

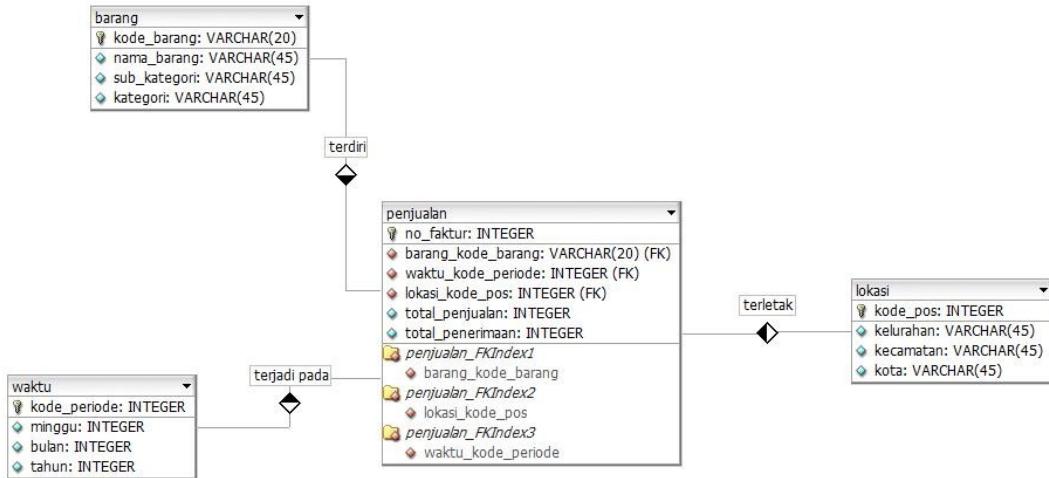
Nama : Avifah Hasna Nur Fadila

NIM : L200170072

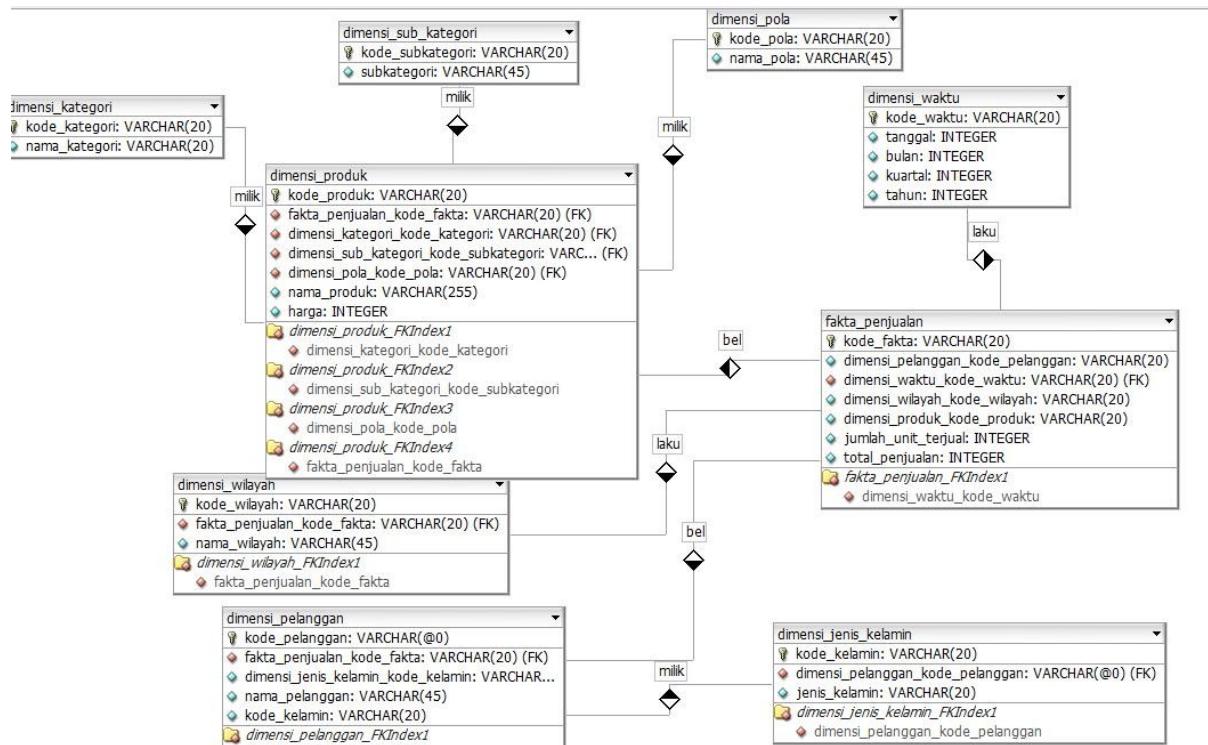
Kelas : C

Modul 1

Percobaan



tugas



MODUL 5

D. Langkah-langkah Praktikum

D.1. Kegiatan 1: Membuat Pivot Table

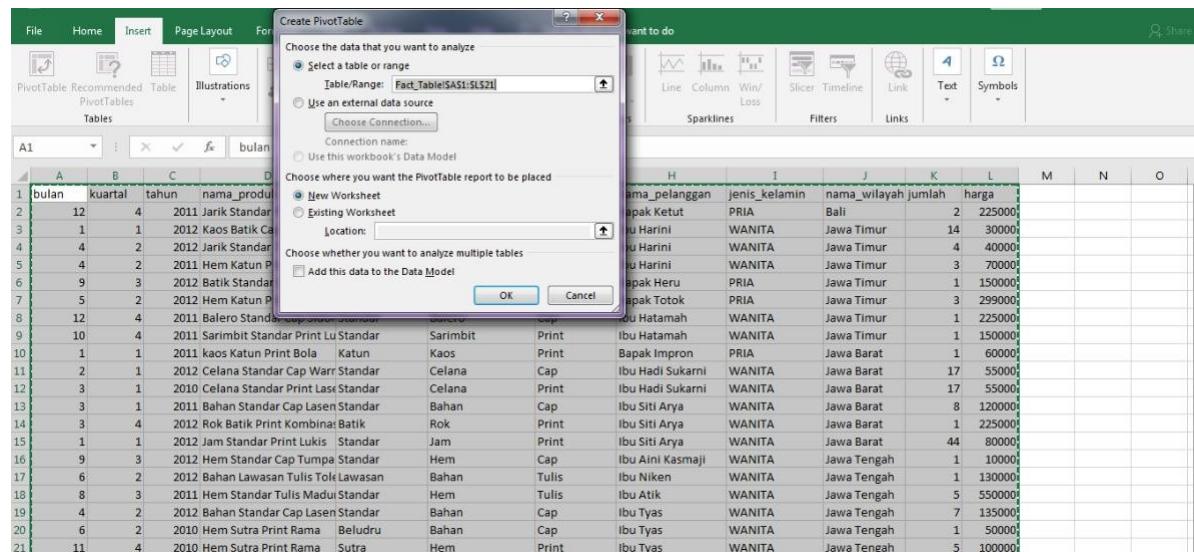
Gunakan file dengan nama “Fakta_Penjualan.xls” hasil tugas Modul 4 soal nomor 2. Jika memungkinkan simpan file tersebut dengan format excel 2007 ke atas (*.xlsx).

Buka sheet Fact_Table, dimana datanya terlihat seperti pada gambar berikut.

Pilih range data A1:L21 atau tekan tombol CTRL + SHIFT + *.

Klik tab Insert pada Ribbon, pilih menu PivotTable | Insert PivotTable.

Pada dialog Create PivotTable yang muncul, pilih New Worksheet, klik tombol OK.



Cobalah berbagai kombinasi penempatan field dalam kotak area tersebut.

Susunlah layout field dengan urutan berikut :

Field nama_kategori ke kotak Row Labels.

b) Field tahun ke kotak Column Labels.

c) Field jumlah ke kotak Values.

| | 2010 | 2011 | 2012 | Grand Total |
|--------------------|-----------|-----------|-----------|-------------|
| Bahan | 1 | 8 | 8 | 17 |
| Balero | | 1 | | 1 |
| Batik | | 1 | 1 | |
| Celana | 17 | 17 | 34 | |
| Hem | 5 | 8 | 4 | 17 |
| Jam | | 44 | 44 | |
| Jarik | 2 | 4 | 6 | |
| Kaos | 1 | 14 | 15 | |
| Rok | | 1 | 1 | |
| Sarimbit | 1 | | 1 | |
| Grand Total | 23 | 21 | 93 | 137 |

Perhatikan hasil pengaturan ini pada area PivotTable. Area ini akan berisi suatu tabel dengan grouping field nama_kategori pada bagian baris, field tahun pada kolom. Sedangkan nilai total jumlah_unit ditempatkan pada cell-cell hasil perpotongan item grouping baris dan kolom tersebut.

| | 2010 | 2011 | 2012 | Grand Total |
|--------------------|-----------|-----------|-----------|-------------|
| Row Labels | | | | |
| Bahan | 1 | 8 | 8 | 17 |
| Balero | | 1 | | 1 |
| Batik | | 1 | 1 | |
| Celana | 17 | 17 | 34 | |
| Hem | 5 | 8 | 4 | 17 |
| Jam | | 44 | 44 | |
| Jarik | 2 | 4 | 6 | |
| Kaos | 1 | 14 | 15 | |
| Rok | | 1 | 1 | |
| Sarimbit | 1 | | 1 | |
| Grand Total | 23 | 21 | 93 | 137 |

D.2. Kegiatan 2 : Menambahkan Tipe Summary Baru

Masih bekerja menggunakan file “Fakta_Penjualan.xls” pada kegiatan 1 dengan Sheet1 PivotTable.

Tambahkan field jumlah kembali ke kotak Value dengan cara klik dan drag, sehingga muncul field baru dengan nama Sum of jumlah2.

| | 2010 | 2011 | | 2012 | | Total | Sum of jumlah | Total | Sum of jumlah2 |
|--------------------|---------------|----------------|---------------|----------------|---------------|----------------|---------------|-------|----------------|
| Row Labels | Sum of jumlah | Sum of jumlah2 | Sum of jumlah | Sum of jumlah2 | Sum of jumlah | Sum of jumlah2 | | | |
| Bahan | 1 | | 1 | | 8 | | 8 | | 17 |
| Balero | | | | 1 | | 1 | | | 1 |
| Batik | | | | | | 1 | | 1 | 1 |
| Celana | 17 | | 17 | | | 17 | | 17 | 34 |
| Hem | 5 | | 5 | | 8 | | 4 | | 17 |
| Jam | | | | | | 44 | | 44 | 44 |
| Jarik | | | 2 | | 2 | | 4 | | 6 |
| Kaos | | | 1 | | 1 | 14 | | 14 | 15 |
| Rok | | | | | | 1 | | 1 | 1 |
| Sarimbit | | | 1 | | 1 | | | | 1 |
| Grand Total | 23 | | 23 | | 21 | | 93 | | 137 |

Kembali ke area Values, dan klik tombol panah ke bawah pada field Sum of jumlah2. Pilih item Value Field Settings.

Pada dialog Value Field Settings, ubah Sum menjadi Count. Perhatikan nama field akan berubah menjadi Count of jumlah2.

Klik tombol OK.

Pada area PivotTable, didapatkan dua summary yaitu:

- nilai jumlah unit penjualan yang terjadi (sum).
- jumlah transaksi yang terjadi (count).

| | 2010 | 2011 | 2012 | Total Sum of jumlah | Total Count of jumlah2 | |
|--------------------|---------------|------------------|---------------|---------------------|------------------------|------------------|
| Row Labels | Sum of jumlah | Count of jumlah2 | Sum of jumlah | Count of jumlah2 | Sum of jumlah | Count of jumlah2 |
| Bahan | 1 | 1 | 8 | 1 | 8 | 2 |
| Balero | | | 1 | 1 | | |
| Batik | | | | 1 | 1 | 1 |
| Celana | 17 | 1 | | | 17 | 1 |
| Hem | 5 | 1 | 8 | 2 | 4 | 2 |
| Jam | | | | 44 | 1 | 44 |
| Jarik | | 2 | 1 | 4 | 1 | 2 |
| Kaos | | 1 | 1 | 14 | 1 | 15 |
| Rok | | | | 1 | 1 | 1 |
| Sarimbit | | 1 | 1 | | 1 | 1 |
| Grand Total | 23 | 3 | 21 | 7 | 93 | 10 |
| | | | | | 137 | 20 |

D.3. Kegiatan 3 : Calculated Field dan Calculated Item di Pivot Table

Calculated Field

Pada menu ribbon PivotTable Tools | Options, klik button Formulas dan pilih Calculated Field.

Pada kotak dialog Insert Calculated Field yang muncul, masukkan nilai berikut kemudian klik tombol OK.

Name : Pendapatan

Formula : = jumlah * harga (Pilih field jumlah kemudian klik Insert

Field kemudian ketikkan tanda "*" dan masukkan field harga)



4. Field baru, "Sum of Pendapatan" akan muncul pada Pivot Table.

| | 2011 | | | 2012 | | | Total Sum of jumlah | Total Count of jumlah |
|----|-------------------|---------------|------------------|-------------------|---------------|------------------|---------------------|-----------------------|
| 5 | Sum of Pendapatan | Sum of jumlah | Count of jumlah2 | Sum of Pendapatan | Sum of jumlah | Count of jumlah2 | Sum of Pendapatan | |
| 6 | 50000 | 8 | 1 | 960000 | 8 | 2 | 2120000 | 17 |
| 7 | 0 | 1 | 1 | 225000 | | | 0 | 1 |
| 8 | 0 | | | 0 | 1 | 1 | 150000 | 1 |
| 9 | 935000 | | | 0 | 17 | 1 | 935000 | 34 |
| 10 | 500000 | 8 | 2 | 4960000 | 4 | 2 | 1236000 | 17 |
| 11 | 0 | | | 0 | 44 | 1 | 3520000 | 44 |
| 12 | 0 | 2 | 1 | 450000 | 4 | 1 | 160000 | 6 |
| 13 | 0 | 1 | 1 | 60000 | 14 | 1 | 420000 | 15 |
| 14 | 0 | | | 0 | 1 | 1 | 225000 | 1 |
| 15 | 0 | 1 | 1 | 150000 | | | 0 | 1 |
| 16 | 4715000 | 21 | 7 | 29400000 | 93 | 10 | 107322000 | 137 |

D.4. Kegiatan 4 : Operasi Roll Up dan Drill Down

Pada Column Labels akan ditampilkan data berdasarkan urutan tahun, kuarter, dan bulan. Beri tanda cek pada field tersebut (drag and drop) dan letakkan pada kotak Column Labels.

Lihat kembali pada cube setelah ditambahkan field-field untuk operasi roll up dan drill down.

Pada masing-masing Row Labels dan Column Labels telah bertambah field-field yang bisa diperinci dan diringkas sesuai urutan kategori data yang lebih spesifik.

| Sum of Pendapatan | Column Labels | 2010 | 2011 | 2012 | Grand Total |
|----------------------------|-------------------------|--------|---------|----------|-------------|
| Row Labels | | | | | |
| Batik | | 0 | 3825000 | 3825000 | |
| Kaos | | 0 | 0 | 420000 | 420000 |
| Kaos Batik Cap Lukis | | 0 | 0 | 420000 | 420000 |
| Rok | | 0 | 0 | 225000 | 225000 |
| Rok Batik Print Kombinasi | | 0 | 0 | 225000 | 225000 |
| Beludru | | 50000 | 0 | 0 | 50000 |
| Bahan | Beludru (nama_kategori) | 0 | 0 | 50000 | |
| Hem Sutra Print Rami | | 0 | 0 | 50000 | |
| Katun | | 520000 | 0 | 520000 | |
| Hem | | 0 | 210000 | 0 | 210000 |
| Hem Katun Print Kelengan | | 0 | 210000 | 0 | 210000 |
| Kaos | | 0 | 60000 | 0 | 60000 |
| kaos Katun Print Bola | | 0 | 60000 | 0 | 60000 |
| Lawasan | | 0 | 0 | 130000 | 130000 |
| Bahan | | 0 | 0 | 130000 | 130000 |
| Bahan Lawasan Tulis Tolet | | 0 | 0 | 130000 | 130000 |
| Standar | | 935000 | 2.2E-07 | 59213000 | 232434000 |
| Bahan | | 0 | 960000 | 945000 | 3825000 |
| Bahan Standar Cap Lasem | | 0 | 960000 | 945000 | 3825000 |
| Balero | | 0 | 225000 | 0 | 225000 |
| Balero Standar Cap Sidomuk | | 0 | 225000 | 0 | 225000 |
| Batik | | 0 | 0 | 150000 | 150000 |
| Batik Standar Cap Tumpal | | 0 | 0 | 150000 | 150000 |
| Celana | | 935000 | 0 | 935000 | 3740000 |
| Celana Standar Cap Warna | | 0 | 0 | 935000 | 935000 |
| Celana Standar Print Lasem | | 935000 | 0 | 0 | 935000 |
| Hem | | 0 | 2750000 | 12360000 | 7731000 |

Klik tanda untuk melakukan operasi Roll Up dan klik tanda untuk

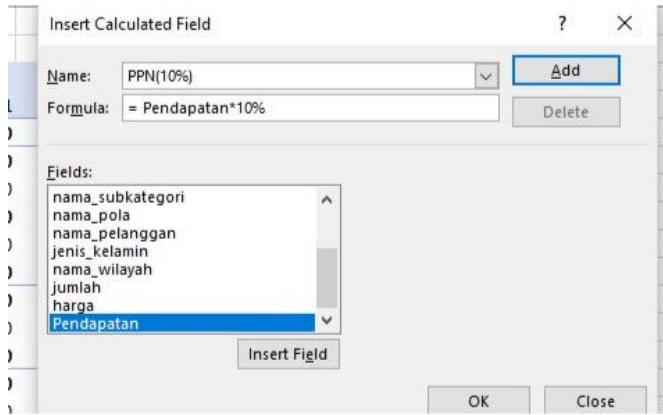
mengakses dan melakukan operasi Drill Down.

Roll Up

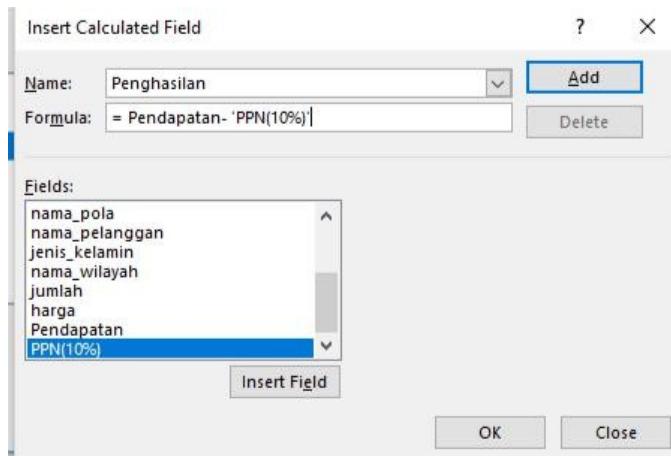
| 3 | Sum of Pendapatan | Column Labels | | | | | | | | | | | |
|----|---------------------------|---------------|-------|---------|--------|---------|--------|---------|---------|--------|---------|---------|----------|
| 4 | | 2010 | | 2011 | | 2012 | | 2013 | | 2014 | | 2015 | |
| 5 | | 1 | 2 | 1 Total | 2 | 2 Total | 3 | 4 | 10 | 4 | 4 Total | 5 | 6 |
| 6 | Row Labels | 1 | 2 | 1 Total | 2 | 2 Total | 3 | 4 | 10 | 4 | 4 Total | 5 | 1 |
| 7 | Batik | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 8 | Kaos | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 9 | Kaos Batik Cap Lukis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10 | Rok | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11 | Rok Batik Print Kombinasi | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | Beludru | 50000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 13 | Bahan | 50000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 14 | Hem Sutra Print Rama | 50000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15 | Katun | 0 | 60000 | 0 | 60000 | 210000 | 210000 | 0 | 0 | 0 | 0 | 520000 | 0 |
| 16 | Hem | 0 | 0 | 0 | 0 | 210000 | 210000 | 0 | 0 | 0 | 0 | 210000 | 0 |
| 17 | Hem Katun Print Kelengan | 0 | 0 | 0 | 0 | 210000 | 210000 | 0 | 0 | 0 | 0 | 210000 | 0 |
| 18 | Kaos | 0 | 60000 | 0 | 60000 | 0 | 0 | 0 | 0 | 0 | 0 | 60000 | 0 |
| 19 | kaos Katun Print Bola | 0 | 60000 | 0 | 60000 | 0 | 0 | 0 | 0 | 0 | 0 | 60000 | 0 |
| 20 | Lawasan | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21 | Bahan | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22 | Bahan Lawasan Tulis Tolet | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23 | Standar | 935000 | 0 | 960000 | 960000 | 0 | 0 | 2750000 | 2750000 | 150000 | 1350000 | 2400000 | 21590000 |
| 24 | Bahan | 0 | 0 | 960000 | 960000 | 0 | 0 | 0 | 0 | 0 | 0 | 960000 | 0 |
| 25 | Bahan Standar Cap Lasem | 0 | 0 | 960000 | 960000 | 0 | 0 | 0 | 0 | 0 | 0 | 960000 | 0 |

E. Tugas

Dengan menggunakan PivotTable pada file Fakta_Penjualan.xls tambahkan 2 buah field, yaitu : a. PPN (Pajak Pertambahan Nilai) sebesar 10% dari tiap pendapatan pada Pivot Table.



b. Total Penghasilan yang dihitung dari pendapatan dikurangi dengan PPN tersebut.



Buatlah PivotTable dan PivotChart untuk melihat PPN dan Total Penghasilan tersebut selama tahun 2010 – 2012. Kategori produk apakah yang memberikan nilai penghasilan terbanyak selama 3 tahun tersebut?

a. Pivot Table

-2010

| Row Labels | Column Labels | | | Total Sum of Pendapatan | Total Sum of PPN(10%) | Total Sum of Penghasilan |
|----------------------------|---------------|-------------------|-----------------|-------------------------|-----------------------|--------------------------|
| | 2010 | Sum of Pendapatan | Sum of PPN(10%) | Sum of Penghasilan | | |
| Beludru | | 50000 | 5000 | 45000 | 5000 | 45000 |
| Bahan | | 50000 | 5000 | 45000 | 5000 | 45000 |
| Hem Sutra Print Rama | | 50000 | 5000 | 45000 | 5000 | 45000 |
| Standar | | 935000 | 93500 | 841500 | 935000 | 841500 |
| Celana | | 935000 | 93500 | 841500 | 935000 | 841500 |
| Celana Standar Print Lasem | | 935000 | 93500 | 841500 | 935000 | 841500 |
| Sutra | | 500000 | 50000 | 450000 | 500000 | 450000 |
| Hem | | 500000 | 50000 | 450000 | 50000 | 450000 |
| Hem Sutra Print Rama | | 500000 | 50000 | 450000 | 50000 | 450000 |
| Grand Total | | 4715000 | 471500 | 4243500 | 4715000 | 4243500 |

-2011

| Row Labels | Column Labels | | | Total Sum of Pendapatan | Total Sum of PPN(10%) | Total Sum of Penghasilan |
|------------------------------|---------------|-------------------|-----------------|-------------------------|-----------------------|--------------------------|
| | 2011 | Sum of Pendapatan | Sum of PPN(10%) | | | |
| • Katun | | 520000 | 52000 | 468000 | 520000 | 52000 |
| • Hem | | 210000 | 21000 | 189000 | 210000 | 21000 |
| Hem Katun Print Kelenggan | | 210000 | 21000 | 189000 | 210000 | 21000 |
| • Kaos | | 60000 | 6000 | 54000 | 60000 | 6000 |
| kaos Katun Print Bola | | 60000 | 6000 | 54000 | 60000 | 6000 |
| • Standar | | 21590000 | 2159000 | 19431000 | 21590000 | 2159000 |
| • Bahan | | 960000 | 96000 | 864000 | 960000 | 96000 |
| Bahan Standar Cap Lasem | | 960000 | 96000 | 864000 | 960000 | 96000 |
| • Balero | | 225000 | 22500 | 202500 | 225000 | 22500 |
| Balero Standar Cap Sidomukti | | 225000 | 22500 | 202500 | 225000 | 22500 |
| • Hem | | 2750000 | 275000 | 2475000 | 2750000 | 275000 |
| Hem Standar Tulis Madura | | 2750000 | 275000 | 2475000 | 2750000 | 2475000 |
| • Jarik | | 450000 | 45000 | 405000 | 450000 | 45000 |
| Jarik Standar Print Sogan | | 450000 | 45000 | 405000 | 450000 | 45000 |
| • Sarimbit | | 150000 | 15000 | 135000 | 150000 | 15000 |
| Sarimbit Standar Print Lukis | | 150000 | 15000 | 135000 | 150000 | 135000 |
| Grand Total | | 29400000 | 2940000 | 25460000 | 29400000 | 2940000 |
| | | Sum of PPN(10%) | | | | |

-2012

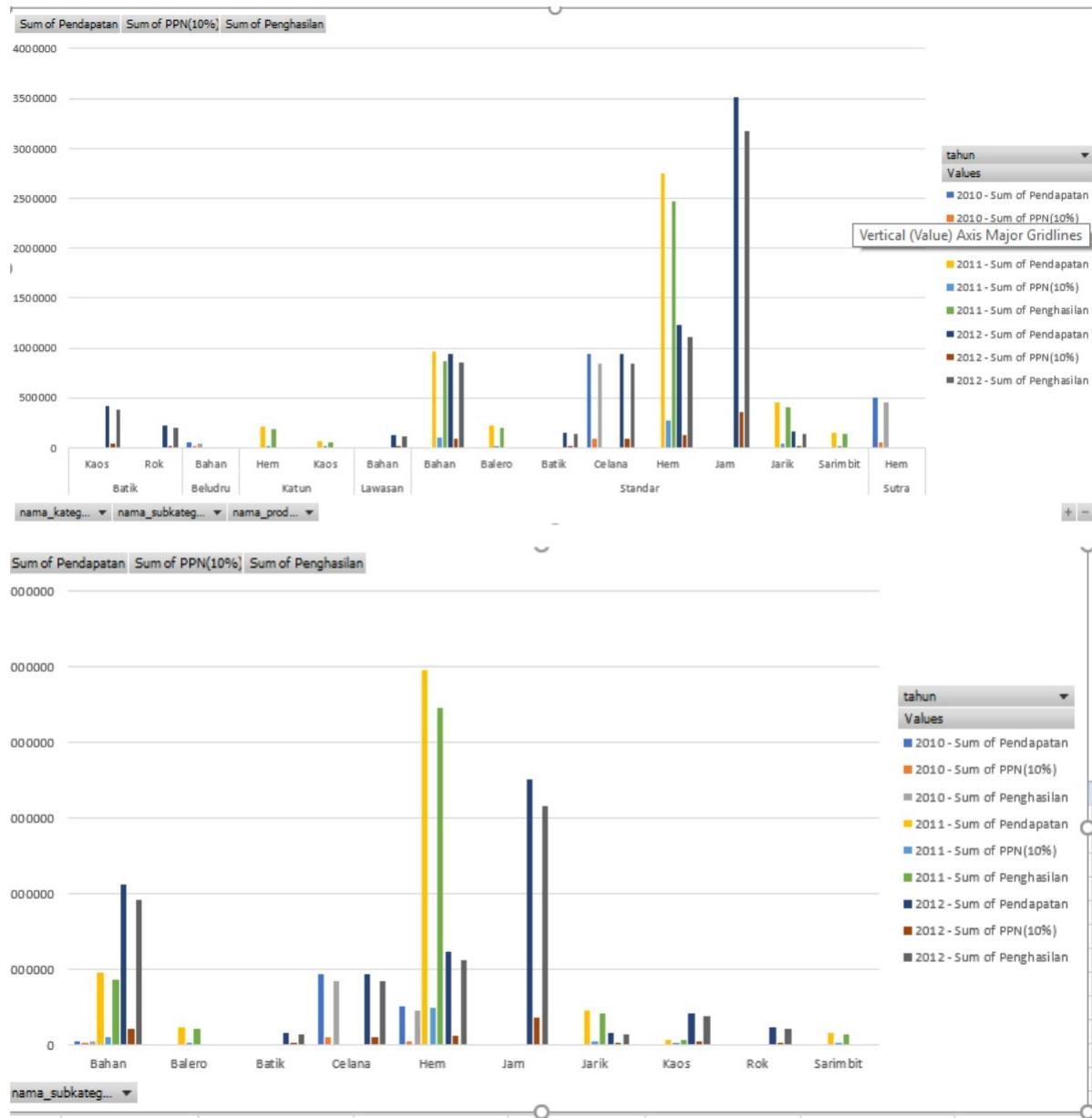
| Row Labels | Column Labels | | | Total Sum of Pendapatan | Total Sum of PPN(10%) | Total Sum of Penghasilan |
|------------------------------|---------------|-------------------|-----------------|-------------------------|-----------------------|--------------------------|
| | 2012 | Sum of Pendapatan | Sum of PPN(10%) | Sum of Penghasilan | | |
| • Batik | | 3825000 | 382500 | 3442500 | 3825000 | 382500 |
| • Lawasan | | 130000 | 13000 | 117000 | 130000 | 13000 |
| • Bahan | | 130000 | 13000 | 117000 | 130000 | 117000 |
| • Bahan Lawasan Tulis Tolet | | 130000 | 13000 | 117000 | 130000 | 117000 |
| • Standar | | 59213000 | 5921300 | 53291700 | 59213000 | 5921300 |
| • Bahan | | 945000 | 94500 | 850500 | 945000 | 94500 |
| Bahan Standar Cap Lasem | | 945000 | 94500 | 850500 | 945000 | 850500 |
| • Batik | | 150000 | 15000 | 135000 | 150000 | 15000 |
| Batik Standar Cap Tumpal | | 150000 | 15000 | 135000 | 150000 | 135000 |
| • Celana | | 935000 | 93500 | 841500 | 935000 | 93500 |
| Celana Standar Cap Warna | | 935000 | 93500 | 841500 | 935000 | 841500 |
| • Hem | | 1236000 | 1236000 | 1112400 | 1236000 | 1112400 |
| Hem Katun Print Kelenggan | | 897000 | 89700 | 807300 | 897000 | 807300 |
| Hem Standar Cap Tumpal | | 10000 | 1000 | 9000 | 10000 | 9000 |
| • Jam | | 3520000 | 352000 | 3168000 | 352000 | 3168000 |
| Jam Standar Print Lukis | | 3520000 | 352000 | 3168000 | 352000 | 3168000 |
| • Jarik | | 160000 | 16000 | 144000 | 160000 | 144000 |
| Jarik Standar Tulis Sarimbit | | 160000 | 16000 | 144000 | 160000 | 144000 |
| Grand Total | | 107322000 | 10732200 | 96589800 | 107322000 | 10732200 |
| | | Sum of Pendapatan | | | | |

-ALL 2010-2012

| Row Labels | Column Labels | | | 2010 | 2011 | 2012 | Total Sum of Pendapatan |
|------------------------------|---------------|-------------------|-----------------|--------------------|----------|-------------------|-------------------------|
| | 2010 | Sum of Pendapatan | Sum of PPN(10%) | Sum of Penghasilan | 2011 | Sum of Pendapatan | Sum of PPN(10%) |
| • Batik | | 0 | 0 | 0 | 0 | 3825000 | 382500 |
| • Beludru | | 50000 | 5000 | 45000 | 0 | 0 | 0 |
| • Bahan | | 50000 | 5000 | 45000 | 0 | 0 | 0 |
| • Bahan Sutra Print Rama | | 50000 | 5000 | 45000 | 0 | 0 | 0 |
| • Katun | | 0 | 0 | 0 | 520000 | 52000 | 468000 |
| • Hem | | 0 | 0 | 0 | 210000 | 21000 | 189000 |
| Hem Katun Print Kelenggan | | 0 | 0 | 0 | 210000 | 21000 | 189000 |
| • Kaos | | 0 | 0 | 0 | 60000 | 6000 | 54000 |
| kaos Katun Print Bola | | 0 | 0 | 0 | 60000 | 6000 | 54000 |
| • Lawasan | | 0 | 0 | 0 | 0 | 130000 | 13000 |
| • Bahan | | 0 | 0 | 0 | 0 | 130000 | 13000 |
| • Bahan Lawasan Tulis Tolet | | 0 | 0 | 0 | 0 | 130000 | 13000 |
| • Standar | | 9350000 | 935000 | 8415000 | 21590000 | 19431000 | 16000000 |
| • Bahan | | 0 | 0 | 0 | 960000 | 960000 | 864000 |
| Bahan Standar Cap Lasem | | 0 | 0 | 0 | 960000 | 960000 | 864000 |
| • Balero | | 0 | 0 | 0 | 225000 | 22500 | 202500 |
| Balero Standar Cap Sidomukti | | 0 | 0 | 0 | 225000 | 22500 | 202500 |
| • Batik | | 0 | 0 | 0 | 0 | 150000 | 150000 |
| Batik Standar Cap Tumpal | | 0 | 0 | 0 | 0 | 150000 | 150000 |
| • Celana | | 9350000 | 935000 | 8415000 | 0 | 0 | 0 |
| Celana Standar Cap Warna | | 0 | 0 | 0 | 0 | 9350000 | 9350000 |
| Celana Standar Print Lasem | | 9350000 | 935000 | 8415000 | 0 | 0 | 0 |
| • Hem | | 0 | 0 | 0 | 2750000 | 275000 | 2475000 |
| Hem Katun Print Kelenggan | | 0 | 0 | 0 | 0 | 0 | 0 |
| Hem Standar Cap Tumpal | | 0 | 0 | 0 | 0 | 10000 | 9000 |
| Hem Standar Tulis Madura | | 0 | 0 | 0 | 2750000 | 275000 | 2475000 |
| • Jam | | 0 | 0 | 0 | 0 | 3520000 | 352000 |
| Jam Standar Print Lukis | | 0 | 0 | 0 | 0 | 3520000 | 352000 |
| • Jarik | | 0 | 0 | 0 | 450000 | 450000 | 405000 |
| Jarik Standar Print Sogan | | 0 | 0 | 0 | 450000 | 450000 | 405000 |

b. Pivot Table

-2010-2012



Berdasarkan subkategori maka produk tertinggi adalah **HEM**

MODUL 6

TUGAS

1.

| | A | B | C | D | E | F |
|----|-------------|--------|--------------|------------|---------|------------|
| 1 | Jurusan_SMA | Gender | Asal_Sekolah | Rerata_SKS | Asisten | Lama_Studi |
| 2 | IPS | WANITA | SURAKARTA | 18 | TIDAK | TERLAMBAT |
| 3 | IPA | PRIA | SURAKARTA | 19 | YA | TEPAT |
| 4 | LAIN | PRIA | SURAKARTA | 19 | TIDAK | TERLAMBAT |
| 5 | IPA | PRIA | LUAR | 17 | TIDAK | TERLAMBAT |
| 6 | IPA | WANITA | SURAKARTA | 17 | TIDAK | TEPAT |
| 7 | IPA | WANITA | LUAR | 18 | YA | TEPAT |
| 8 | IPA | PRIA | SURAKARTA | 18 | TIDAK | TERLAMBAT |
| 9 | IPA | PRIA | SURAKARTA | 19 | TIDAK | TEPAT |
| 10 | IPS | PRIA | LUAR | 18 | TIDAK | TERLAMBAT |
| 11 | LAIN | WANITA | SURAKARTA | 18 | TIDAK | TEPAT |
| 12 | IPA | WANITA | SURAKARTA | 19 | TIDAK | TEPAT |
| 13 | IPS | PRIA | SURAKARTA | 20 | TIDAK | TEPAT |
| 14 | IPS | PRIA | SURAKARTA | 19 | TIDAK | TEPAT |
| 15 | IPA | PRIA | SURAKARTA | 19 | TIDAK | TEPAT |
| 16 | IPA | PRIA | LUAR | 22 | YA | TEPAT |
| 17 | LAIN | PRIA | SURAKARTA | 16 | TIDAK | TERLAMBAT |
| 18 | IPS | PRIA | LUAR | 20 | TIDAK | TEPAT |
| 19 | LAIN | PRIA | LUAR | 23 | YA | TEPAT |
| 20 | IPA | PRIA | SURAKARTA | 21 | YA | TEPAT |
| 21 | IPS | PRIA | SURAKARTA | 19 | TIDAK | TERLAMBAT |

a. LAIN =COUNTIF(A2:A21;"LAIN")

