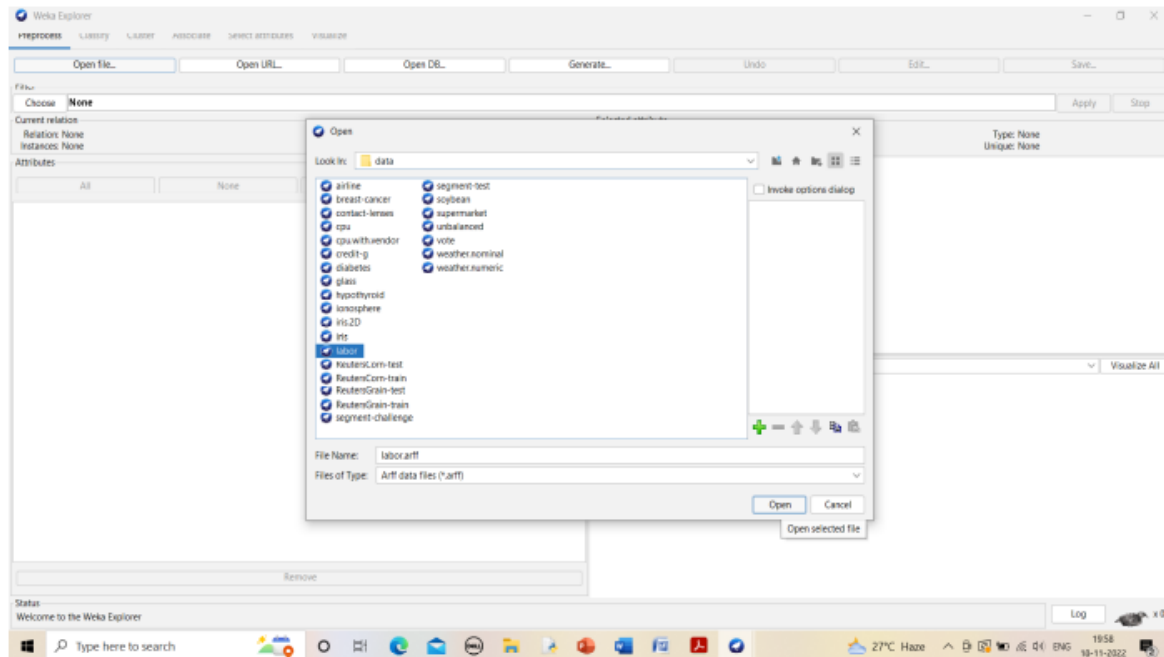
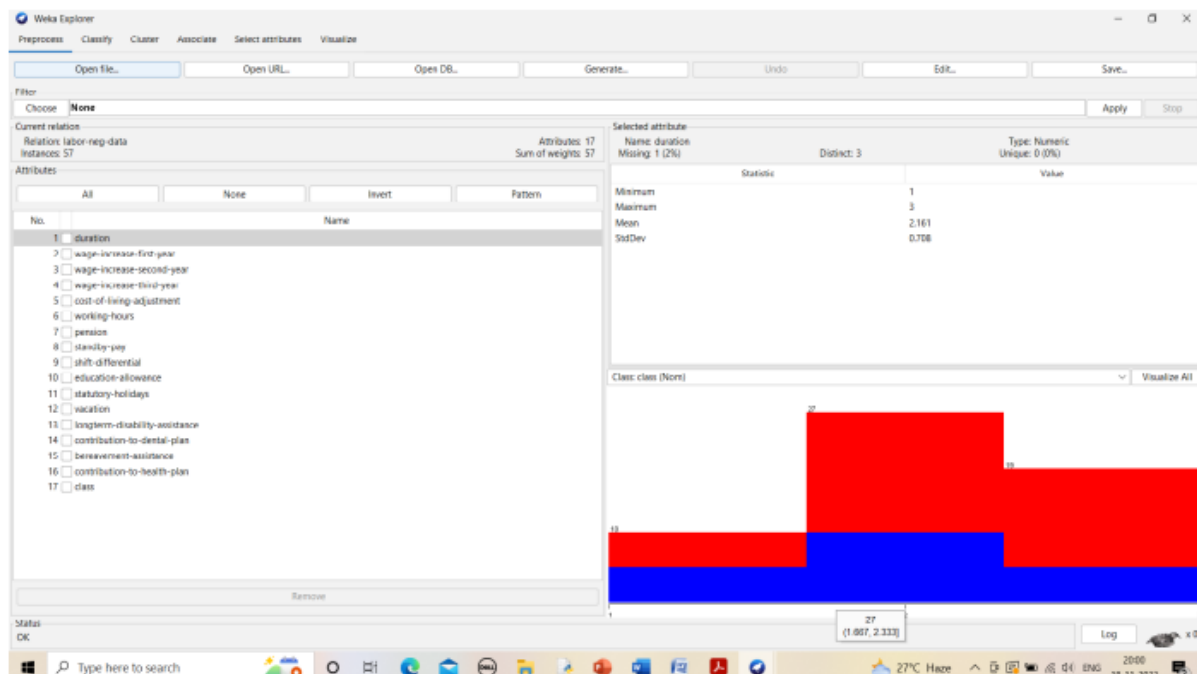


