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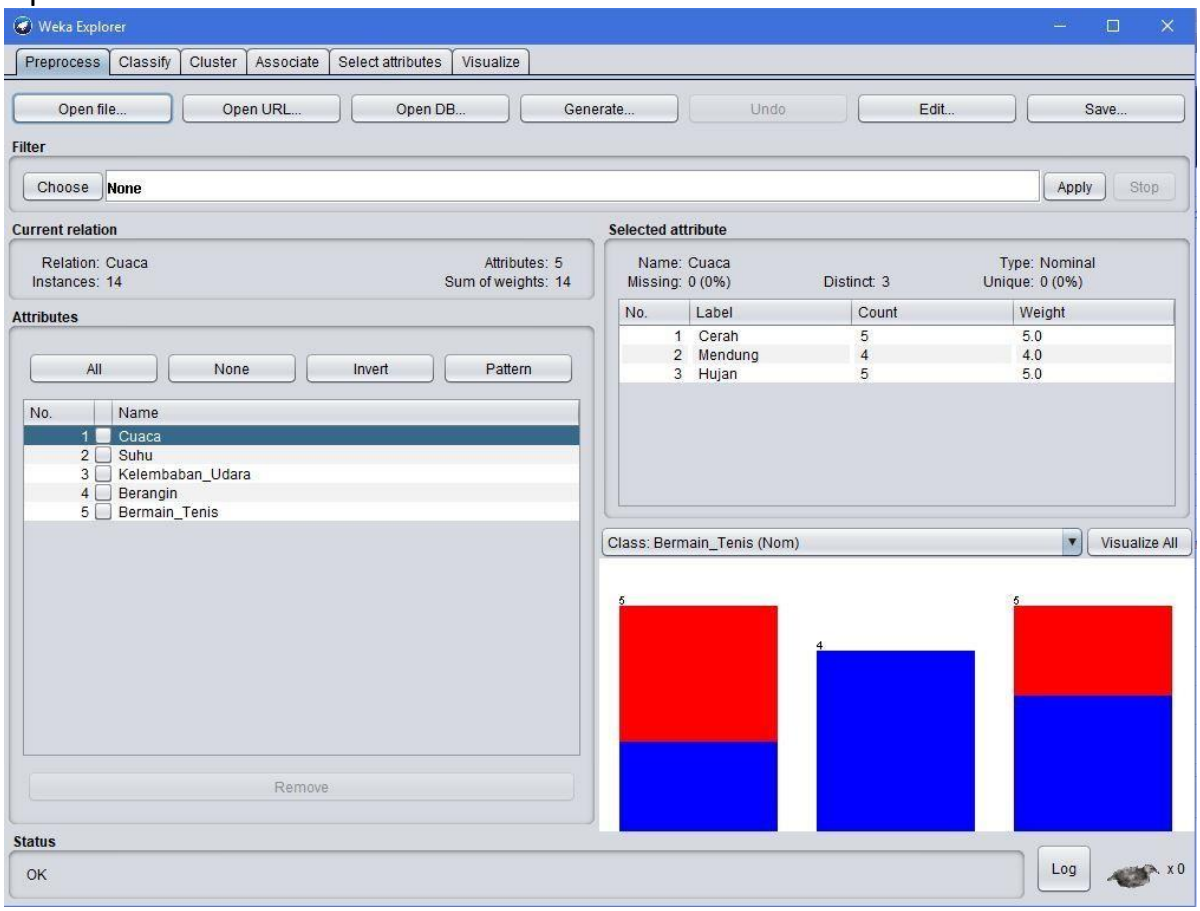
Class : X

