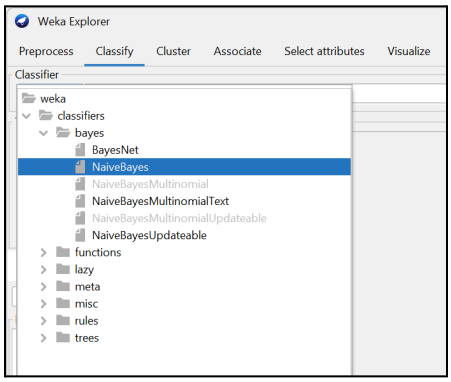
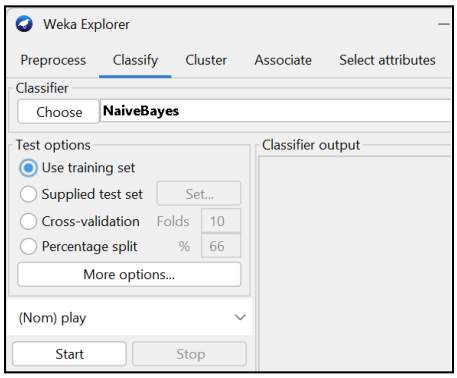
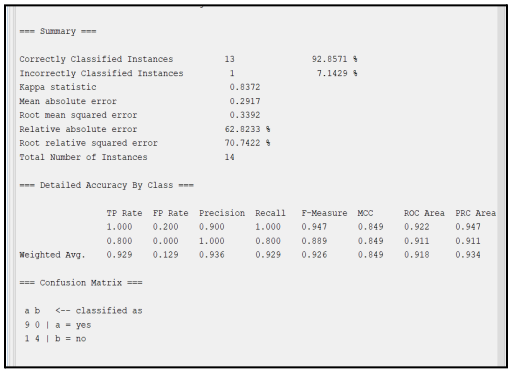
Practical 09: Implementing Classification in Weka [Naïve Bayes]

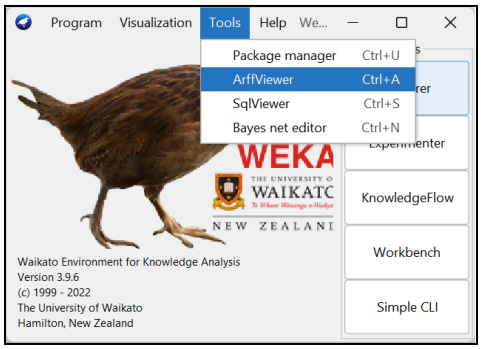
Step 01: Open Weka Explorer → Preprocess → load weather.nominal.arff → move to Classify tab → choose Naïve Bayes[it will be in bayes directory] → set classifier options via More Options → hit Use Training Set → Start → Now, you will see the results showing 13 correct, 1 incorrect [6th instance, marked [+]], with 92.8571% accuracy.

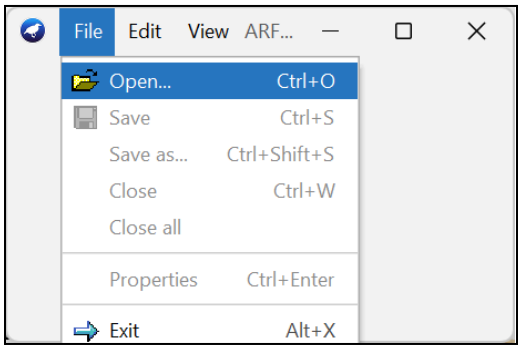


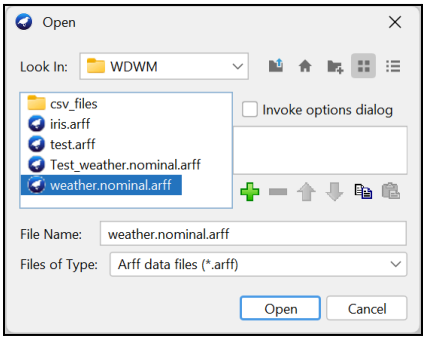




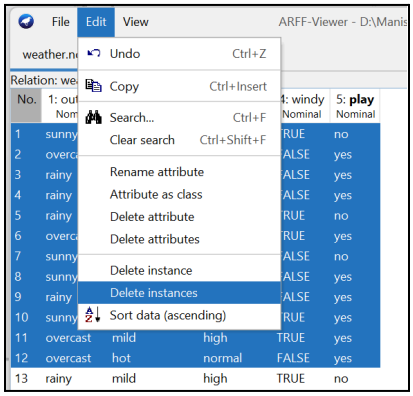
Step 02: Now will create a training dataset and for that, Open weka GUI → Tool Tab → Arrffviewer → File → open weather.nominal.arff file.