IPA =COUNTIF(A2:A21;"IPA")

IPS =COUNTIF(A2:A21;"IPS")

| | |
|------|----|
| LAIN | 4 |
| IPA | 10 |
| IPS | 6 |

b. TEPAT =COUNTIF(F2:F21;"TEPAT")

TERLAMBAT=COUNTIF(F2:F21;"TERLAMBAT")

c. MAX =MAX(D2:D21)

MIN =MIN(D2:D21)

MEAN =AVERAGE(D2:D21)

STANDAR DEVIASI =STDEV.S(D2:D21)

| | |
|-----------------|------------|
| max rerata SKS | 23 |
| MIN RERATA SKS | 16 |
| MEAN RERATA SKS | 18,95 |
| STANDAR DEVIASI | 1,66938375 |

d. =COUNTIFS(A2:A21;"IPA";B2:B21;"PRIA";E2:E21;"YA";F2:F21;"TEPAT")

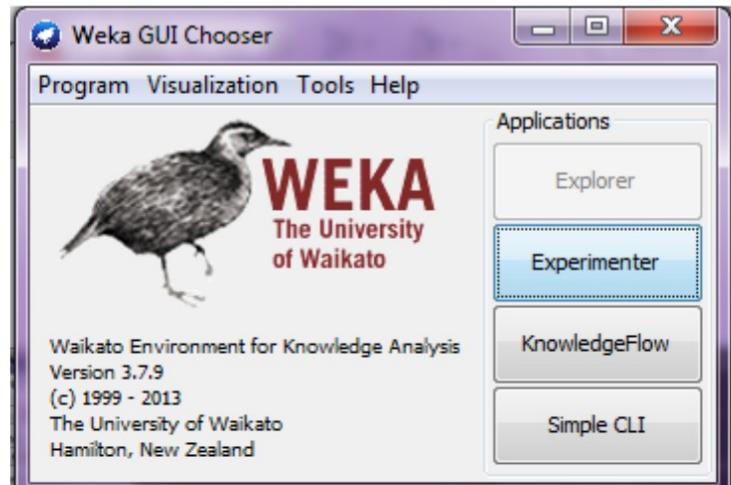
| | |
|---|---|
| D | 3 |
|---|---|

MODUL 7

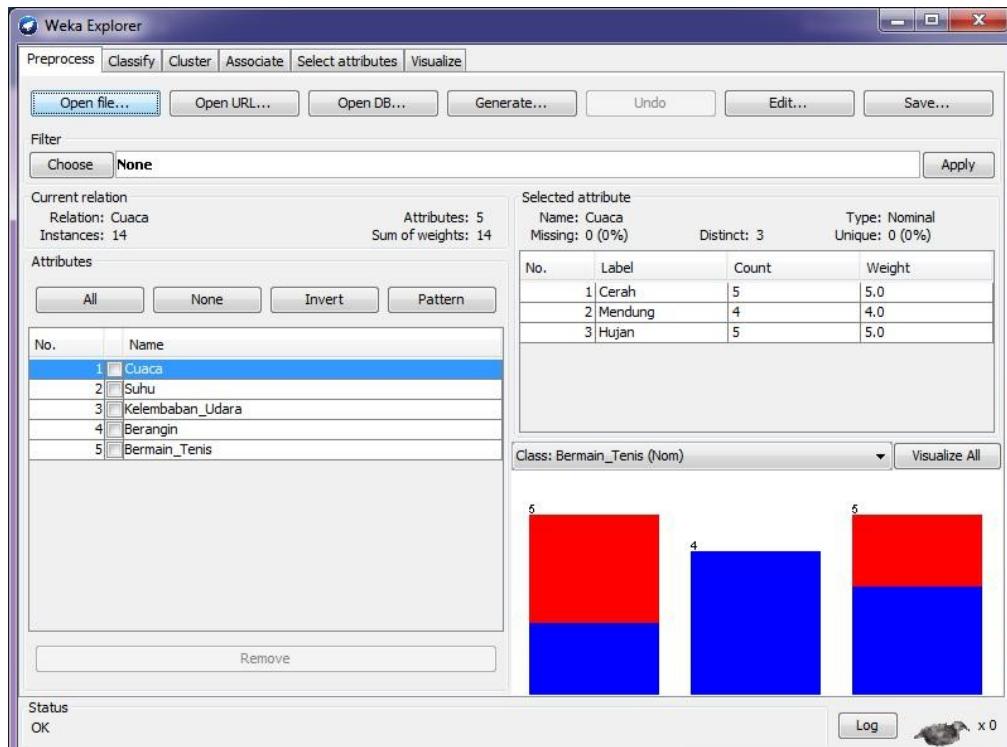
PERCOBAAN

-Data

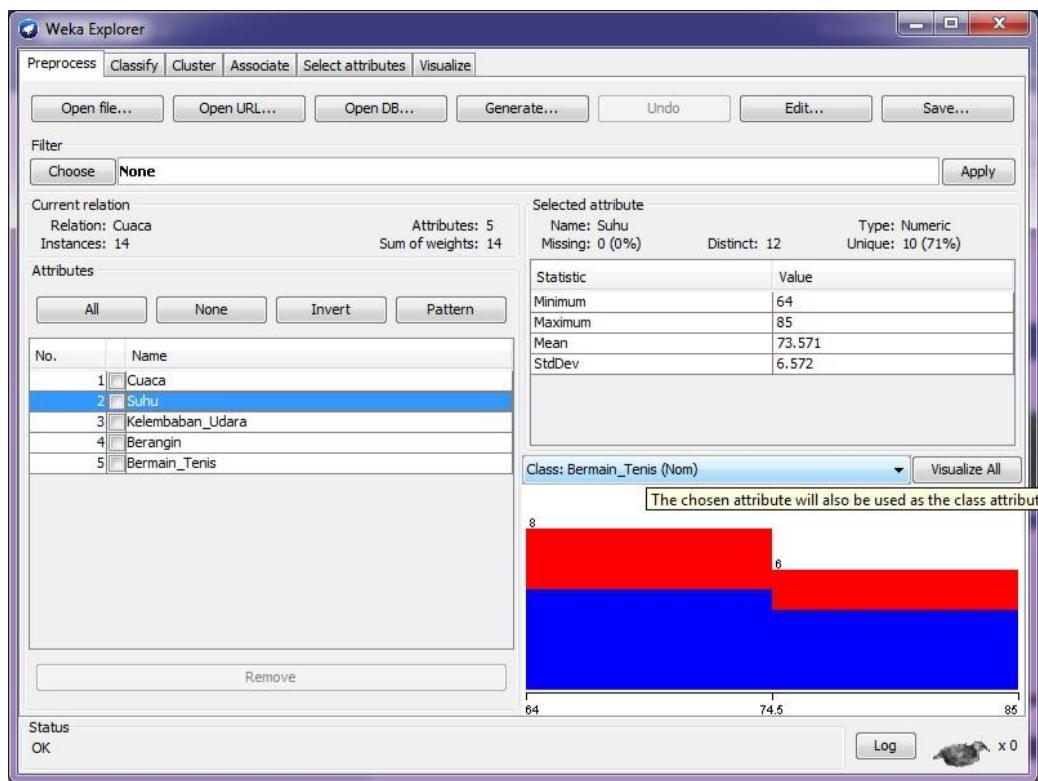
```
≡ Cuaca.arff ×  
C: > Users > LABSI-01 > Documents > prak DWDM > ≡ Cuaca.arff  
1  @relation Cuaca  
2  
3  @attribute Cuaca {Cerah, Mendung, Hujan}  
4  @attribute Suhu real  
5  @attribute Kelembaban_Udara real  
6  @attribute Berangin {YA, TIDAK}  
7  @attribute Bermain_Tenis {YA, TIDAK}  
8  
9  @data  
10 Cerah,85,85,TIDAK,TIDAK  
11 Cerah,80,90,YA,TIDAK  
12 Mendung,83,86,TIDAK,YA  
13 Hujan,70,96,TIDAK,YA  
14 Hujan,68,80,TIDAK,YA  
15 Hujan,65,70,YA,TIDAK  
16 Mendung,64,65,YA,YA  
17 Cerah,72,95,TIDAK,TIDAK  
18 Cerah,69,70,TIDAK,YA  
19 Hujan,75,80,TIDAK,YA  
20 Cerah,75,70,YA,YA  
21 Mendung,72,90,YA,YA  
22 Mendung,81,75,TIDAK,YA  
23 Hujan,71,91,YA,TIDAK
```



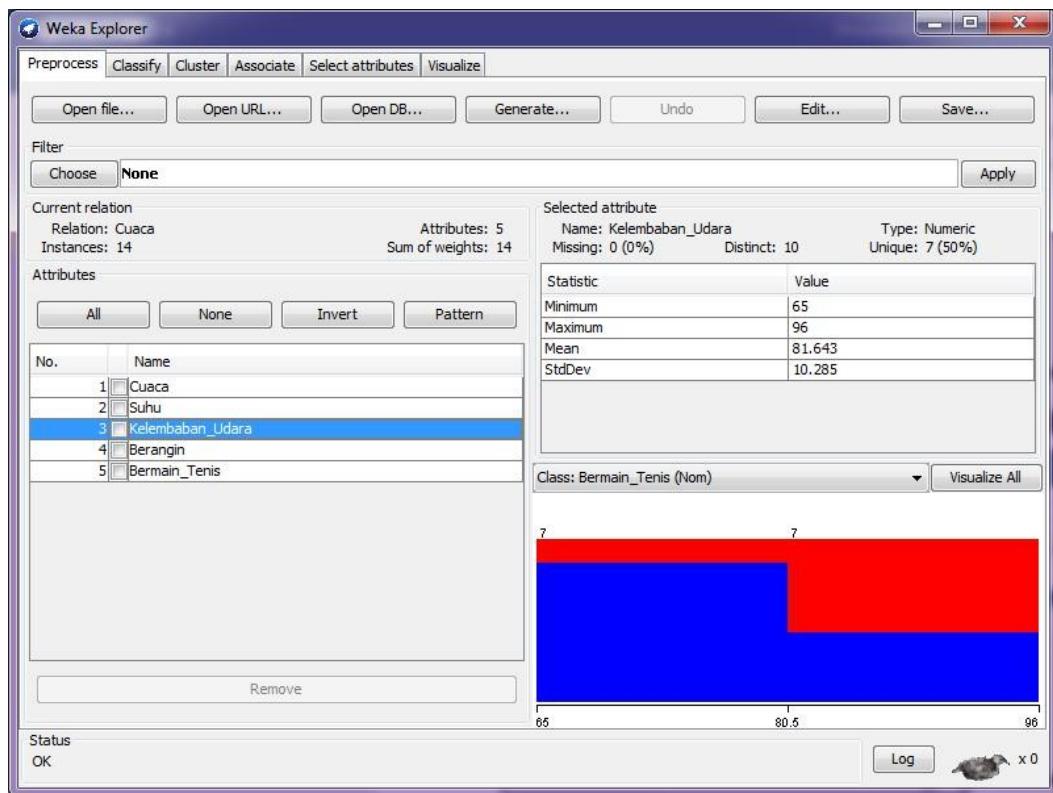
-cuaca



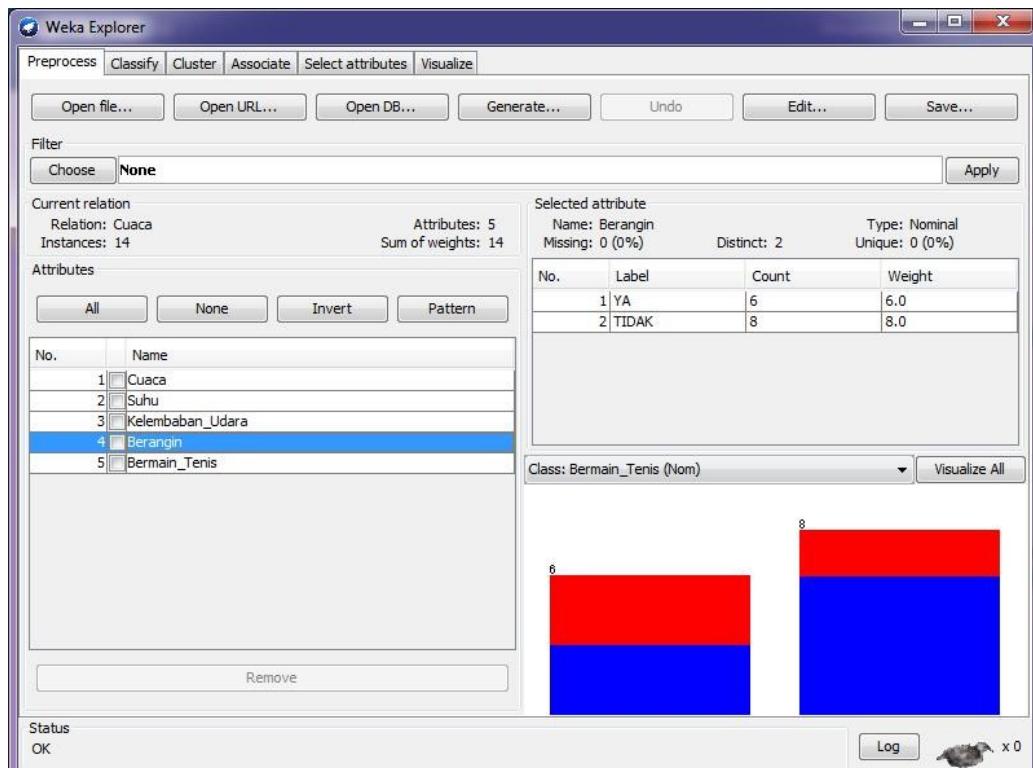
-suhu



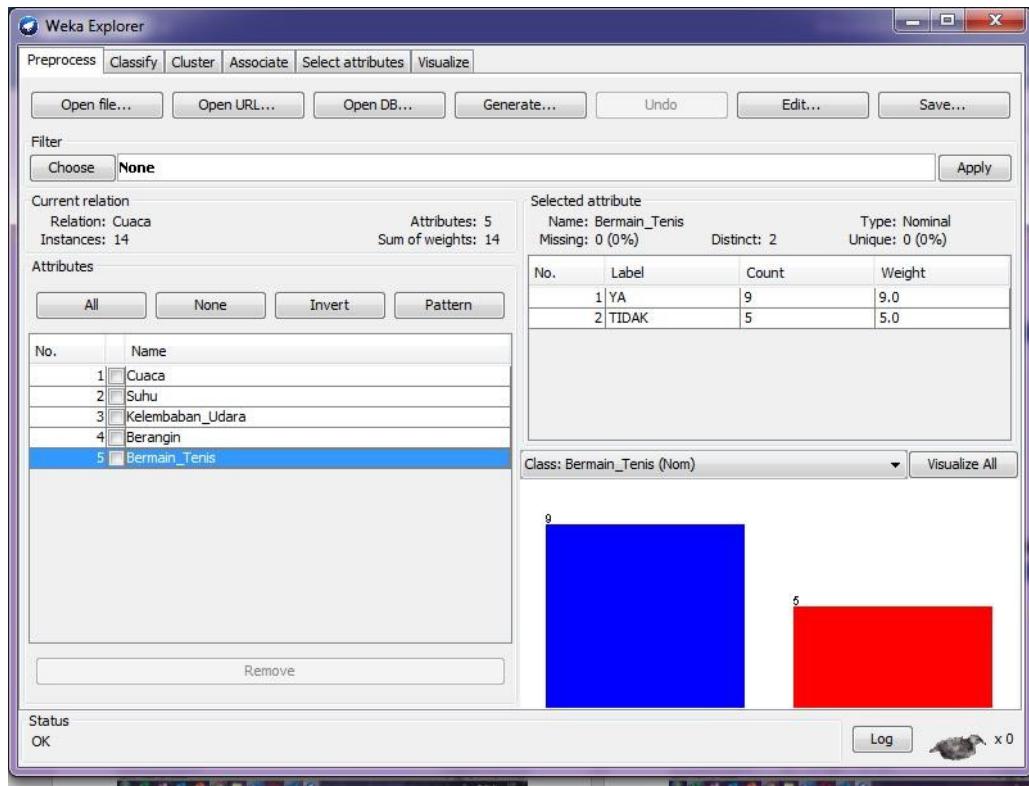
-kelembaban udara



-berangin



-bermain tennis



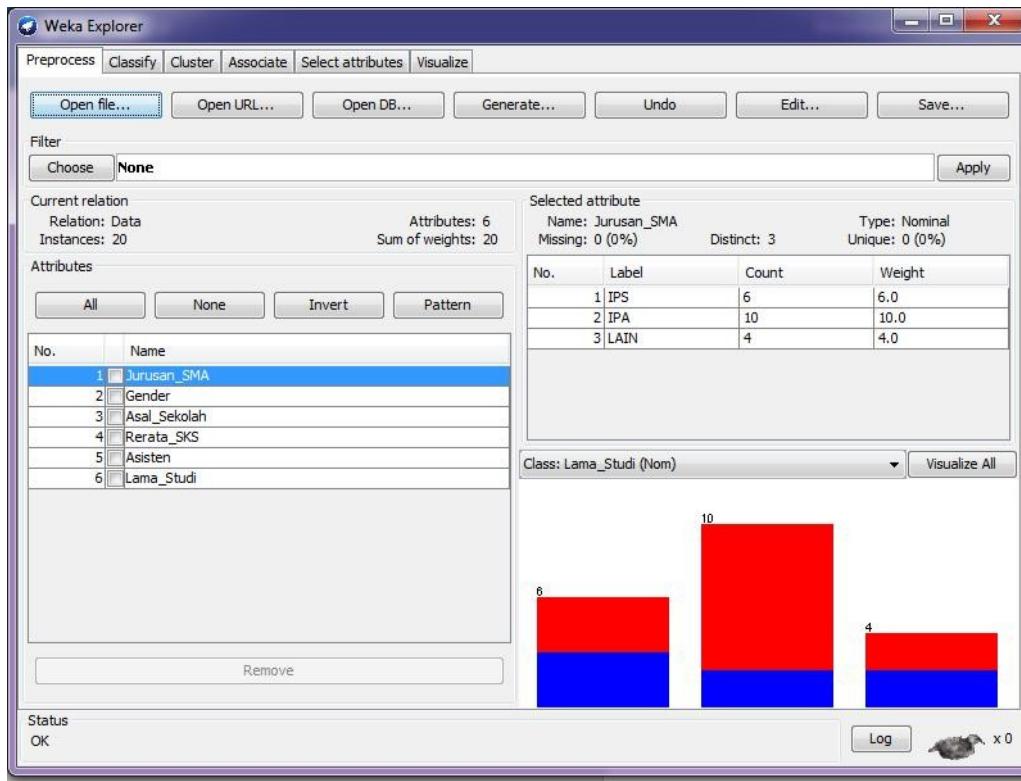
TUGAS

| 1 | Jurusan_SMA | Gender | Asal_Sekolah | Rerata_SKS | Asisten | Lama_Studi |
|----|-------------|--------|--------------|------------|---------|------------|
| 2 | IPS | WANITA | SURAKARTA | 18 | TIDAK | TERLAMBAT |
| 3 | IPA | PRIA | SURAKARTA | 19 | YA | TEPAT |
| 4 | LAIN | PRIA | SURAKARTA | 19 | TIDAK | TERLAMBAT |
| 5 | IPA | PRIA | LUAR | 17 | TIDAK | TERLAMBAT |
| 6 | IPA | WANITA | SURAKARTA | 17 | TIDAK | TEPAT |
| 7 | IPA | WANITA | LUAR | 18 | YA | TEPAT |
| 8 | IPA | PRIA | SURAKARTA | 18 | TIDAK | TERLAMBAT |
| 9 | IPA | PRIA | SURAKARTA | 19 | TIDAK | TEPAT |
| 10 | IPS | PRIA | LUAR | 18 | TIDAK | TERLAMBAT |
| 11 | LAIN | WANITA | SURAKARTA | 18 | TIDAK | TEPAT |
| 12 | IPA | WANITA | SURAKARTA | 19 | TIDAK | TEPAT |
| 13 | IPS | PRIA | SURAKARTA | 20 | TIDAK | TEPAT |
| 14 | IPS | PRIA | SURAKARTA | 19 | TIDAK | TEPAT |
| 15 | IPA | PRIA | SURAKARTA | 19 | TIDAK | TEPAT |
| 16 | IPA | PRIA | LUAR | 22 | YA | TEPAT |
| 17 | LAIN | PRIA | SURAKARTA | 16 | TIDAK | TERLAMBAT |
| 18 | IPS | PRIA | LUAR | 20 | TIDAK | TEPAT |
| 19 | LAIN | PRIA | LUAR | 23 | YA | TEPAT |
| 20 | IPA | PRIA | SURAKARTA | 21 | YA | TEPAT |
| 21 | IPS | PRIA | SURAKARTA | 19 | TIDAK | TERLAMBAT |

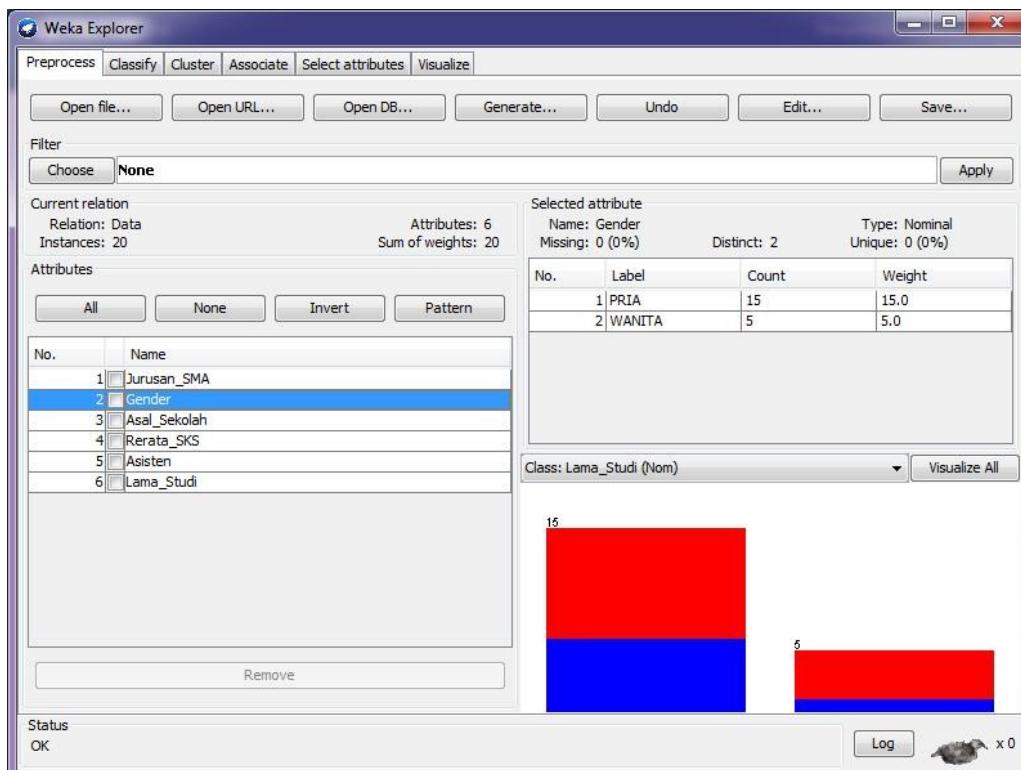
1. Buat file ARFF berdasarkan tugas pada Modul 6 soal nomor 1!

```
1 @relation Data
2
3 @attribute Jurusan_SMA {IPS, IPA, LAIN}
4 @attribute Gender {PRIA,WANITA}
5 @attribute Asal_Sekolah {SURAKARTA, LUAR}
6 @attribute Rerata_SKS real
7 @attribute Asisten {YA, TIDAK}
8 @attribute Lama_Studi {TERLAMBAT, TEPAT}
9
10 @data
11 IPS,WANITA,SURAKARTA,18,TIDAK,TERLAMBAT
12 IPA,PRIA,SURAKARTA,19,YA,TEPAT
13 LAIN,PRIA,SURAKARTA,19,TIDAK,TERLAMBAT
14 IPA,PRIA,LUAR,17,TIDAK,TERLAMBAT
15 IPA,WANITA,SURAKARTA,17,TIDAK,TEPAT
16 IPA,WANITA,LUAR,18,YA,TEPAT
17 IPA,PRIA,SURAKARTA,18,TIDAK,TERLAMBAT
18 IPA,PRIA,SURAKARTA,19,TIDAK,TEPAT
19 IPS,PRIA,LUAR,18,TIDAK,TERLAMBAT
20 LAIN,WANITA,SURAKARTA,18,TIDAK,TEPAT
21 IPA,WANITA,SURAKARTA,19,TIDAK,TEPAT
22 IPS,PRIA,SURAKARTA,20,TIDAK,TEPAT
23 IPS,PRIA,SURAKARTA,19,TIDAK,TEPAT
24 IPA,PRIA,SURAKARTA,19,TIDAK,TEPAT
25 IPA,PRIA,LUAR,22,YA,TEPAT
26 LAIN,PRIA,SURAKARTA,16,TIDAK,TERLAMBAT
27 IPS,PRIA,LUAR,20,TIDAK,TEPAT
28 LAIN,PRIA,LUAR,23,YA,TEPAT
29 IPA,PRIA,SURAKARTA,21,YA,TEPAT
30 IPS,PRIA,SURAKARTA,19,TIDAK,TERLAMBAT
```

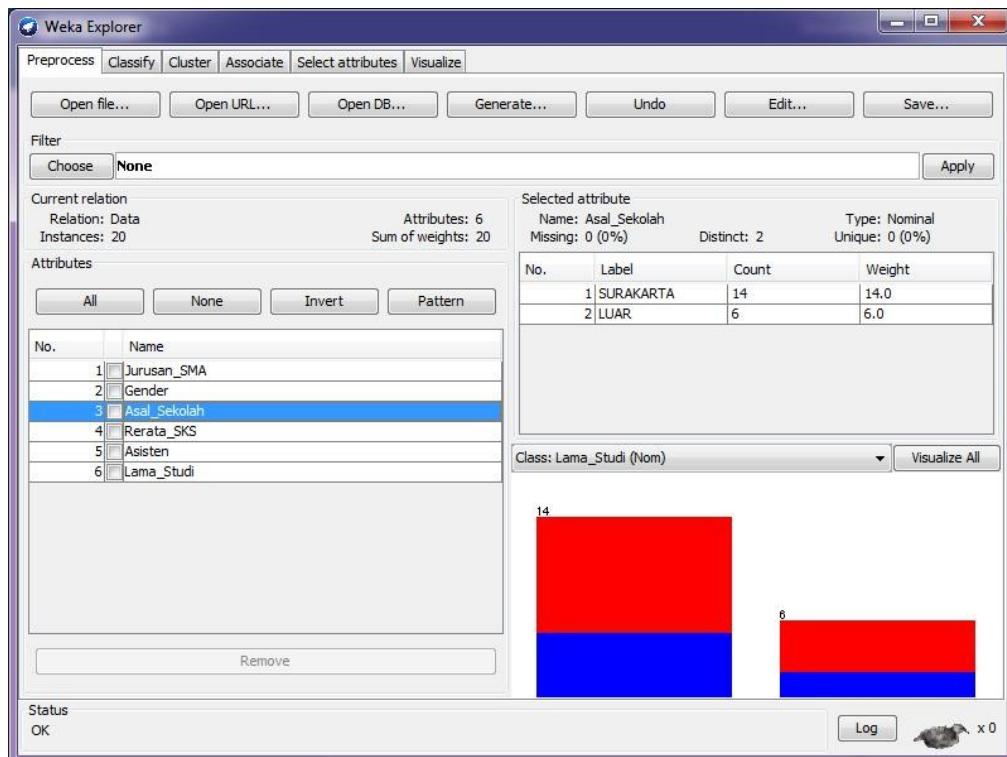
2. Jurusan_SMA



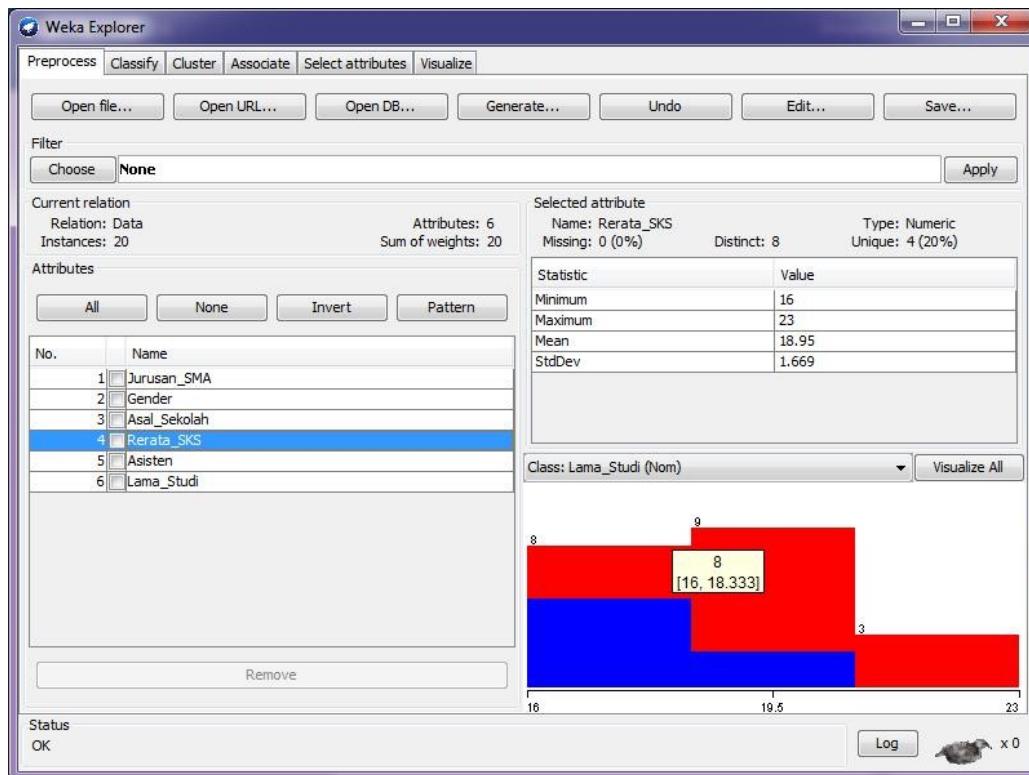
- Gender



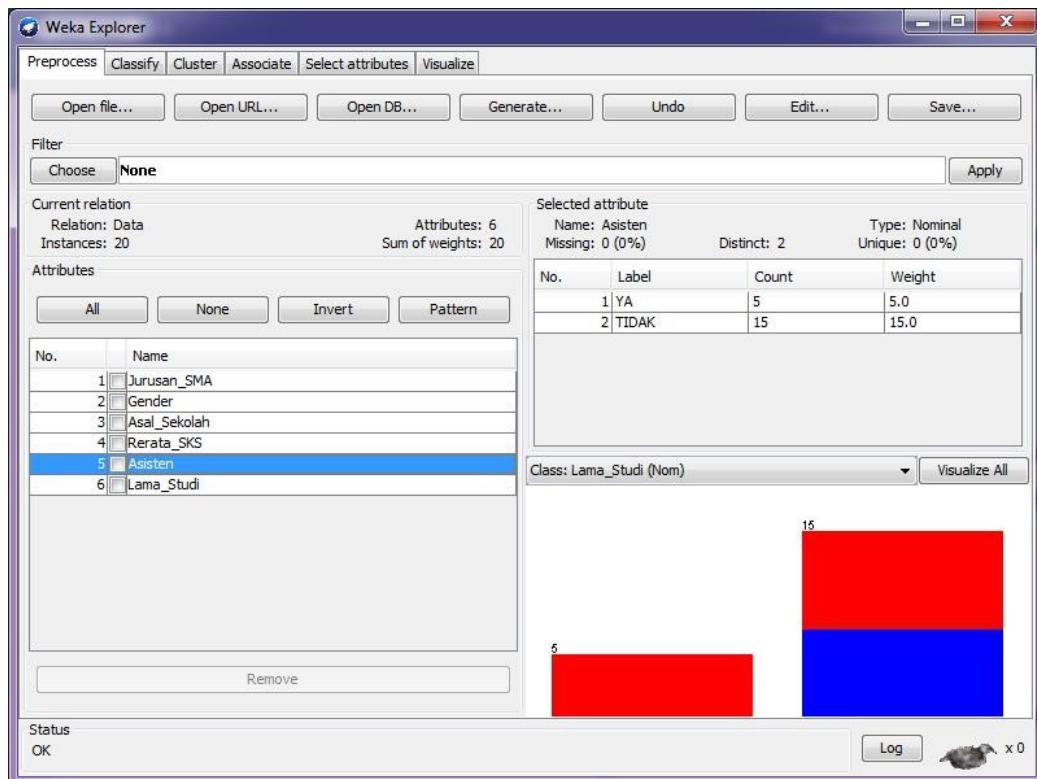
-- Asal_Sekolah



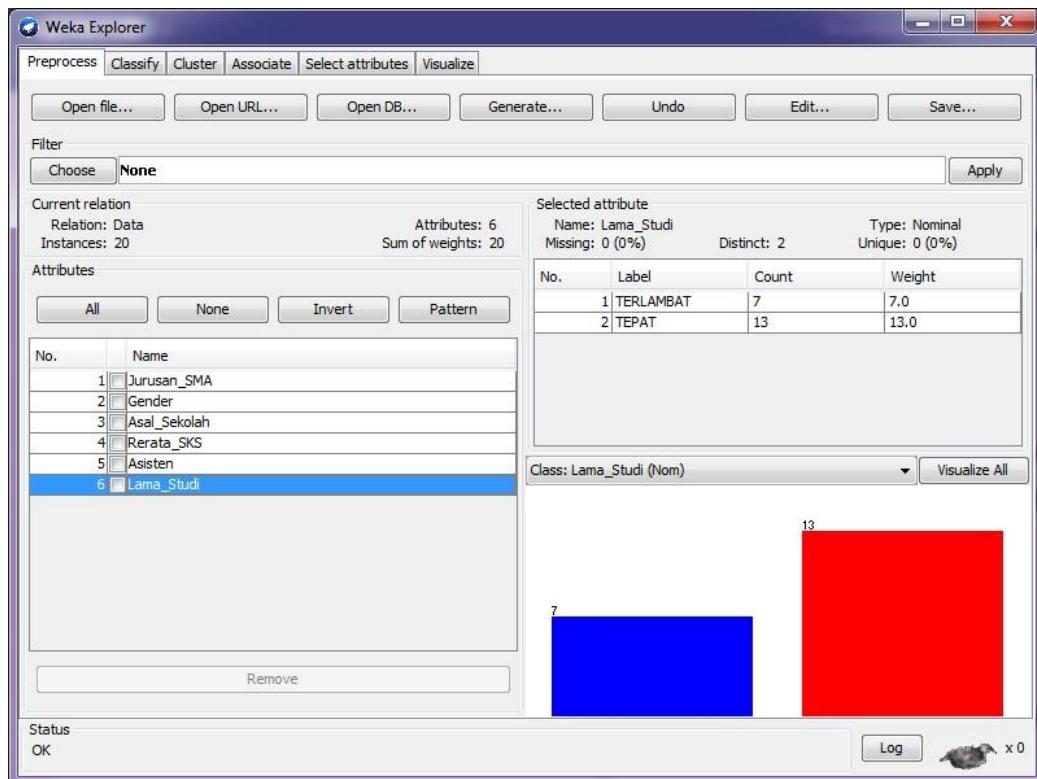
-Rerata_SKS



- Asisten



Lama_Studi



Jumlah atribut

Binomial: 4

Polynomial :1

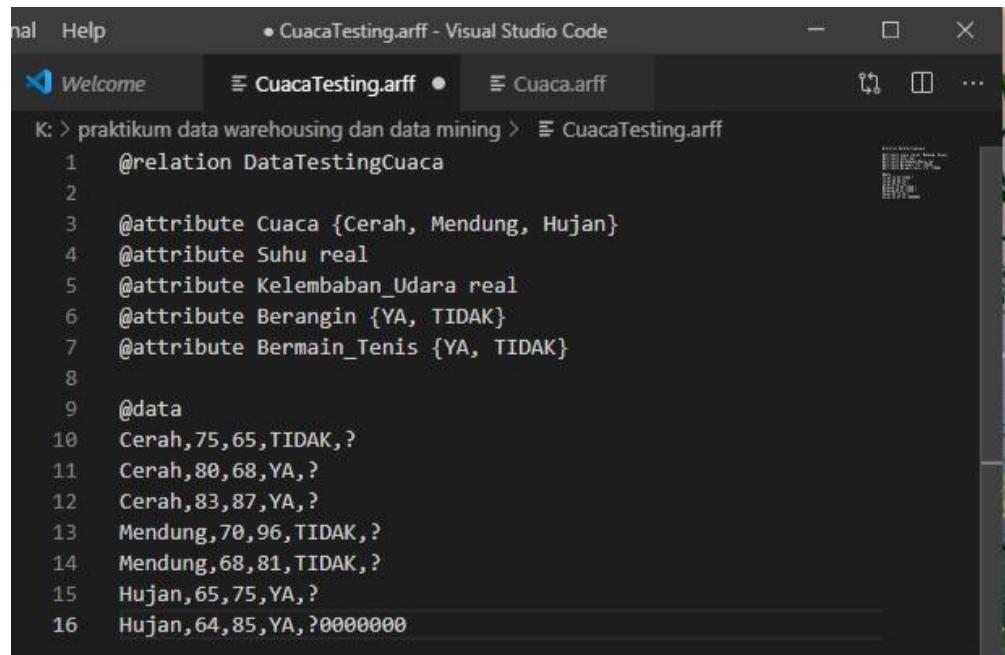
atribut bertipe real 1

| Statistic | Value |
|-----------|-------|
| Minimum | 16 |
| Maximum | 23 |
| Mean | 18.95 |
| StdDev | 1.669 |

