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## MODUL 9 TUGAS

### 1. Table

Cuaca	Suhu	Kelembaban_udara	Berangin	Bermain_Tenis
Cerah	75	65	TIDAK	YA
Cerah	80	68	YA	YA
Cerah	83	87	YA	TIDAK
Mendung	70	96	TIDAK	YA
Mendung	68	81	TIDAK	YA
Hujan	65	75	TIDAK	YA
Hujan	64	85	YA	TIDAK

### 2. Weka

#### a. Tree

The screenshot shows the Weka Explorer interface. The 'Classifier' tab is selected, and the 'J48 -C 0.25 -M 2' classifier is chosen. The 'Test options' section shows 'Use training set' selected. The 'Classifier output' pane displays the following information:

```
=== Run information ===
Scheme:      weka.classifiers.trees.J48 -C 0.25 -M 2
Relation:    Jurusan_SMA
Instances:    20
Attributes:   6
              Jurusan_SMA
              Gender
              Asal_Sekolah
              Rerata_SKS
              Asisten
              Lama_Studi
Test mode:    evaluate on training data

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

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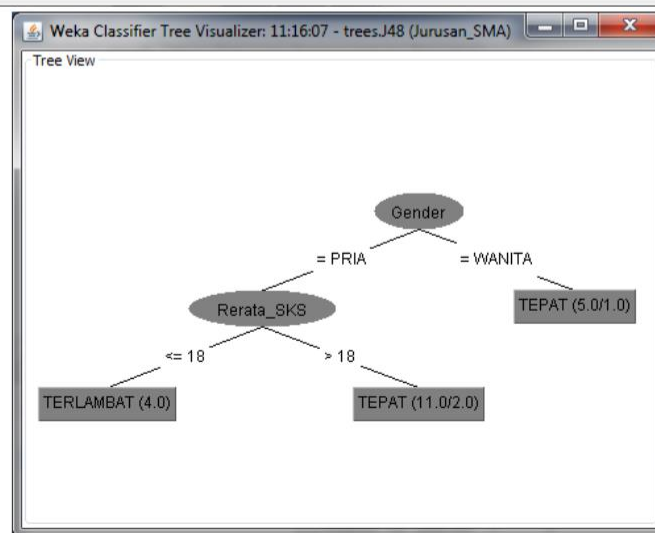
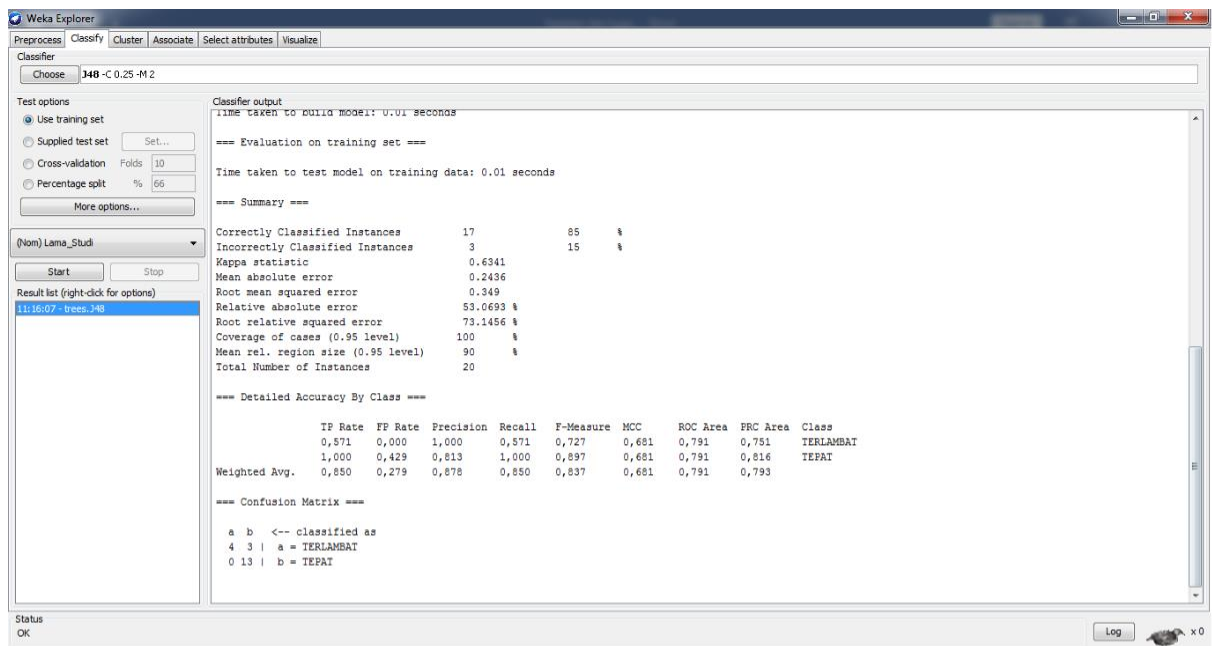
Gender = PRIA
| Rerata_SKS <= 18: TERLAMBAT (4.0)
| Rerata_SKS > 18: TEPAT (11.0/2.0)
Gender = WANITA: TEPAT (5.0/1.0)

Number of Leaves :    3
Size of the tree :    5

Time taken to build model: 0.01 seconds

=== Evaluation on training set ===
```

