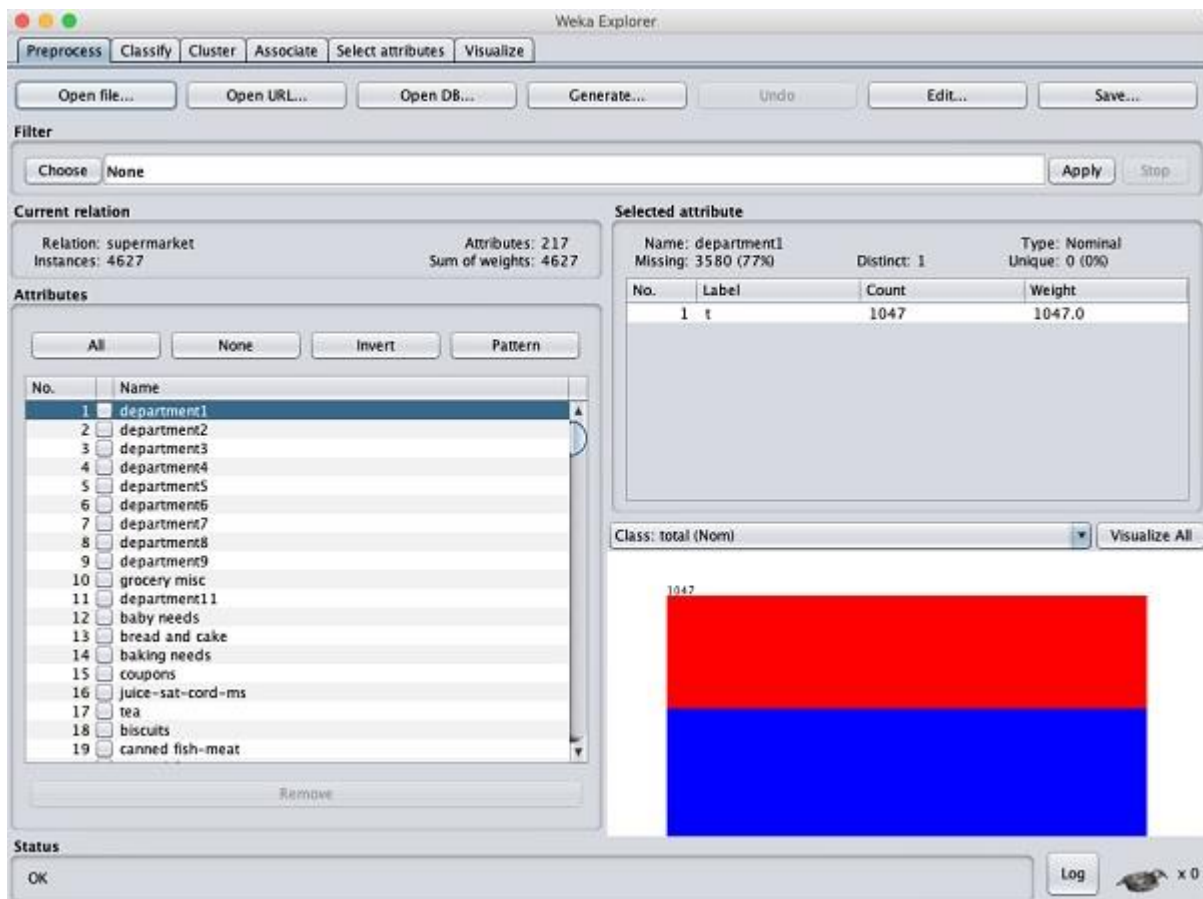


EX : 4 Generate Association Rules using the Apriori Algorithm

The **Apriori** algorithm is one such algorithm in ML that finds out the probable associations and creates association rules. WEKA provides the implementation of the Apriori algorithm. You can define the minimum support and an acceptable confidence level while computing these rules. You will apply the **Apriori** algorithm to the **supermarket** data provided in the WEKA installation.