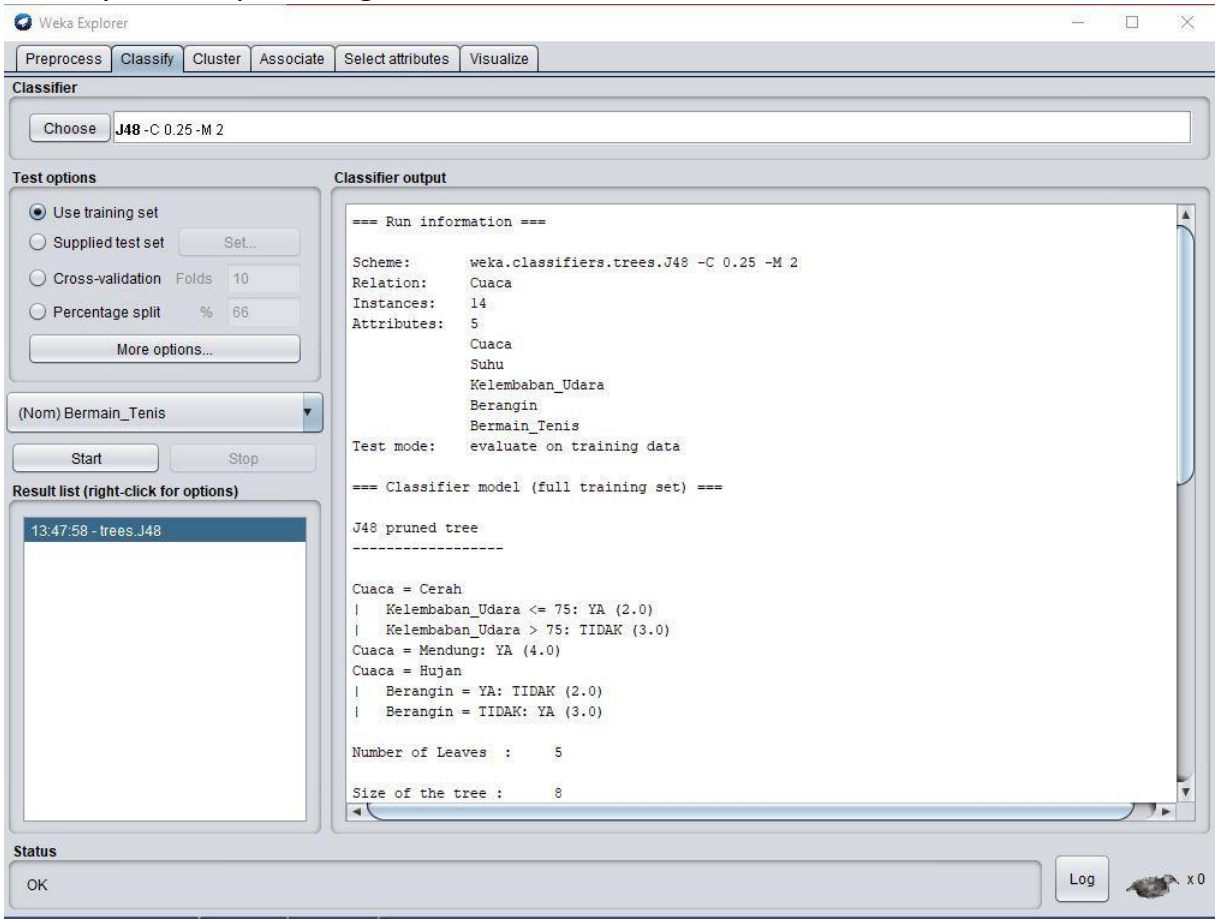
Practicum Report Module 9

Practicum

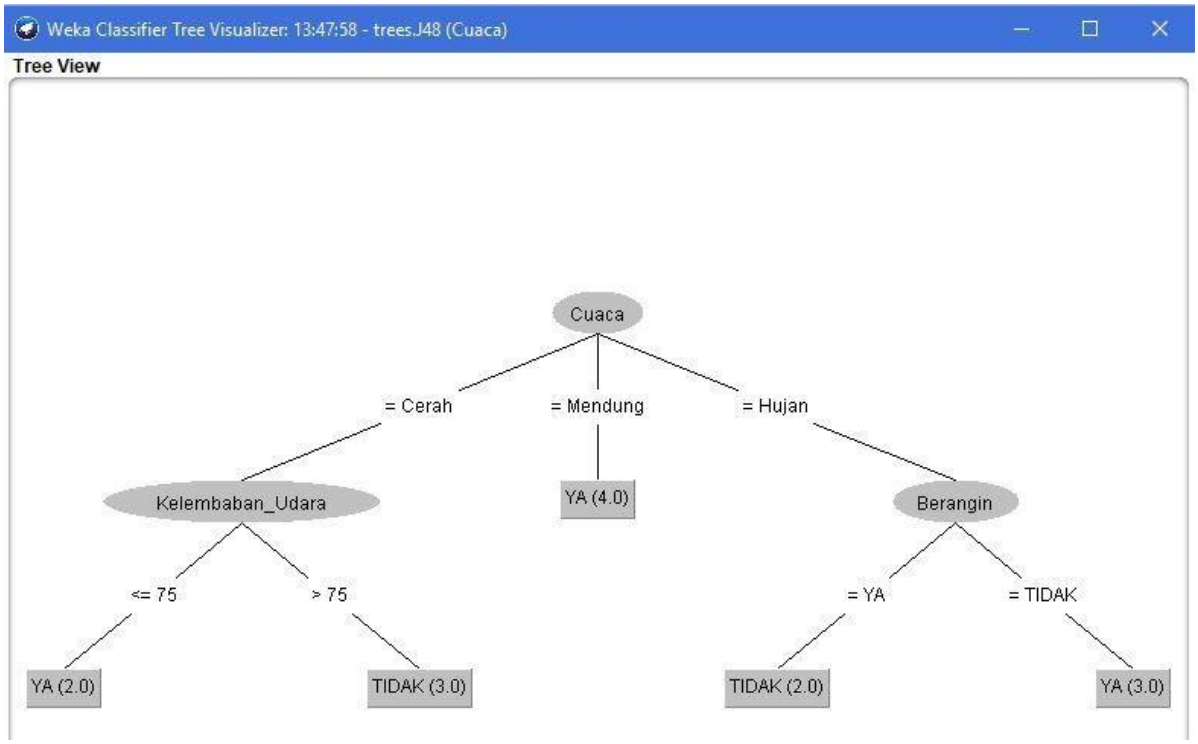
1. Decision Tree using Weka