## Results:

The following Screen shows the process of loading a file



The following Screen shows the view of preprocessing window when data loaded



## The following Screen shows the selection of Discretization

The screenshot shows the Weka Explorer interface with the 'Filters' tab selected. The 'unsupervised' filter category is expanded, and the 'Discretize' filter is highlighted. A tooltip for the 'Discretize' filter is displayed, providing details about its capabilities and usage.

**Discretize Filter Details:**

- Description:** An instance filter that discretizes a range of numeric attributes in the dataset into nominal attributes. Discretization is by simple binning. Skips the class attribute if set.
- CAPABILITIES:**
  - Class -- Binary class, Date class, Empty nominal class, Missing class values, No class, Nominal class, Numeric class, Relational class, String class, Unary class
  - Attributes -- Binary attributes, Date attributes, Empty nominal attributes, Missing values, Nominal attributes, Numeric attributes, Relational attributes, String attributes, Unary attributes
  - Interfaces -- UnsupervisedFilter, WekaInstancesHandler, WekaInstancesHandler
  - Additional: Minimum number of instances: 0

In the main window, the 'Selected attribute' is 'Name', with 17 attributes and a sum of weights of 57. The 'Discretize' filter is applied to the 'Name' attribute, resulting in 3 distinct values. The 'Type' is 'Numeric' with 0 unique values (0%). The 'Value' column shows the following statistics:

Statistic	Value
Minimum	1
Maximum	3
Mean	2.161
StdDev	0.708

## The following Screen shows the selection of resample filter

The screenshot shows the Weka Explorer interface with the 'Filters' tab selected. The 'unsupervised' filter category is expanded, and the 'Resample' filter is highlighted. A tooltip for the 'Resample' filter is displayed, providing details about its capabilities and usage.

**Resample Filter Details:**

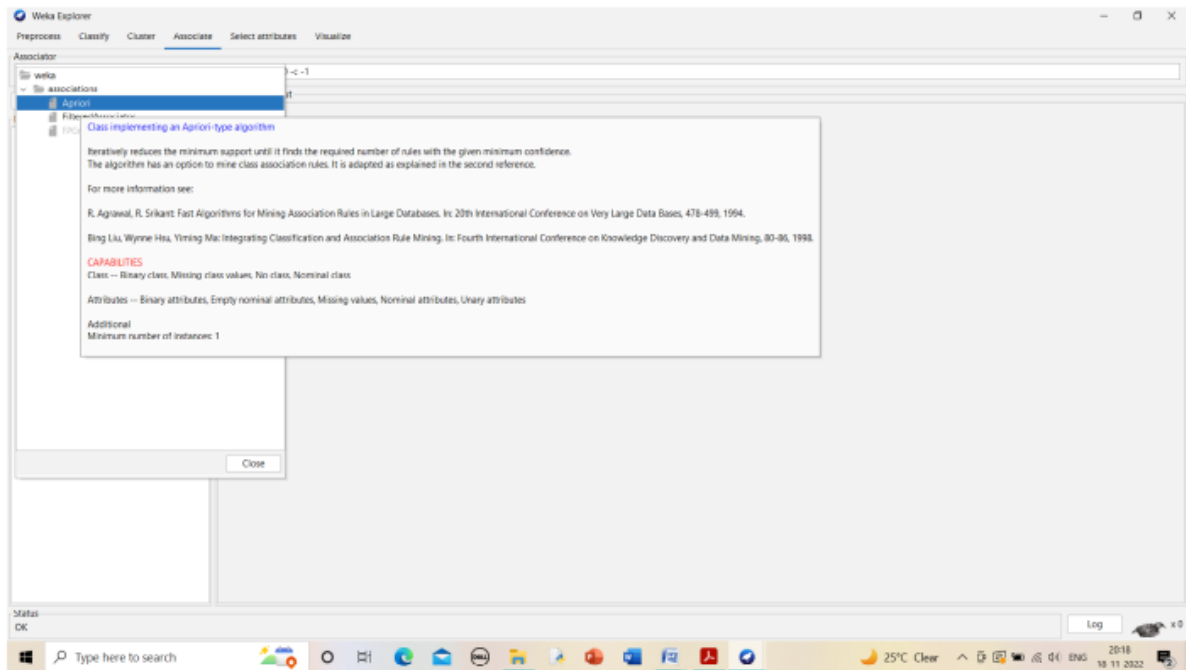
- Description:** Produces a random subsample of a dataset using either sampling with replacement or without replacement. The original dataset must fit entirely in memory. The number of instances in the generated dataset may be specified. When used in batch mode, subsequent batches are NOT resampled.
- CAPABILITIES:**
  - Class -- Binary class, Date class, Empty nominal class, Missing class values, No class, Nominal class, Numeric class, Relational class, String class, Unary class
  - Attributes -- Binary attributes, Date attributes, Empty nominal attributes, Missing values, Nominal attributes, Numeric attributes, Relational attributes, String attributes, Unary attributes
  - Interfaces -- Randomizable, UnsupervisedFilter, WekaInstancesHandler
  - Additional: Minimum number of instances: 0