Loading Data

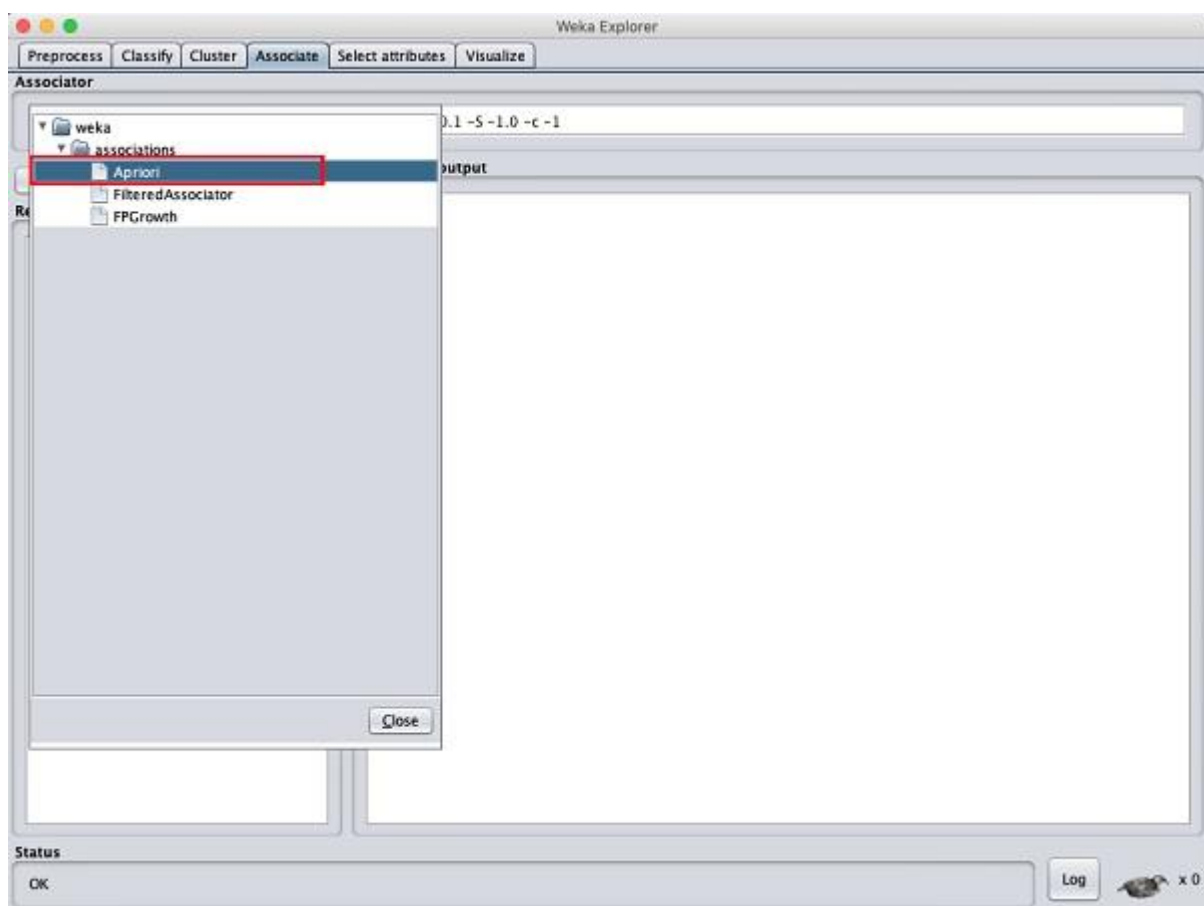
In the WEKA explorer, open the **Preprocess** tab, click on the **Open file ...** button and select **supermarket.arff** database from the installation folder. After the data is loaded you will see the following screen –