    a. Open file Cuaca.arff with Weka



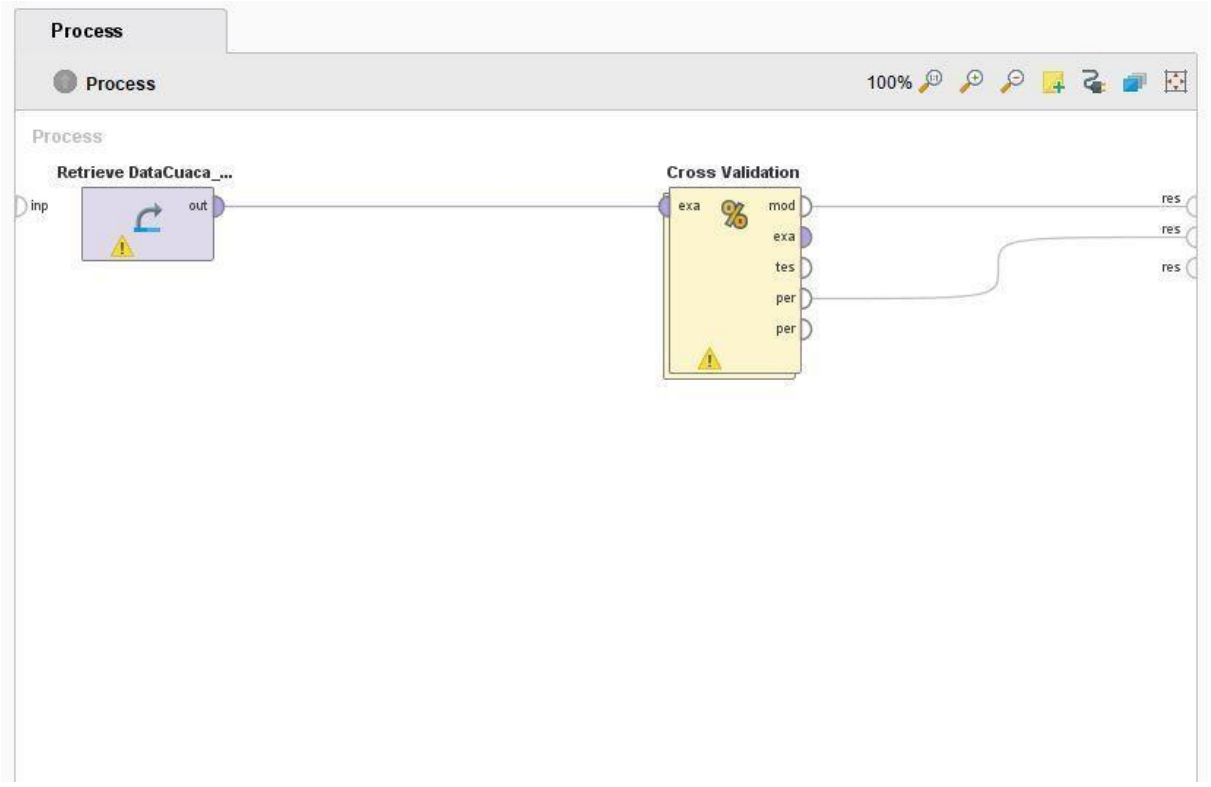
b. Classify the output using Decision Tree



