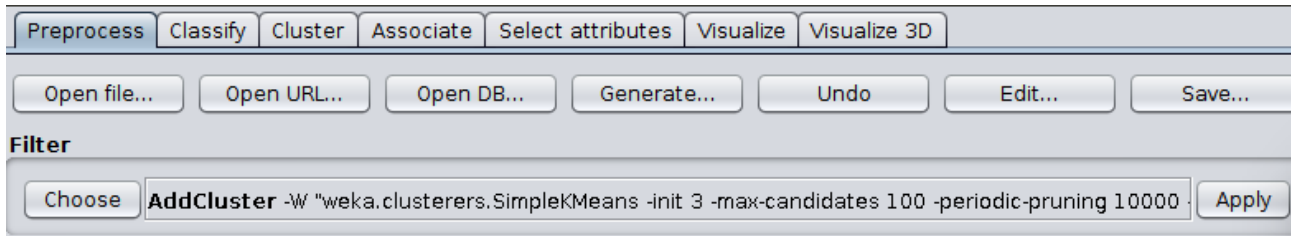


I applied PCA algorithm with help of WEKA tool. Steps followed are below.

1.Import data to weka.

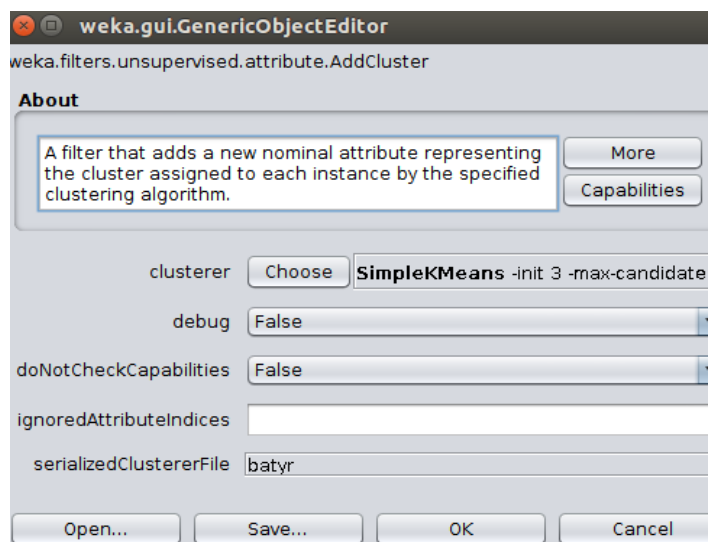
2. In Preprocess tab from Filter choose addCluster and apply, like below

Filter->filters->unsupervised->attribute->addCluster

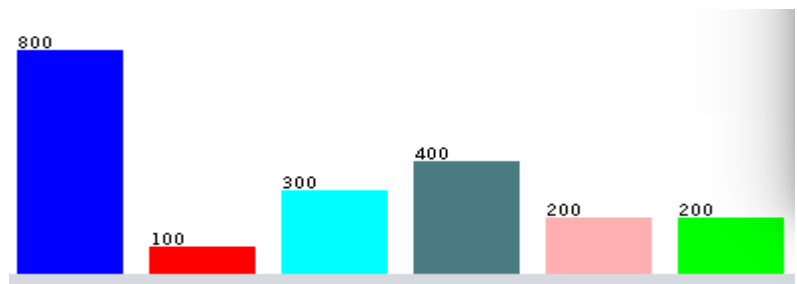


If you click on AddCluster -W
"weka.clusterers.SimpleKMean....."

this, will appear from here if you click on **SimpleKMeans....** you may give parameters like number of clusters and Farthest-first. After applying it there will appear new attribute named "cluster". If you click on it you will see the results as in picture below



As you can see the numbers are same as our "number of instances" in each cluster that we found before.