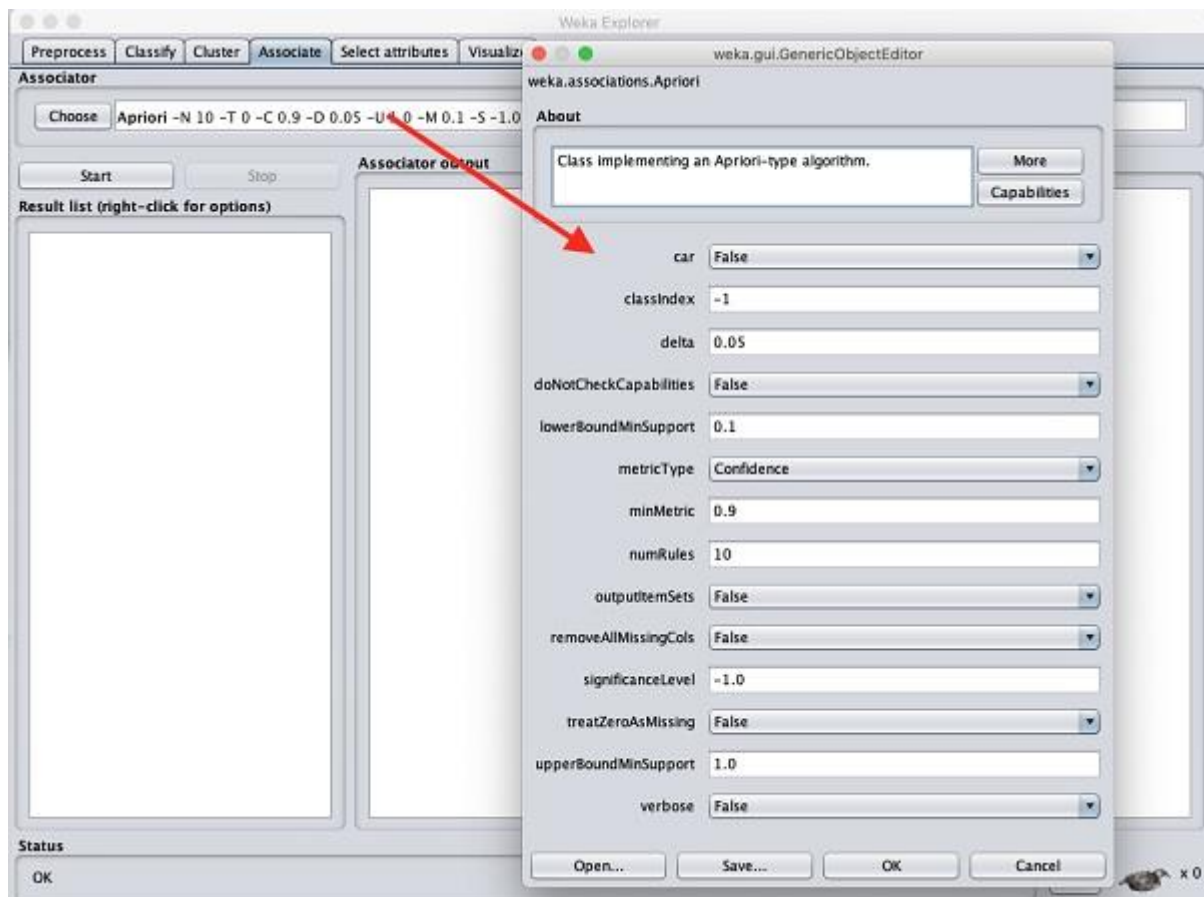
The database contains 4627 instances and 217 attributes. You can easily understand how difficult it would be to detect the association between such a large number of attributes. Fortunately, this task is automated with the help of Apriori algorithm.