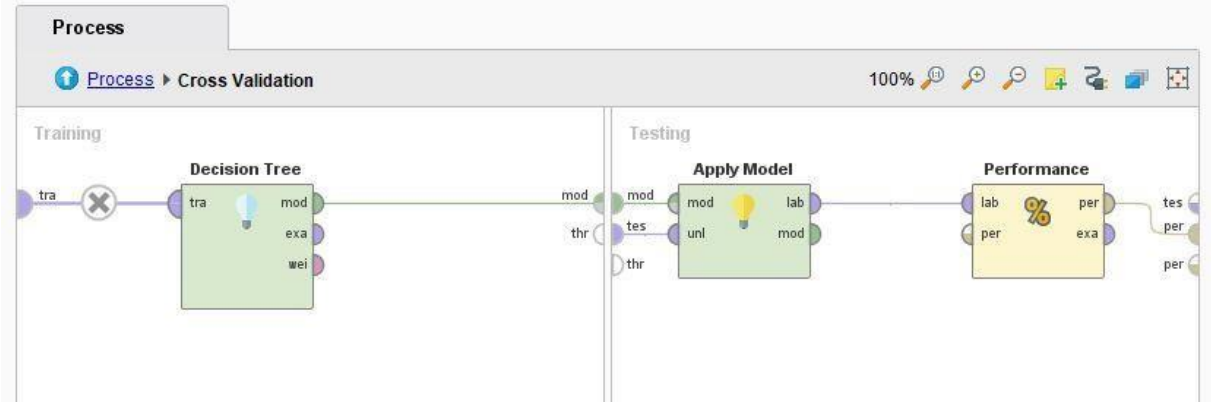
c. The Visualize Tree



2. Decision Tree using RapidMiner
   a. Model by using DataCuaca_Training with Cross Validation then connecting each port



   b. Double click on Cross Validation enter the Decision Tree operator, Apply Model, and Performance then connect each port



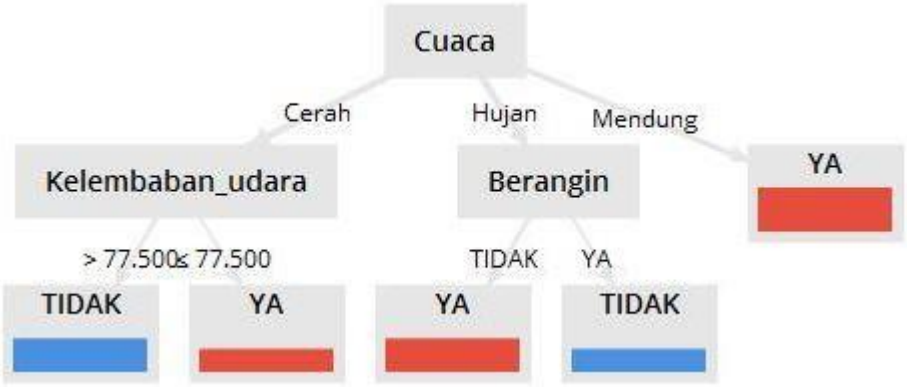
   c. Then press the Run button

Table View Plot View

accuracy: 60.00% +/- 45.95% (micro average: 64.29%)

	true TIDAK	true YA	class precision
pred. TIDAK	2	2	50.00%
pred. YA	3	7	70.00%
class recall	40.00%	77.78%	