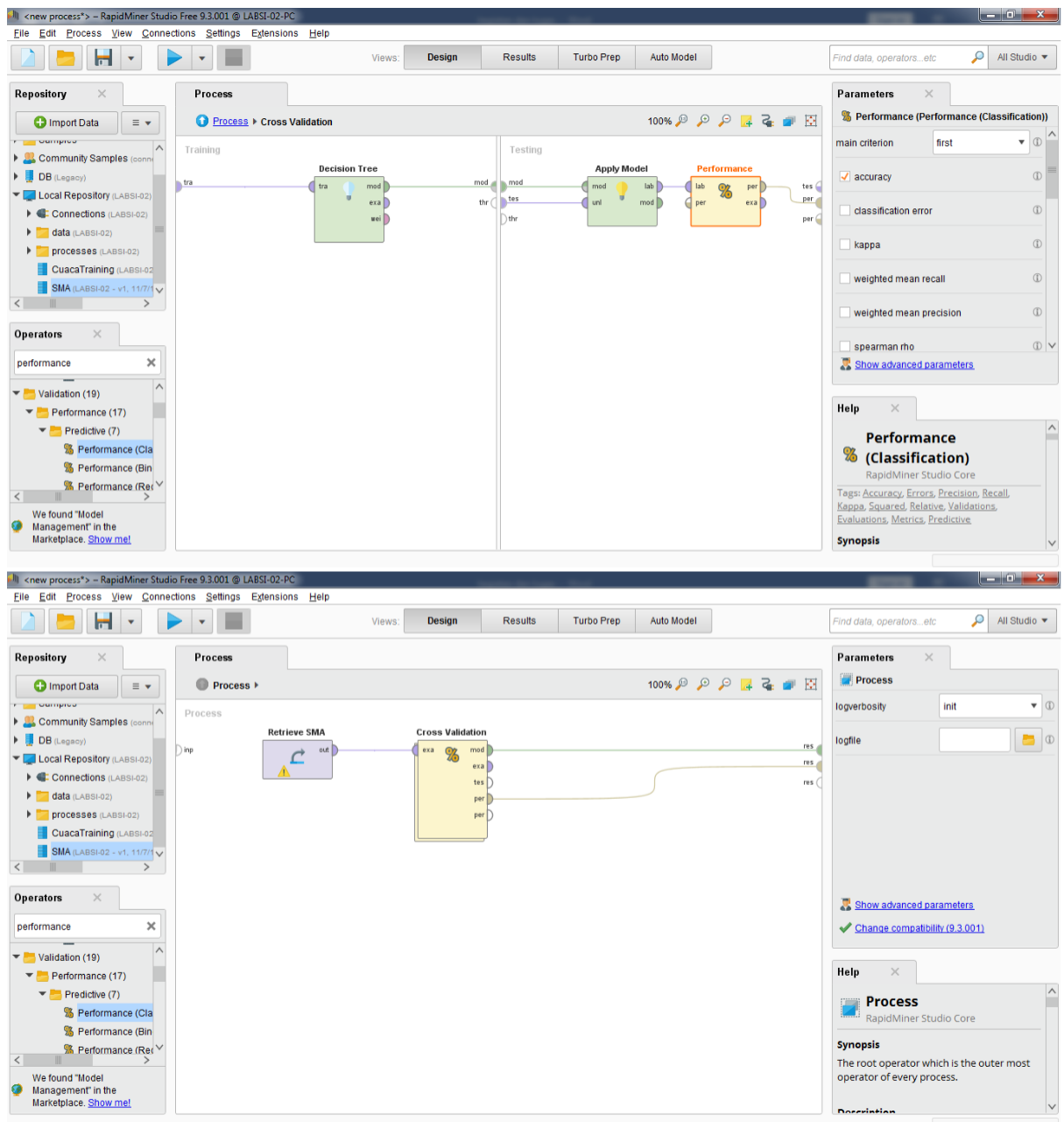
The status bar at the bottom shows 'Status OK' and a 'Log' button.