MODUL8

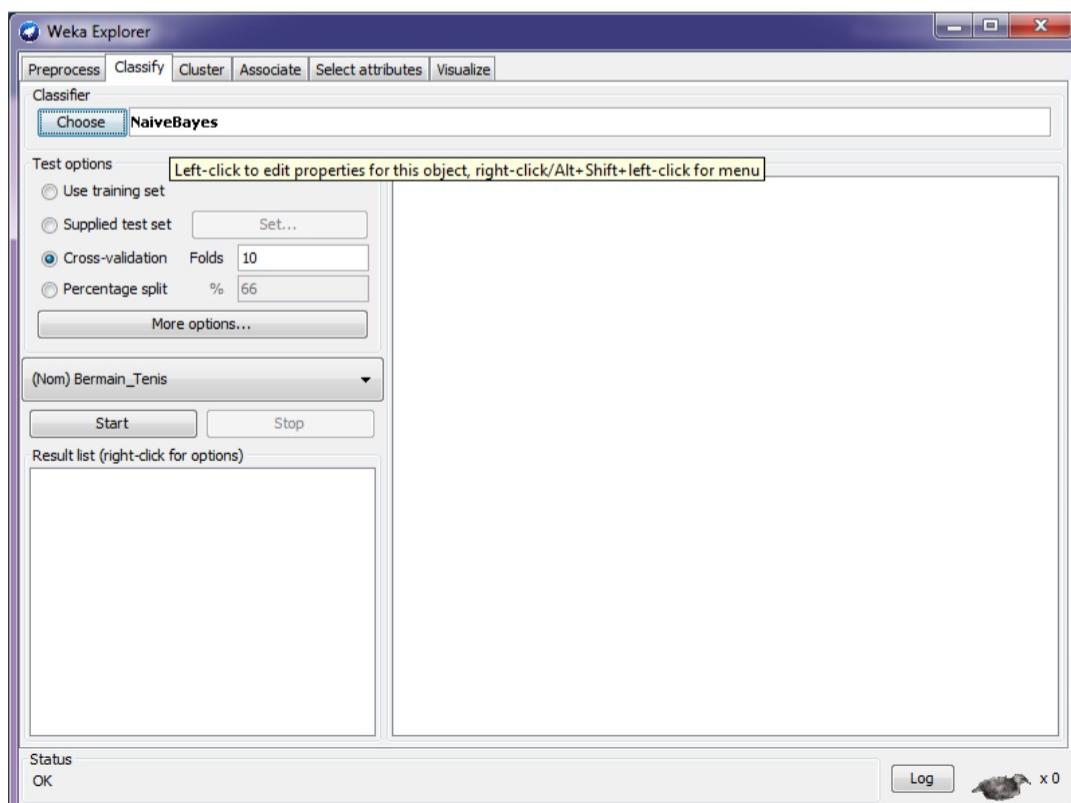
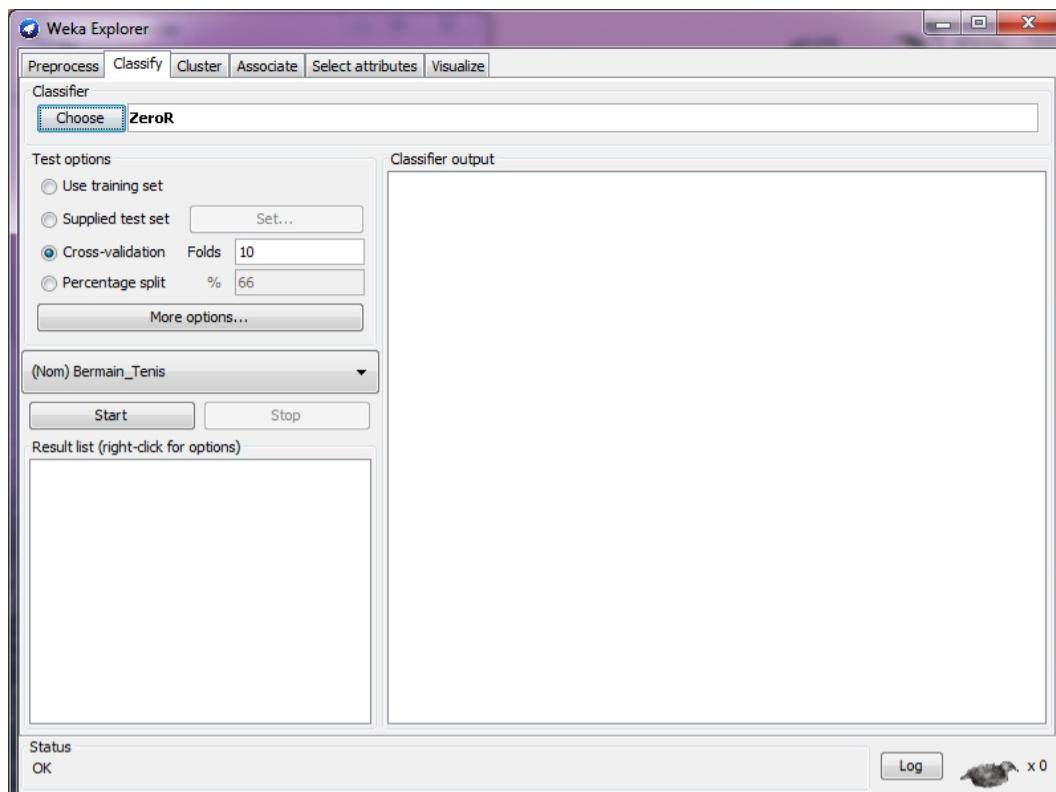
PERCOBAAN

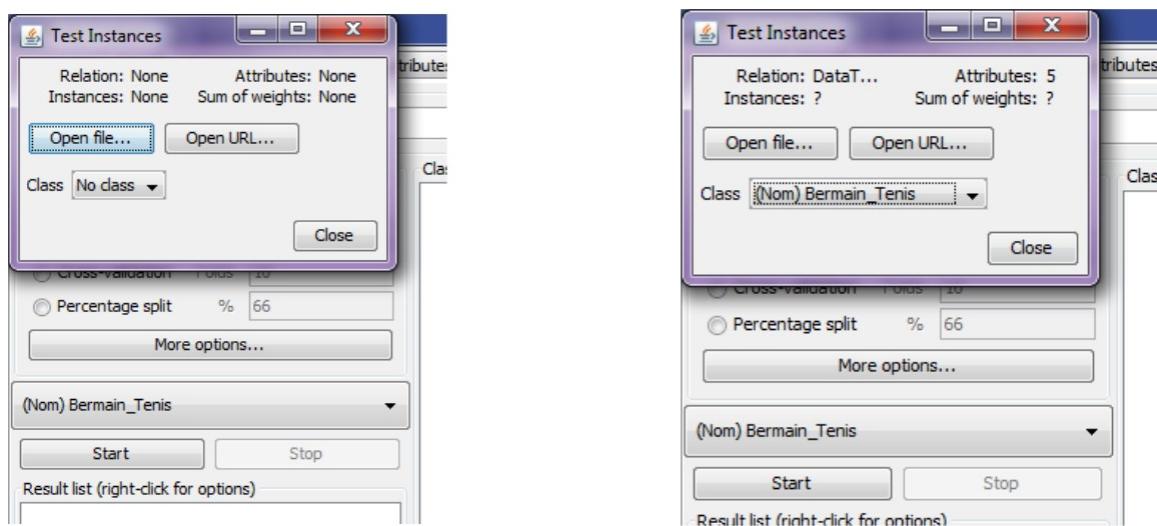
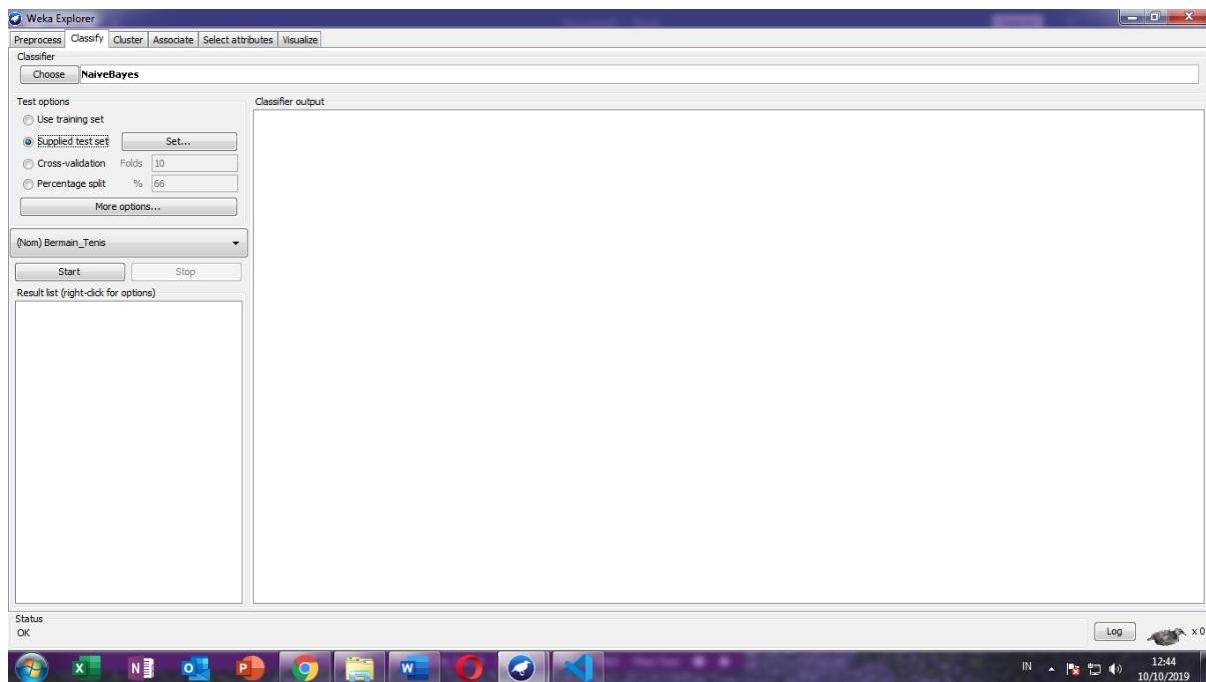
-MENGGUNAKAN WEKA

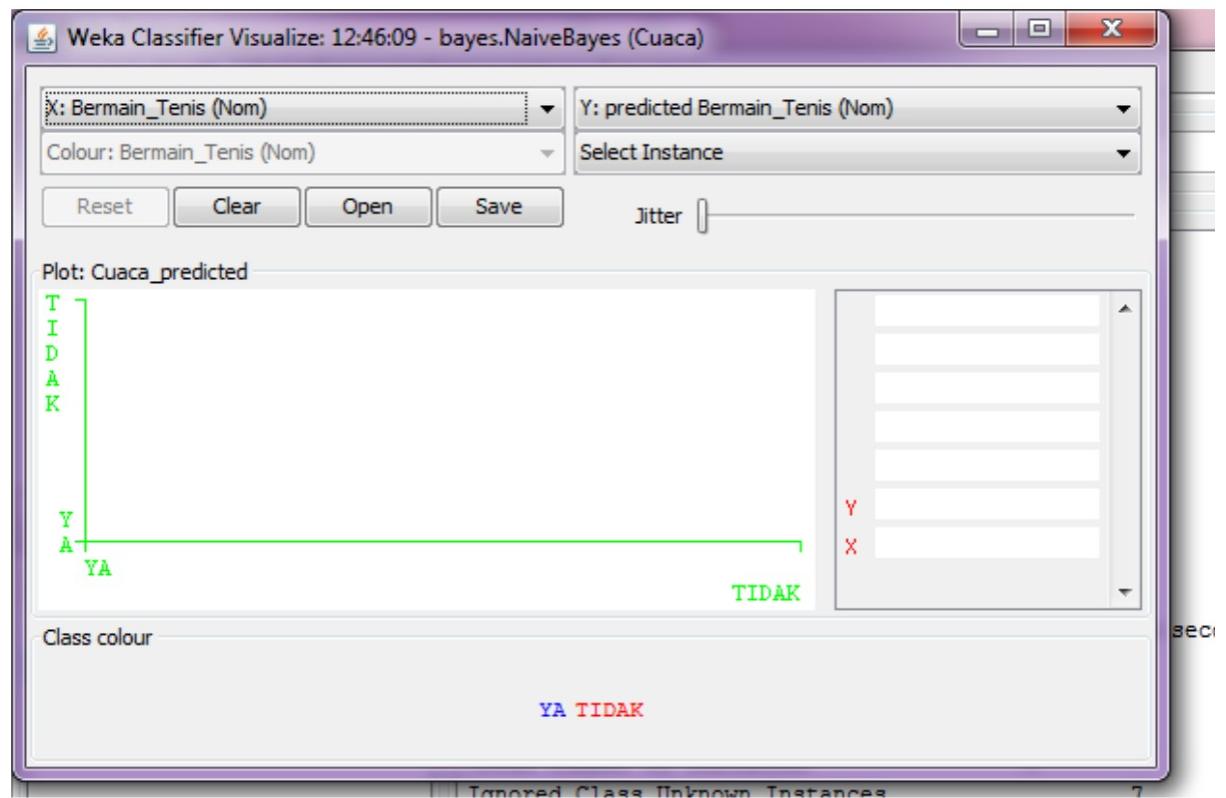
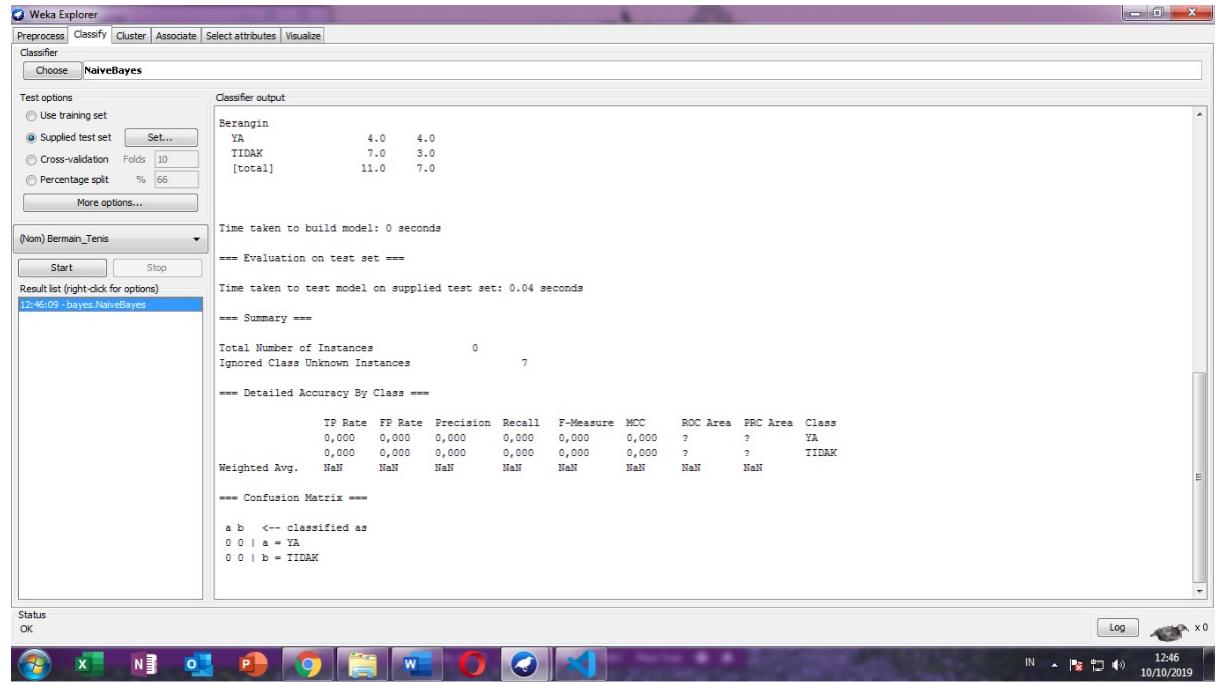


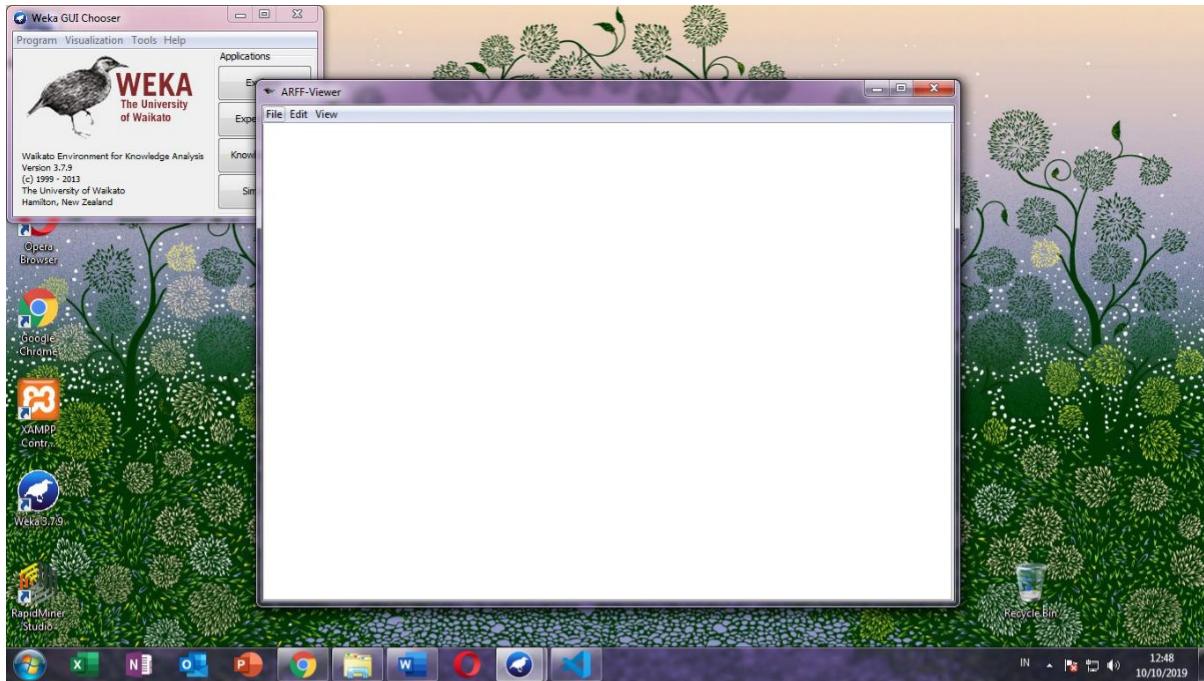
```
hal Help • CuacaTesting.arff - Visual Studio Code
Welcome CuacaTesting.arff • Cuaca.arff ⌂ ⌄ ...
```

```
K: > praktikum data warehousing dan data mining > CuacaTesting.arff
1 @relation DataTestingCuaca
2
3 @attribute Cuaca {Cerah, Mendung, Hujan}
4 @attribute Suhu real
5 @attribute Kelembaban_Udara real
6 @attribute Berangin {YA, TIDAK}
7 @attribute Bermain_Tenis {YA, TIDAK}
8
9 @data
10 Cerah,75,65,TIDAK,?
11 Cerah,80,68,YA,?
12 Cerah,83,87,YA,?
13 Mendung,70,96,TIDAK,?
14 Mendung,68,81,TIDAK,?
15 Hujan,65,75,YA,?
16 Hujan,64,85,YA,?0000000
```









| Relation: Cuaca_predicted | | | | | | | |
|---------------------------|------------------|-----------------|-----------------------------|---------------------|------------------------------|------------------------------------|--------------------------|
| No. | 1: Cuaca Nominal | 2: Suhu Numeric | 3: Kelembaban_Udara Numeric | 4: Berangin Nominal | 5: prediction margin Numeric | 6: predicted Bermain_Tenis Nominal | 7: Bermain_Tenis Nominal |
| 1 | Cerah | 75.0 | 65.0 | TIDAK | 0.762765 | YA | |
| 2 | Cerah | 80.0 | 68.0 | YA | 0.087878 | YA | |
| 3 | Cerah | 83.0 | 87.0 | YA | -0.676866 | TIDAK | |
| 4 | Mendung | 70.0 | 96.0 | TIDAK | 0.628523 | YA | |
| 5 | Mendung | 68.0 | 81.0 | TIDAK | 0.833996 | YA | |
| 6 | Hujan | 65.0 | 75.0 | YA | 0.253733 | YA | |
| 7 | Hujan | 64.0 | 85.0 | YA | -0.160143 | TIDAK | |

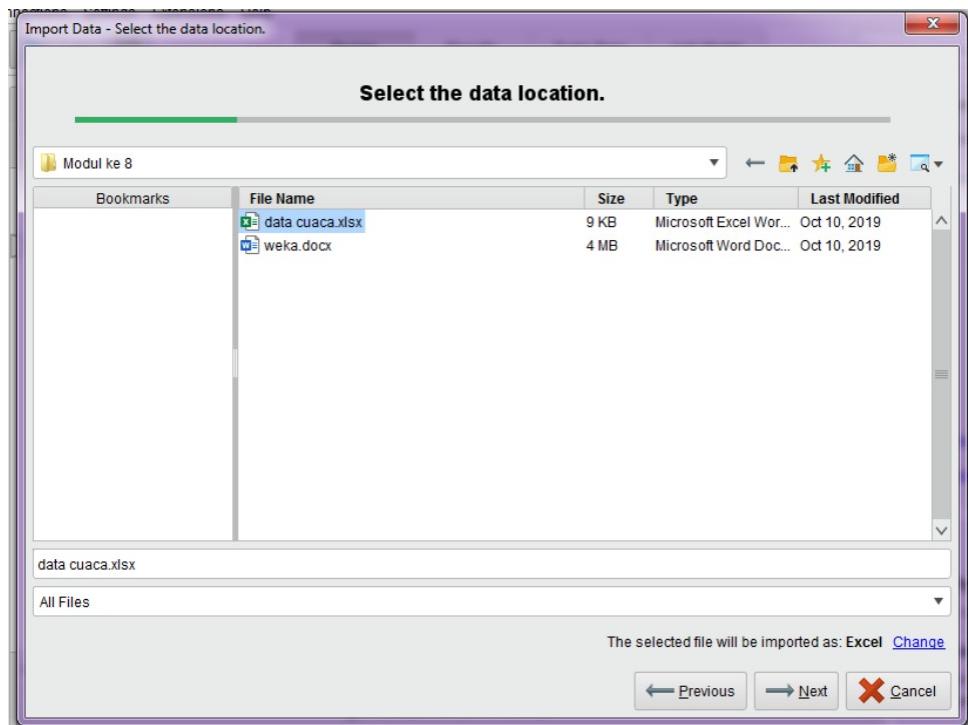
-MENGGUNAKAN RAPID MINER

The screenshot shows a Microsoft Excel spreadsheet titled "Book1 - Excel". The data is organized into columns A through S. Column A contains labels for weather conditions: Cuaca, Cerah, Cerah, Cerah, Mendung, Hujan, Hujan, Hujan, Mendung, Cerah, Cerah, Cerah, Cerah, Cerah, Hujan. Columns B through E represent input features: Suhu, Kelembaban_udara, Berangin, and Bermain_Tenis. Column F represents the output class: TIDAK or YA. The data shows that when Suhu is 85, Kelembaban_udara is 85, and Berangin is TIDAK, the output is TIDAK. Other rows show similar patterns for different weather types and their corresponding values.

| | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S |
|----|---------|------|------------------|----------|---------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Cuaca | Suhu | Kelembaban_udara | Berangin | Bermain_Tenis | | | | | | | | | | | | | | |
| 2 | Cerah | 85 | 85 | TIDAK | TIDAK | | | | | | | | | | | | | | |
| 3 | Cerah | 80 | 90 | TIDAK | YA | | | | | | | | | | | | | | |
| 4 | Mendung | 83 | 86 | TIDAK | YA | | | | | | | | | | | | | | |
| 5 | Hujan | 70 | 96 | TIDAK | YA | | | | | | | | | | | | | | |
| 6 | Hujan | 68 | 80 | TIDAK | YA | | | | | | | | | | | | | | |
| 7 | Hujan | 65 | 70 | YA | TIDAK | | | | | | | | | | | | | | |
| 8 | Mendung | 64 | 65 | YA | YA | | | | | | | | | | | | | | |
| 9 | Cerah | 72 | 95 | TIDAK | TIDAK | | | | | | | | | | | | | | |
| 10 | Cerah | 69 | 70 | TIDAK | YA | | | | | | | | | | | | | | |
| 11 | Hujan | 75 | 80 | TIDAK | YA | | | | | | | | | | | | | | |
| 12 | Cerah | 75 | 70 | YA | YA | | | | | | | | | | | | | | |
| 13 | Mendung | 72 | 90 | YA | YA | | | | | | | | | | | | | | |
| 14 | Mendung | 81 | 75 | TIDAK | YA | | | | | | | | | | | | | | |
| 15 | Hujan | 71 | 91 | YA | TIDAK | | | | | | | | | | | | | | |
| 16 | | | | | | | | | | | | | | | | | | | |
| 17 | | | | | | | | | | | | | | | | | | | |
| 18 | | | | | | | | | | | | | | | | | | | |
| 19 | | | | | | | | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | | | | | | | | |
| 21 | | | | | | | | | | | | | | | | | | | |
| 22 | | | | | | | | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | | | | | | | |

This screenshot shows a simplified version of the Excel table from above, containing only the first 12 rows of data. The columns are labeled A through F. The data shows the relationship between weather conditions (Cuaca, Cerah, Mendung, Hujan) and their corresponding Suhu, Kelembaban_udara, Berangin, and Bermain_Tenis values, along with the output class (TIDAK or YA).

| | A | B | C | D | E | F |
|----|---------|------|----------|----------|-------|---|
| 1 | Cuaca | Suhu | Kelembab | Berangin | | |
| 2 | Cerah | | 75 | 65 | TIDAK | |
| 3 | Cerah | | 80 | 68 | YA | |
| 4 | Cerah | | 83 | 87 | YA | |
| 5 | Mendung | | 70 | 96 | TIDAK | |
| 6 | Mendung | | 68 | 81 | TIDAK | |
| 7 | Hujan | | 65 | 75 | YA | |
| 8 | Hujan | | 64 | 85 | YA | |
| 9 | | | | | | |
| 10 | | | | | | |
| 11 | | | | | | |
| 12 | | | | | | |



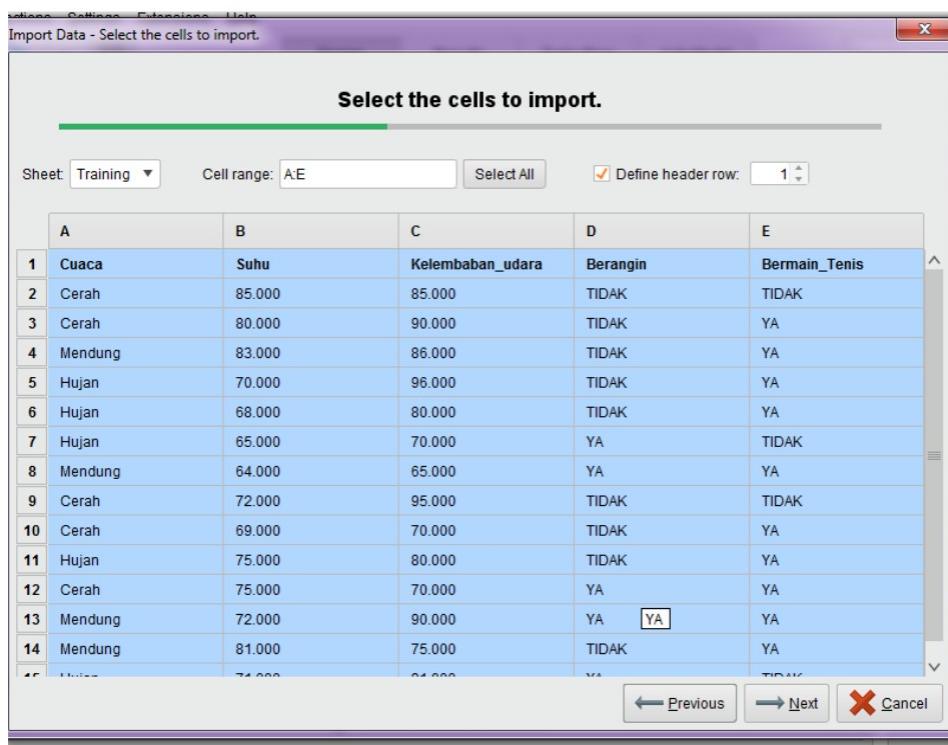
Import Data - Select the cells to import.

Select the cells to import.

Sheet: Training ▾ Cell range: A:E Select All Define header row: 1

| | A | B | C | D | E |
|-----|---------|--------|------------------|----------|---------------|
| 1 | Cuaca | Suhu | Kelembaban_udara | Berangin | Bermain_Tenis |
| 2 | Cerah | 85.000 | 85.000 | TIDAK | TIDAK |
| 3 | Cerah | 80.000 | 90.000 | TIDAK | YA |
| 4 | Mendung | 83.000 | 86.000 | TIDAK | YA |
| 5 | Hujan | 70.000 | 96.000 | TIDAK | YA |
| 6 | Hujan | 68.000 | 80.000 | TIDAK | YA |
| 7 | Hujan | 65.000 | 70.000 | YA | TIDAK |
| 8 | Mendung | 64.000 | 65.000 | YA | YA |
| 9 | Cerah | 72.000 | 95.000 | TIDAK | TIDAK |
| 10 | Cerah | 69.000 | 70.000 | TIDAK | YA |
| 11 | Hujan | 75.000 | 80.000 | TIDAK | YA |
| 12 | Cerah | 75.000 | 70.000 | YA | YA |
| 13 | Mendung | 72.000 | 90.000 | YA | YA |
| 14 | Mendung | 81.000 | 75.000 | TIDAK | YA |
| ... | ... | ... | ... | ... | ... |

← Previous → Next 



Import Data - Format your columns.

Format your columns.

Replace errors with missing values ⓘ

| | Cuaca polynominal | Suhu integer | Kelembaban_u... integer | Berangin polynominal | Bermain_Tenis binominal |
|----|----------------------|-----------------|----------------------------|-------------------------|----------------------------|
| 1 | Cerah | 85 | 85 | TIDAK | TIDAK |
| 2 | Cerah | 80 | 90 | TIDAK | YA |
| 3 | Mendung | 83 | 86 | TIDAK | YA |
| 4 | Hujan | 70 | 96 | TIDAK | YA |
| 5 | Hujan | 68 | 80 | TIDAK | YA |
| 6 | Hujan | 65 | 70 | YA | TIDAK |
| 7 | Mendung | 64 | 65 | YA | YA |
| 8 | Cerah | 72 | 95 | TIDAK | TIDAK |
| 9 | Cerah | 69 | 70 | TIDAK | YA |
| 10 | Hujan | 75 | 80 | TIDAK | YA |
| 11 | Cerah | 75 | 70 | YA | YA |
| 12 | Mendung | 72 | 90 | YA | YA |
| 13 | Mendung | 81 | 75 | TIDAK | YA |

no problems.

Previous Next Cancel

Import Data - Format your columns.

Format your columns.

Replace errors with missing values ⓘ

| | Cuaca polynominal | Suhu integer | Kelembaban_u... integer | Berangin polynominal | Bermain_Tenis binominal |
|----|----------------------|-----------------|----------------------------|-------------------------|----------------------------|
| 1 | Cerah | | | | |
| 2 | Cerah | | | | |
| 3 | Mendung | | | | |
| 4 | Hujan | | | | |
| 5 | Hujan | | | | |
| 6 | Hujan | | | | |
| 7 | Mendung | | | | |
| 8 | Cerah | | | | |
| 9 | Cerah | 69 | 70 | TIDAK | YA |
| 10 | Hujan | 75 | 80 | TIDAK | YA |
| 11 | Cerah | 75 | 70 | YA | YA |
| 12 | Mendung | 72 | 90 | YA | YA |
| 13 | Mendung | 81 | 75 | TIDAK | YA |

no problems.

