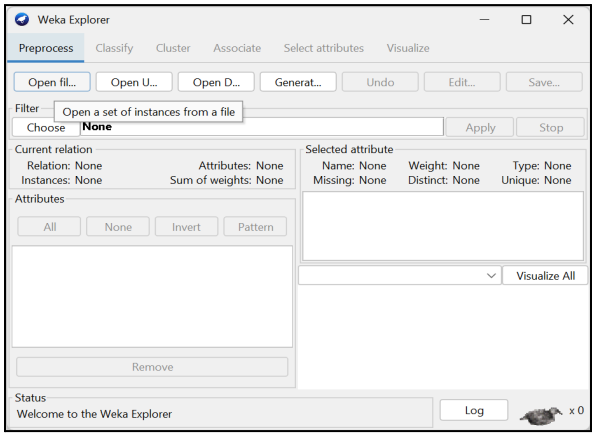
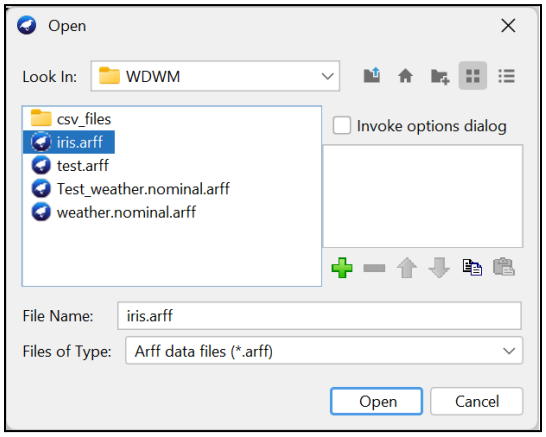
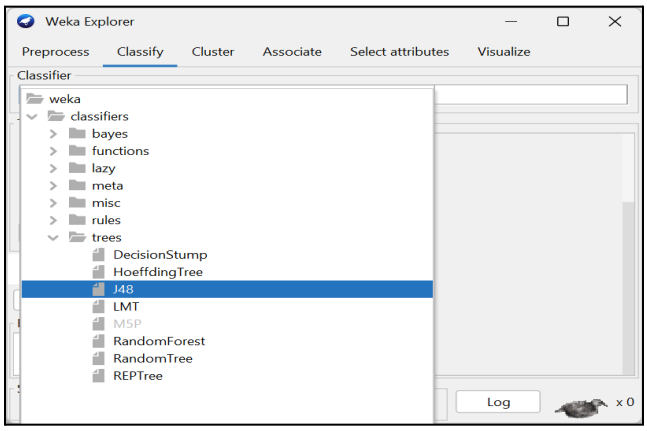
Practical 08: Implementing Classification in Weka [Decision Tree]

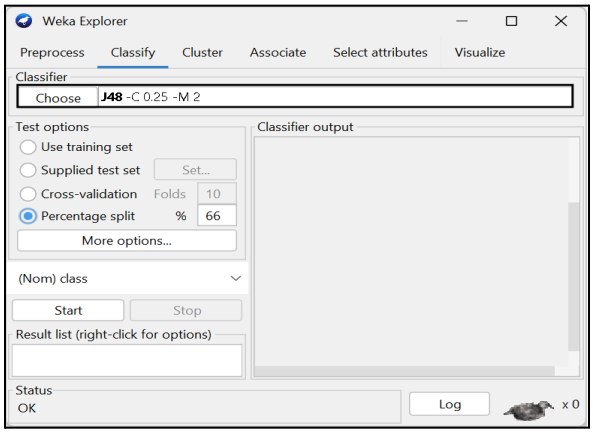
Step 01: Open Weka → Explorer → Open file → Choose '**iris.arff**' file → after that move to the **Classify Tab.**



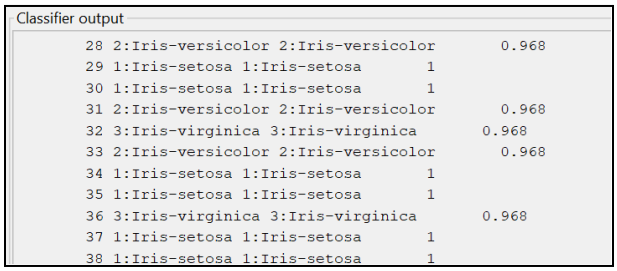


Step 02: In the Classify tab follow the path choose → trees → J48 now you will be able to see J48 in the choose textbox Click on it, set **saveInstanceData** to **true**, and confirm. Then, select **Percentage split** under **Test options** and set it to **66%**, and click **Start**.





Step 03: The Classifier output box displays classification results, including accuracy statistics, as shown in the figure.



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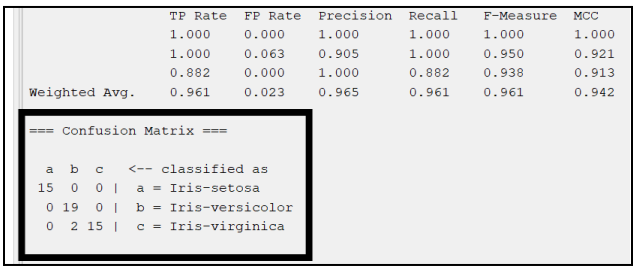
Classifier output

       28 2:Iris-versicolor 2:Iris-versicolor       0.968
       29 1:Iris-setosa 1:Iris-setosa       1
       30 1:Iris-setosa 1:Iris-setosa       1
       31 2:Iris-versicolor 2:Iris-versicolor       0.968
       32 3:Iris-virginica 3:Iris-virginica       0.968
       33 2:Iris-versicolor 2:Iris-versicolor       0.968
       34 1:Iris-setosa 1:Iris-setosa       1
       35 1:Iris-setosa 1:Iris-setosa       1
       36 3:Iris-virginica 3:Iris-virginica       0.968
       37 1:Iris-setosa 1:Iris-setosa       1
       38 1:Iris-setosa 1:Iris-setosa       1
```



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                 TP Rate   FP Rate   Precision   Recall  F-Measure   MCC
                 1.000     0.000     1.000      1.000     1.000      1.000
                 1.000     0.063     0.905      1.000     0.950      0.921
                 0.882     0.000     1.000      0.882     0.938      0.913
Weighted Avg.    0.961     0.023     0.965      0.961     0.961      0.942

=== Confusion Matrix ===

  a  b  c   <-- classified as
 15  0  0 |  a = Iris-setosa
  0 19  0 |  b = Iris-versicolor
  0  2 15 |  c = Iris-virginica
```

Step 04: Right-click on the highlighted Result list entry, then select Visualize tree to view the decision tree for the Fisher's Iris dataset. The tree is easy to read