- b. Carilah nilai-nilai parameter berikut:
- Jumlah simpul daun pada pohon keputusan = **3**
  - Jumlah simpul keseluruhan pada pohon keputusan = **5**
  - Waktu yang dibutuhkan untuk proses pelatihan = **0.01** detik
  - Tingkat ketepatan klasifikasi = **85 %**
  - Tingkat ketidaktepatan klasifikasi = **15 %**

### 3. RapidMiner

#### a. Pohon



<new process\*> - RapidMiner Studio Free 9.3.001 @ LABSI-02-PC

File Edit Process View Connections Settings Extensions Help

Views: Design Results Turbo Prep Auto Model

Find data, operators, etc. All Studio

ExampleSet (/Local Repository/SMA) ExampleSet (/Local Repository/CuacaTraining)

Result History PerformanceVector (Performance) Tree (Decision Tree)

Criterion: accuracy

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%	

Repository

- Training Resources (connected)
  - Samples
  - Community Samples (connected)
  - DB (Legacy)
- Local Repository (LABSI-02)
  - Connections (LABSI-02)
  - data (LABSI-02)
  - processes (LABSI-02)
    - CuacaTraining (LABSI-02 - v1, 11/7/19 10:44 AM - 5...)
    - SMA (LABSI-02 - v1, 11/7/19 11:24 AM - 609 bytes)

<new process\*> - RapidMiner Studio Free 9.3.001 @ LABSI-02-PC

File Edit Process View Connections Settings Extensions Help

Views: Design Results Turbo Prep Auto Model

Find data, operators, etc. All Studio

ExampleSet (/Local Repository/SMA) ExampleSet (/Local Repository/CuacaTraining)

Result History PerformanceVector (Performance) Tree (Decision Tree)

Zoom

Tree

Node Labels Edge Labels

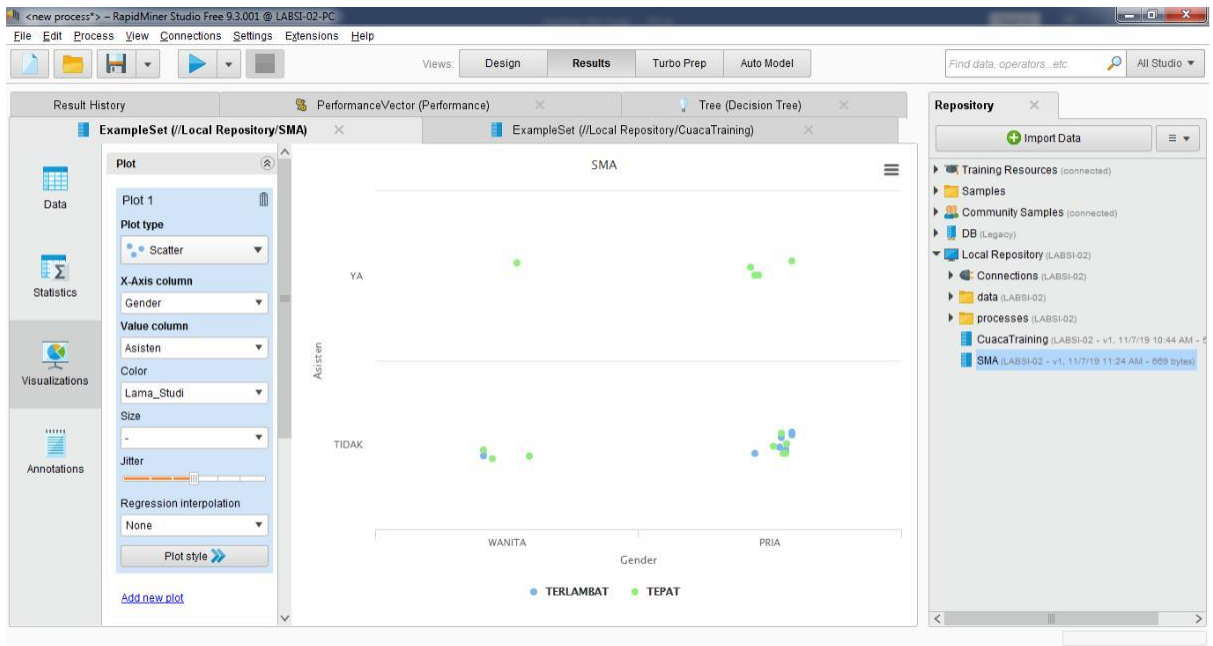
```

graph TD
    Asisten -- TIDAK --> Rerata_SKS
    Asisten -- YA --> TEPAT
    Rerata_SKS -- "> 18.500" --> TEPAT
    Rerata_SKS -- "<= 18.500" --> Gender
    Gender -- PRIA --> TERLAMBAT
    Gender -- WANITA --> TEPAT
  
```

Repository

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    - SMA (LABSI-02 - v1, 11/7/19 11:24 AM - 609 bytes)

## b. Plot View



### 4. Klasifikasi yang terbentuk yaitu :

- i. Seseorang akan lama\_studi (TERLAMBAT) jika kondisi sebagai berikut:
  - Gender = PRIA, Rerata\_SKS  $\leq 18$  (nilai atribut lain diabaikan)
- ii. Seseorang akan lama\_studi (TERLAMBAT) jika kondisi sebagai berikut:
  - Gender = WANITA (nilai atribut lain diabaikan)
  - Gender = PRIA, Rerata\_SKS  $> 18$  (nilai atribut lain diabaikan)