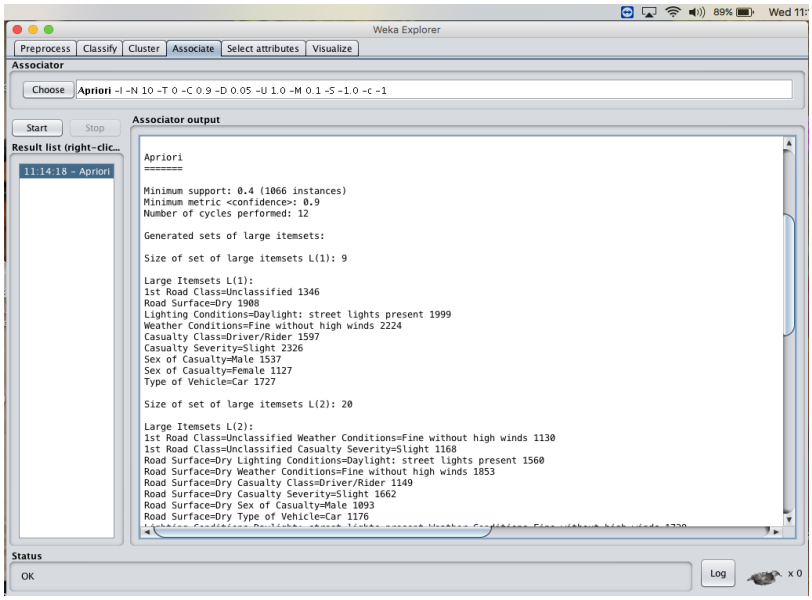
PROCEDURE:

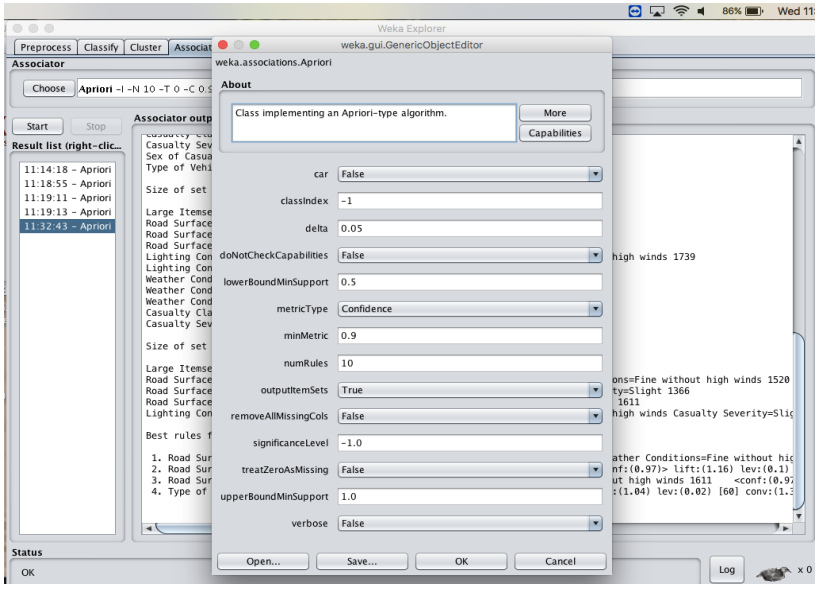
1.Download WEKA And Install
2.Start WEKA
3.Open The Data/iris.arff Dataset
4.Select And Run An Algorithm
5.Review The Results

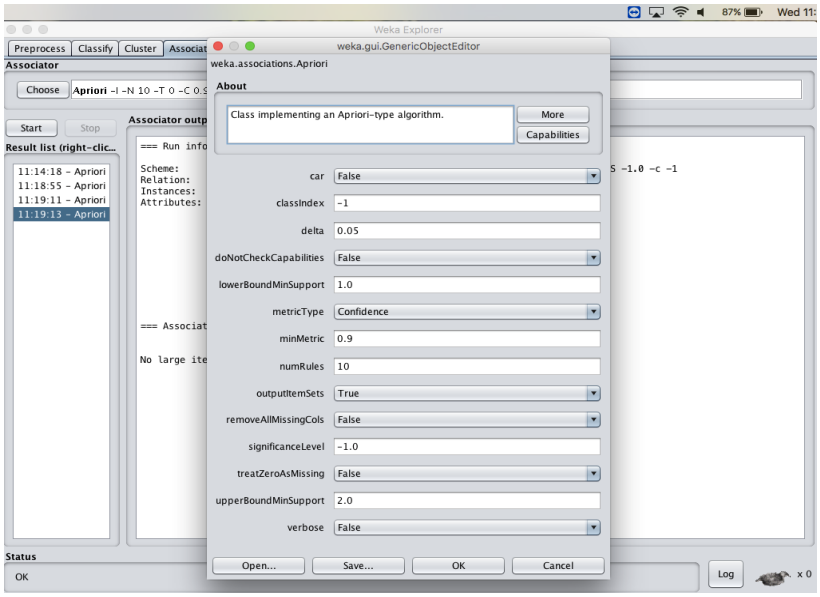
❖ USING WEKA TOOL :