Previous Next Cancel

Please enter the new role:

OK Cancel

| Bermain_Tenis | |
|---------------|-------|
| binomial | label |
| TIDAK | |
| YA | |
| YA | |
| YA | |
| YA | |
| TIDAK | |

File Edit Process View Connections Settings Extensions Help

Views: Design Results Turbo Prep Auto Model Find data, operators, etc All Studio

Result History ExampleSet //Local Repository/DataCuaca_Training

Open in Turbo Prep Auto Model Filter (14 / 14 examples): all

| Row No. | Bermain_Te... | Cuaca | Suhu | Kelembaban... | Berangin |
|---------|---------------|---------|------|---------------|----------|
| 1 | TIDAK | Cerah | 85 | 85 | TIDAK |
| 2 | YA | Cerah | 80 | 90 | TIDAK |
| 3 | YA | Mendung | 83 | 86 | TIDAK |
| 4 | YA | Hujan | 70 | 96 | TIDAK |
| 5 | YA | Hujan | 68 | 80 | TIDAK |
| 6 | TIDAK | Hujan | 65 | 70 | YA |
| 7 | YA | Mendung | 64 | 65 | YA |
| 8 | TIDAK | Cerah | 72 | 95 | TIDAK |
| 9 | YA | Cerah | 69 | 70 | TIDAK |
| 10 | YA | Hujan | 75 | 80 | TIDAK |
| 11 | YA | Cerah | 75 | 70 | YA |
| 12 | YA | Mendung | 72 | 90 | YA |
| 13 | YA | Mendung | 81 | 75 | TIDAK |

ExampleSet (14 examples, 1 special attribute, 4 regular attributes)

Repository

- Training Resources (connected)
- Samples
- Community Samples (connected)
- DB (Legacy)
- Local Repository (LABSI-01)
 - Connections (LABSI-01)
 - data (LABSI-01)
 - processes (LABSI-01)
 - DataCuaca_Training (LABSI-01 - v)

13:10 10/10/2019

12.

Import Data - Select the cells to import.

Select the cells to import.

Sheet: Testing ▾ Cell range: A:E Select All Define header row: 1

| | A | B | C | D | E |
|---|---------|--------|------------------|----------|---------------|
| 1 | Cuaca | Subu | Kelembaban_udara | Berangin | Bermain_Tenis |
| 2 | Cerah | 75.000 | 65.000 | TIDAK | |
| 3 | Cerah | 80.000 | 68.000 | YA | |
| 4 | Cerah | 83.000 | 87.000 | YA | |
| 5 | Mendung | 70.000 | 96.000 | TIDAK | |
| 6 | Mendung | 68.000 | 81.000 | TIDAK | |
| 7 | Hujan | 65.000 | 75.000 | YA | |
| 8 | Hujan | 64.000 | 85.000 | YA | |

← Previous → Next ✖ Cancel

File Options Extensions Help

Import Data - Format your columns.

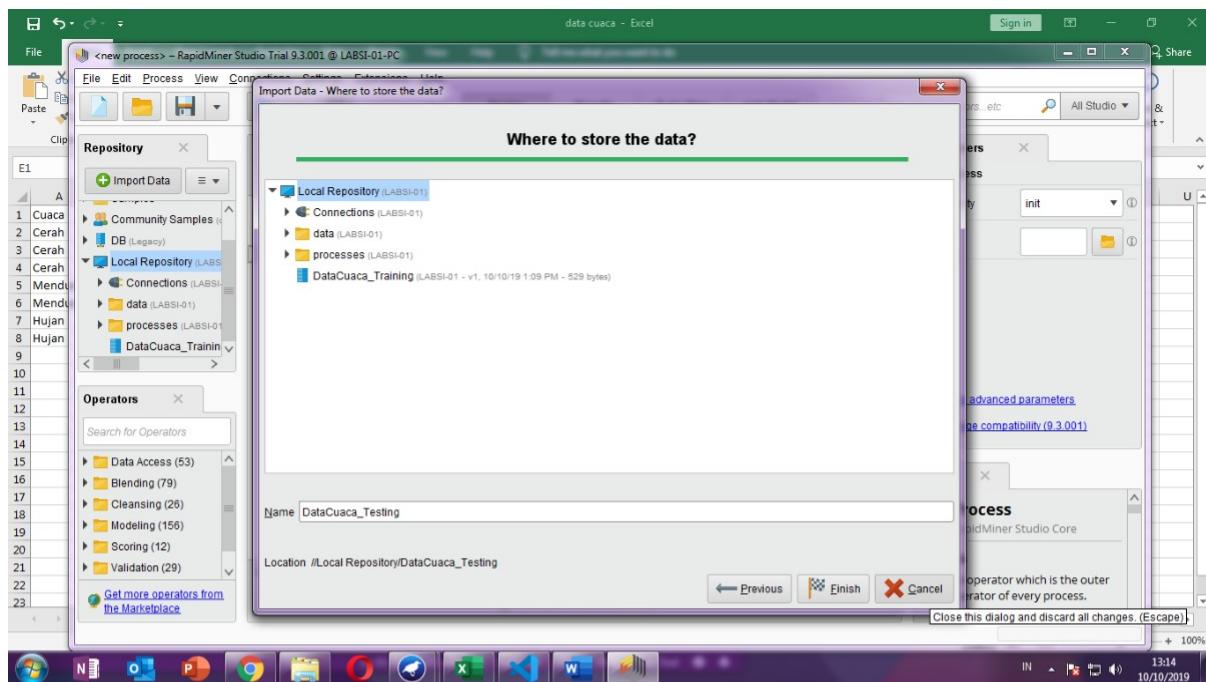
Format your columns.

Replace errors with missing values ⓘ

| | Cuaca polynomial | Suhu integer | Kelembaban_ud... integer | Berangin polynomial | Bermain_Tenis binomial label |
|---|---------------------|-----------------|-----------------------------|------------------------|------------------------------------|
| 1 | Cerah | 75 | 65 | TIDAK | ? |
| 2 | Cerah | 80 | 68 | YA | ? |
| 3 | Cerah | 83 | 87 | YA | ? |
| 4 | Mendung | 70 | 96 | TIDAK | ? |
| 5 | Mendung | 68 | 81 | TIDAK | ? |
| 6 | Hujan | 65 | 75 | YA | ? |
| 7 | Hujan | 64 | 85 | YA | ? |

✓ no problems.

← Previous → Next ✖ Cancel

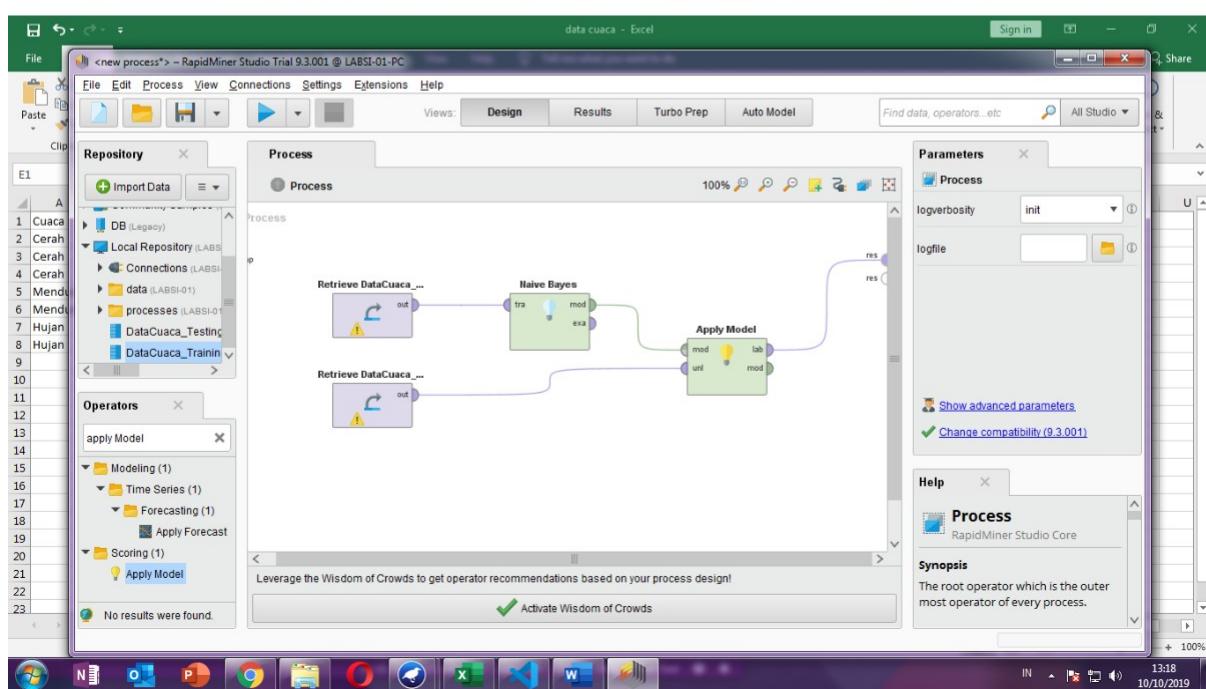
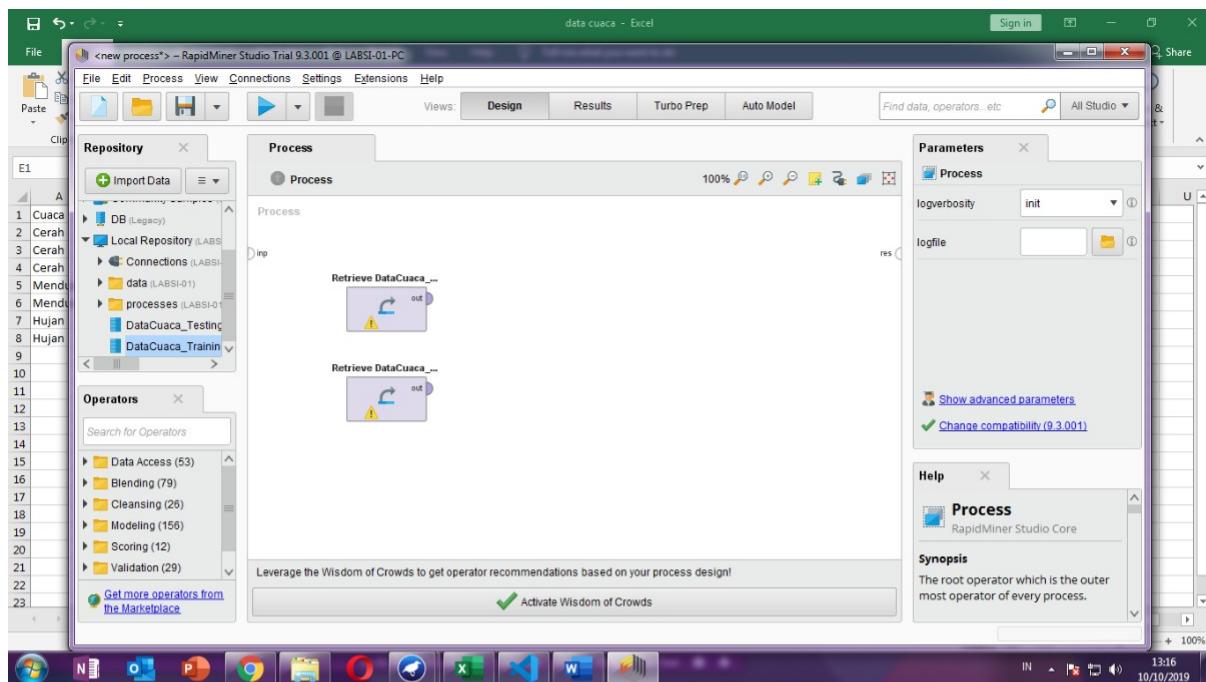


The screenshot shows the RapidMiner Studio interface with a process editor window open. The Results tab is selected, displaying a table titled "ExampleSet (/Local Repository/DataCuaca_Testing)". The table has columns: Row No., Bermain_Te..., Cuaca, Suhu, Kelembaban..., and Berangin. The data is as follows:

| Row No. | Bermain_Te... | Cuaca | Suhu | Kelembaban... | Berangin |
|---------|---------------|---------|------|---------------|----------|
| 1 | ? | Cerah | 75 | 65 | TIDAK |
| 2 | ? | Cerah | 80 | 68 | YA |
| 3 | ? | Cerah | 83 | 87 | YA |
| 4 | ? | Mendung | 70 | 96 | TIDAK |
| 5 | ? | Mendung | 68 | 81 | TIDAK |
| 6 | ? | Hujan | 65 | 75 | YA |
| 7 | ? | Hujan | 64 | 85 | YA |

The repository sidebar on the right shows the Local Repository (LABSI-01) with items like DataCuaca_Testing, DataCuaca_Training, and DataCuaca_Training (LABSI-01 - v1).

14.



File Edit Process View Connections Settings Extensions Help

Views: Design Results Turbo Prep Auto Model Find data, operators... etc All Studio

Repository Import Data

Training Resources (connected)

Local Repository (LABSI-01)

- Connections (LABSI-01)
- data (LABSI-01)
- processes (LABSI-01)
- DataCuaca_Testing (LABSI-01 - v1)
- DataCuaca_Training (LABSI-01 - v1)

ExampleSet (//Local Repository/DataCuaca_Training) ExampleSet (Apply Model) ExampleSet (//Local Repository/DataCuaca_Testing)

Result History

Open in Turbo Prep Auto Model Filter (7 / 7 examples): all

Data Statistics Visualizations Annotations

| Bermain_Te... | prediction(B... | confidence(... | confidence(... | Cuaca | Suhu | Kelembaban... | Berangin |
|---------------|-----------------|----------------|----------------|---------|------|---------------|----------|
| ? | YA | 0.148 | 0.852 | Cerah | 75 | 65 | TIDAK |
| ? | YA | 0.343 | 0.657 | Cerah | 80 | 68 | YA |
| ? | TIDAK | 0.584 | 0.416 | Cerah | 83 | 87 | YA |
| ? | YA | 0.018 | 0.982 | Mendung | 70 | 96 | TIDAK |
| ? | YA | 0.010 | 0.990 | Mendung | 68 | 81 | TIDAK |
| ? | YA | 0.469 | 0.531 | Hujan | 65 | 75 | YA |
| ? | TIDAK | 0.600 | 0.400 | Hujan | 64 | 85 | YA |

ExampleSet (7 examples, 4 special attributes, 4 regular attributes)

File Edit Process View Connections Settings Extensions Help

Views: Design Results Turbo Prep Auto Model Find data, operators... etc All Studio

Repository Import Data

Training Resources (connected)

Local Repository (LABSI-01)

- Connections (LABSI-01)
- data (LABSI-01)
- processes (LABSI-01)
- DataCuaca_Testing (LABSI-01 - v1)
- DataCuaca_Training (LABSI-01 - v1)

ExampleSet (//Local Repository/DataCuaca_Training) ExampleSet (Apply Model) ExampleSet (//Local Repository/DataCuaca_Testing)

Result History

Name Type Missing Filter (8 / 8 attributes): Search for Attributes

| Name | Type | Missing | Least | Most |
|---------------------------|------------|---------|-------------------|----------------|
| Label | | | | |
| Bermain_Tenis | Binomial | 7 | | |
| Prediction | | | | |
| prediction(Bermain_Tenis) | Binomial | 0 | Least TIDAK (2) | Most YA (5) |
| Confidence_TIDAK | Real | 0 | Min 0.010 | Max 0.600 |
| confidence(TIDAK) | Real | 0 | Min 0.400 | Max 0.990 |
| Confidence_YA | Real | 0 | Least Mendung (2) | Most Cerah (3) |
| confidence(YA) | Real | 0 | Min 64 | Max 83 |
| Cuaca | Polynomial | 0 | | |
| Suhu | Integer | 0 | | |

Showing attributes 1 - 8 Examples: 7 Special Attributes: 4 Regular Attributes: 4

TUGAS

1.

The screenshot shows a Microsoft Excel spreadsheet titled "datasekolah - Excel". The data is organized into columns A through T, with rows numbered 1 to 23. The first few rows of data are as follows:

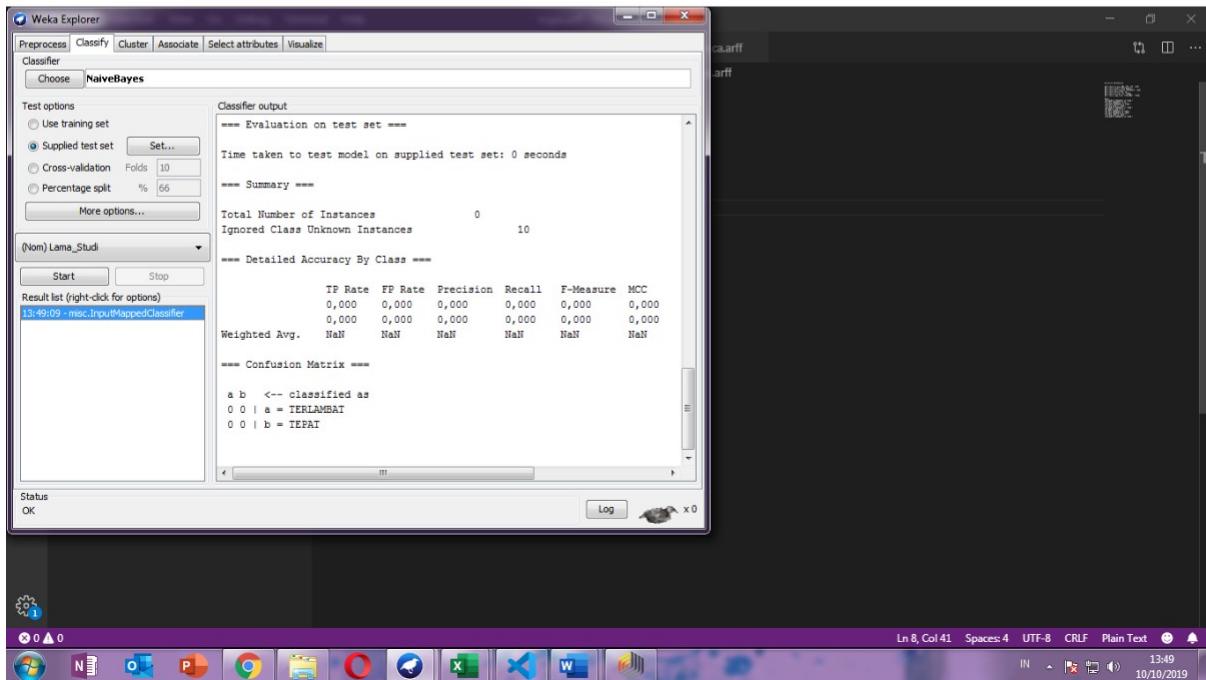
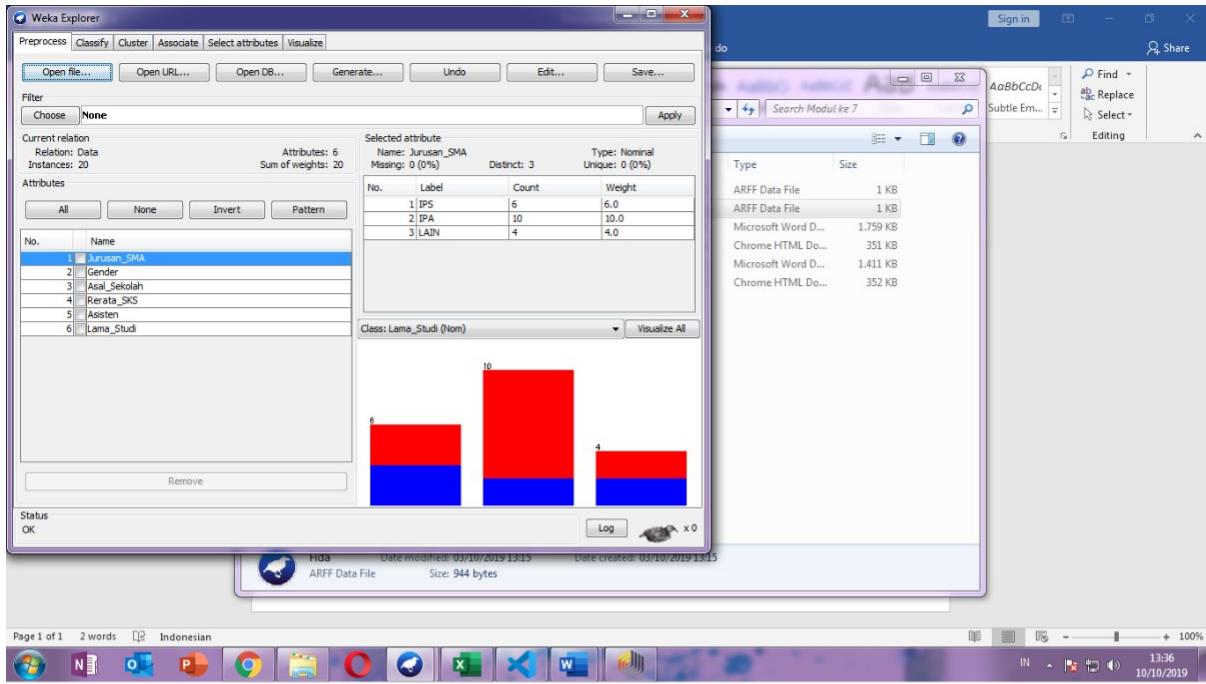
| | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T |
|----|-----------|--------|--------------|------------|---------|-------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Jurusan_S | Gender | Asal_Sekolah | Rerata_SKS | Asisten | | | | | | | | | | | | | | | |
| 2 | LAIN | WANITA | SURAKARTA | | 18 | TIDAK | | | | | | | | | | | | | | |
| 3 | IPA | PRIA | SURAKARTA | | 19 | YA | | | | | | | | | | | | | | |
| 4 | LAIN | PRIA | SURAKARTA | | 19 | TIDAK | | | | | | | | | | | | | | |
| 5 | IPS | PRIA | LUAR | | 17 | TIDAK | | | | | | | | | | | | | | |
| 6 | LAIN | WANITA | SURAKARTA | | 17 | TIDAK | | | | | | | | | | | | | | |
| 7 | IPA | WANITA | LUAR | | 18 | YA | | | | | | | | | | | | | | |
| 8 | IPA | PRIA | SURAKARTA | | 18 | TIDAK | | | | | | | | | | | | | | |
| 9 | IPA | PRIA | SURAKARTA | | 19 | TIDAK | | | | | | | | | | | | | | |
| 10 | IPS | PRIA | LUAR | | 18 | TIDAK | | | | | | | | | | | | | | |
| 11 | LAIN | WANITA | SURAKARTA | | 18 | TIDAK | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | | |
| 13 | | | | | | | | | | | | | | | | | | | | |
| 14 | | | | | | | | | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | | | | | | | | | |
| 16 | | | | | | | | | | | | | | | | | | | | |
| 17 | | | | | | | | | | | | | | | | | | | | |
| 18 | | | | | | | | | | | | | | | | | | | | |
| 19 | | | | | | | | | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | | | | | | | | | |
| 21 | | | | | | | | | | | | | | | | | | | | |
| 22 | | | | | | | | | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | | | | | | | | |

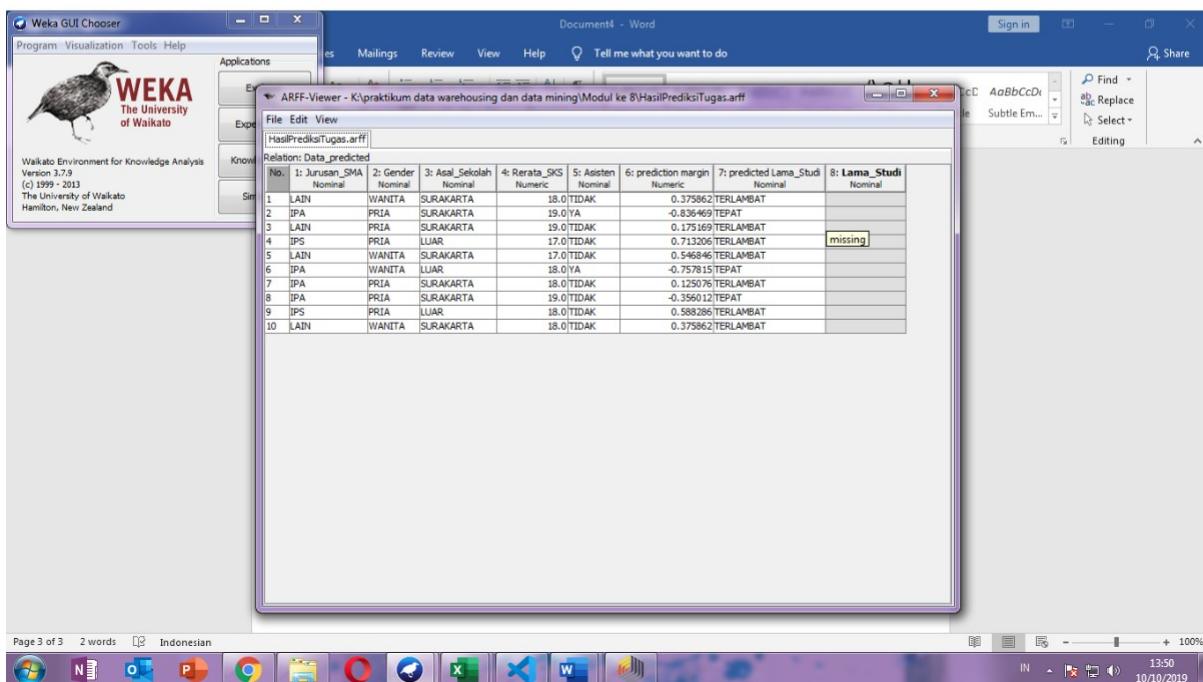
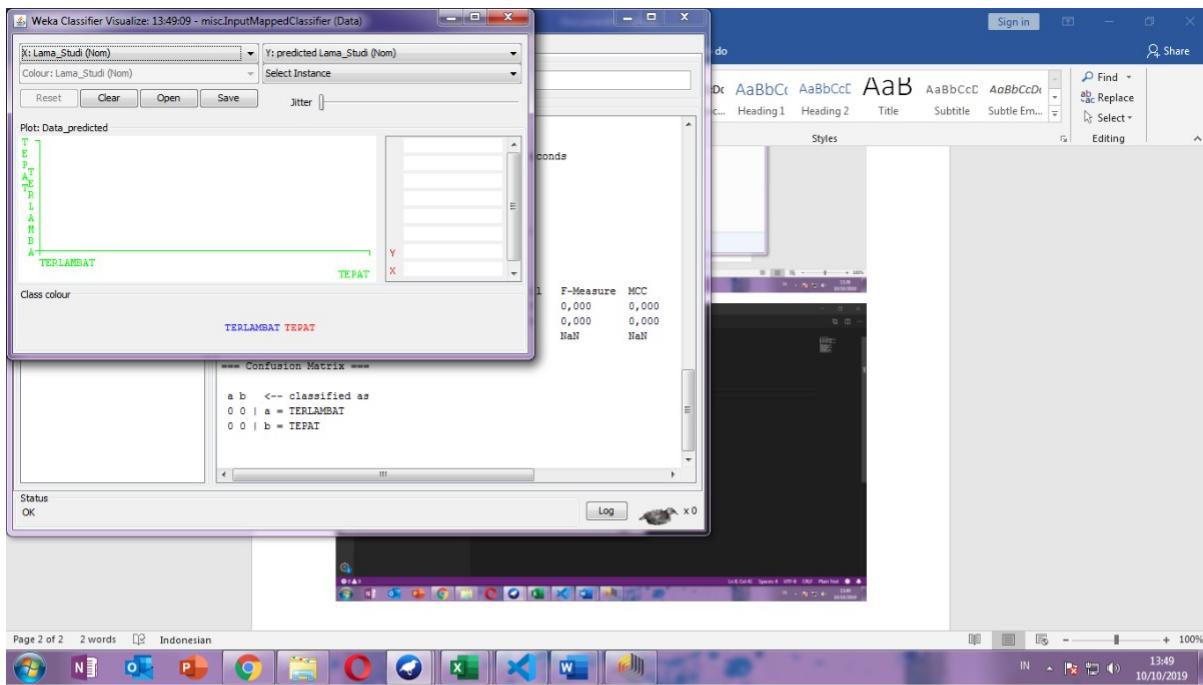
The screenshot shows a Visual Studio Code editor window with the title "tugas.arff - Visual Studio Code". The code editor displays an ARFF (Attribute-Relationship File Format) file. The content of the file is as follows:

```
@relation DataSekolah
@attribute Jurusan_SMA {IPS, IPA, LAIN}
@attribute Gender {PRIA, WANITA}
@attribute Asal_Sekolah {SURAKARTA, LUAR}
@attribute Rerata_SKS real
@attribute Asisten {YA, TIDAK}

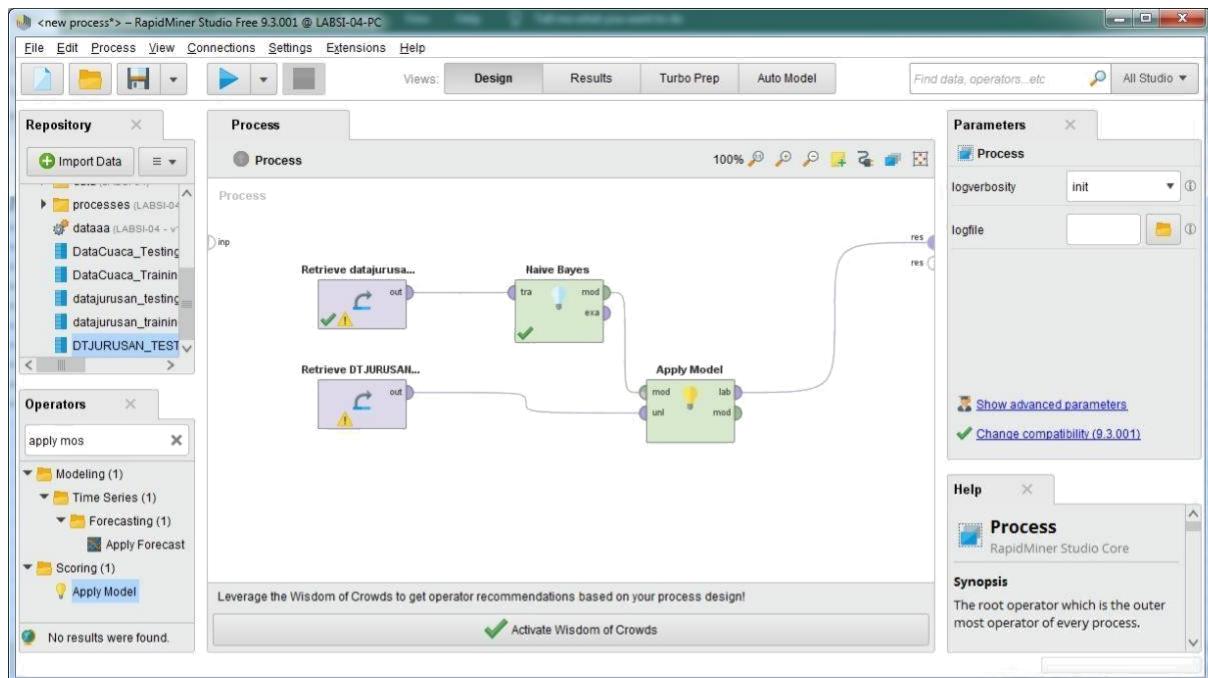
@data
LAIN,WANITA,SURAKARTA,18,TIDAK
IPA,PRIA,SURAKARTA,19,YA
LAIN,PRIA,SURAKARTA,19,TIDAK
IPS,PRIA,LUAR,17,TIDAK
LAIN,WANITA,SURAKARTA,17,TIDAK
IPA,WANITA,LUAR,18,YA
IPA,PRIA,SURAKARTA,18,TIDAK
IPA,PRI,SURAKARTA,19,TIDAK
IPS,PRIA,LUAR,18,TIDAK
LAIN,WANITA,SURAKARTA,18,TIDAK
```

2.





3.