In the main window, the 'Selected attribute' is 'Name', with 17 attributes and a sum of weights of 57. The 'Resample' filter is applied to the 'Name' attribute, resulting in 3 distinct values. The 'Type' is 'Numeric' with 0 unique values (0%). The 'Value' column shows the following statistics:

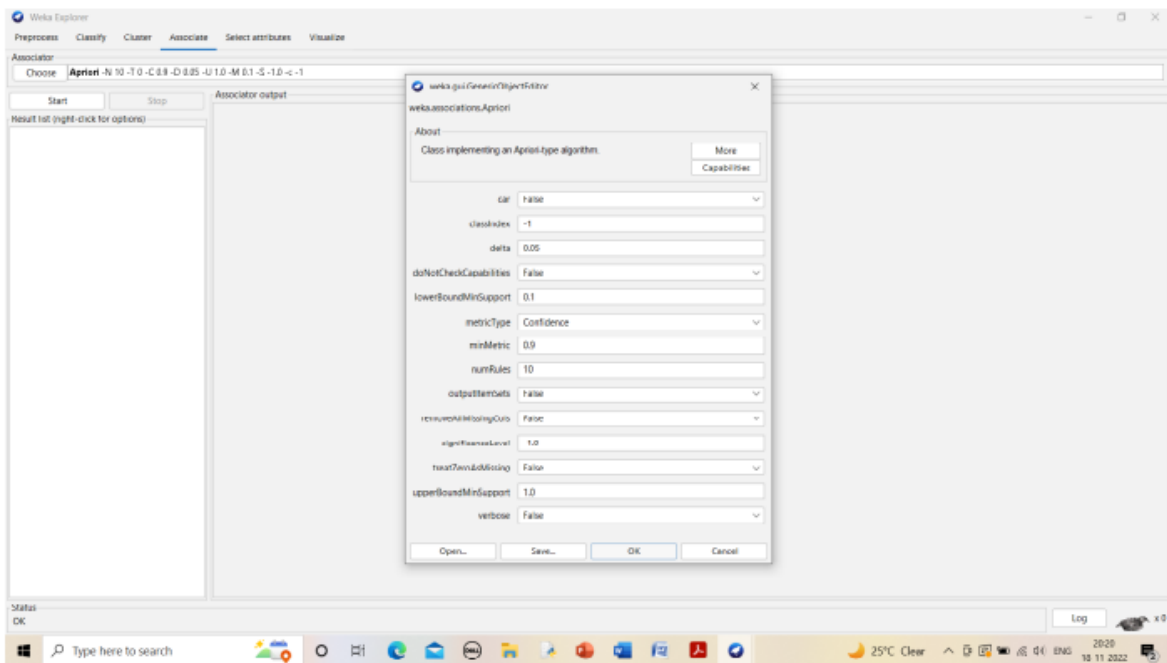
Statistic	Value
Minimum	1
Maximum	3
Mean	2.161
StdDev	0.708

## Results:

The following Screen shows selection of 'apriori algorithm'.



The following Screen shows how to set the options for 'apriori algorithm'.



**The following Screen shows the result after applying 'apriori algorithm'**

The screenshot shows the Weka Explorer interface with the 'Associate' tab selected. The 'Apriori' algorithm has been applied to a dataset. The results are displayed in the 'Associate output' pane.