d. Decision Tree Result

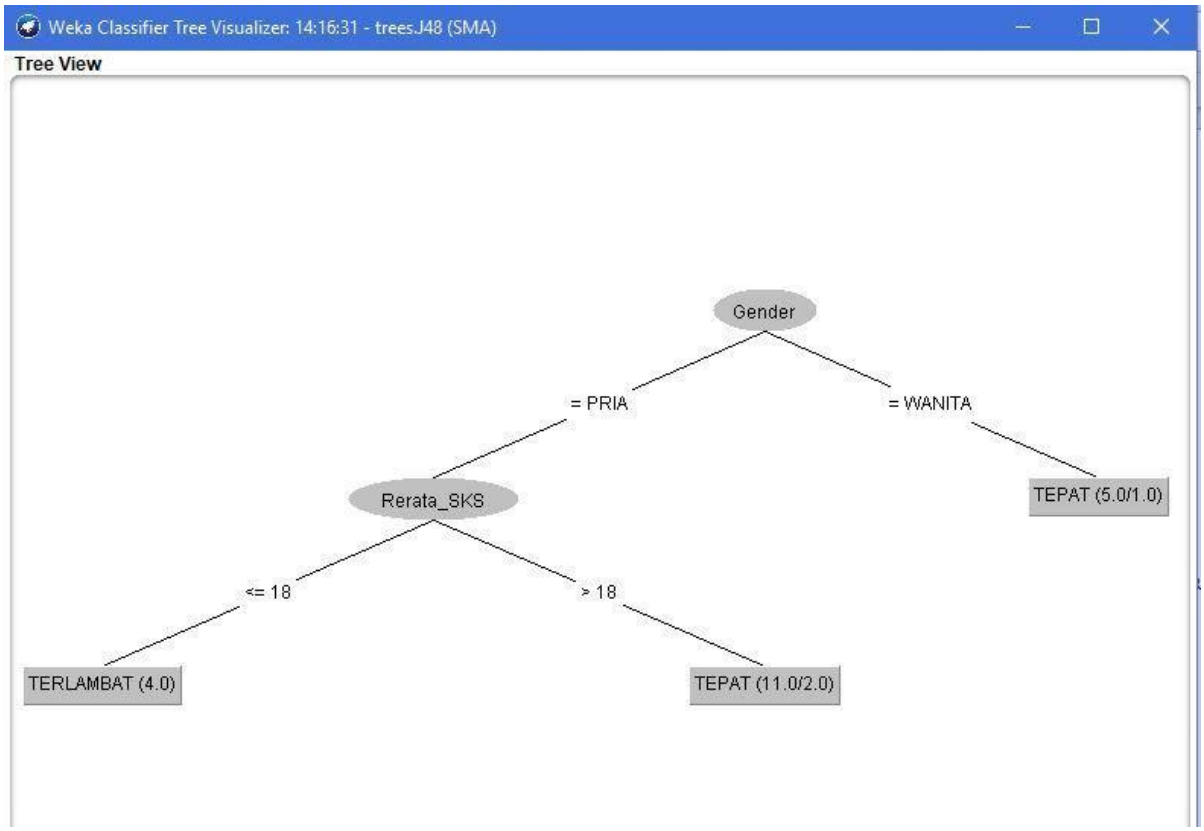


Task

1.

	A	B	C	D	E	F
1	**Cuaca**	**Suhu**	**Kelembaban_udara**	**Berangin**	**Bermain_Tenis**	
2	Cerah	75	65	TIDAK	YA	
3	Cerah	80	68	YA	YA	
4	Cerah	83	87	YA	TIDAK	
5	Mendung	70	96	TIDAK	YA	
6	Mendung	68	81	TIDAK	YA	
7	Hujan	65	75	TIDAK	YA	
8	Hujan	64	85	YA	TIDAK	
9						
10						

2. Using file ARFF SMA Training
   a. Decision Tree and Classifier Output



Classifier output

```
=== Classifier model (full training set) ===

J48 pruned tree
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Gender = PRIA
|   Rerata_SKS <= 18: TERLAMBAT (4.0)
|   Rerata_SKS > 18: TEPAT (11.0/2.0)
Gender = WANITA: TEPAT (5.0/1.0)

Number of Leaves  :     3

Size of the tree :      5


Time taken to build model: 0.03 seconds

=== Evaluation on training set ===

Time taken to test model on training data: 0 seconds

=== Summary ===

Correctly Classified Instances          17               85      %
Incorrectly Classified Instances         3               15      %
Kappa statistic                          0.6341
Mean absolute error                      0.2436
Root mean squared error                  0.349
```