RapidMiner Studio Free 9.3.001 @ LABSI-04-PC

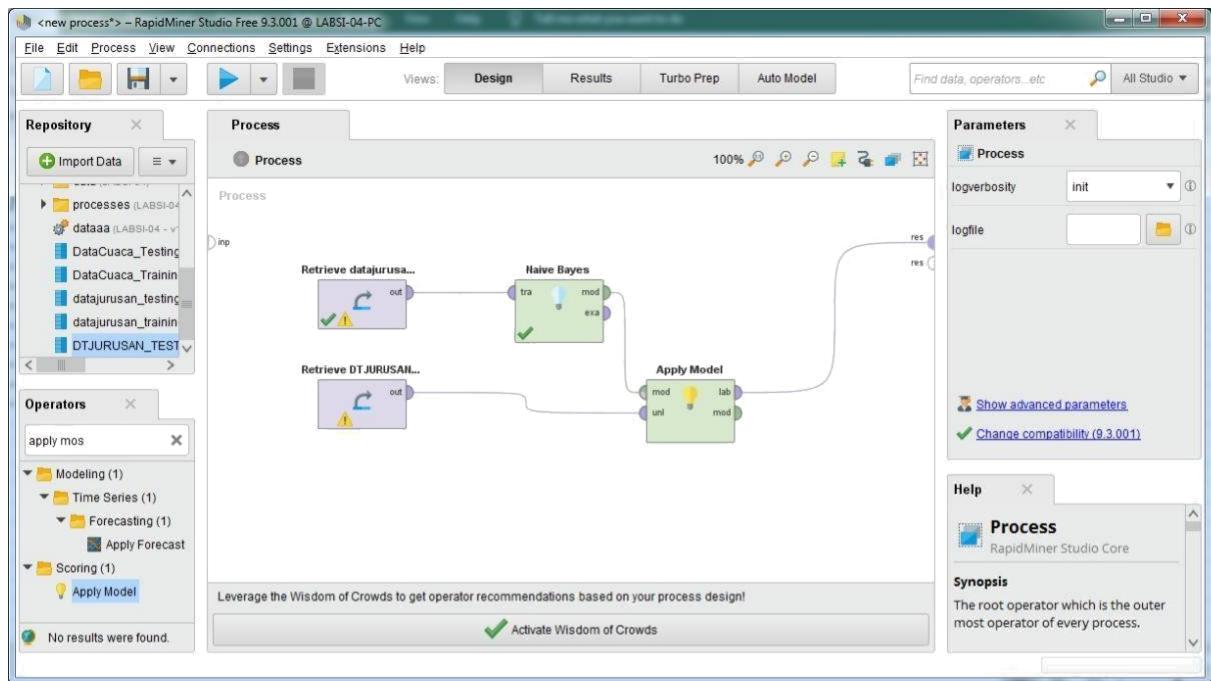
Result History

| Row No. | prediction(L... | confidence(... | confidence(... | Jurusan_SMA | Gender | Asal_Sekolah | Rerata_SKS | Asi |
|---------|-----------------|----------------|----------------|-------------|--------|--------------|------------|-----|
| 1 | TERLAMBAT | 0.648 | 0.352 | LAIN | WANITA | SURAKARTA | 18 | TID |
| 2 | TEPAT | 0.005 | 0.995 | IPA | PRIA | SURAKARTA | 19 | YA |
| 3 | TERLAMBAT | 0.650 | 0.350 | LAIN | PRIA | SURAKARTA | 19 | TID |
| 4 | TERLAMBAT | 0.868 | 0.132 | IPS | PRIA | LUAR | 17 | TID |
| 5 | TERLAMBAT | 0.738 | 0.262 | LAIN | WANITA | SURAKARTA | 17 | TID |
| 6 | TEPAT | 0.005 | 0.995 | IPA | WANITA | LUAR | 18 | YA |
| 7 | TERLAMBAT | 0.547 | 0.453 | IPA | PRIA | SURAKARTA | 18 | TID |
| 8 | TEPAT | 0.321 | 0.679 | IPA | PRIA | SURAKARTA | 19 | TID |
| 9 | TERLAMBAT | 0.811 | 0.189 | IPS | PRIA | LUAR | 18 | TID |
| 10 | TERLAMBAT | 0.648 | 0.352 | LAIN | WANITA | SURAKARTA | 18 | TID |

ExampleSet (10 examples, 3 special attributes, 5 regular attributes)

Repository

- Training Resources (connected)
- Samples
- Community Samples (connected)
- DB (Legacy)
- Local Repository (LABSI-04)
 - Connections (LABSI-04)
 - data (LABSI-04)
 - processes (LABSI-04)
 - dataaa (LABSI-04 - v1, 10/10/19 1:56)
 - DataCuaca_Testing (LABSI-04 - v1)
 - DataCuaca_Training (LABSI-04 - v1)
 - datajurusan_testing (LABSI-04 - v1)
 - datajurusan_training (LABSI-04 - v1)
 - DTJURUSAN_TESTING (LABSI-04)



RapidMiner Studio Free 9.3.001 @ LABSI-04-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/datajurusan_testing) ExampleSet (//Local Repository/datajurusan_training) ExampleSet (//Local Repository/DTJURUSAN_TESTING)

Result History

ExampleSet (Apply Model)

Repository

- Import Data
- Training Resources (connected)
- Samples
- Community Samples (connected)
- DB (Legacy)
- Local Repository (LABSI-04)
 - Connections (LABSI-04)
 - data (LABSI-04)
 - processes (LABSI-04)
 - dataaa (LABSI-04 - v1, 10/19/19 1:56)
 - DataCuaca_Testing (LABSI-04 - v1)
 - DataCuaca_Training (LABSI-04 - v1)
 - datajurusan_testing (LABSI-04 - v1)
 - datajurusan_training (LABSI-04 - v1)
 - DTJURUSAN_TESTING (LABSI-04)

| Row No. | prediction(L... | confidence(L... | confidencec... | Jurusan_SMA | Gender | Asal_Sekolah | Rerata_SKS | Asi |
|---------|-----------------|-----------------|----------------|-------------|--------|--------------|------------|-----|
| 1 | TERLAMBAT | 0.648 | 0.352 | LAIN | WANITA | SURAKARTA | 18 | TID |
| 2 | TEPAT | 0.005 | 0.995 | IPA | PRIA | SURAKARTA | 19 | YA |
| 3 | TERLAMBAT | 0.650 | 0.350 | LAIN | PRIA | SURAKARTA | 19 | TID |
| 4 | TERLAMBAT | 0.868 | 0.132 | IPS | PRIA | LUAR | 17 | TID |
| 5 | TERLAMBAT | 0.738 | 0.262 | LAIN | WANITA | SURAKARTA | 17 | TID |
| 6 | TEPAT | 0.005 | 0.995 | IPA | WANITA | LUAR | 18 | YA |
| 7 | TERLAMBAT | 0.547 | 0.453 | IPA | PRIA | SURAKARTA | 18 | TID |
| 8 | TEPAT | 0.321 | 0.679 | IPA | PRIA | SURAKARTA | 19 | TID |
| 9 | TERLAMBAT | 0.811 | 0.189 | IPS | PRIA | LUAR | 18 | TID |
| 10 | TERLAMBAT | 0.648 | 0.352 | LAIN | WANITA | SURAKARTA | 18 | TID |

ExampleSet (10 examples, 3 special attributes, 5 regular attributes)

The screenshot shows the RapidMiner Studio interface. On the left, the 'ExampleSet (Apply Model)' panel displays results for 'TERLAMBAT' (7) and 'TEPAT' (3). It includes sections for Data, Statistics, Visualizations, and Annotations. On the right, an ARFF viewer window titled 'HasilPredksi_Siswa.arff' shows a table of student data with columns: No., Jurusan_SMA, Gender, Asal_sekolah, Rerata_SKS, Asisten, prediction margin, predicted Lama_Studi, and L. The data consists of 10 rows of student information.

| No. | 1: Jurusan_SMA | 2: Gender | 3: Asal_sekolah | 4: Rerata_SKS | 5: Asisten | 6: prediction margin | 7: predicted Lama_Studi | 8: L |
|-----|----------------|-----------|-----------------|---------------|------------|----------------------|-------------------------|------|
| 1 | LAIN | WANITA | SURAKARTA | 18.0 | TIDAK | 0.375862 | TERLAMBAT | |
| 2 | IPA | PRIA | SURAKARTA | 19.0 | YA | -0.836469 | TEPAT | |
| 3 | LAIN | PRIA | SURAKARTA | 19.0 | TIDAK | 0.175169 | TERLAMBAT | |
| 4 | IPS | PRIA | LUAR | 17.0 | TIDAK | 0.713206 | TERLAMBAT | |
| 5 | LAIN | WANITA | SURAKARTA | 17.0 | TIDAK | 0.546846 | TERLAMBAT | |
| 6 | IPA | WANITA | LUAR | 18.0 | YA | -0.757815 | TEPAT | |
| 7 | IPA | PRIA | SURAKARTA | 18.0 | TIDAK | 0.129076 | TERLAMBAT | |
| 8 | IPA | PRIA | SURAKARTA | 19.0 | TIDAK | -0.356012 | TEPAT | |
| 9 | IPS | PRIA | LUAR | 18.0 | TIDAK | 0.588286 | TERLAMBAT | |
| 10 | LAIN | WANITA | SURAKARTA | 18.0 | TIDAK | 0.375862 | TERLAMBAT | |

No 4

Rerata confidence TEPAT = 0.476

Rerata confodence TERLAMBAT = 0.524

No 5

-lulus TEPAT = 3

-lulus TERLAMBAT = 7

nomor 6 dan 7

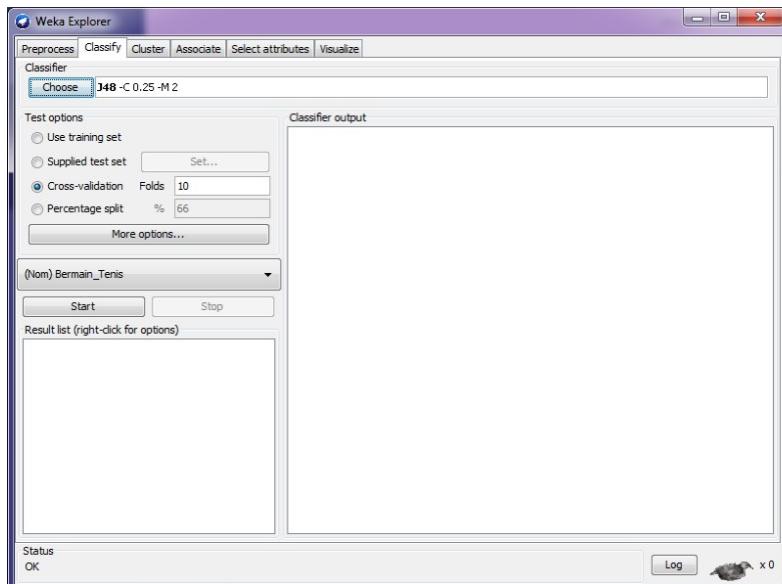
The screenshot shows the RapidMiner interface with the 'ExampleSet (Apply Model)' tab selected. The main area displays a table of results with the following columns: Row No., prediction(L...), confidence(...), confidence(...), Jurusan_SMA, Gender, Asal_Sekolah, Rerata_Sek..., and Asister. There are two rows of data:

| Row No. | prediction(L...) | confidence(...) | confidence(...) | Jurusan_SMA | Gender | Asal_Sekolah | Rerata_Sek... | Asister |
|---------|------------------|-----------------|-----------------|-------------|--------|--------------|---------------|---------|
| 1 | TEPAT | 0.298 | 0.702 | IPA | WANITA | LUAR | 18 | TIDAK |
| 2 | TEPAT | 0.076 | 0.924 | LAIN | PRIA | SURAKARTA | 17 | YA |

The 'Data' tab is also visible on the left sidebar. The top navigation bar shows several open ExampleSets: 'ExampleSet (/Local Repository/DataCuaca_Testing)', 'ExampleSet (/Local Repository/DataCuaca_Training)', 'ExampleSet (/Local Repository/DataSMA_Testing)', 'ExampleSet (/Local Repository/DataSMA_Training)', and 'ExampleSet (/Local Repository/TugasSMA_Testing)'. A 'Result History' tab is also present.

MODUL 9

WEKA



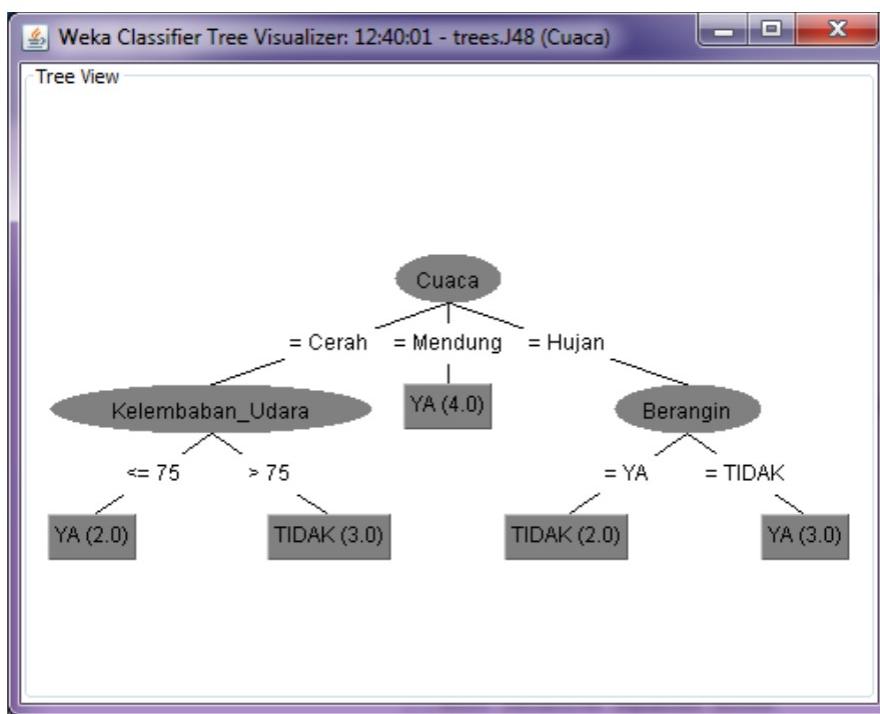
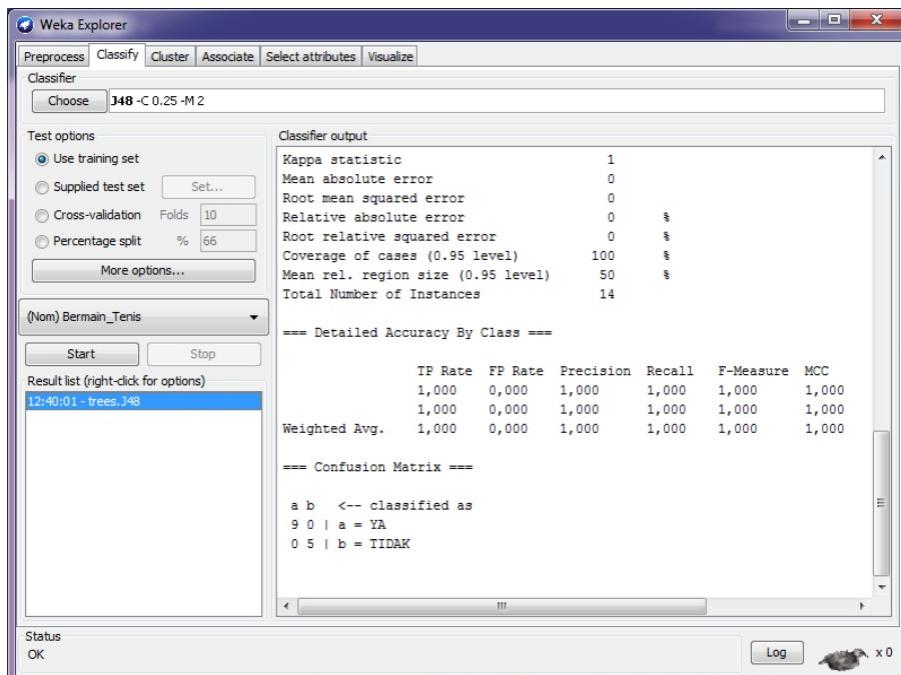
```
Weka Explorer
Preprocess Classify Cluster Associate Select attributes Visualize
Classifier
Choose J48 -C 0.25 -M 2
Test options
 Use training set
 Supplied test set Set...
 Cross-validation Folds 10
 Percentage split % 66
More options...
(Nom) Bermain_Tenis
Start Stop
Result list (right-click for options)
12:40:01 - trees.J48
Status OK Log x 0

Classifier output
Relation: Cuaca
Instances: 14
Attributes: 5
Cuaca
Suhu
Kelembaban_Udara
Berangin
Bermain_Tenis
Test mode: evaluate on training data
==== Classifier model (full training set) ====
J48 pruned tree
-----
Cuaca = Cerah
| Kelembaban_Udara <= 75: YA (2.0)
| Kelembaban.Udara > 75: TIDAK (3.0)
Cuaca = Mendung: YA (4.0)
Cuaca = Hujan
| Berangin = YA: TIDAK (2.0)
| Berangin = TIDAK: YA (3.0)

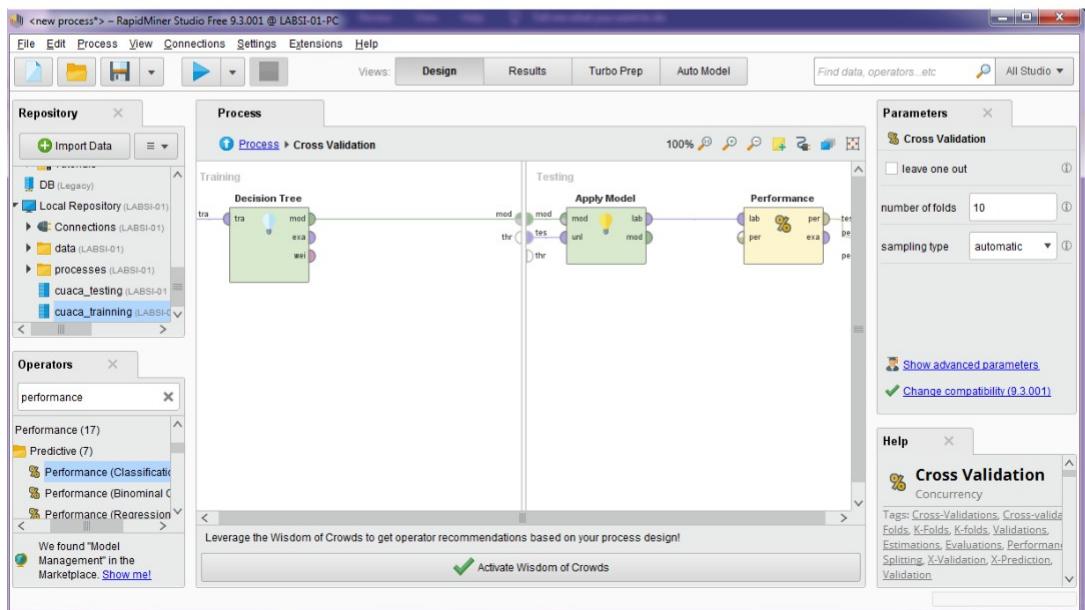
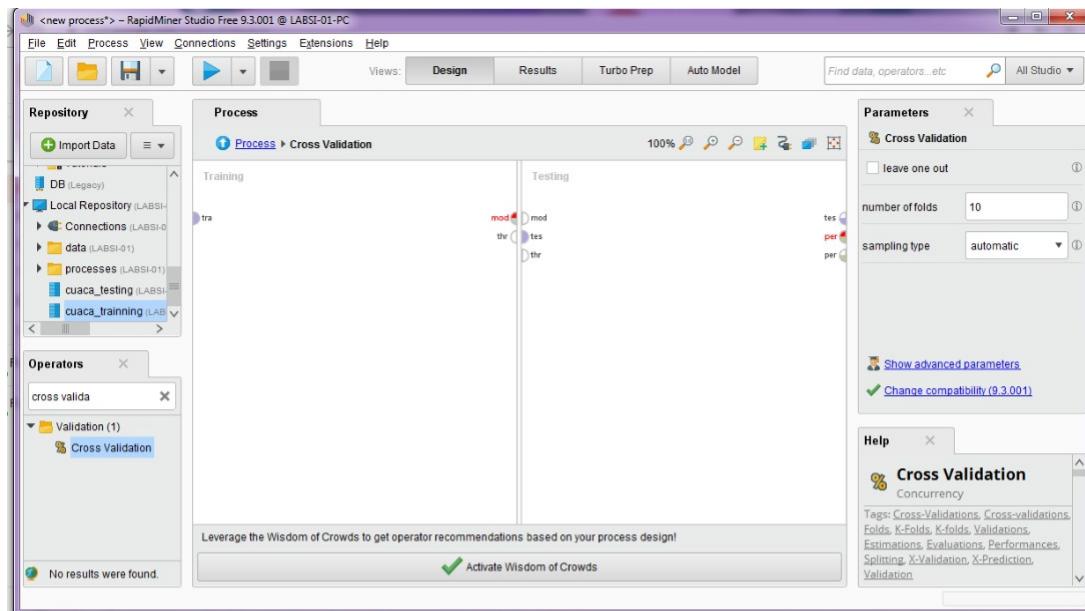
Number of Leaves : 5
Size of the tree : 8

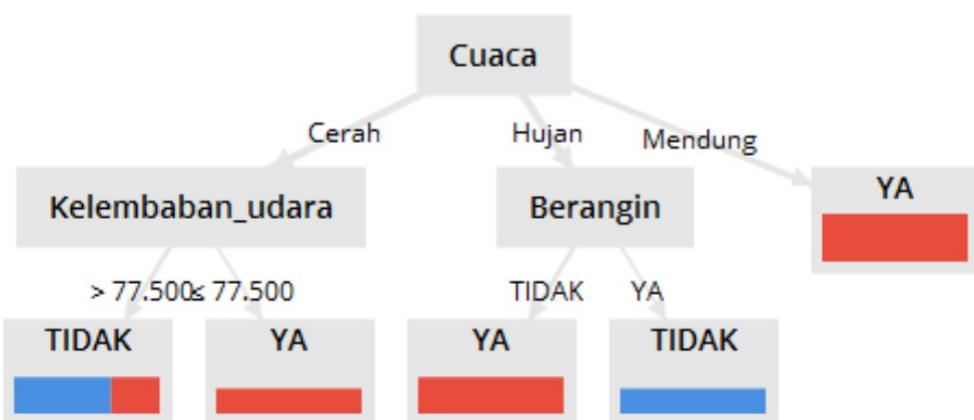
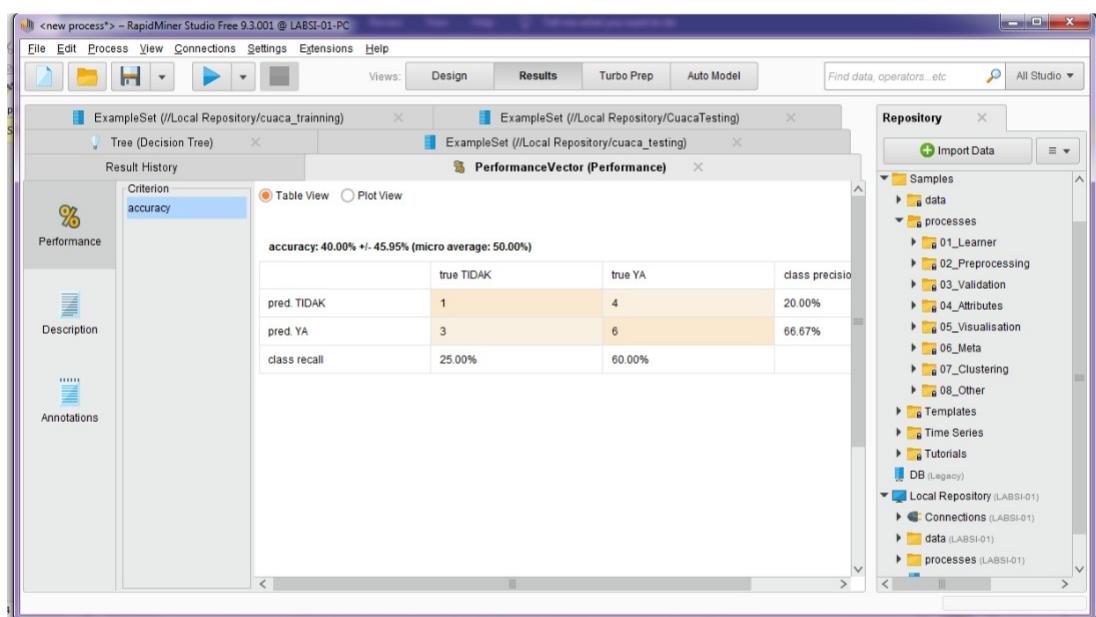
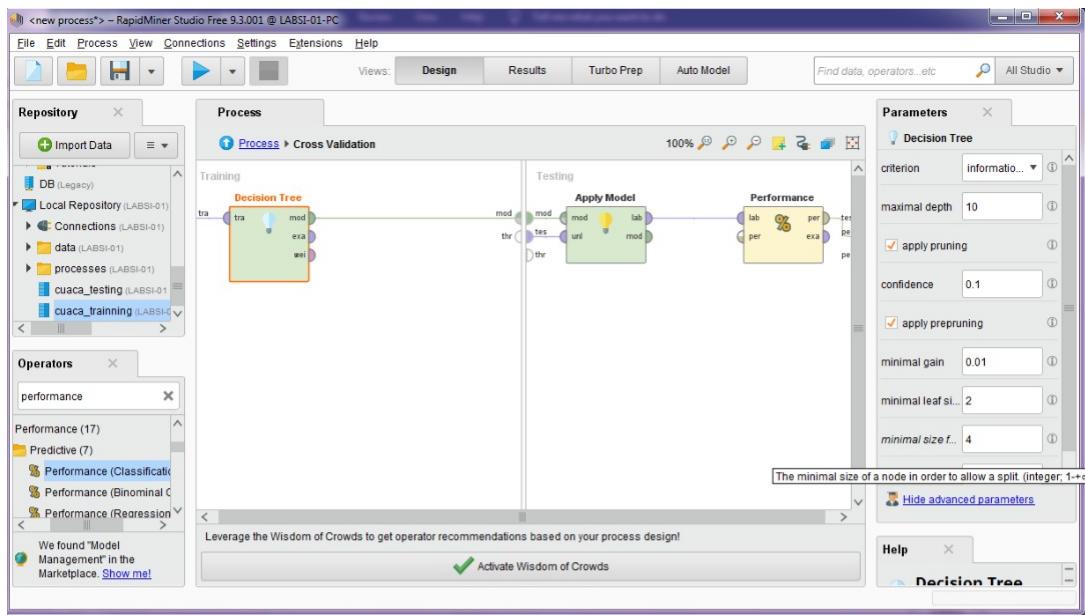
Time taken to build model: 0.01 seconds
==== Evaluation on training set ====
< / >
```

The 'Classifier output' pane displays the details of the J48 pruned tree model. It includes the relation (Cuaca), instances (14), attributes (5), and the decision rules for the tree. The model has 5 leaves and a size of 8. The time taken to build the model was 0.01 seconds. The evaluation on the training set is shown as a progress bar at 0% completion.



RAPID MINER



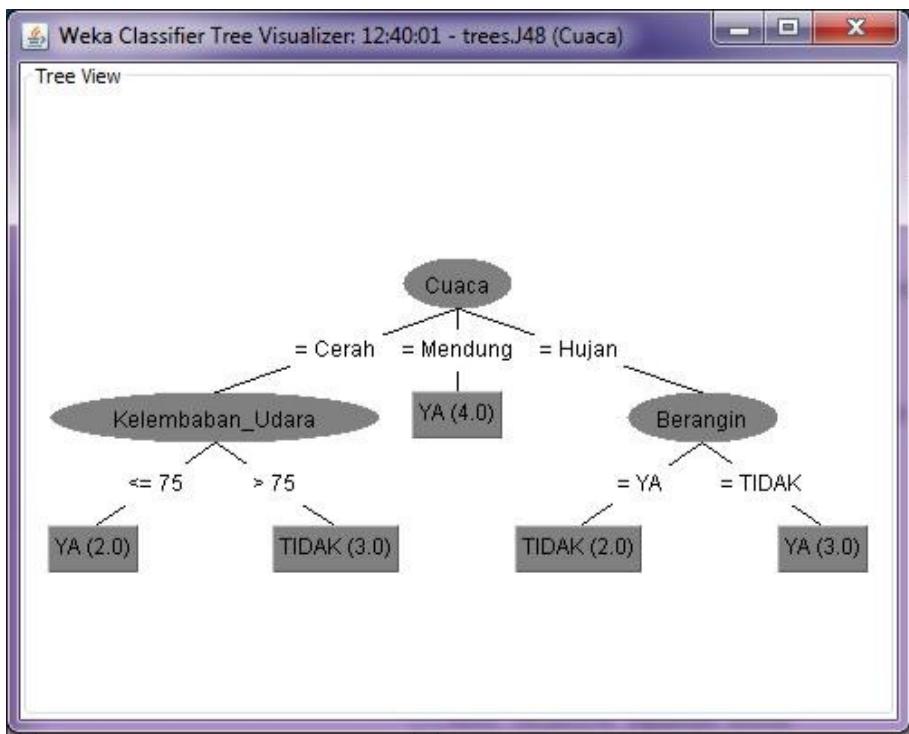


TUGAS

1.

| Cuaca | Suhu | Kelembaban_udara | berangim | 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. A.



- Number of Leaves : 5

- Size of the tree : 8

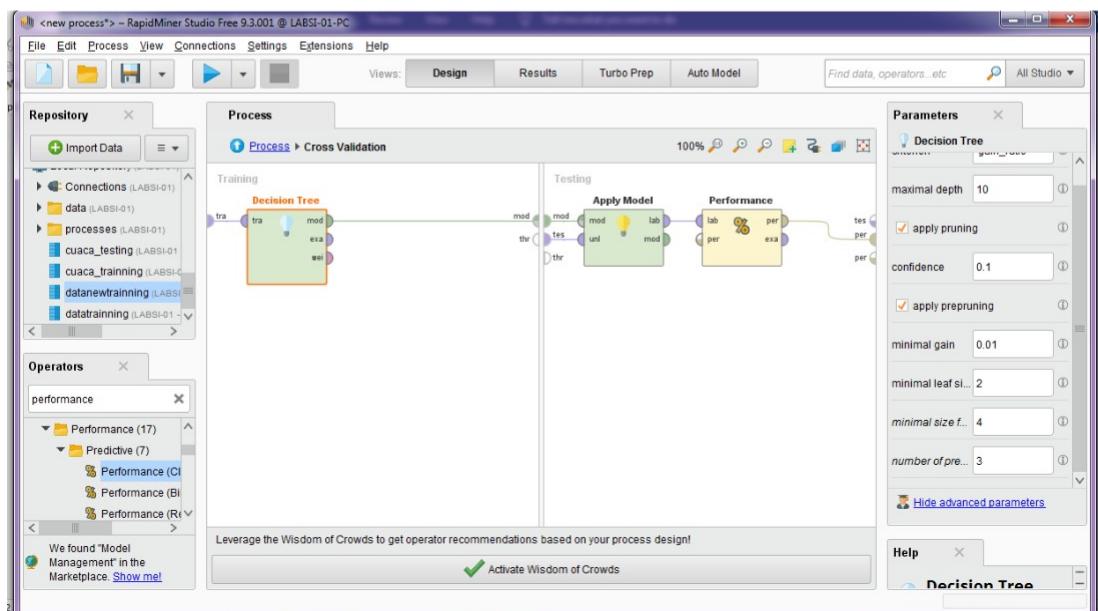
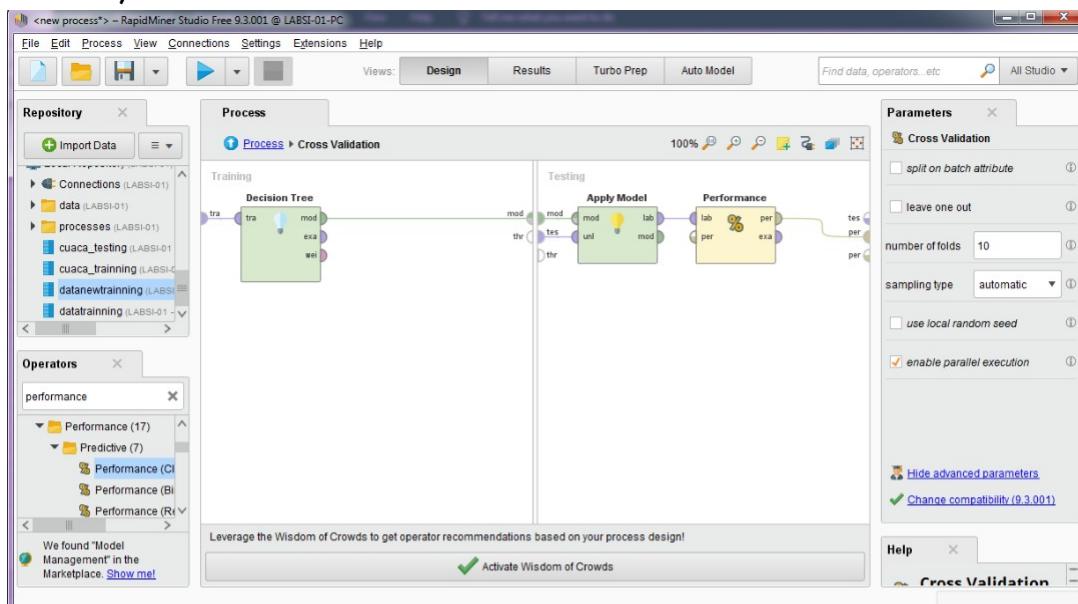
- Time taken to build model: 0.01 seconds

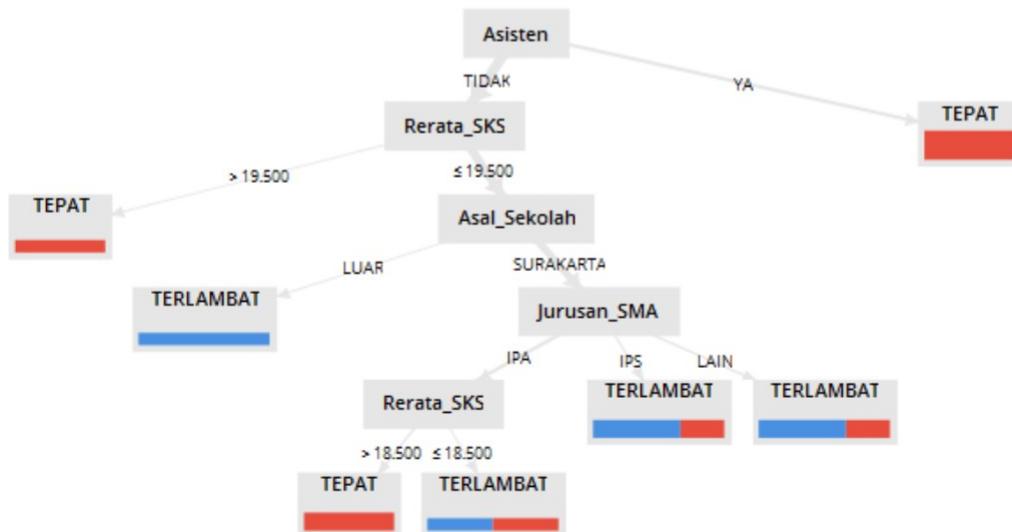
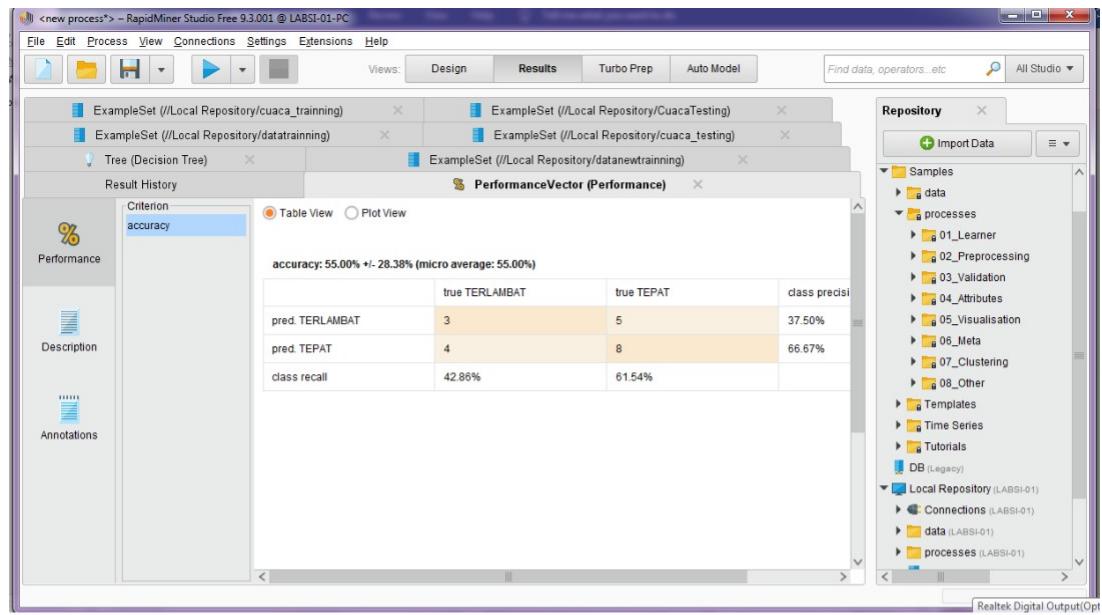
- Correctly Classified Instances 100%

- Incorrectly Classified Instances 0%

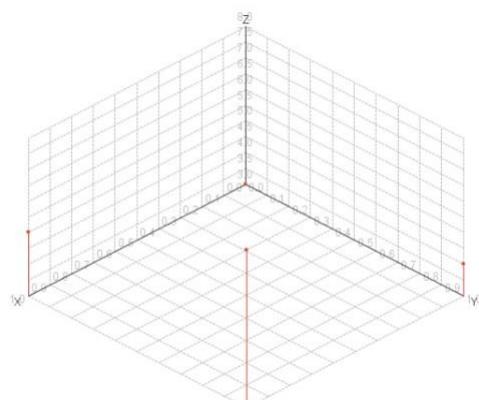
3.

a)

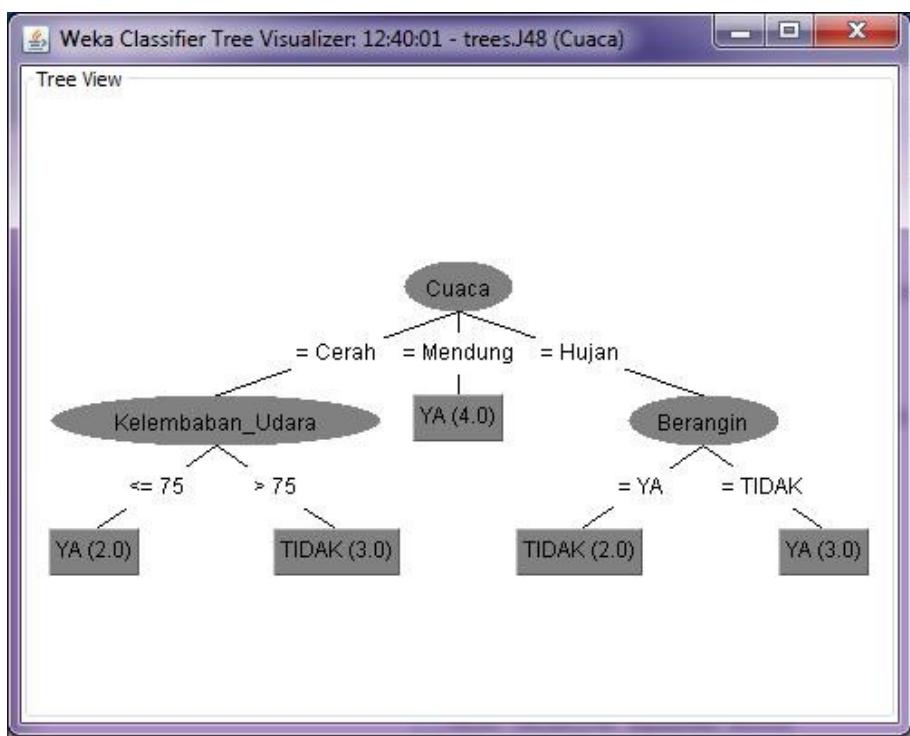




b.



