

## CSA1618 DWDM-DE

### EXPERIMENT-26

#### FREQUENT PATTERN MINING USING FP GROWTH THROUGH WEKA TOOL

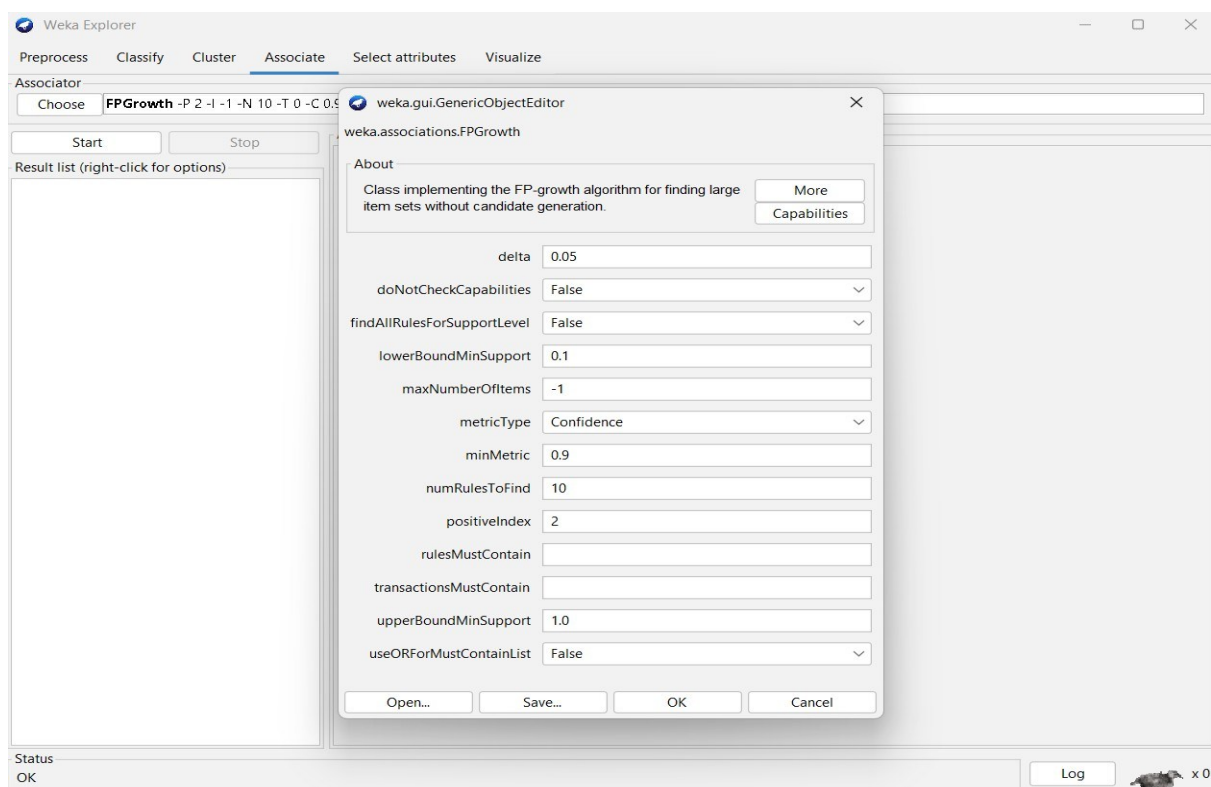
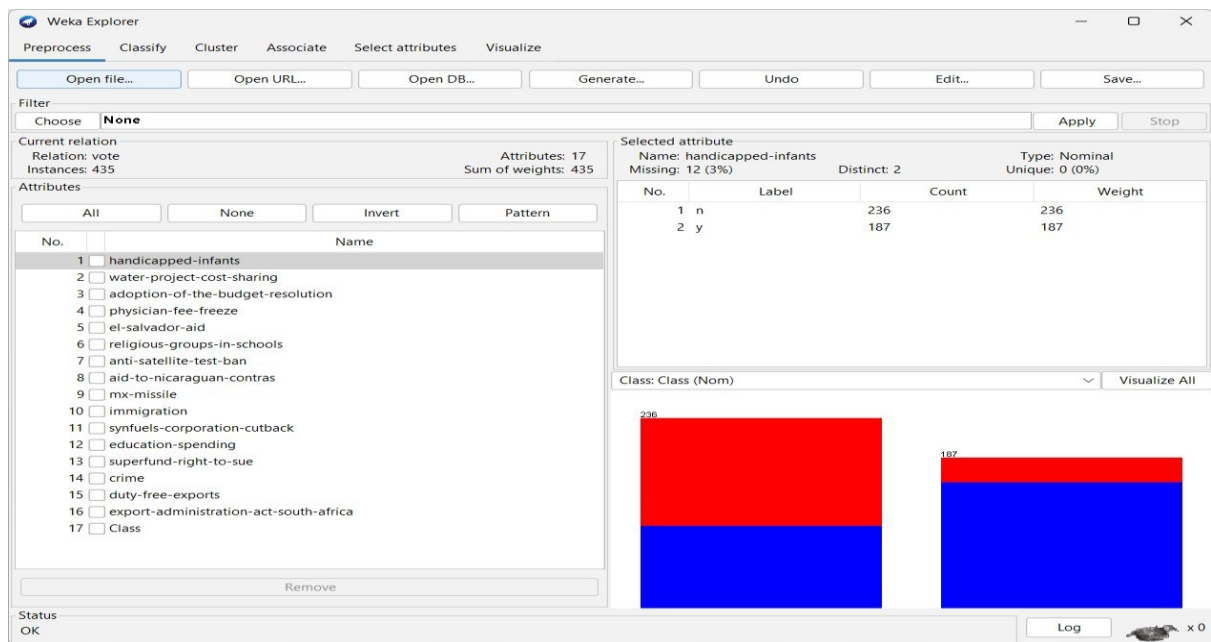
##### AIM:

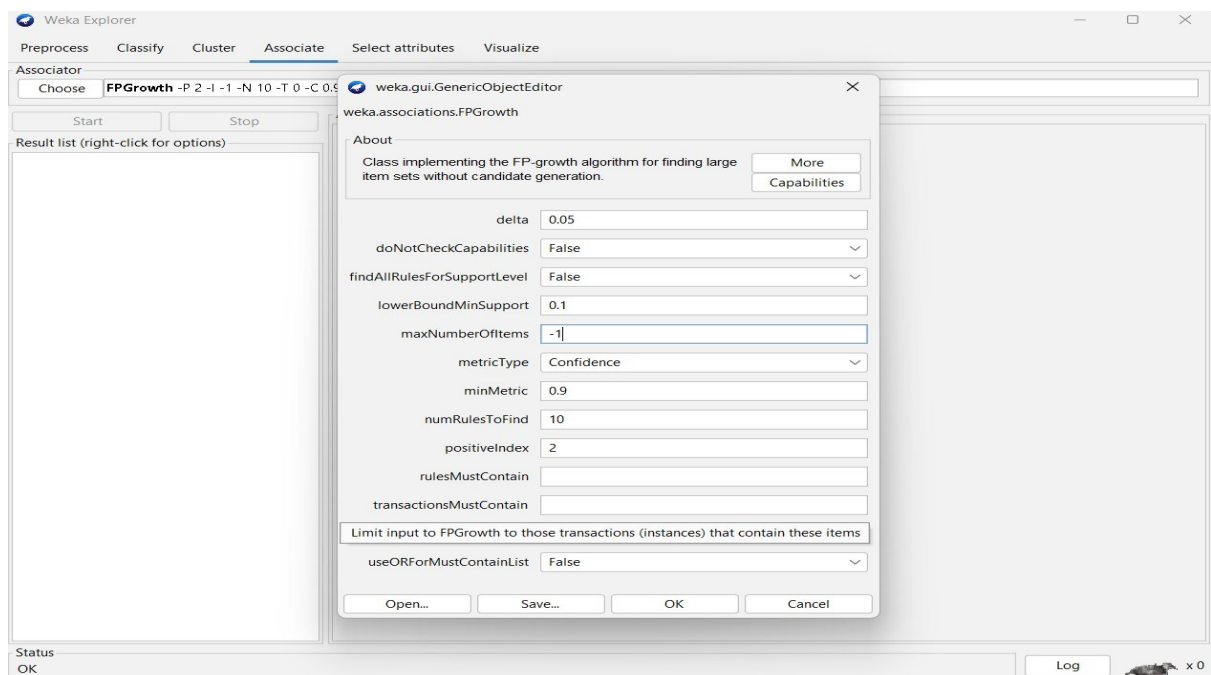
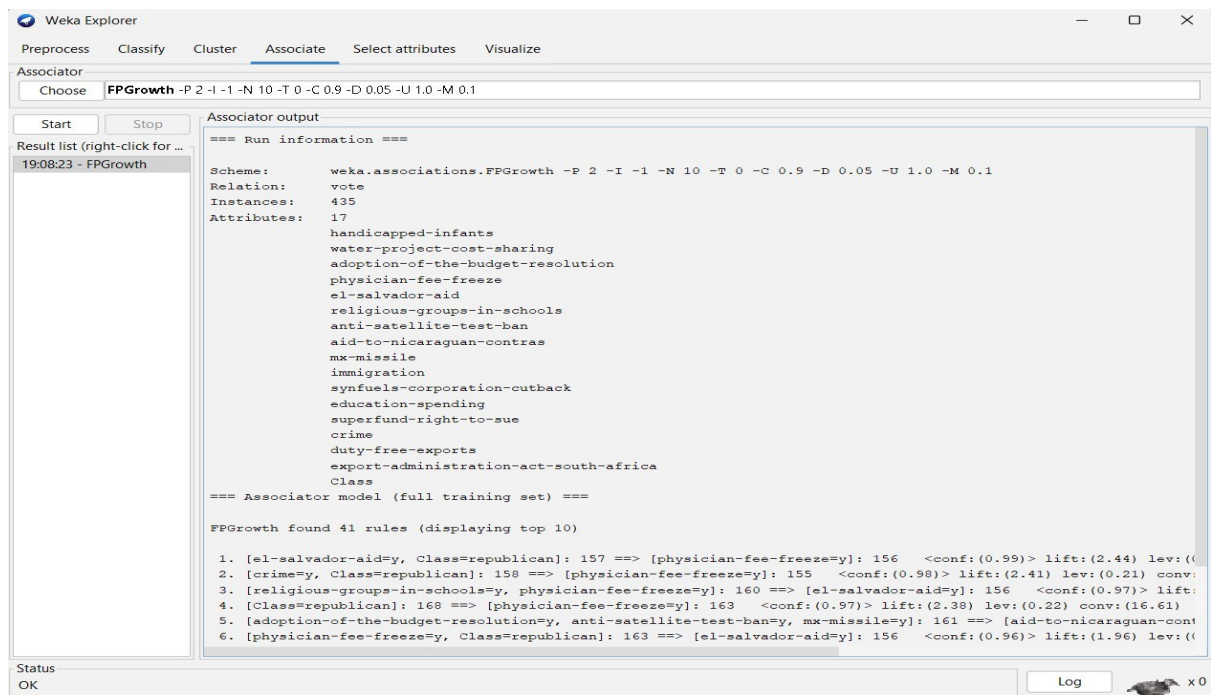
To create frequent pattern mining using FP Growth through weka tool.