Associator

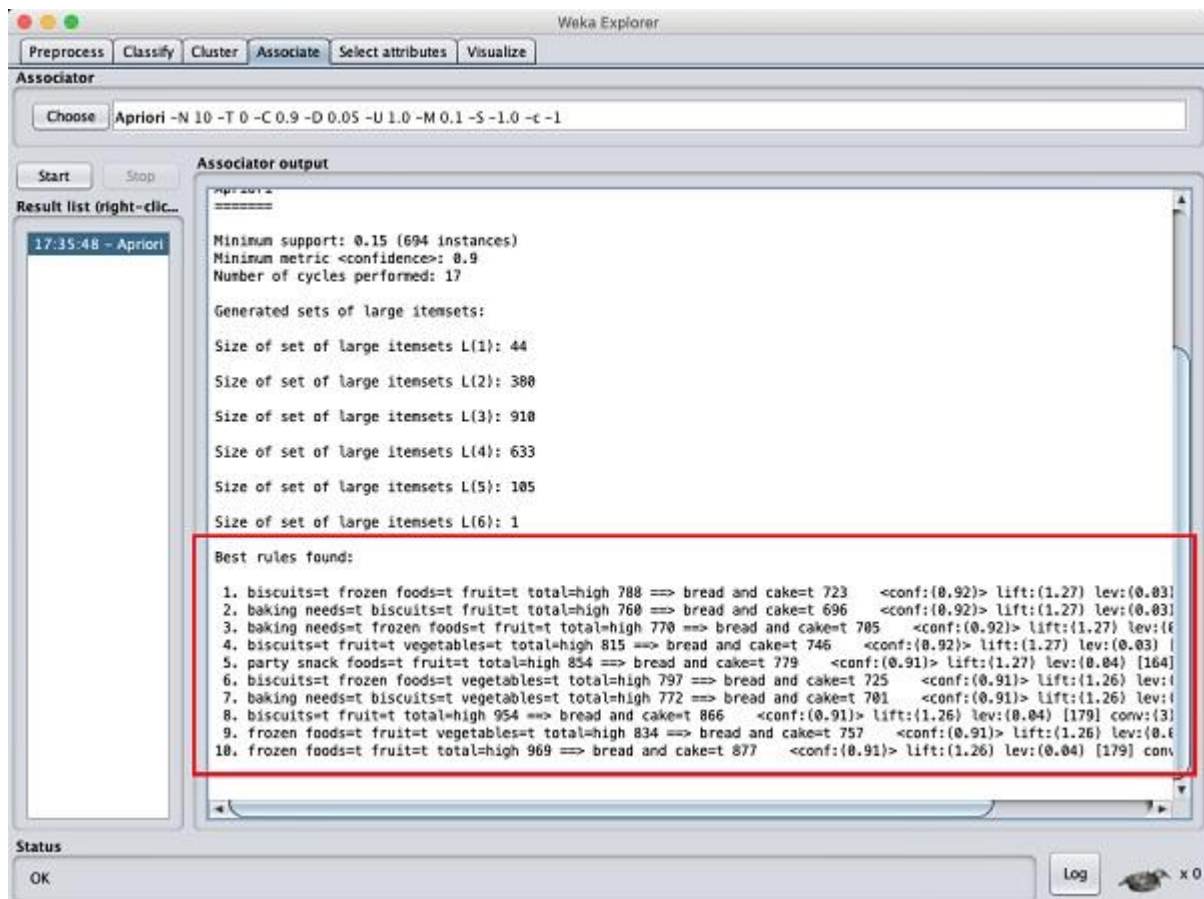
Click on the **Associate** TAB and click on the **Choose** button. Select the **Apriori** association as shown in the screenshot –



To set the parameters for the Apriori algorithm, click on its name, a window will pop up as shown below that allows you to set the parameters –



After you set the parameters, click the **Start** button. After a while you will see the results as shown in the screenshot below –



At the bottom, you will find the detected best rules of associations. This will help the supermarket in stocking their products in appropriate shelves.

RESULT :