4.



Akan bermain(YA) jika :

Cucaca=cerah, Kelembaban_udara= ≤ 75

Cuaca = mendung

Cuaca = hujan, berangin= tidak

Tidak bermain (TIDAK)

Cuaca = cerah, kelembaban_udara = > 75

Cuaca = hujan, berangin = ya

MODUL 10

Percobaan

1.

| | A | B | C | D | E |
|----|----------|--------|-------|-------|---|
| | NO_SISWA | NAMA | B.IND | B.ING | |
| 1 | S-101 | JOKO | 8,54 | 8,4 | |
| 2 | S-102 | AGUS | 9,98 | 6,81 | |
| 3 | S-103 | SUSI | 6,2 | 9,15 | |
| 4 | S-104 | DYAH | 5,24 | 7,26 | |
| 5 | S-105 | WATI | 5,7 | 5,71 | |
| 6 | S-106 | IKA | 8,57 | 5,87 | |
| 7 | S-107 | EKO | 7,7 | 7,71 | |
| 8 | S-108 | YANTO | 6,6 | 5,7 | |
| 9 | S-109 | WAWAN | 9 | 8,12 | |
| 10 | S-110 | MAHMUD | 9,81 | 9,58 | |
| 11 | | | | | |
| 12 | | | | | |
| 13 | | | | | |

2.,3.

Import Data - Select the cells to import.

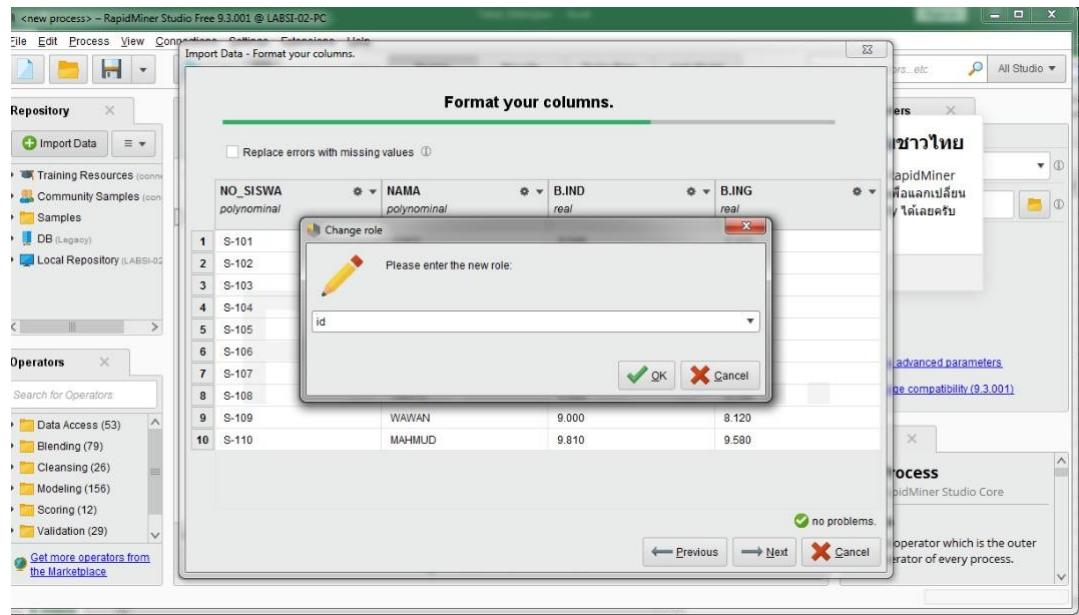
Select the cells to import.

Sheet: k-means ▾ Cell range: A:D Select All Define header row: 1

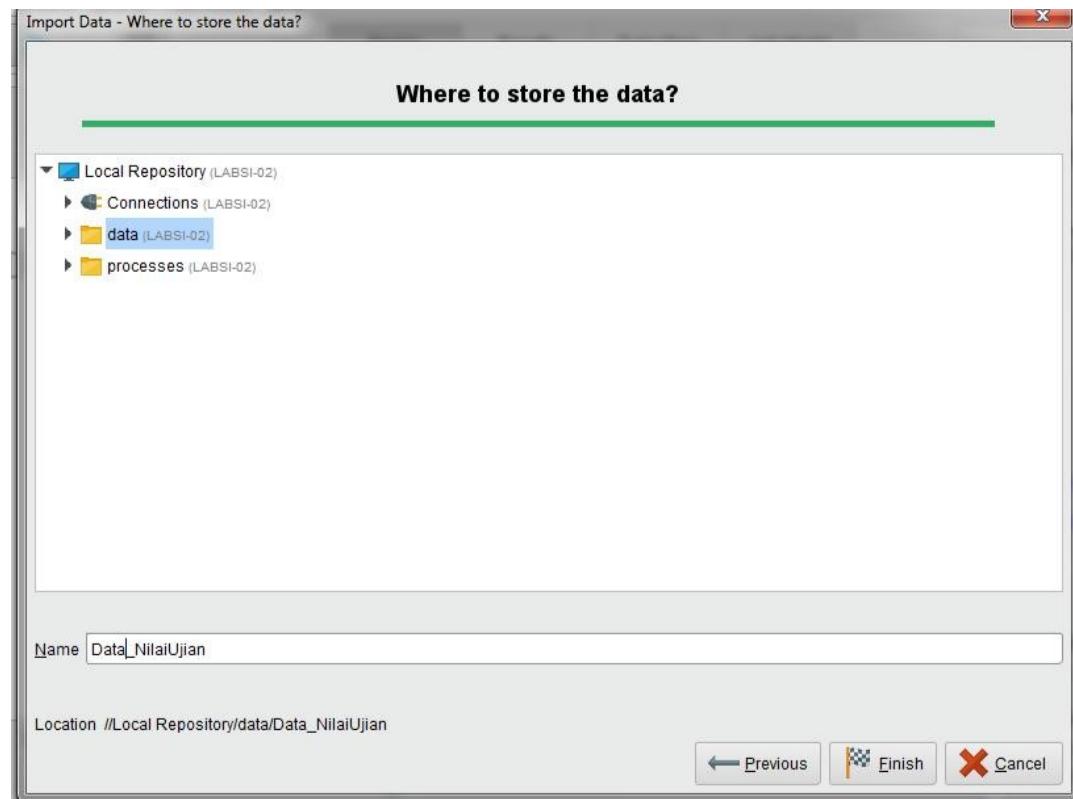
| | A | B | C | D |
|----|----------|--------|-------|-------|
| 1 | NO_SISWA | NAMA | B.IND | B.ING |
| 2 | S-101 | JOKO | 8.540 | 8.400 |
| 3 | S-102 | AGUS | 9.980 | 6.810 |
| 4 | S-103 | SUSI | 6.200 | 9.150 |
| 5 | S-104 | DYAH | 5.240 | 7.260 |
| 6 | S-105 | WATI | 5.700 | 5.710 |
| 7 | S-106 | IKA | 8.570 | 5.870 |
| 8 | S-107 | EKO | 7.700 | 7.710 |
| 9 | S-108 | YANTO | 6.600 | 5.700 |
| 10 | S-109 | WAWAN | 9.000 | 8.120 |
| 11 | S-110 | MAHMUD | 9.810 | 9.580 |

← Previous → Next ✖ Cancel

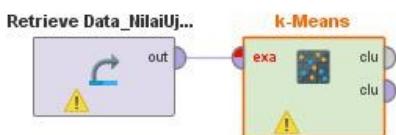
4.



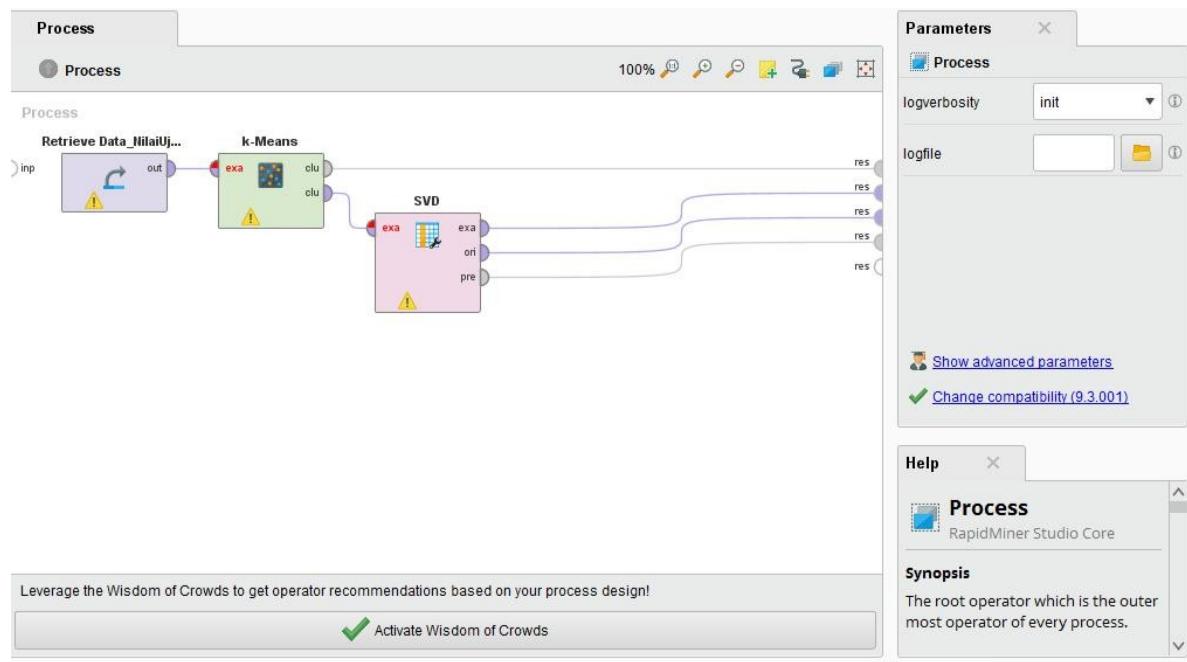
5.



6.,7.



8.



9., 10

a.

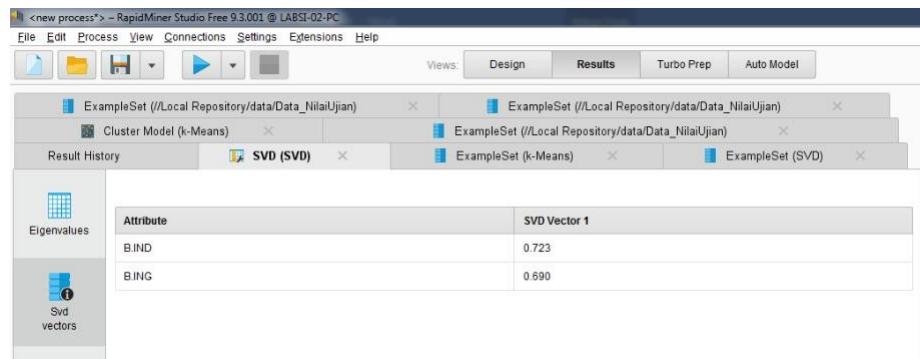
i.

A screenshot of the RapidMiner Result History window. It displays four tabs: 'ExampleSet (/Local Repository/data/Data_NilaiUjian)', 'Cluster Model (k-Means)', 'SVD (SVD)', and 'ExampleSet (k-Means)'. The 'SVD (SVD)' tab is active, showing a table of SVD results. The table has columns: Component, Singular Value, Proportion of Singular Value, Cumulative Singular Values, and Cumulative Proportion of S... . The data is as follows:

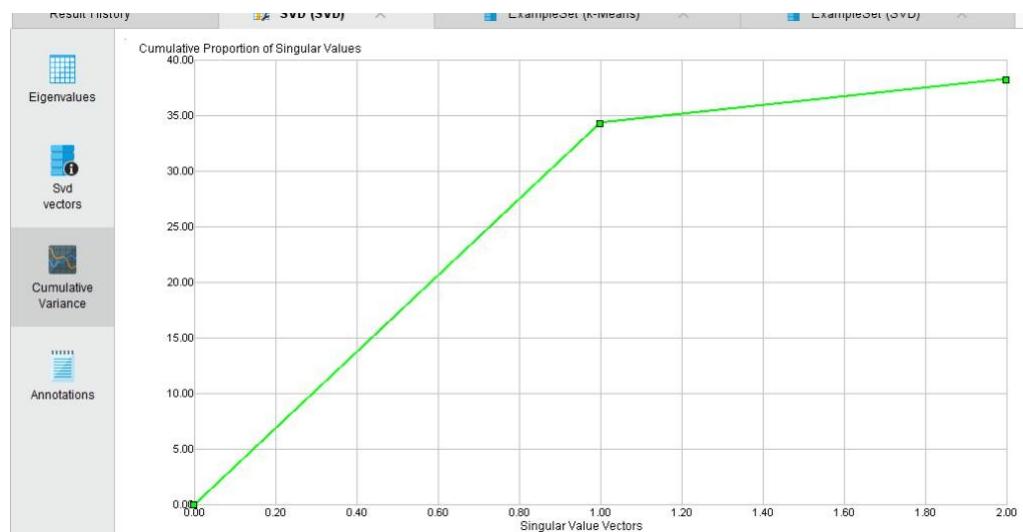
| Component | Singular Value | Proportion of Singular Value | Cumulative Singular Values | Cumulative Proportion of S... |
|-----------|----------------|------------------------------|----------------------------|-------------------------------|
| SVD 1 | 34.340 | 0.898 | 34.340 | 0.898 |
| SVD 2 | 3.906 | 0.102 | 38.246 | 1.000 |

The left sidebar shows icons for Eigenvalues, Svd vectors, Cumulative Variance, and more.

ii.

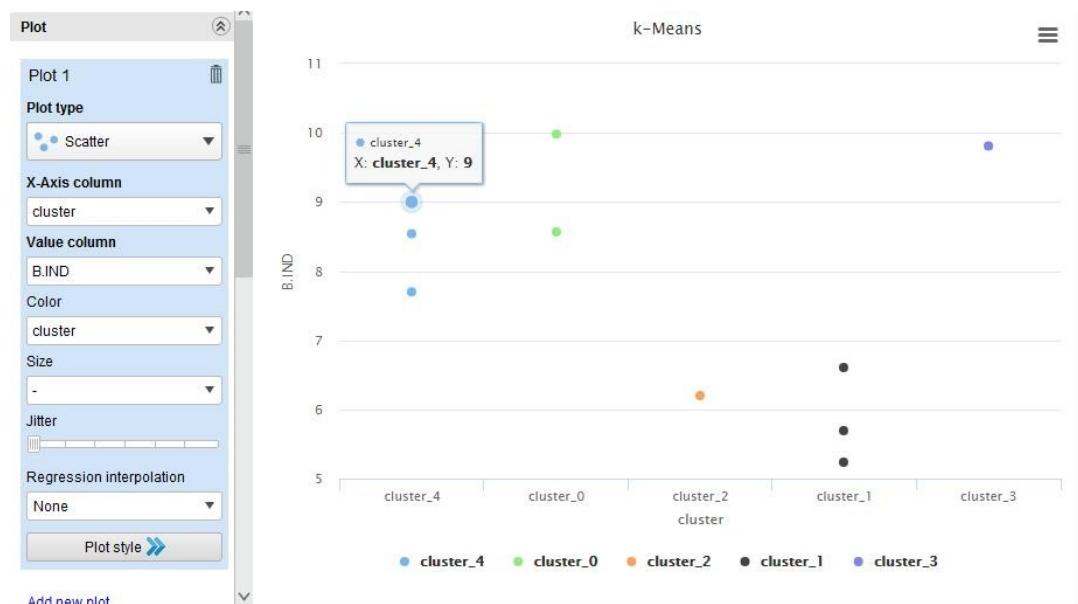


iii.

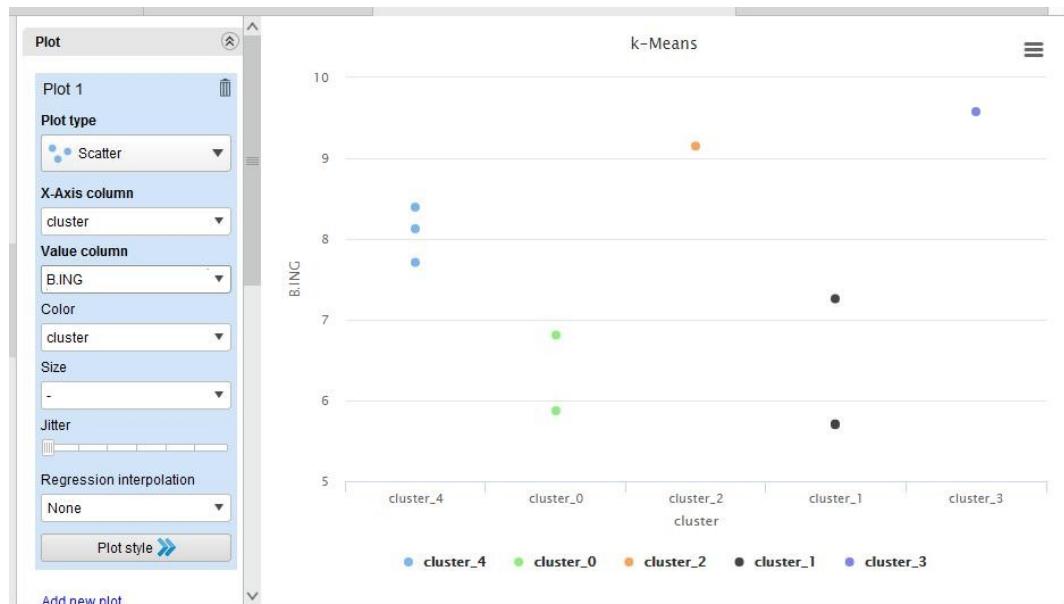


b.

I. B.IND



II. B.ING

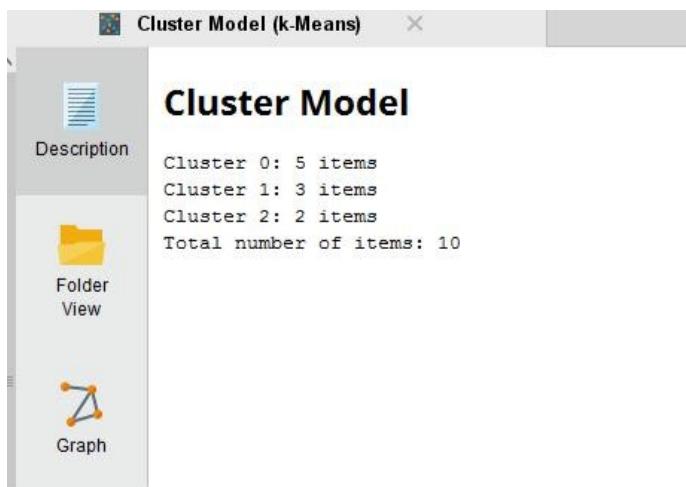


C. SVD

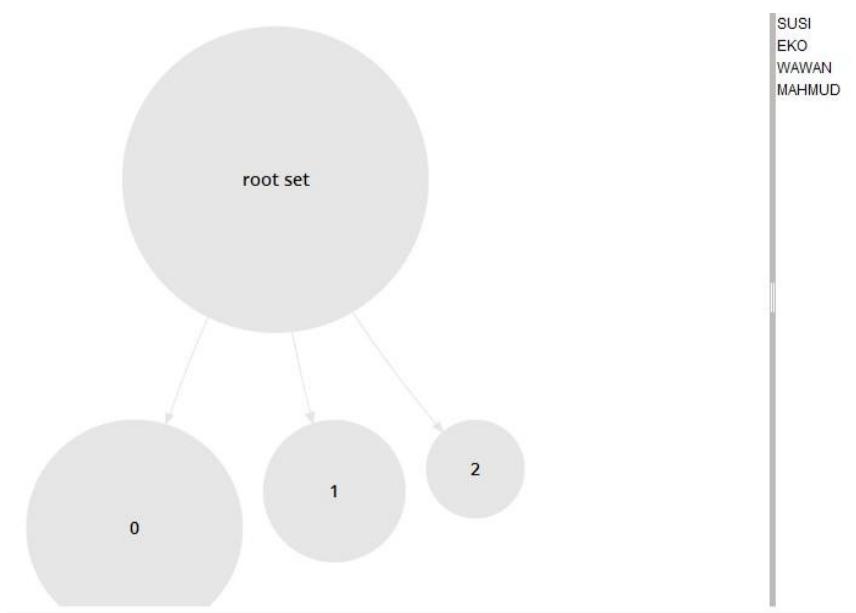
| Row No. | NAMA | cluster ↑ | svd_1 |
|---------|--------|-----------|-------|
| 1 | JOKO | cluster_0 | 0.349 |
| 3 | SUSI | cluster_0 | 0.315 |
| 7 | EKO | cluster_0 | 0.317 |
| 9 | WAWAN | cluster_0 | 0.353 |
| 10 | MAHMUD | cluster_0 | 0.399 |
| 4 | DYAH | cluster_1 | 0.256 |
| 5 | WATI | cluster_1 | 0.235 |
| 8 | YANTO | cluster_1 | 0.254 |
| 2 | AGUS | cluster_2 | 0.347 |
| 6 | IKA | cluster_2 | 0.299 |

D. CLUSTER MODEL

I. DESC



II. GRAPH



Tugas

1.

| | NO_SISWA | NAMA | B.IND | B.ING | MTK | IPA |
|----|----------|--------|-------|-------|------|------|
| 2 | S-101 | JOKO | 6,97 | 5,96 | 6,27 | 9,52 |
| 3 | S-102 | AGUS | 6,61 | 5,88 | 6,36 | 7,25 |
| 4 | S-103 | SUSI | 8,98 | 8,56 | 8,41 | 8,88 |
| 5 | S-104 | DYAH | 8,62 | 9,38 | 7,09 | 8,52 |
| 6 | S-105 | WATI | 7,76 | 9,95 | 8,13 | 6,71 |
| 7 | S-106 | IKA | 6,89 | 8,14 | 5,31 | 6,94 |
| 8 | S-107 | EKO | 9,05 | 9,67 | 6,81 | 9,95 |
| 9 | S-108 | YANTO | 6,59 | 5,57 | 5,02 | 9,08 |
| 10 | S-109 | WAWAN | 6,98 | 8,07 | 7,06 | 9,89 |
| 11 | S-110 | MAHMUD | 7,16 | 7,15 | 9,88 | 5,37 |
| 12 | S-111 | BUDI | 6,11 | 8,51 | 5,41 | 8,89 |
| 13 | S-112 | SANTI | 9,46 | 9,41 | 9,14 | 6,88 |
| 14 | S-113 | DIAN | 6,43 | 7,38 | 9,80 | 7,92 |
| 15 | S-114 | DANI | 8,09 | 8,49 | 8,87 | 9,15 |
| 16 | S-115 | AHMAD | 9,02 | 8,16 | 5,17 | 9,70 |
| 17 | S-116 | SAYU | 9,14 | 5,12 | 6,78 | 9,09 |
| 18 | S-117 | RISA | 5,41 | 5,41 | 5,54 | 6,95 |
| 19 | S-118 | RANI | 9,23 | 6,56 | 7,88 | 8,94 |
| 20 | S-119 | YANI | 5,24 | 7,09 | 7,62 | 7,09 |
| 21 | S-120 | RATIH | 9,76 | 8,75 | 9,57 | 6,71 |
| 22 | S-121 | INDAH | 7,15 | 7,78 | 7,65 | 6,18 |
| 23 | S-122 | JONO | 7,77 | 9,20 | 9,40 | 5,18 |
| 24 | S-123 | SARAH | 9,89 | 7,63 | 6,74 | 5,65 |
| 25 | S-124 | RAMA | 7,54 | 8,04 | 9,38 | 6,85 |
| 26 | S-125 | BABANG | 9,29 | 6,51 | 8,34 | 9,12 |
| 27 | S-126 | HADI | 9,15 | 6,57 | 8,07 | 6,42 |
| 28 | S-127 | NANA | 8,18 | 8,60 | 5,09 | 9,04 |
| 29 | S-128 | FEBRI | 7,07 | 7,78 | 8,88 | 5,93 |
| 30 | S-129 | DENI | 5,35 | 6,99 | 5,02 | 8,18 |
| 31 | S-130 | TONI | 5,96 | 5,09 | 8,75 | 5,58 |
| 32 | | | | | | |
| 33 | | | | | | |

2.

Import Data - Select the cells to import. X

Select the cells to import.

Sheet: Sheet1 ▾ Cell range: B1:F31 Select All Define header row: 1 ▾

| A | B | C | D | E | F |
|------------|--------|-------|-------|-------|-------|
| 1 NO_SISWA | NAMA | B.IND | B.ING | MTK | IPA |
| 2 S-101 | JOKO | 6.973 | 5.557 | 6.275 | 9.517 |
| 3 S-102 | AGUS | 6.613 | 5.879 | 6.361 | 7.254 |
| 4 S-103 | SUSI | 8.982 | 8.561 | 8.412 | 8.888 |
| 5 S-104 | DYAH | 8.621 | 9.383 | 7.091 | 8.324 |
| 6 S-105 | WATI | 7.764 | 9.946 | 8.131 | 6.711 |
| 7 S-106 | IKA | 6.891 | 8.140 | 5.314 | 6.941 |
| 8 S-107 | EKO | 9.051 | 9.673 | 6.806 | 9.953 |
| 9 S-108 | YANTO | 6.588 | 5.566 | 5.024 | 9.079 |
| 10 S-109 | WAWAN | 6.985 | 8.074 | 7.059 | 9.891 |
| 11 S-110 | MAHMUD | 7.158 | 7.153 | 9.878 | 5.374 |
| 12 S-111 | BUDI | 6.110 | 8.611 | 5.409 | 8.893 |
| 13 S-112 | SANTI | 9.458 | 9.408 | 9.136 | 6.883 |
| 14 S-113 | DIAN | 6.432 | 7.378 | 9.797 | 7.915 |
| 15 DANI | | 8.000 | 9.100 | 9.000 | 9.155 |

← Previous Next → X Cancel

Import Data - Format your columns.

Format your columns.

Replace errors with missing values ⓘ

| | NAMA polynomial | B.IND real | B.ING real | MTK real | IPA real |
|----|--------------------|---------------|---------------|-------------|-------------|
| 1 | JOKO | | | | |
| 2 | AGUS | | | | |
| 3 | SUSI | | | | |
| 4 | DYAH | | | | |
| 5 | WATI | | | | |
| 6 | IKA | | | | |
| 7 | EKO | | | | |
| 8 | YANTO | | | | |
| 9 | WAWAN | 6.985 | 8.074 | 7.059 | 9.891 |
| 10 | MAHMUD | 7.158 | 7.153 | 9.878 | 5.374 |
| 11 | BUDI | 6.110 | 8.611 | 5.409 | 8.893 |
| 12 | SANTI | 9.458 | 9.408 | 9.136 | 6.883 |
| 13 | DIAN | 6.432 | 7.378 | 9.797 | 7.915 |

Please enter the new role:

OK Cancel

Close this dialog and apply all changes.

no problems.

← Previous

ry ExampleSet (/Local Repository/data/30siswa) × SVD (SVD)

Open in

| Row No. | NAMA | B.IND | B.ING | MTK | IPA |
|---------|--------|-------|-------|-------|-------|
| 1 | JOKO | 6.973 | 5.557 | 6.275 | 9.517 |
| 2 | AGUS | 6.613 | 5.879 | 6.361 | 7.254 |
| 3 | SUSI | 8.982 | 8.561 | 8.412 | 8.888 |
| 4 | DYAH | 8.621 | 9.383 | 7.091 | 8.324 |
| 5 | WATI | 7.764 | 9.946 | 8.131 | 6.711 |
| 6 | IKA | 6.891 | 8.140 | 5.314 | 6.941 |
| 7 | EKO | 9.051 | 9.673 | 6.806 | 9.953 |
| 8 | YANTO | 6.588 | 5.566 | 5.024 | 9.079 |
| 9 | WAWAN | 6.985 | 8.074 | 7.059 | 9.891 |
| 10 | MAHMUD | 7.158 | 7.153 | 9.878 | 5.374 |
| 11 | BUDI | 6.110 | 8.611 | 5.409 | 8.893 |
| 12 | SANTI | 9.458 | 9.408 | 9.136 | 6.883 |
| 13 | DIAN | 6.432 | 7.378 | 9.797 | 7.915 |

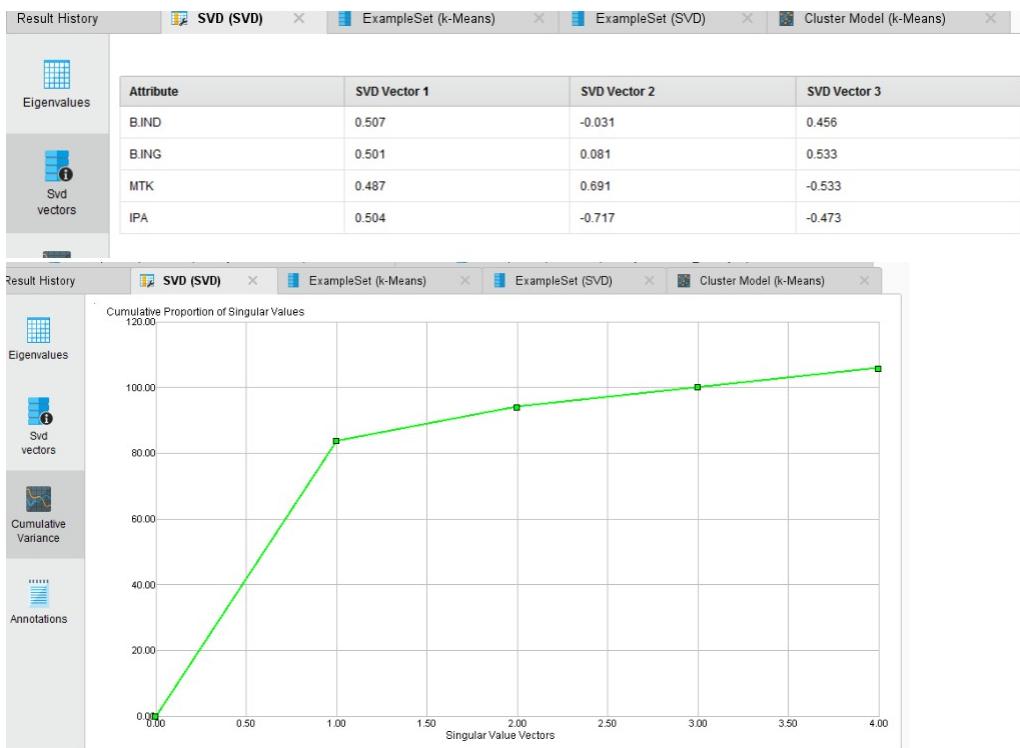
Result History SVD (SVD) × ExampleSet (k-Means) × ExampleSet (SVD) × Cluster Model (k-Means) ×

Eigenvalues

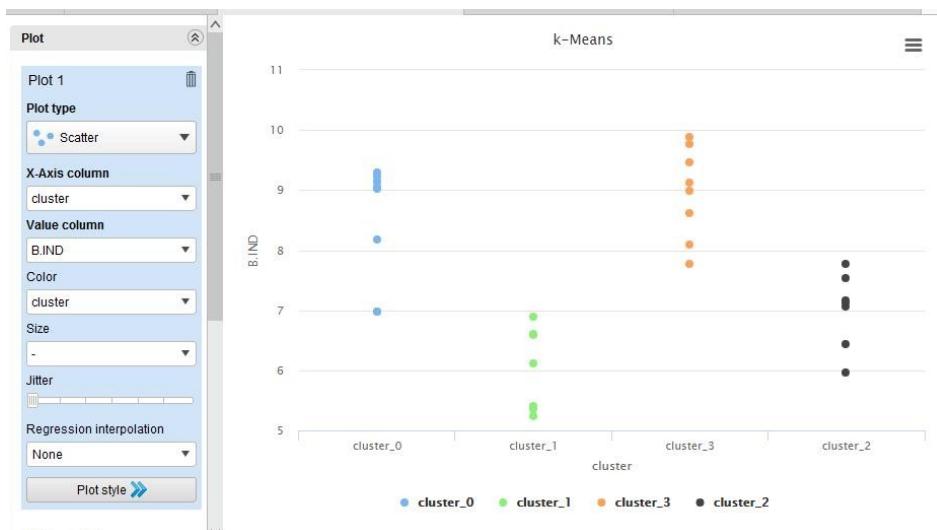
| Component | Singular Value | Proportion of Singular Value... | Cumulative Singular Values | Cumulative Proportion of S... |
|-----------|----------------|---------------------------------|----------------------------|-------------------------------|
| SVD 1 | 83.781 | 0.791 | 83.781 | 0.791 |
| SVD 2 | 10.307 | 0.097 | 94.088 | 0.889 |
| SVD 3 | 6.066 | 0.057 | 100.154 | 0.946 |
| SVD 4 | 5.717 | 0.054 | 105.871 | 1.000 |