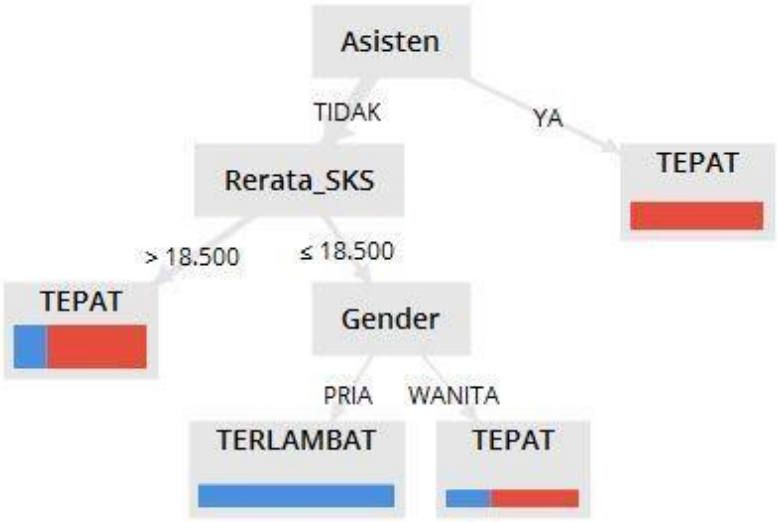
b. Number of leaf nodes in the decision tree = 3
   The total number of vertices in the decision tree = 5
   The time needed for the training process = 0.03 seconds
   The level of classification accuracy = 85%
   Inaccurate classification rate = 15%

3. Using file Excel SMA Training
   a. Result and Decision Tree

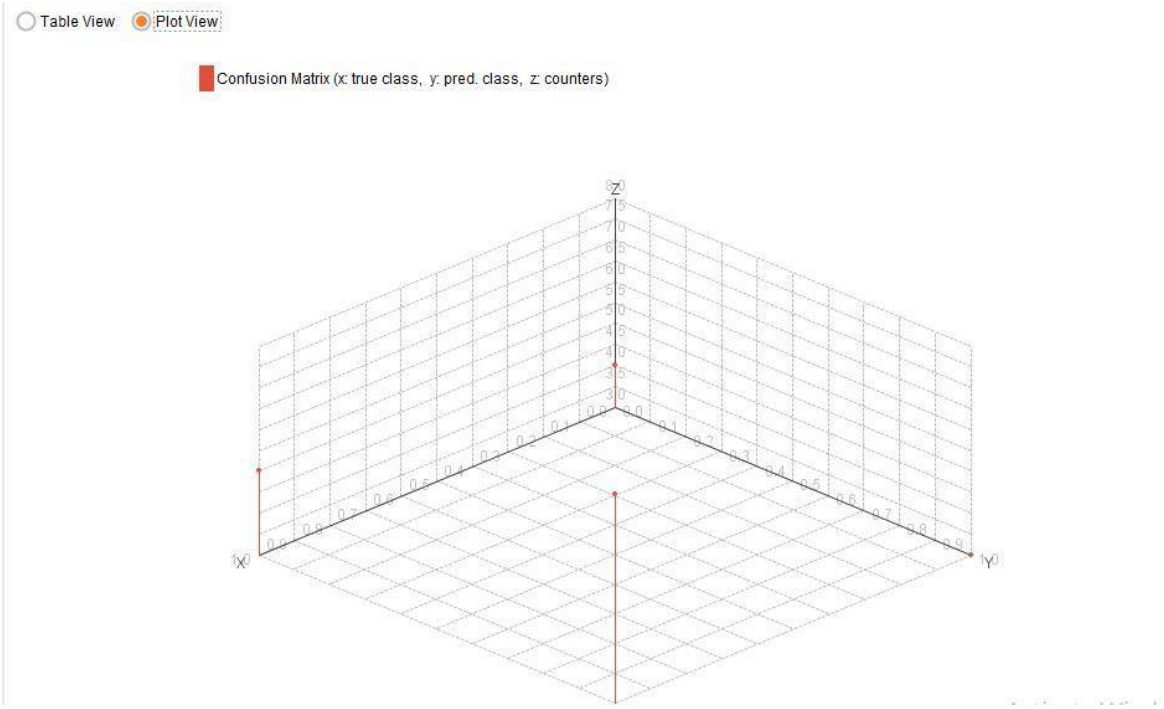
Table View Plot View

accuracy: 60.00% +/- 21.08% (micro average: 60.00%)