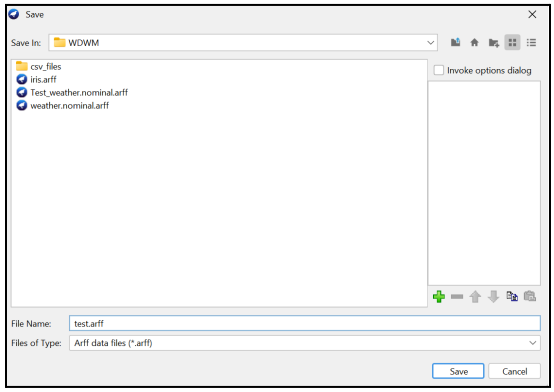


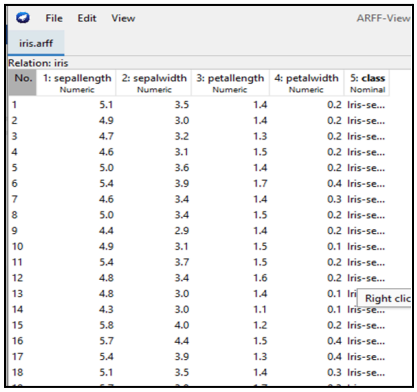




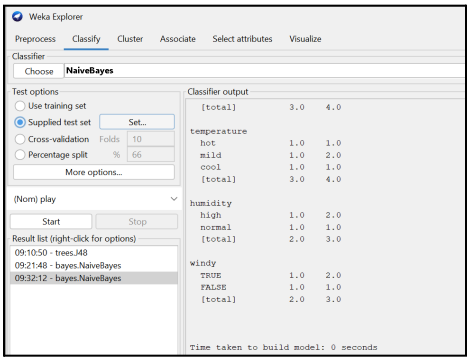
Step 03: Select all records, exclude one, delete the rest, and save as **test.arff.** After that Go to the Preprocess tab → Open file → iris.arff.

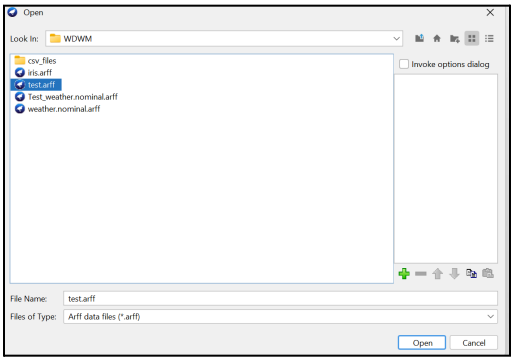


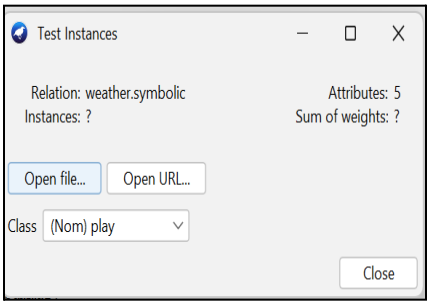




Step 04: Move to Classify tab → choose Naïve Bayes → hit Start to build the classifier, then Select Supplied test set → hit Set and open test.arff file, once the file details are displayed → hit Start again to classify the test instances. The classifier predicts an unknown instance as Play: Yes





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=== Summary ===

Correctly Classified Instances           1               100      %
Incorrectly Classified Instances         0                 0      %
Kappa statistic                          1
Mean absolute error                      0.1111
Root mean squared error                  0.1111
Relative absolute error                 33.3333 %
Root relative squared error             33.3333 %
Total Number of Instances                1

=== Detailed Accuracy By Class ===

                 TP Rate  FP Rate  Precision  Recall   F-Measure  MCC      ROC Area  PRC Area
                 ?        0.000    ?          ?        ?          ?        ?         ?
                 1.000    ?        1.000      1.000    1.000      ?        ?         1.000
Weighted Avg.    1.000    ?        1.000      1.000    1.000      ?        ?         1.000

=== Confusion Matrix ===

 a b   <-- classified as
 0 0 | a = yes
 0 1 | b = no
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