Svd vectors

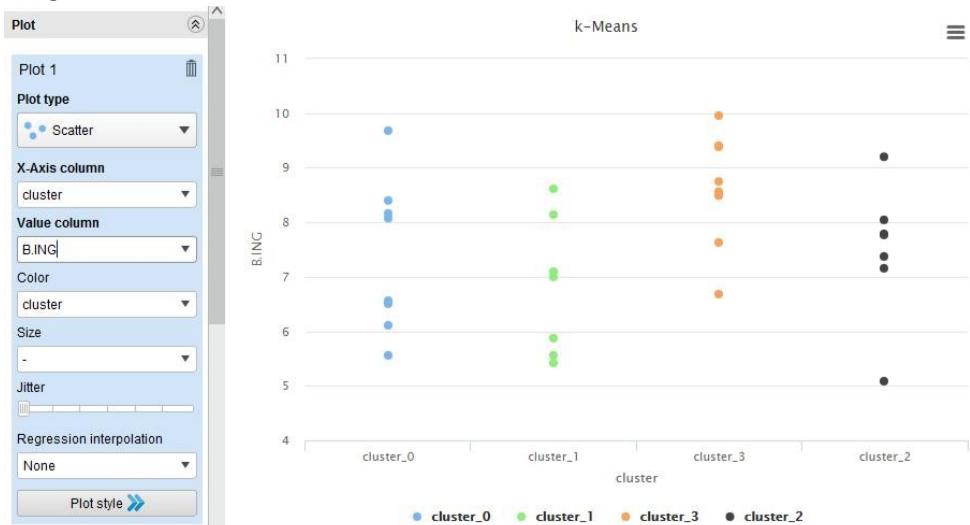
Cumulative Variance



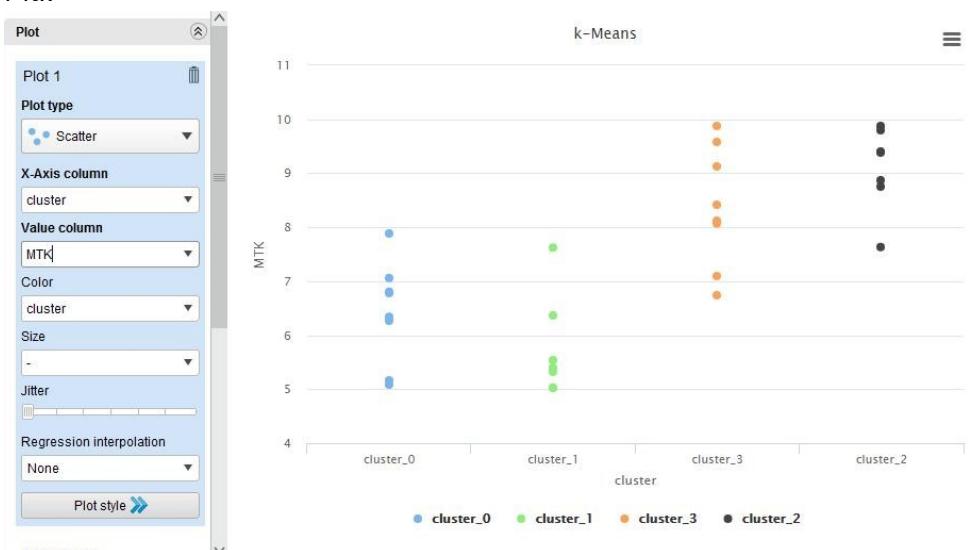
b.ind



b.ing



Mtk



IPA



| Row No. | NAMA | cluster ↑ | svd_1 | Row No. | NAMA | cluster ↑ | svd_1 |
|---------|--------|-----------|-------|---------|--------|-----------|-------|
| 1 | JOKO | cluster_0 | 0.169 | 17 | RISA | cluster_1 | 0.139 |
| 7 | EKO | cluster_0 | 0.212 | 19 | YANI | cluster_1 | 0.161 |
| 9 | WAWAN | cluster_0 | 0.191 | 29 | DENI | cluster_1 | 0.153 |
| 15 | AHMAD | cluster_0 | 0.192 | 10 | MAHMUD | cluster_2 | 0.176 |
| 16 | BAYU | cluster_0 | 0.186 | 13 | DIAN | cluster_2 | 0.188 |
| 18 | RANI | cluster_0 | 0.195 | 21 | INDAH | cluster_2 | 0.171 |
| 25 | BABANG | cluster_0 | 0.187 | 22 | JONO | cluster_2 | 0.188 |
| 27 | NANA | cluster_0 | 0.184 | 24 | RAMA | cluster_2 | 0.189 |
| 2 | AGUS | cluster_1 | 0.156 | 28 | FEBRI | cluster_2 | 0.177 |
| 6 | IKA | cluster_1 | 0.163 | 30 | TONI | cluster_2 | 0.151 |
| 8 | YANTO | cluster_1 | 0.157 | 3 | SUSI | cluster_3 | 0.208 |
| 11 | BUDI | cluster_1 | 0.173 | 4 | DYAH | cluster_3 | 0.200 |
| 17 | RISA | cluster_1 | 0.139 | 5 | WATI | cluster_3 | 0.194 |

ExampleSet (30 examples, 2 special attributes, 1 regular attribute)

| | | | |
|----|-------|-----------|-------|
| 5 | WATI | cluster_3 | 0.194 |
| 12 | SANTI | cluster_3 | 0.208 |
| 14 | DANI | cluster_3 | 0.212 |
| 20 | RATIH | cluster_3 | 0.207 |
| 23 | SARAH | cluster_3 | 0.179 |
| 26 | HADI | cluster_3 | 0.181 |

CLUSTER MODEL

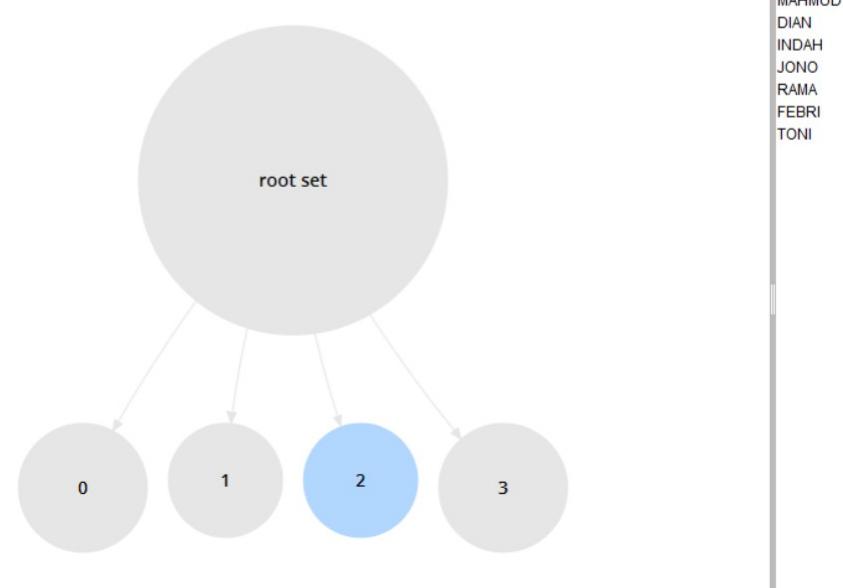
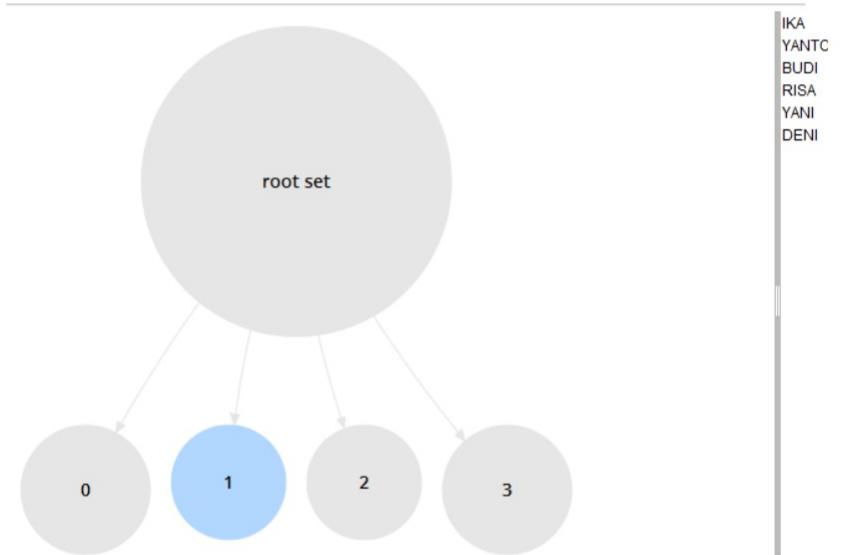
Result History SVD (SVD) ExampleSet (k-Means)

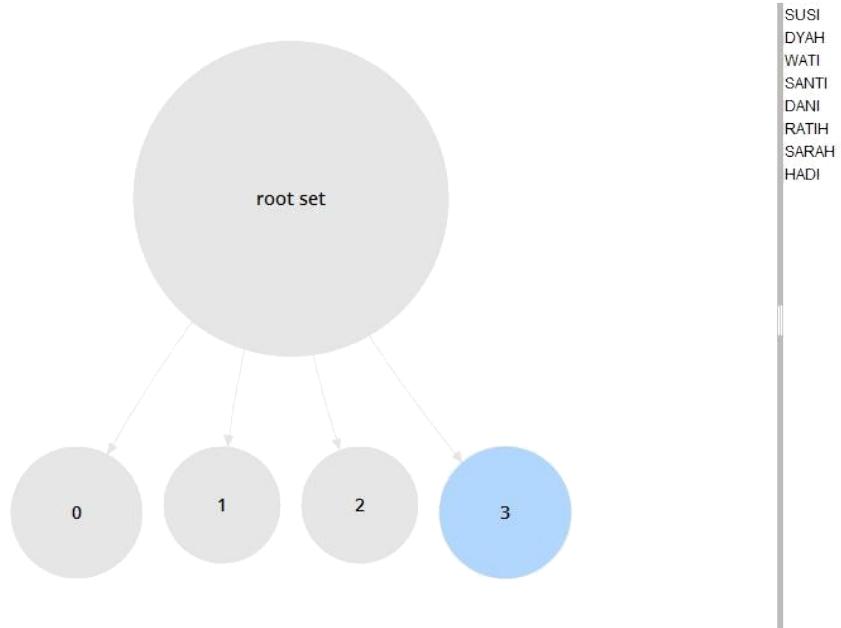
Cluster Model

Description

Cluster 0: 8 items
 Cluster 1: 7 items
 Cluster 2: 7 items
 Cluster 3: 8 items
 Total number of items: 30

Folder View





MODUL 11

Screenshot of the RapidMiner interface showing a decision tree model and its corresponding rule model.

The top part shows the "PerformanceVector (Performance)" view with the "ExampleSet (/Local Repository/Cuaca_training)" selected. The decision tree structure is as follows:

```
graph TD; Cuaca[Cuaca] -- Cerah --> Kelembaban_Udara[Kelembaban_Udara]; Cuaca -- Hujan --> Berangin[Berangin]; Cuaca -- Mendung --> YA[YA]; Kelembaban_Udara -- > 77.500 --> TIDAK[TIDAK]; Kelembaban_Udara -- ≤ 77.500 --> YA[YA]; Berangin -- TIDAK --> YA[YA]; Berangin -- YA --> TIDAK[TIDAK];
```

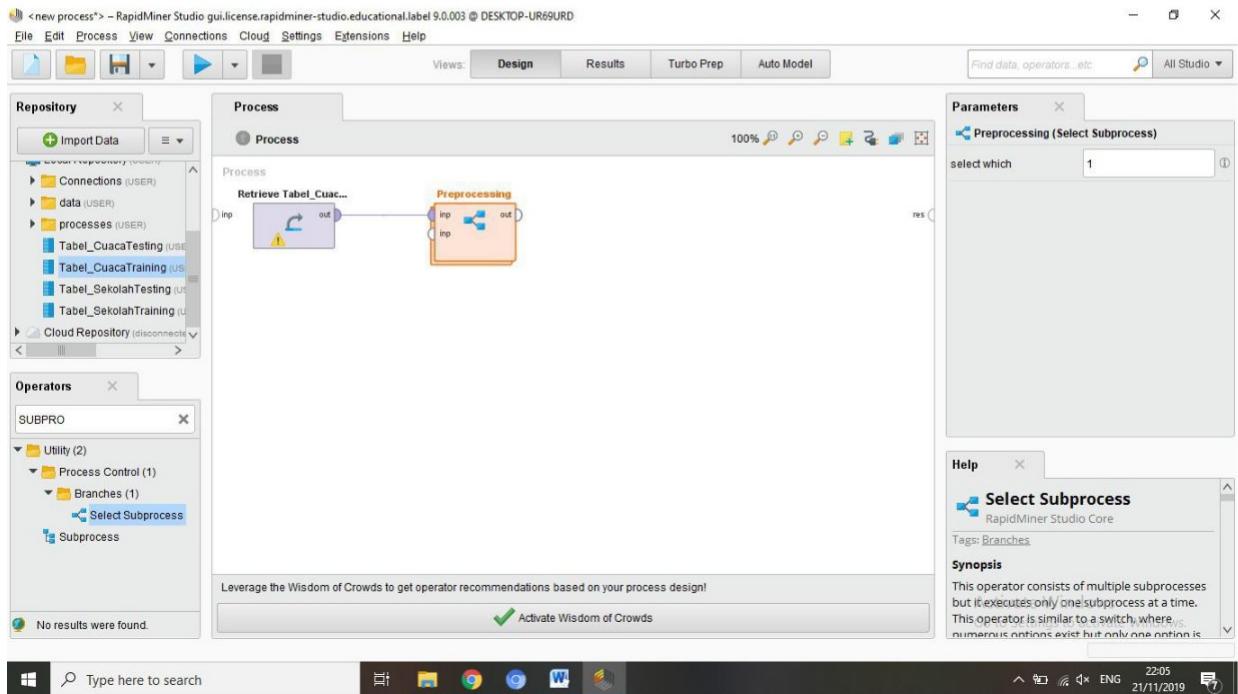
The bottom part shows the "RuleModel (Rule Induction)" view, which displays the generated rules:

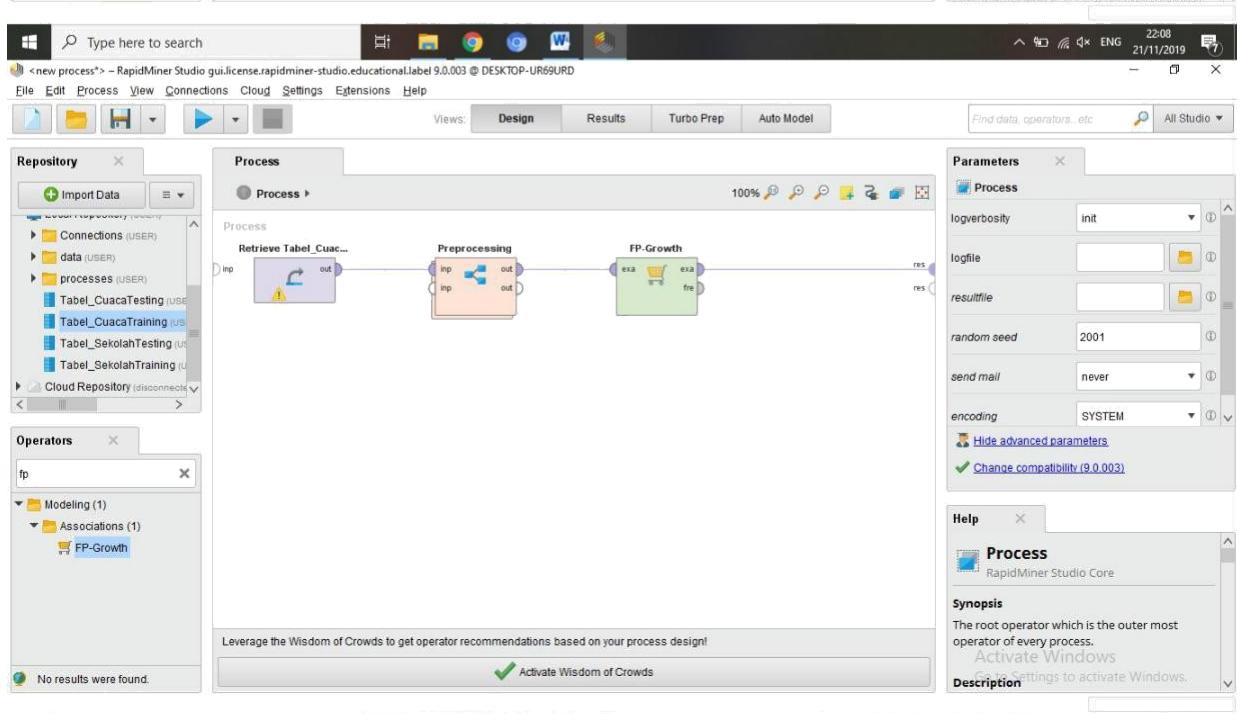
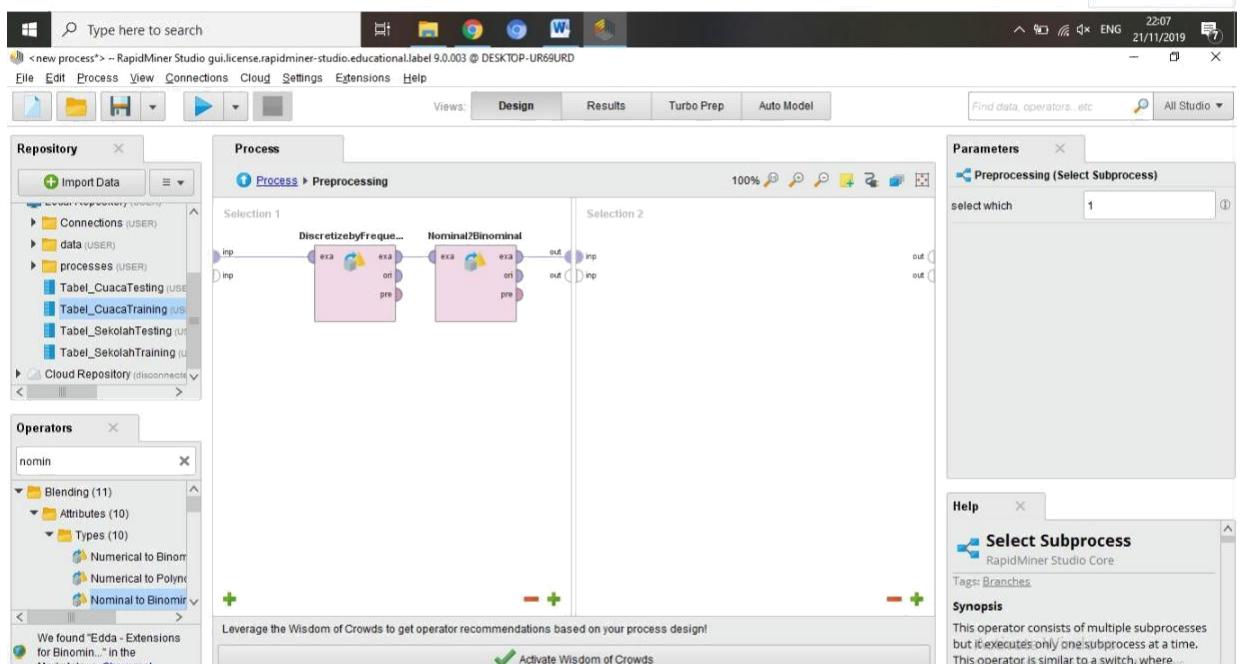
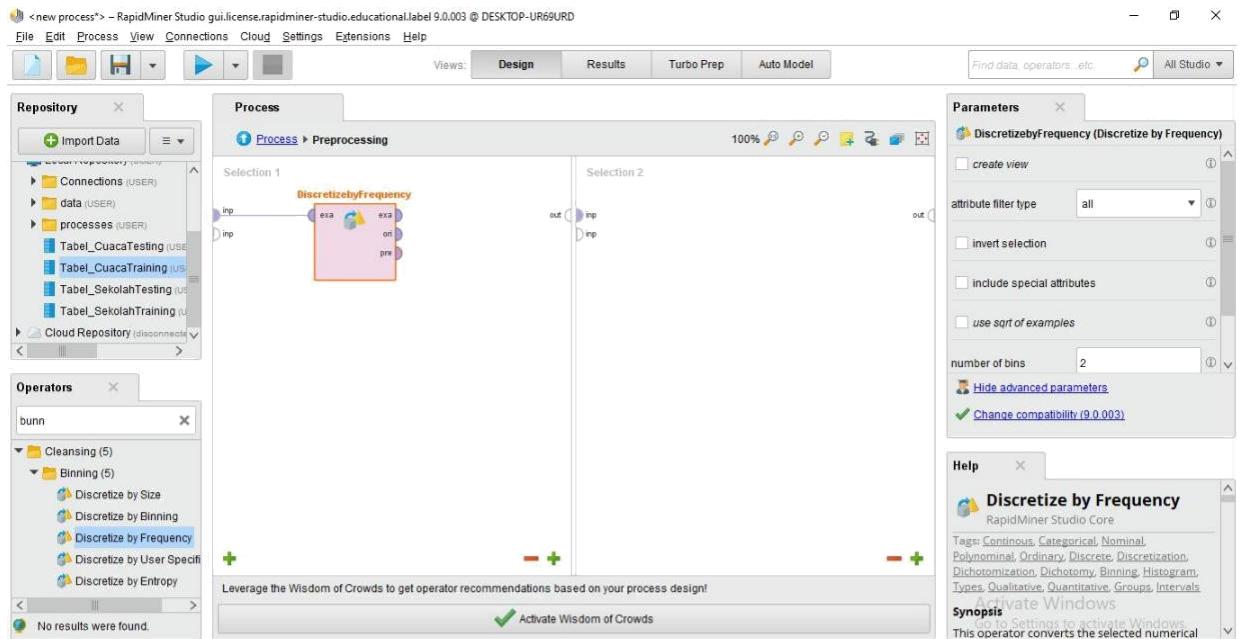
```
if Kelembaban_Udara ≤ 82.500 then YA (1 / 6)
if Cuaca = Cerah then TIDAK (3 / 0)
if Cuaca = Mendung then YA (0 / 2)
if Suhu ≤ 70.500 then YA (0 / 1)
else TIDAK (0 / 0)

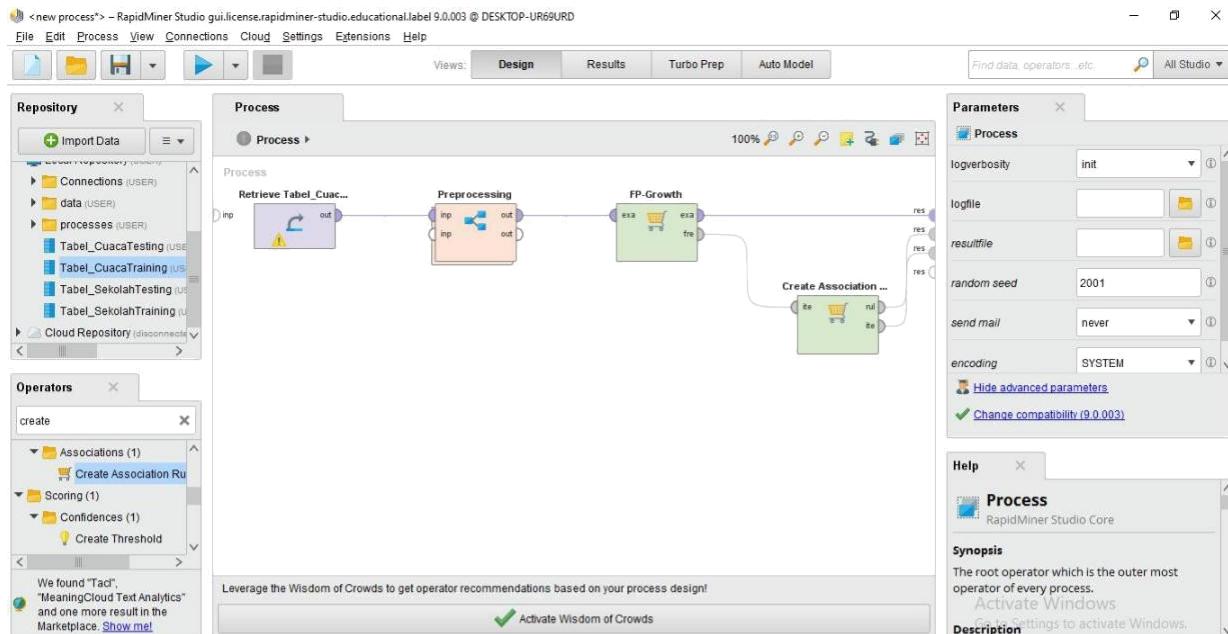
correct: 12 out of 13 training examples.
```

accuracy: 65.00% +/- 45.00% (micro average: 71.43%)

| | true TIDAK | true YA | class precision |
|--------------|------------|---------|-----------------|
| pred. TIDAK | 2 | 1 | 66.67% |
| pred. YA | 3 | 8 | 72.73% |
| class recall | 40.00% | 88.89% | |







RapidMiner Studio

File Edit Process View Connections Cloud Settings Extensions Help

Views: Design Results Turbo Prep Auto Model

Repository

- Import Data
- Training Resources (connected)
- Samples
- Community Samples (connected)
- DB
- Local Repository (USER)
 - Connections (USER)
 - data (USER)
 - processes (USER)
 - Tabel_CuacaTesting (USER - v1, 10/15/1)
 - Tabel_CuacaTraining (USER - v1, 10/15/1)
 - Tabel_SekolahTesting (USER - v1, 10/15/1)
 - Tabel_SekolahTraining (USER - v1, 10/15/1)
- Cloud Repository (disconnected)

Result History

FrequentItemSets (FP-Growth)

| Size | Support | Item 1 | Item 2 | Item 3 | Item 4 |
|------|---------|------------------|-----------------|--------|--------|
| 1 | 0.500 | Kelembaban_Udara | | | |
| 1 | 0.429 | Berangin | | | |
| 1 | 0.429 | Suhu | | | |
| 1 | 0.357 | Cuaca = Cerah | | | |
| 1 | 0.357 | Cuaca = Hujan | | | |
| 1 | 0.286 | Cuaca = Mendung | | | |
| 2 | 0.214 | Kelembaban_Udara | Berangin | | |
| 2 | 0.214 | Kelembaban_Udara | Suhu | | |
| 2 | 0.214 | Kelembaban_Udara | Cuaca = Cerah | | |
| 2 | 0.143 | Kelembaban_Udara | Cuaca = Hujan | | |
| 2 | 0.143 | Kelembaban_Udara | Cuaca = Mendung | | |
| 2 | 0.143 | Berangin | Suhu | | |
| 2 | 0.143 | Berangin | Cuaca = Cerah | | |
| 2 | 0.143 | Berangin | Cuaca = Hujan | | |
| 2 | 0.143 | Berangin | Cuaca = Mendung | | |

AssociationRules (Create Association Rules)

RapidMiner Studio

File Edit Process View Connections Cloud Settings Extensions Help

Views: Design Results Turbo Prep Auto Model

Repository

- Import Data
- Training Resources (connected)
- Samples
- Community Samples (connected)
- DB
- Local Repository (USER)
 - Connections (USER)
 - data (USER)
 - processes (USER)
 - Tabel_CuacaTesting (USER - v1, 10/15/1)
 - Tabel_CuacaTraining (USER - v1, 10/15/1)
 - Tabel_SekolahTesting (USER - v1, 10/15/1)
 - Tabel_SekolahTraining (USER - v1, 10/15/1)
- Cloud Repository (disconnected)

Result History

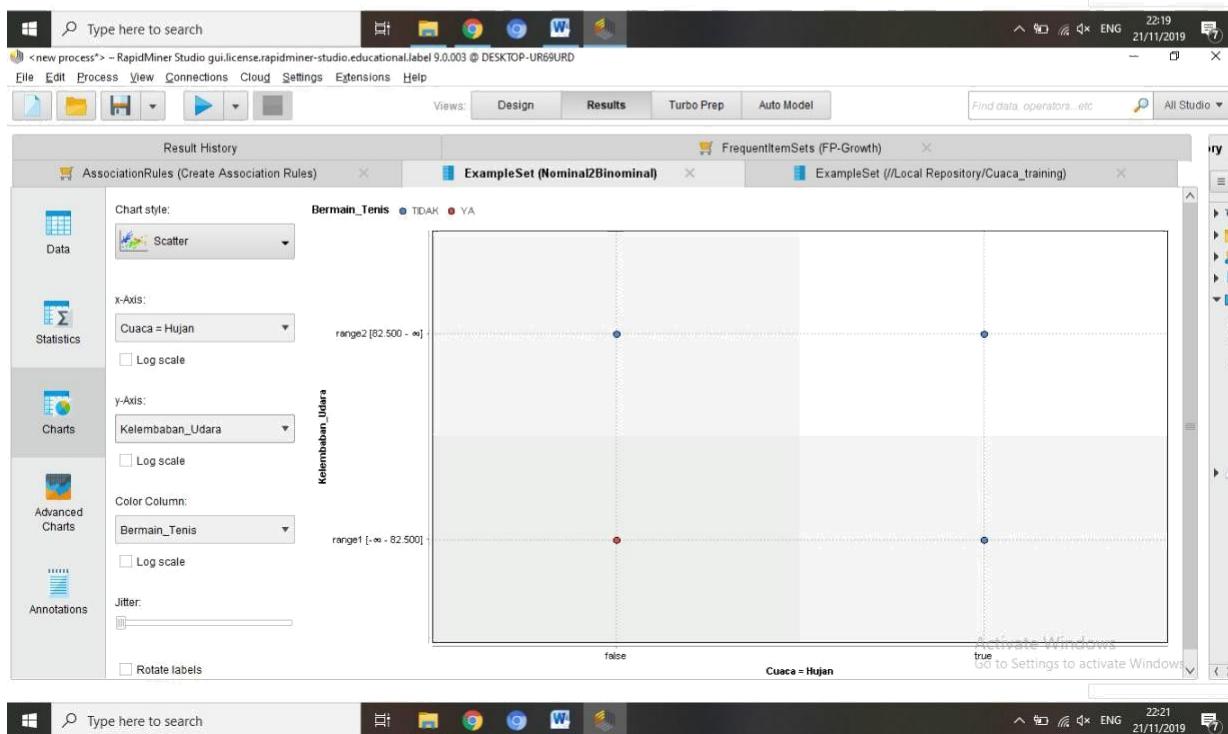
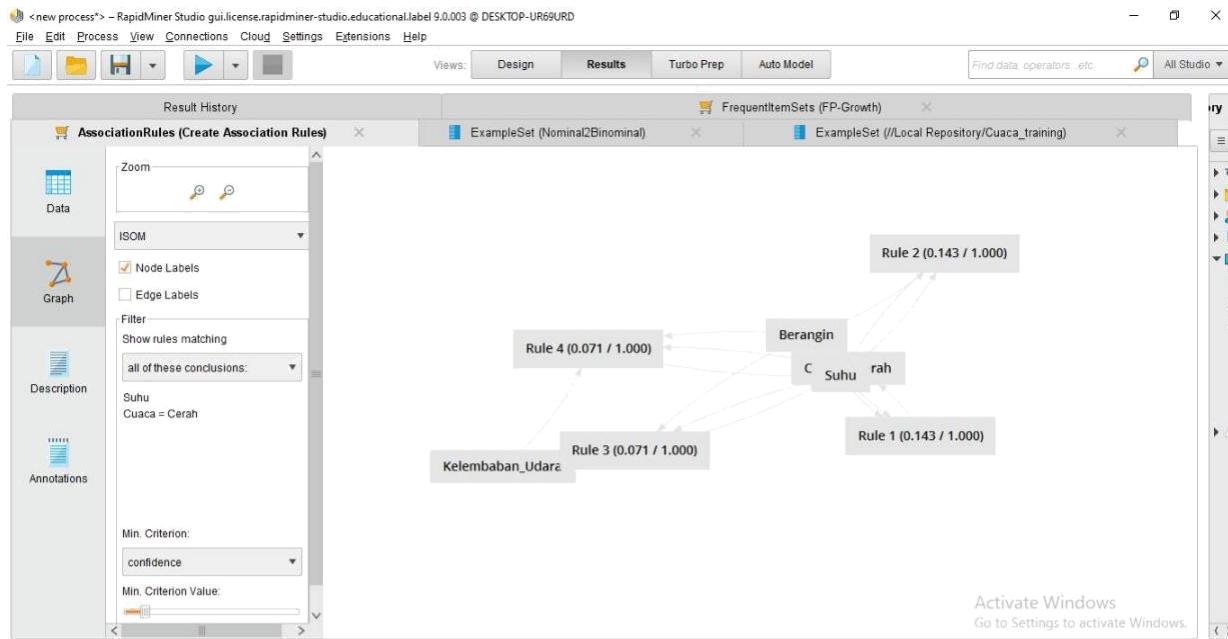
AssociationRules (Create Association Rules)

| Premises | Conclusion | Support | Confidence | LaPlace | Gain | p-s |
|---|---------------|---------|------------|---------|--------|-------|
| Berangin, Suhu | Cuaca = Cerah | 0.143 | 1 | 1 | -0.143 | 0.092 |
| Berangin, Cuaca = Cerah | Suhu | 0.143 | 1 | 1 | -0.143 | 0.082 |
| Kelembaban_Udara, Berangin, Suhu | Cuaca = Cerah | 0.071 | 1 | 1 | -0.071 | 0.046 |
| Kelembaban_Udara, Berangin, Cuaca = Cerah | Suhu | 0.071 | 1 | 1 | -0.071 | 0.041 |

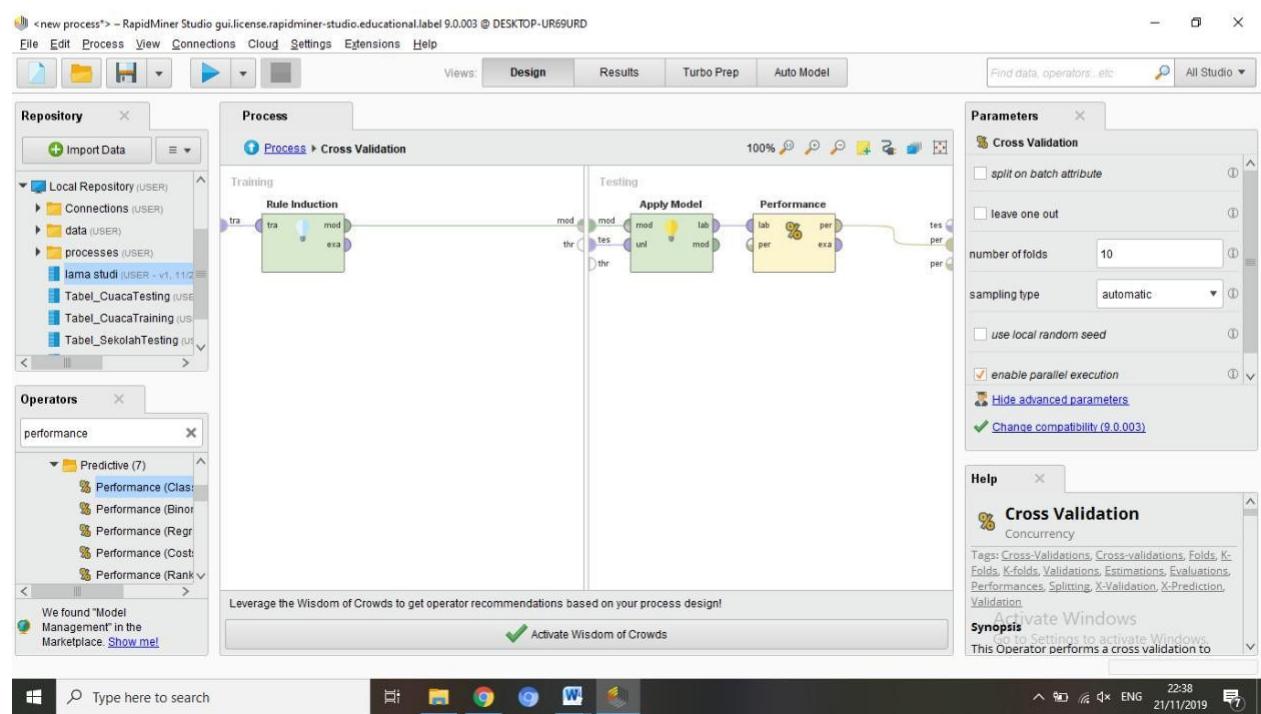
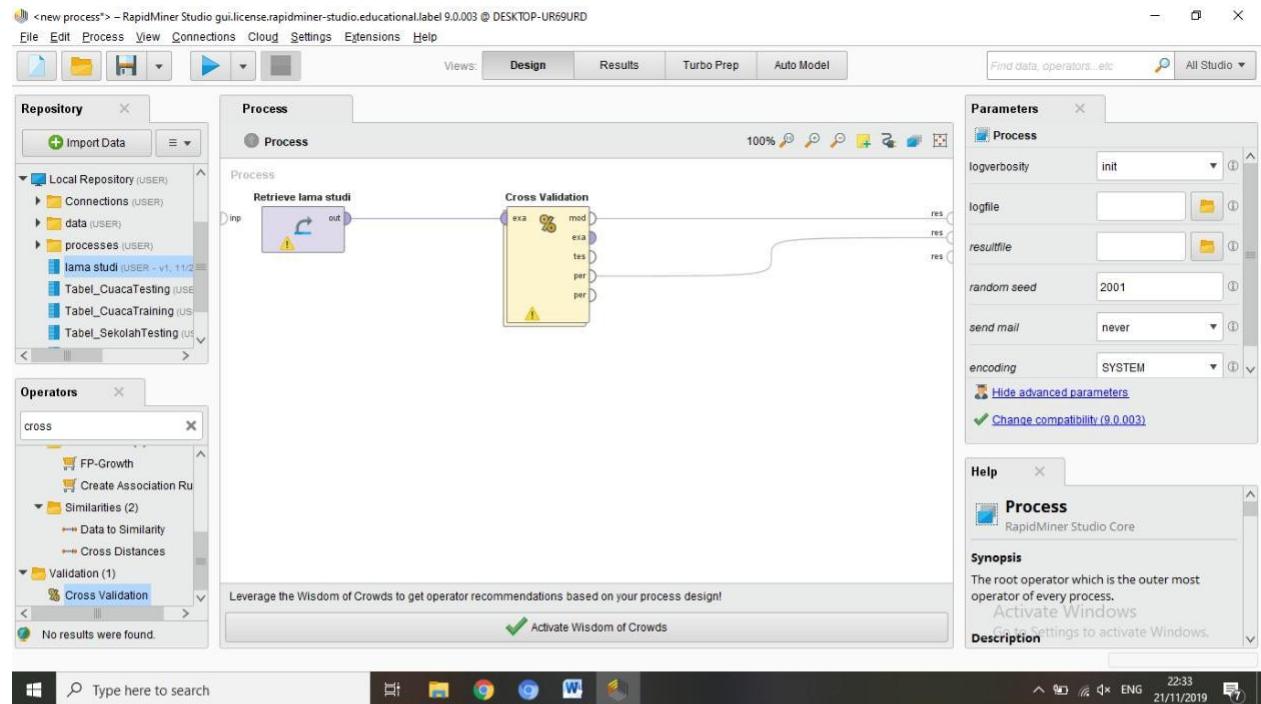
ExampleSet (Nominal2Binomial)

ExampleSet (//Local Repository/Cuaca_training)





TUGAS



<new process*> – RapidMiner Studio gui.license.rapidminer-studio.educational.label 9.0.003 @ DESKTOP-UR69URD

File Edit Process View Connections Cloud Settings Extensions Help

Views: Design Results Turbo Prep Auto Model Find data, operators... etc All Studio

ExampleSet (/Local Repository/lama studi) ExampleSet (/Local Repository/Cuaca_training) RuleModel (Rule Induction)

Result History PerformanceVector (Performance)

RuleModel

Description

```
if Rerata_SKS > 18.500 then TEPAT (2 / 10)
if Gender = PRIA then TERLAMBAT (4 / 0)
if Jurusan_SMA = IFA then TEPAT (0 / 2)
if Jurusan_SMA = IPS then TERLAMBAT (1 / 0)
else TEPAT (0 / 0)

correct: 17 out of 19 training examples.
```

Annotations

Activate Windows Go to Settings to activate Windows.