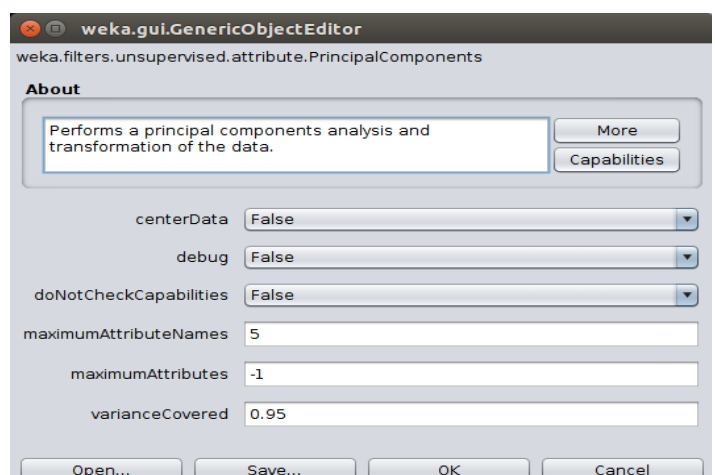


3. Now choose "principalComponents" from filters and apply.

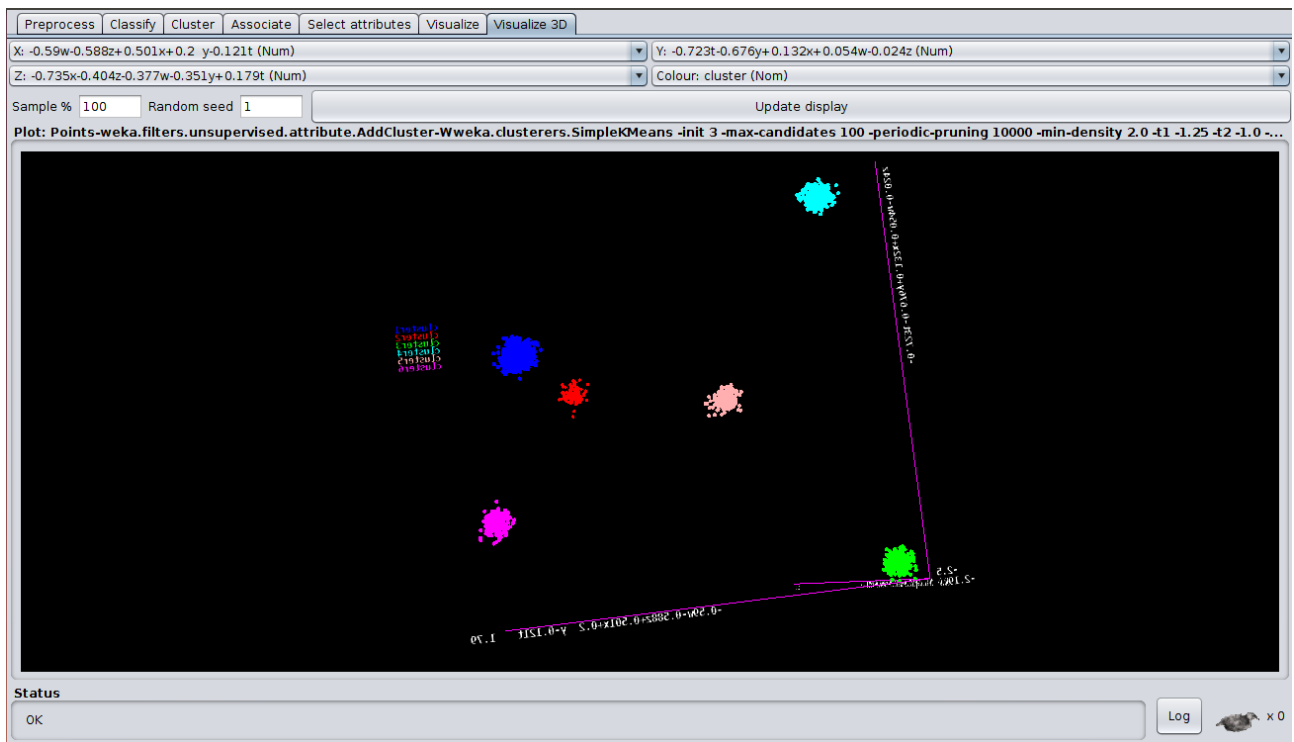
Filter->filters->unsupervised->attribute->principalComponents.

When you click on **PrincipalComponents** you will get this.

Where you can arrange maximum possible value of preserved information or lost information and number of attributes.



After you apply this your attributes will be reduced. Here is the result that I got.



As you can see we could get 6 clearly separated clusters with help of only 3 attribute instead of 5.