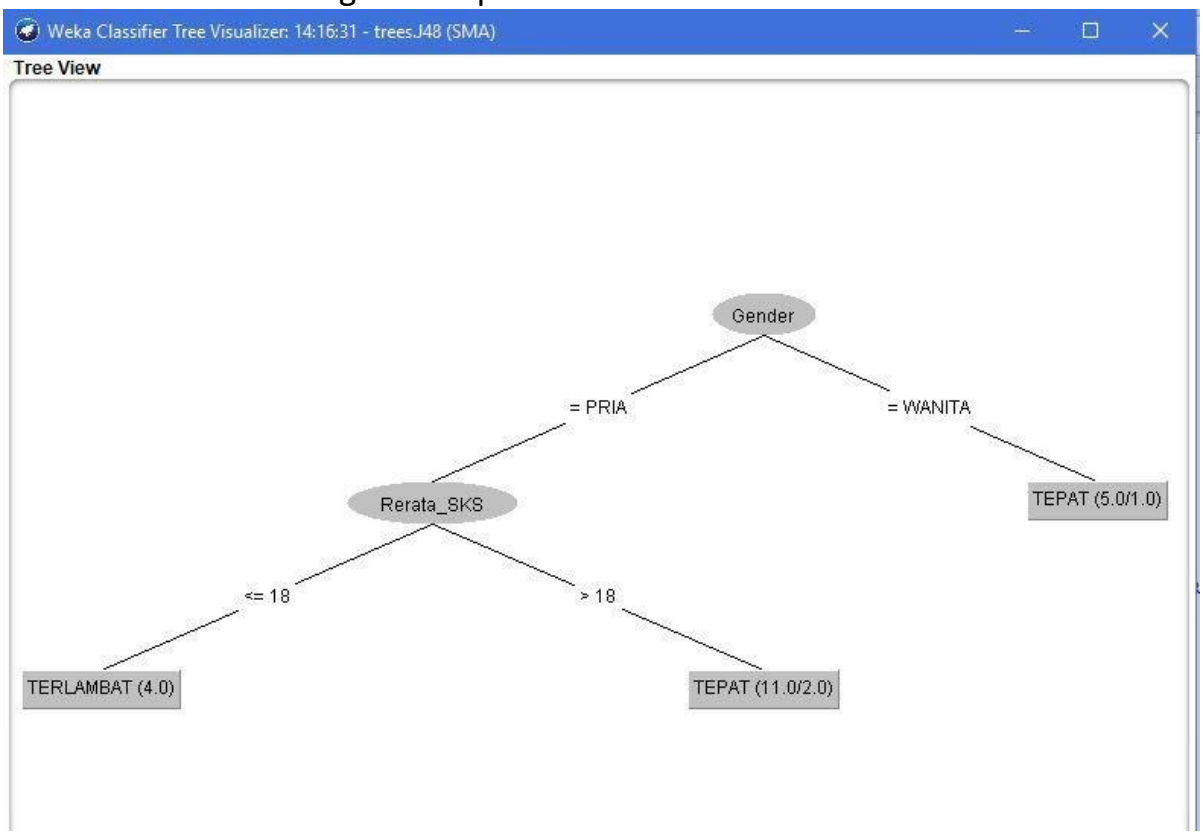
	true TERLAMBAT	true TEPAT	class precision
pred. TERLAMBAT	4	5	44.44%
pred. TEPAT	3	8	72.73%
class recall	57.14%	61.54%	



b. Plot View



4. Classification according to the question number 2



Classification:

a. TEPAT
   Gender = Wanita
   Gender = Pria, Rerata_SKS > 18

b. TERLAMBAT
   Gender = Pria, Rerata_SKS <= 18