##### PROCEDURE:

1. Download and install WEKA.
2. Open WEKA and Choose "Explorer" from the main menu.
3. Under Preprocess, Click on the open file button and select the dataset Ensure that your dataset contains categorical (nominal) attributes (FP-Growth does not work well with numerical data).
4. Go to the "Associate" tab for association rule mining. In the "Associate" tab, click "Choose" and select FPGrowth (found under weka.associations).
5. Click on "FPGrowth" to configure its parameters: minSupport: Set minimum support value (e.g., 0.1 for 10%), maxNumberOfItems: Maximum size of itemsets (default = unlimited), rules: Set to true to generate association rules, metricType: Choose confidence, lift, or leverage for rule evaluation.
6. Click "OK" and then "Start" to begin clustering. Save the file.







## OBSERVATION:

=== Run information ===

Scheme: weka.associations.FPBGrowth -P 2 -I -1 -N 10 -T 0 -C 0.9 -D 0.05 -U 1.0 -M 0.1

Relation: vote

Instances: 435 **Attributes:** 17

handicapped-infants      water-project-cost-  
sharing      adoption-of-the-budget-  
resolution      physician-fee-freeze  
el-salvador-aid      religious-groups-in-  
schools      anti-satellite-test-ban      aid-  
to-nicaraguan-contras      mx-missile  
immigration      synfuels-corporation-  
cutback      education-spending  
superfund-right-to-sue      crime  
duty-free-exports      export-administration-  
act-south-africa

Class

=== Associator model (full training set) ===

FPGrowth found 41 rules (displaying top 10)

1. [el-salvador-aid=y, Class=republican]: 157 ==> [physician-fee-freeze=y]: 156 <conf:(0.99)> lift:(2.44) lev:(0.21) conv:(46.56)
2. [crime=y, Class=republican]: 158 ==> [physician-fee-freeze=y]: 155 <conf:(0.98)> lift:(2.41) lev:(0.21) conv:(23.43)
3. [religious-groups-in-schools=y, physician-fee-freeze=y]: 160 ==> [el-salvador-aid=y]: 156 <conf:(0.97)> lift:(2) lev:(0.18) conv:(16.4)
4. [Class=republican]: 168 ==> [physician-fee-freeze=y]: 163 <conf:(0.97)> lift:(2.38) lev:(0.22) conv:(16.61)
5. [adoption-of-the-budget-resolution=y, anti-satellite-test-ban=y, mx-missile=y]: 161 ==> [aid-tonicaraguan-contras=y]: 155 <conf:(0.96)> lift:(1.73) lev:(0.15) conv:(10.2)
6. [physician-fee-freeze=y, Class=republican]: 163 ==> [el-salvador-aid=y]: 156 <conf:(0.96)> lift:(1.96) lev:(0.18) conv:(10.45)
7. [religious-groups-in-schools=y, el-salvador-aid=y, superfund-right-to-sue=y]: 160 ==> [crime=y]: 153 <conf:(0.96)> lift:(1.68) lev:(0.14) conv:(8.6)
8. [el-salvador-aid=y, superfund-right-to-sue=y]: 170 ==> [crime=y]: 162 <conf:(0.95)> lift:(1.67) lev:(0.15) conv:(8.12)
9. [crime=y, physician-fee-freeze=y]: 168 ==> [el-salvador-aid=y]: 160 <conf:(0.95)> lift:(1.95) lev:(0.18) conv:(9.57)
10. [el-salvador-aid=y, physician-fee-freeze=y]: 168 ==> [crime=y]: 160 <conf:(0.95)> lift:(1.67) lev:(0.15) conv:(8.02)

**RESULT:**

Thus, the analysis of FP growth algorithm using weka tool has been successfully completed. Incase of changing the upper bound and lower bound values there is a change in the number of rules that are found.