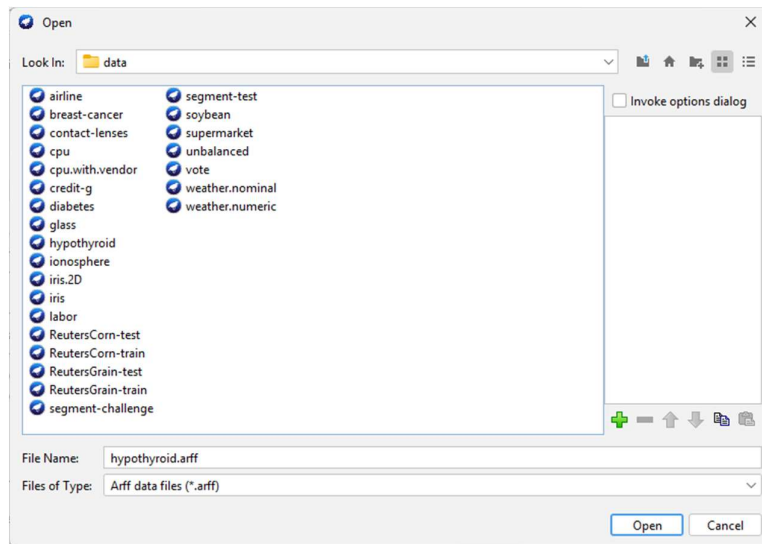


WEEK-6

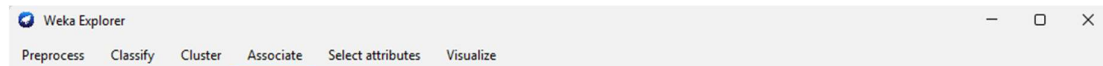
Demonstration of FP-Growth Algorithm.

Procedure for applying FP-Growth Algorithm for supermarket.arff

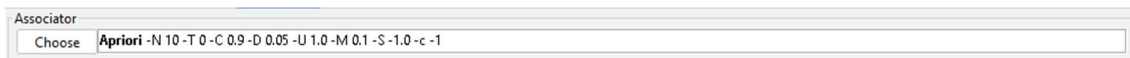
Step 1: Load the **supermarket.arff** data file



Step 2: Go to **Associate** tab



Then click on choose, under the associator, and select **FPGrowth**



Click on the start.

Output for FPGrowth – numOfRulesToFind=10, support=0.1, metricType=confidence)

```

=== Run information ===

Scheme:      weka.associations.FPGrowth -P 2 -I -1 -N 10 -T 0 -C 0.9 -D 0.05 -U 1.0 -M 0.1
Relation:    supermarket
Instances:   4627
Attributes:  217
             [list of attributes omitted]
=== Associator model (full training set) ===

FPGrowth found 16 rules (displaying top 10)

1. [fruit=t, frozen foods=t, biscuits=t, total=high]: 788 ==> [bread and cake=t]: 723 <conf:(0.92)> lift:(1.27) lev:(0.03) conv:(3.35)
2. [fruit=t, baking needs=t, biscuits=t, total=high]: 760 ==> [bread and cake=t]: 696 <conf:(0.92)> lift:(1.27) lev:(0.03) conv:(3.28)
3. [fruit=t, baking needs=t, frozen foods=t, total=high]: 770 ==> [bread and cake=t]: 705 <conf:(0.92)> lift:(1.27) lev:(0.03) conv:(3.27)
4. [fruit=t, vegetables=t, biscuits=t, total=high]: 815 ==> [bread and cake=t]: 746 <conf:(0.92)> lift:(1.27) lev:(0.03) conv:(3.26)
5. [fruit=t, party snack foods=t, total=high]: 854 ==> [bread and cake=t]: 779 <conf:(0.91)> lift:(1.27) lev:(0.04) conv:(3.15)
6. [vegetables=t, frozen foods=t, biscuits=t, total=high]: 797 ==> [bread and cake=t]: 725 <conf:(0.91)> lift:(1.26) lev:(0.03) conv:(3.06)
7. [vegetables=t, baking needs=t, biscuits=t, total=high]: 772 ==> [bread and cake=t]: 701 <conf:(0.91)> lift:(1.26) lev:(0.03) conv:(3.01)
8. [fruit=t, biscuits=t, total=high]: 954 ==> [bread and cake=t]: 866 <conf:(0.91)> lift:(1.26) lev:(0.04) conv:(3)
9. [fruit=t, vegetables=t, frozen foods=t, total=high]: 834 ==> [bread and cake=t]: 757 <conf:(0.91)> lift:(1.26) lev:(0.03) conv:(3)
10. [fruit=t, frozen foods=t, total=high]: 969 ==> [bread and cake=t]: 877 <conf:(0.91)> lift:(1.26) lev:(0.04) conv:(2.92)

```

Output for FPGrowth – numOfRulesToFind=15, support=0.5, metricType=lift

```

=== Run information ===

Scheme:      weka.associations.FPGrowth -P 2 -I -1 -N 15 -T 1 -C 0.9 -D 0.05 -U 1.0 -M 0.5
Relation:    supermarket
Instances:   4627
Attributes:  217
              [list of attributes omitted]
=== Associator model (full training set) ===

FPGrowth found 4 rules (displaying top 4)

1. [bread and cake=t]: 3330 ==> [milk-cream=t]: 2337   conf:(0.7) <lift:(1.1)> lev:(0.05) conv:(1.22)
2. [milk-cream=t]: 2939 ==> [bread and cake=t]: 2337   conf:(0.8) <lift:(1.1)> lev:(0.05) conv:(1.37)
3. [bread and cake=t]: 3330 ==> [fruit=t]: 2325    conf:(0.7) <lift:(1.09)> lev:(0.04) conv:(1.19)
4. [fruit=t]: 2962 ==> [bread and cake=t]: 2325    conf:(0.78) <lift:(1.09)> lev:(0.04) conv:(1.3)

```

Output for FPGrowth – numOfRulesToFind=5, support=0.4, metricType=lift

```

=== Run information ===

Scheme:      weka.associations.FPGrowth -P 2 -I -1 -N 5 -T 1 -C 0.9 -D 0.05 -U 1.0 -M 0.4
Relation:    supermarket
Instances:   4627
Attributes:  217
              [list of attributes omitted]
=== Associator model (full training set) ===

FPGrowth found 14 rules (displaying top 5)

1. [vegetables=t]: 2961 ==> [fruit=t]: 2207   conf:(0.75) <lift:(1.16)> lev:(0.07) conv:(1.41)
2. [fruit=t]: 2962 ==> [vegetables=t]: 2207   conf:(0.75) <lift:(1.16)> lev:(0.07) conv:(1.41)
3. [bread and cake=t]: 3330 ==> [biscuits=t]: 2083   conf:(0.63) <lift:(1.11)> lev:(0.04) conv:(1.17)
4. [biscuits=t]: 2605 ==> [bread and cake=t]: 2083   conf:(0.8) <lift:(1.11)> lev:(0.04) conv:(1.4)
5. [bread and cake=t]: 3330 ==> [milk-cream=t]: 2337   conf:(0.7) <lift:(1.1)> lev:(0.05) conv:(1.22)

```