**Associate output:**

```

==== Associate model (full training set) ====

Apriori
=====

Minimum supports: 0.15 (2 instances)
Minimum metric 'confidence': 0.9
Number of cycles performed: 17

Generated sets of large itemsets:

Size of set of large itemsets L(1): 12
Size of set of large itemsets L(2): 47
Size of set of large itemsets L(3): 39
Size of set of large itemsets L(4): 4

Best rules found:

1. outlook=overcast 4 ==> play=yes 4 <conf: (1)> lift: (1.84) lev: (0.1) [1] covr: (1.43)
2. temperature=cool 4 ==> humidity=normal 4 <conf: (1)> lift: (2) lev: (0.14) [2] covr: (2)
3. humidity=normal windy=FALSE 4 ==> play=yes 4 <conf: (1)> lift: (1.58) lev: (0.1) [1] covr: (1.43)
4. outlook=sunny play=no 3 ==> humidity=high 2 <conf: (1)> lift: (2) lev: (0.11) [1] covr: (1.5)
5. outlook=sunny humidity=high 2 ==> play=no 2 <conf: (1)> lift: (2.8) lev: (0.14) [1] covr: (1.92)
6. outlook=sunny play=yes 3 ==> windy=FALSE 3 <conf: (1)> lift: (2.75) lev: (0.09) [1] covr: (1.29)
7. outlook=sunny windy=FALSE 3 ==> play=yes 3 <conf: (1)> lift: (2.88) lev: (0.08) [1] covr: (1.07)
8. temperature=cool play=yes 3 ==> humidity=normal 3 <conf: (1)> lift: (2) lev: (0.11) [1] covr: (1.5)
9. outlook=sunny temperature=cool 3 ==> humidity=high 2 <conf: (1)> lift: (2.46) lev: (0.07) [1] covr: (1.5)
10. temperature=hot play=no 2 ==> outlook=sunny 2 <conf: (1)> lift: (2.8) lev: (0.09) [1] covr: (1.29)
  
```

## Results:

**The following Screen shows iris data with numerical attributes.**

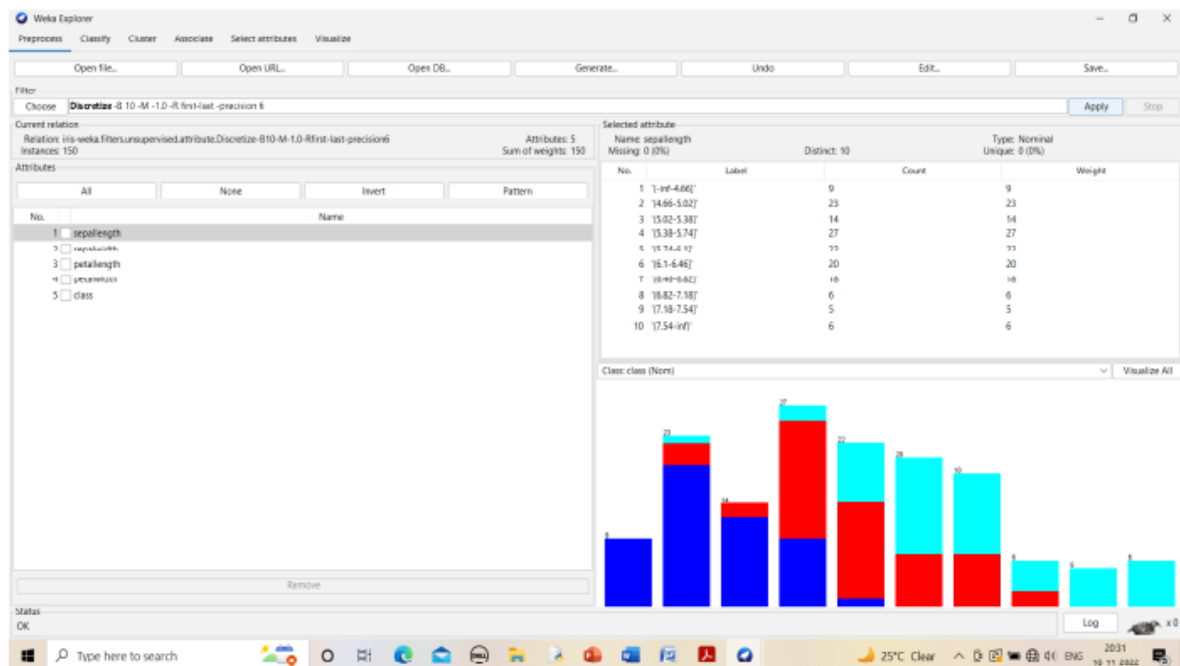
The screenshot shows the Weka Explorer interface with the 'Visualize' tab selected. The 'Iris' dataset is loaded, and the 'sepal length' attribute is selected for visualization. A histogram is displayed, showing the distribution of sepal length values across the three classes (setosa, versicolour, virginica).

**Visualize output:**

Class: class (Nom)

The histogram shows the distribution of sepal length (X-axis) for the three classes (Y-axis). The classes are represented by different colors: blue for setosa, red for versicolour, and cyan for virginica. The X-axis ranges from 4.3 to 7.9, and the Y-axis ranges from 0 to 150.

## The following Screen shows iris data after applying discretization.



## The following Screen shows the result after applying 'apriori algorithm'