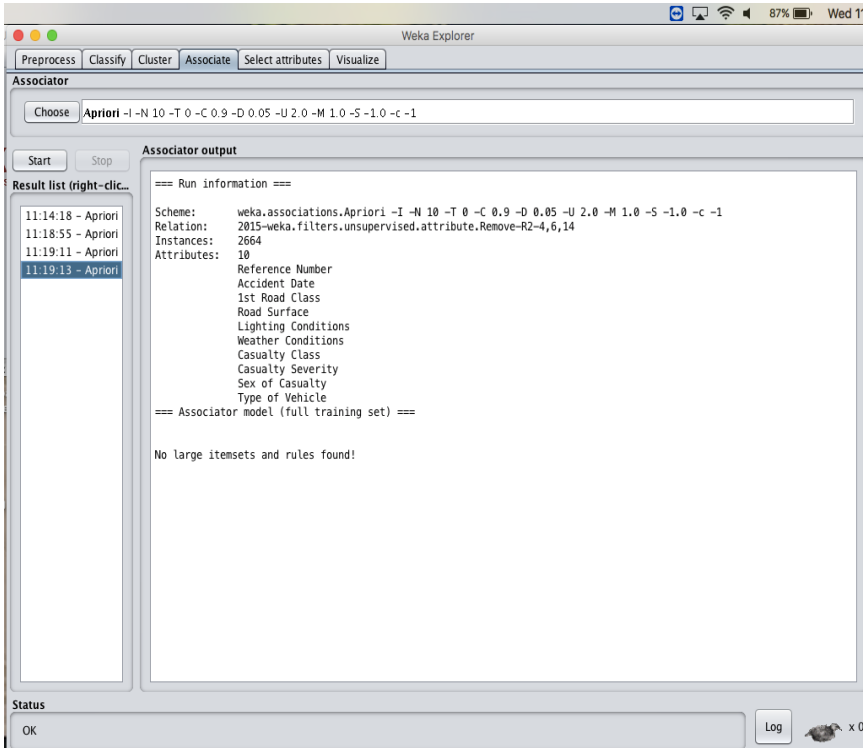
STEPS INVOLVED :

- Choose a set of attributes for clustering and for giving a motivation.
- Choose the dataset and import the dataset into Weka tool.
- Discretize the attributes from numeric to nominal to perform the algorithm.
- Cluster the dataset and choose simple Apriori algorithm.
- Set the Upper bound min_sup and lower bound min_sup values.


Weka Explorer
Preprocess
Classify
Cluster
Associate
Select attributes
Visualize
Associator
Choose
Apriori -I -N 10 -T 0 -C 0.9 -D 0.05 -U 1.0 -M 0.1 -S -1.0 -c -1
Start
Stop
Result list (right-clic...
11:14:18 - Apriori
Associator output
Apriori
=======
Minimum support: 0.4 (1066 instances)
Minimum metric <confidence>: 0.9
Number of cycles performed: 12
Generated sets of large itemsets:
Size of set of large itemsets L(1): 9
Large Itemsets L(1):
1st Road Class=Unclassified 1346
Road Surface=Dry 1908
Lighting Conditions=Daylight: street lights present 1999
Weather Conditions=Fine without high winds 2224
Casualty Class=Driver/Rider 1597
Casualty Severity=Slight 2326
Sex of Casualty=Male 1537
Sex of Casualty=Female 1127
Type of Vehicle=Car 1727
Size of set of large itemsets L(2): 20
Large Itemsets L(2):
1st Road Class=Unclassified Weather Conditions=Fine without high winds 1130
1st Road Class=Unclassified Casualty Severity=Slight 1168
Road Surface=Dry Lighting Conditions=Daylight: street lights present 1560
Road Surface=Dry Weather Conditions=Fine without high winds 1853
Road Surface=Dry Casualty Class=Driver/Rider 1149
Road Surface=Dry Casualty Severity=Slight 1662
Road Surface=Dry Sex of Casualty=Male 1093
Road Surface=Dry Type of Vehicle=Car 1176
Status
OK
Log
x 0


Weka Explorer
weka.gui.GenericObjectEditor
weka.associations.Apriori
About
Class implementing an Apriori-type algorithm.
More
Capabilities
car
False
classIndex
-1
delta
0.05
doNotCheckCapabilities
False
lowerBoundMinSupport
0.5
metricType
Confidence
minMetric
0.9
numRules
10
outputItemSets
True
removeAllMissingCols
False
significanceLevel
-1.0
treatZeroAsMissing
False
upperBoundMinSupport
1.0
verbose
False
Open...
Save...
OK
Cancel
11:14:18 - Apriori
11:18:55 - Apriori
11:19:11 - Apriori
11:19:13 - Apriori
11:32:43 - Apriori
Status
OK
Log
x 0





RESULT :

Thus, the Apriori algorithm analyzing using both the weka tool and R- tool has been successfully completed. In case of weka tool, the change in upper bound and lower bound values lead to the increase and decrease of number of

itemsets and rules . In case of R-tool, there is an increase in absolute minimum support count value.