Type here to search

22:41 21/11/2019

<new process*> – RapidMiner Studio gui.license.rapidminer-studio.educational.label 9.0.003 @ DESKTOP-UR69URD

File Edit Process View Connections Cloud Settings Extensions Help

Views: Design Results Turbo Prep Auto Model Find data, operators... etc All Studio

ExampleSet (/Local Repository/lama studi) ExampleSet (/Local Repository/Cuaca_training) RuleModel (Rule Induction)

Result History PerformanceVector (Performance)

Performance

Criterion accuracy

Table View Plot View

accuracy: 65.00% +/- 32.02% (micro average: 65.00%)

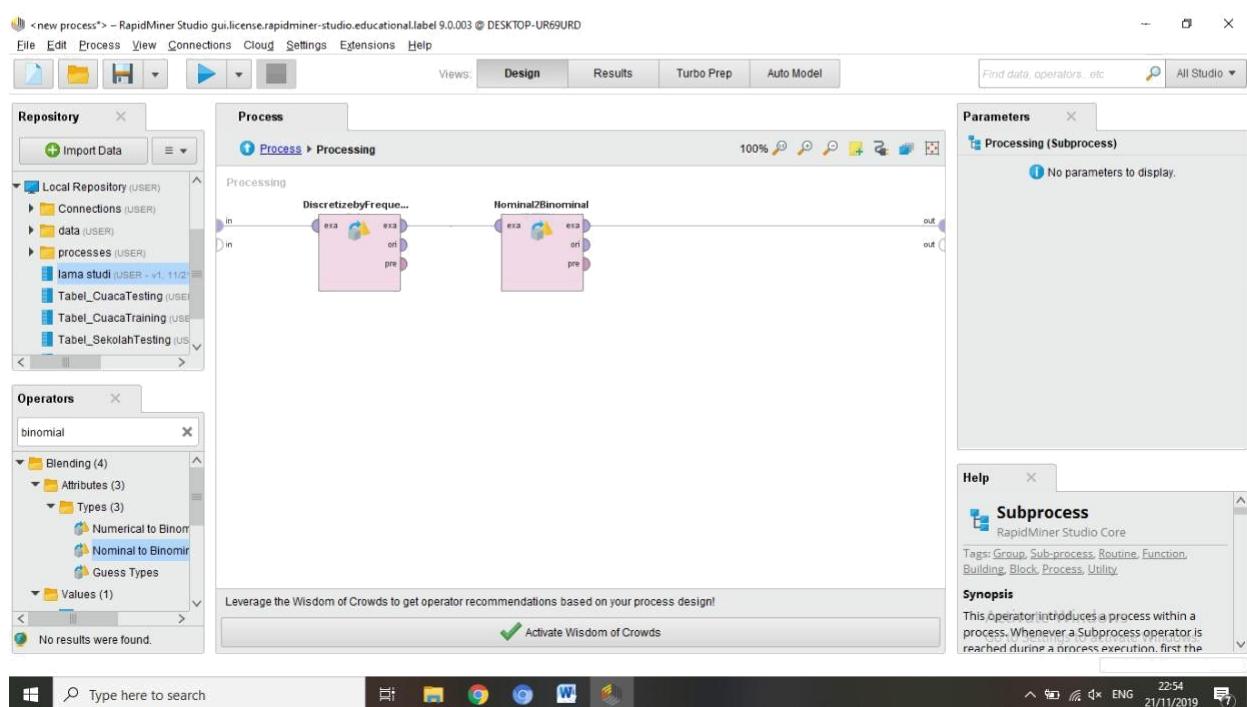
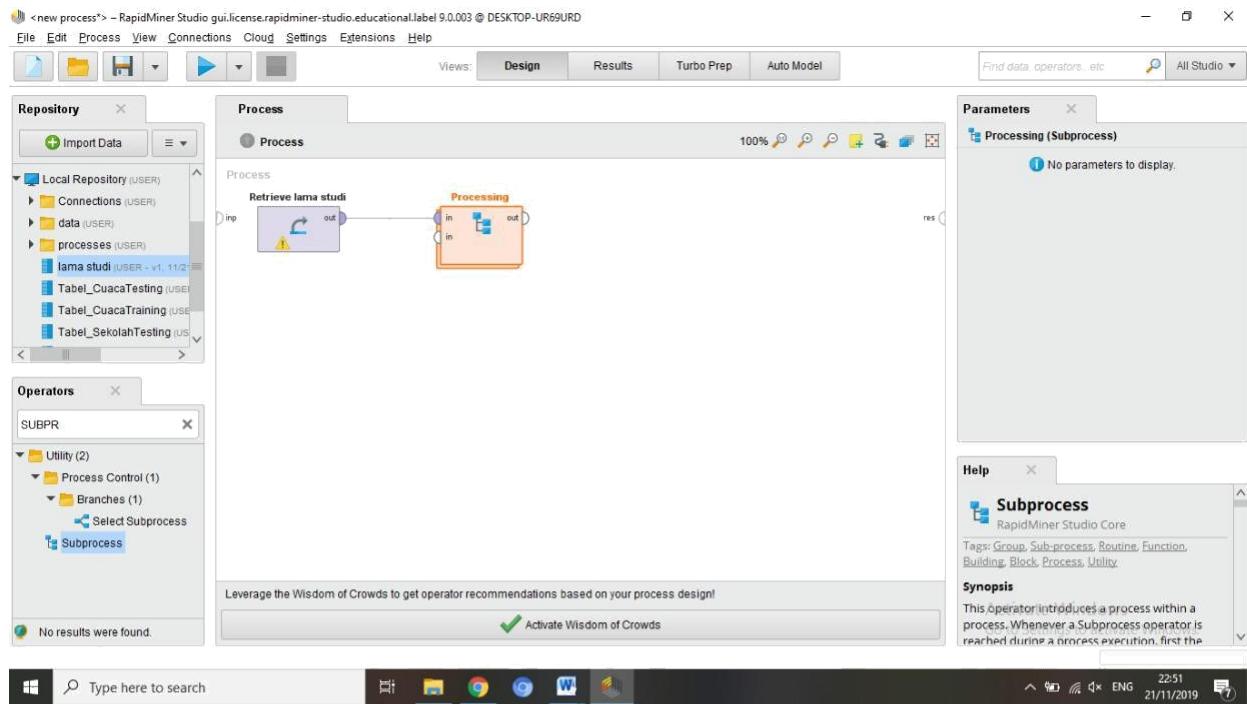
| | true TERLAMBAT | true TEPAT | class precision |
|-----------------|----------------|------------|-----------------|
| pred. TERLAMBAT | 4 | 4 | 50.00% |
| pred. TEPAT | 3 | 9 | 75.00% |
| class recall | 57.14% | 69.23% | |

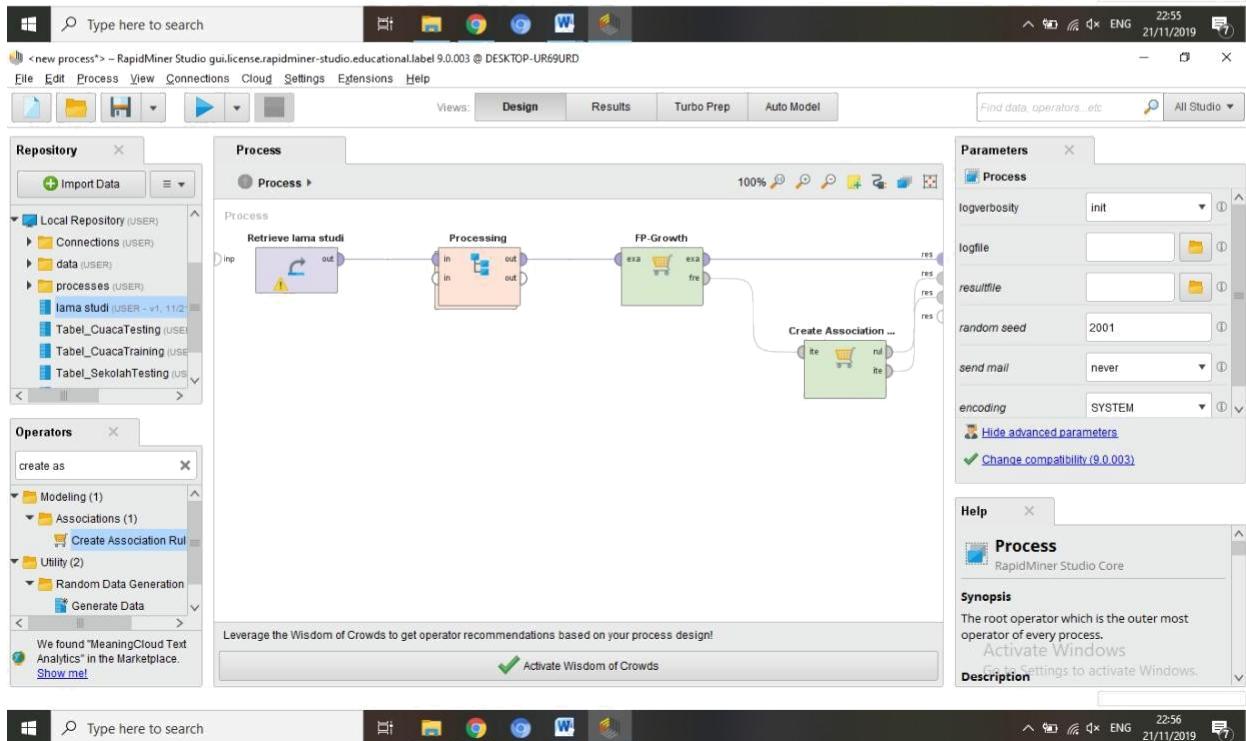
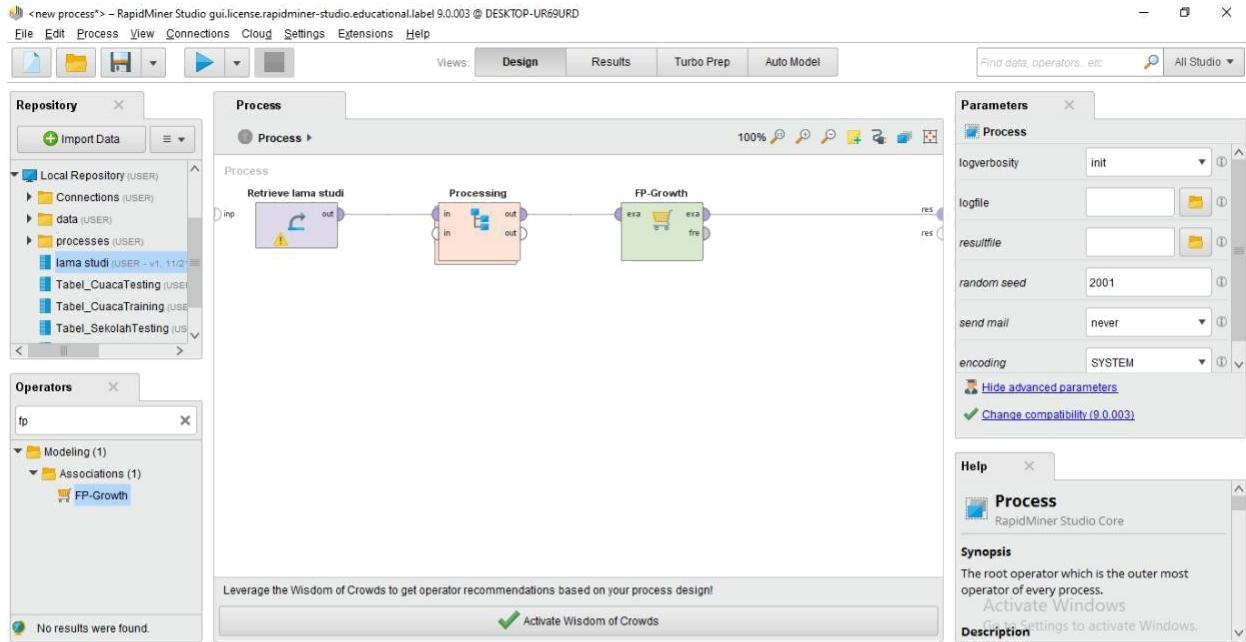
Annotations

Activate Windows Go to Settings to activate Windows.

Type here to search

22:39 21/11/2019





Number of bins = 2

Frequent Item Set (FP-Growth)

The screenshot shows the RapidMiner Studio interface with the 'FrequentItemSets (FP-Growth)' tab selected. The results table displays frequent item sets of size 1 to 2. The columns are labeled 'Size', 'Support', 'Item 1', 'Item 2', 'Item 3', 'Item 4', and 'Item 5'. The data includes items like Gender, Jurusan_SMA = IPA, Asal_Sekolah, Jurusan_SMA = IPS, Asisten, Rerata_SKS, and various combinations of these items.

| Size | Support | Item 1 | Item 2 | Item 3 | Item 4 | Item 5 |
|------|---------|--------------------|--------------------|--------|--------|--------|
| 1 | 0.750 | Gender | | | | |
| 1 | 0.500 | Jurusan_SMA = IPA | | | | |
| 1 | 0.300 | Asal_Sekolah | | | | |
| 1 | 0.300 | Jurusan_SMA = IPS | | | | |
| 1 | 0.250 | Asisten | | | | |
| 1 | 0.250 | Rerata_SKS | | | | |
| 1 | 0.200 | Jurusan_SMA = LAIN | | | | |
| 2 | 0.350 | Gender | Jurusan_SMA = IPA | | | |
| 2 | 0.250 | Gender | Asal_Sekolah | | | |
| 2 | 0.250 | Gender | Jurusan_SMA = IPS | | | |
| 2 | 0.200 | Gender | Asisten | | | |
| 2 | 0.250 | Gender | Rerata_SKS | | | |
| 2 | 0.150 | Gender | Jurusan_SMA = LAIN | | | |
| 2 | 0.150 | Jurusan_SMA = IPA | Asal_Sekolah | | | |
| 2 | 0.200 | Jurusan_SMA = IPA | Asisten | | | |

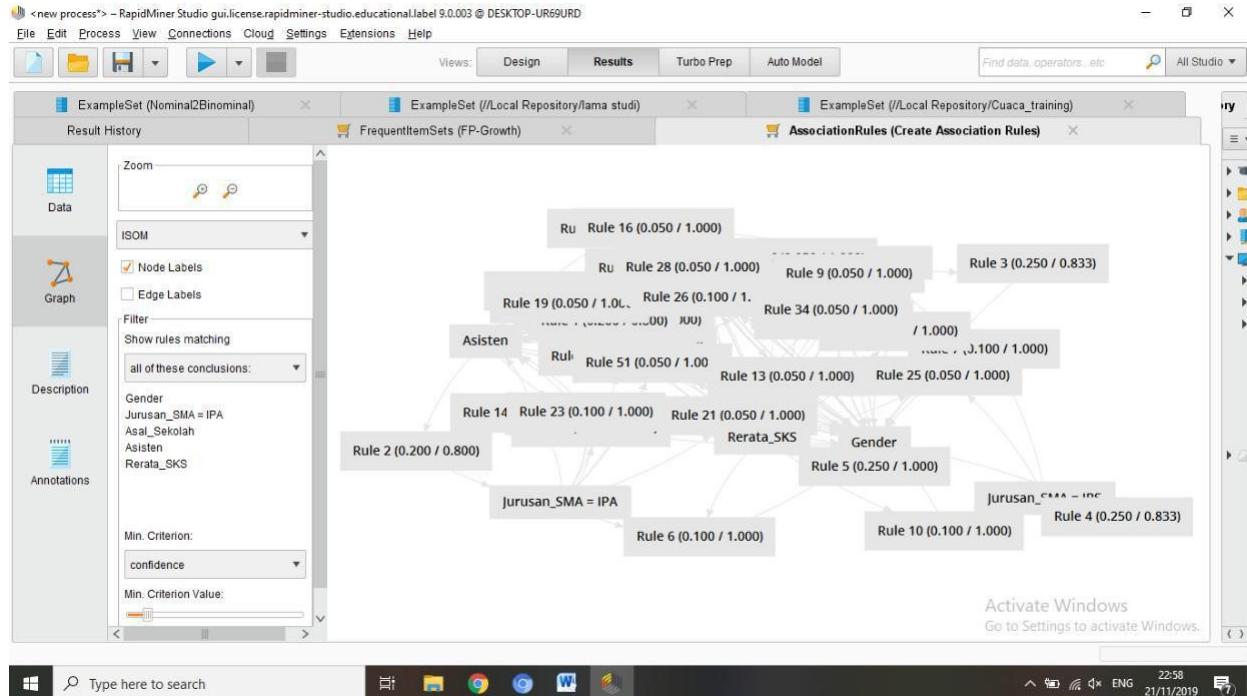
Association Rules (Create Association Rules)

Table View

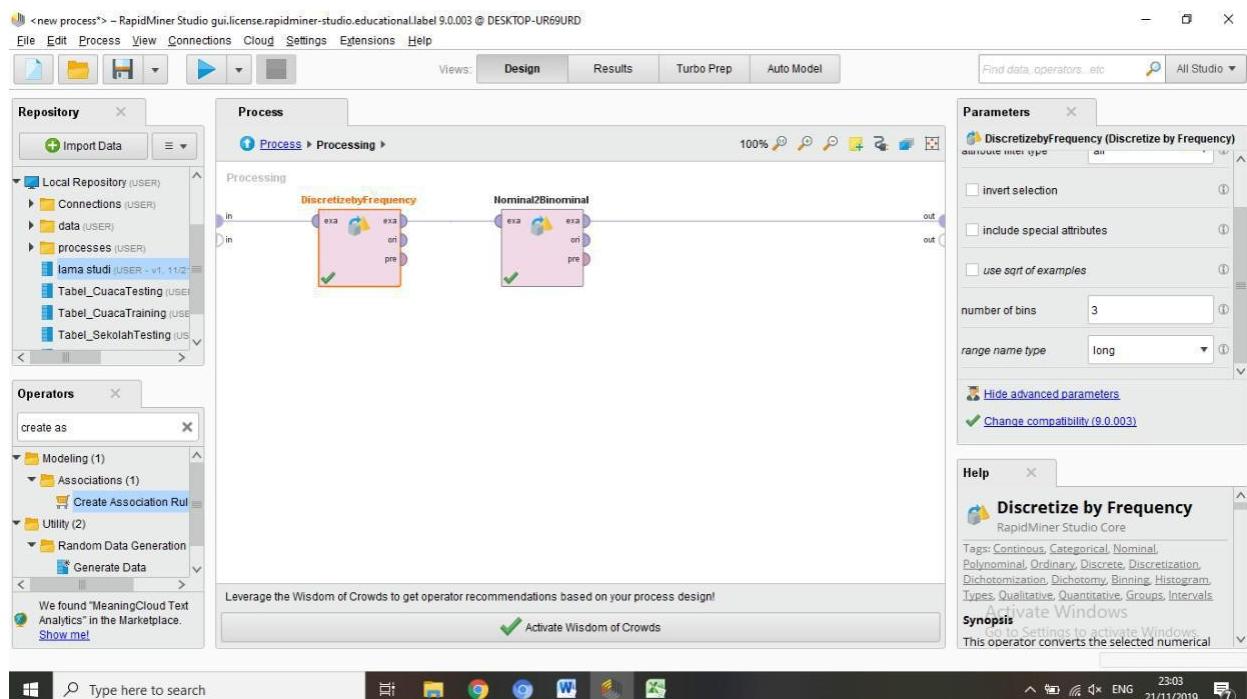
The screenshot shows the RapidMiner Studio interface with the 'AssociationRules (Create Association Rules)' tab selected. The results table displays association rules with columns for 'No.', 'Premises', 'Conclusion', 'Support', 'Confidence', 'LaPlace', and 'G'. The data includes rules like 'Asal_Sekolah' → 'Gender', 'Jurusan_SMA = IPS' → 'Gender', etc. A sidebar on the left shows the selected conclusions: Gender, Jurusan_SMA = IPA, Asal_Sekolah, Asisten, and Rerata_SKS.

| No. | Premises | Conclusion | Support | Confidence | LaPlace | G |
|-----|----------------------------------|--------------|---------|------------------|---------|----|
| 3 | Asal_Sekolah | Gender | 0.250 | 0.833 | 0.962 | -0 |
| 4 | Jurusan_SMA = IPS | Gender | 0.250 | 0.833 | 0.962 | -0 |
| 5 | Rerata_SKS | Gender | 0.250 | 1 | 1 | -0 |
| 6 | Jurusan_SMA = IPA, Rerata_SKS | Gender | 0.100 | 1 | 1 | -0 |
| 7 | Asal_Sekolah, Jurusan_SMA = IPS | Gender | 0.100 | 1 | 1 | -0 |
| 8 | Asal_Sekolah, Rerata_SKS | Gender | 0.150 | 1 | 1 | -0 |
| 9 | Asal_Sekolah, Jurusan_SMA = LAIN | Gender | 0.050 | 1 | 1 | -0 |
| 10 | Jurusan_SMA = IPS, Rerata_SKS | Gender | 0.100 | 1 | 1 | -0 |
| 11 | Asisten, Rerata_SKS | Gender | 0.150 | 1 | 1 | -0 |
| 12 | Asisten, Jurusan_SMA = LAIN | Gender | 0.050 | 1 | 1 | -0 |
| 13 | Rerata_SKS, Jurusan_SMA = LAIN | Gender | 0.050 | 1 | 1 | -0 |
| 14 | Jurusan_SMA = IPA, Rerata_SKS | Asisten | 0.100 | 1 | 1 | -0 |
| 15 | Asal_Sekolah, Jurusan_SMA = LAIN | Asisten | 0.050 | 1 | 1 | -0 |
| 16 | Asisten, Jurusan_SMA = LAIN | Asal_Sekolah | 0.050 | 1 | 1 | -0 |
| 17 | Asal_Sekolah, Jurusan_SMA = LAIN | Rerata_SKS | 0.050 | Activate Windows | -0 | v |

Graph View



b. Number of bins = 3



Frequent Item Set (FP-Growth)

No. of Sets: 85
Total Max. Size: 5
Min. Size: 1
Max. Size: 5
Contains Item:
Update View

| Size | Support | Item 1 | Item 2 | Item 3 | Item 4 | Item 5 |
|------|---------|-------------------------|-------------------------|--------|--------|--------|
| 1 | 0.750 | Gender | | | | |
| 1 | 0.500 | Jurusan_SMA = IPA | | | | |
| 1 | 0.400 | Rerata_SKS = range1 ... | | | | |
| 1 | 0.350 | Rerata_SKS = range2 ... | | | | |
| 1 | 0.300 | Asal_Sekolah | | | | |
| 1 | 0.300 | Jurusan_SMA = IPS | | | | |
| 1 | 0.250 | Asisten | | | | |
| 1 | 0.250 | Rerata_SKS = range3 ... | | | | |
| 1 | 0.200 | Jurusan_SMA = LAIN | | | | |
| 2 | 0.350 | Gender | Jurusan_SMA = IPA | | | |
| 2 | 0.200 | Gender | Rerata_SKS = range1 ... | | | |
| 2 | 0.300 | Gender | Rerata_SKS = range2 ... | | | |
| 2 | 0.250 | Gender | Asal_Sekolah | | | |
| 2 | 0.250 | Gender | Jurusan_SMA = IPS | | | |
| 2 | 0.200 | Gender | Asisten | | | |

Activate Windows
Go to Settings to activate Windows

Association Rules (Create Association Rules)

Table View

Show rules matching
all of these conclusions:

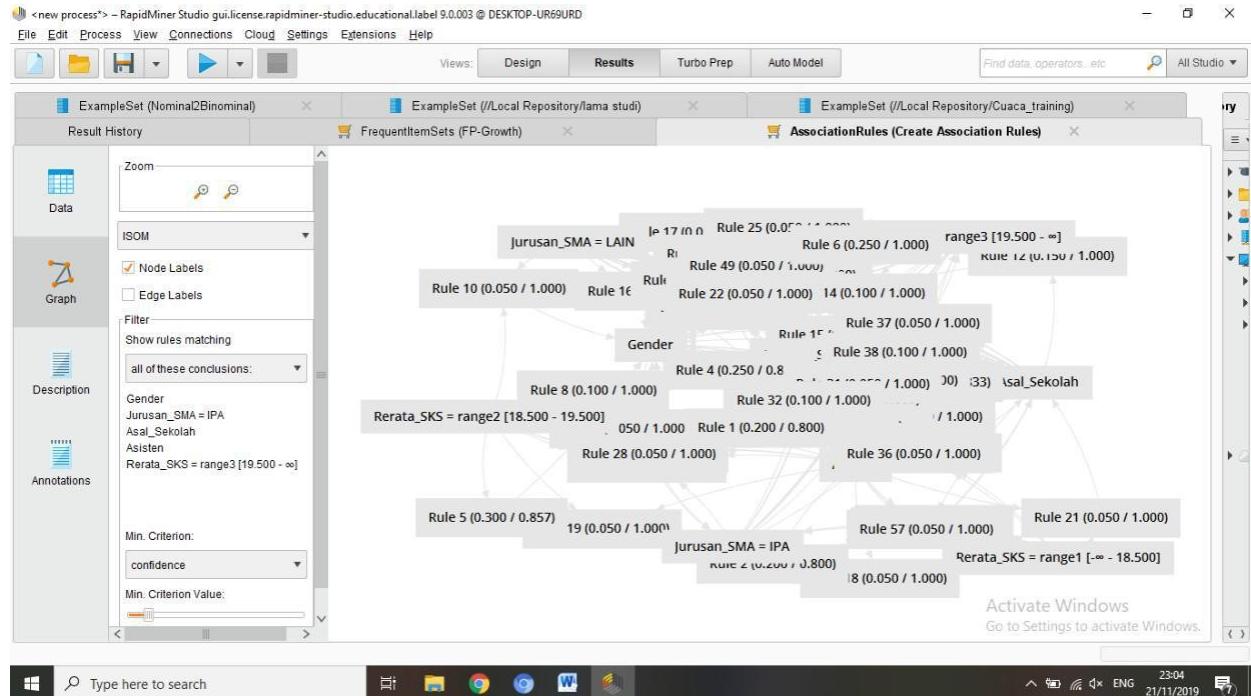
- Gender
- Jurusan_SMA = IPA
- Asal_Sekolah
- Asisten
- Rerata_SKS = range3 [19.500 - ∞]

Min. Criterion:
confidence
Min. Criterion Value:

| No. | Premises | Conclusion | Support | Confidence | LaPlace | G |
|-----|---|------------|---------|------------|---------|----|
| 3 | Asal_Sekolah | Gender | 0.250 | 0.833 | 0.962 | -0 |
| 4 | Jurusan_SMA = IPS | Gender | 0.250 | 0.833 | 0.962 | -0 |
| 5 | Rerata_SKS = range2 [18.500 - 19.500] | Gender | 0.300 | 0.857 | 0.963 | -0 |
| 6 | Rerata_SKS = range3 [19.500 - ∞] | Gender | 0.250 | 1 | 1 | -0 |
| 7 | Jurusan_SMA = IPA, Rerata_SKS = range3 [19.500 - ∞] | Gender | 0.100 | 1 | 1 | -0 |
| 8 | Rerata_SKS = range2 [18.500 - 19.500], Jurusan_SMA = IPS | Gender | 0.100 | 1 | 1 | -0 |
| 9 | Rerata_SKS = range2 [18.500 - 19.500], Asisten | Gender | 0.050 | 1 | 1 | -0 |
| 10 | Rerata_SKS = range2 [18.500 - 19.500], Jurusan_SMA = LAIN | Gender | 0.050 | 1 | 1 | -0 |
| 11 | Asal_Sekolah, Jurusan_SMA = IPS | Gender | 0.100 | 1 | 1 | -0 |
| 12 | Asal_Sekolah, Rerata_SKS = range3 [19.500 - ∞] | Gender | 0.150 | 1 | 1 | -0 |
| 13 | Asal_Sekolah, Jurusan_SMA = LAIN | Gender | 0.050 | 1 | 1 | -0 |
| 14 | Jurusan_SMA = IPS, Rerata_SKS = range3 [19.500 - ∞] | Gender | 0.100 | 1 | 1 | -0 |
| 15 | Asisten, Rerata_SKS = range3 [19.500 - ∞] | Gender | 0.150 | 1 | 1 | -0 |
| 16 | Asisten, Jurusan_SMA = LAIN | Gender | 0.050 | 1 | 1 | -0 |
| 17 | Rerata_SKS = range3 [19.500 - ∞], Jurusan_SMA = LAIN | Gender | 0.050 | 1 | 1 | -0 |

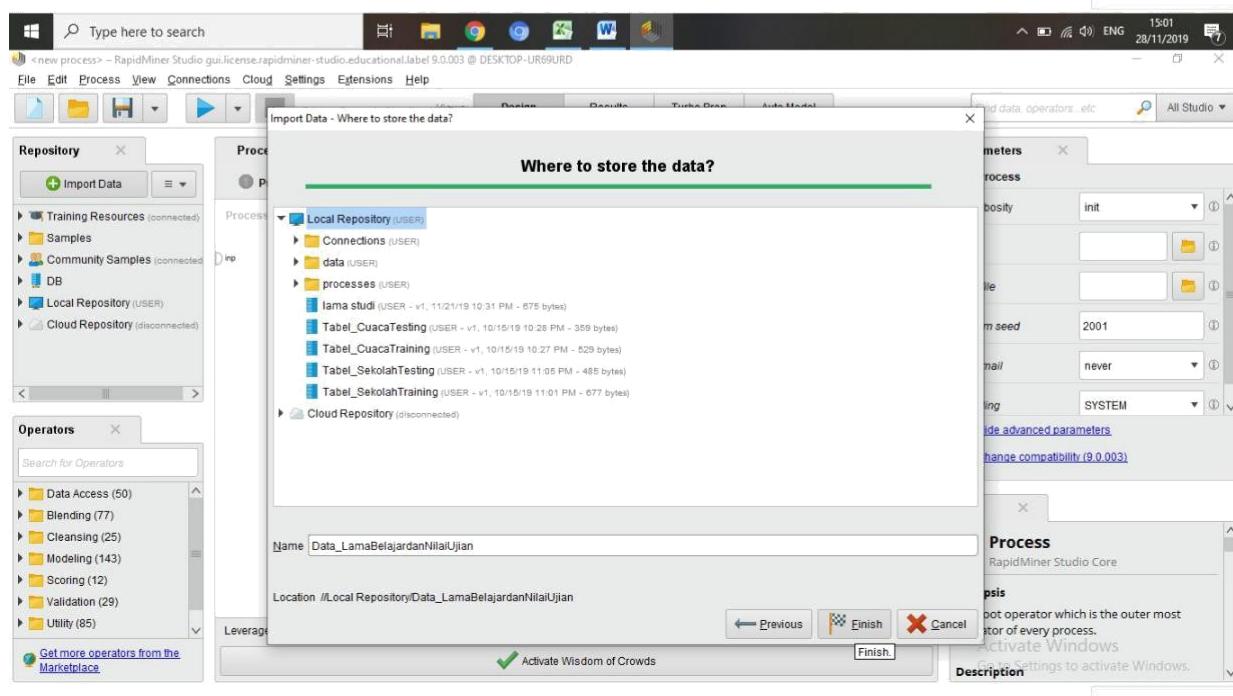
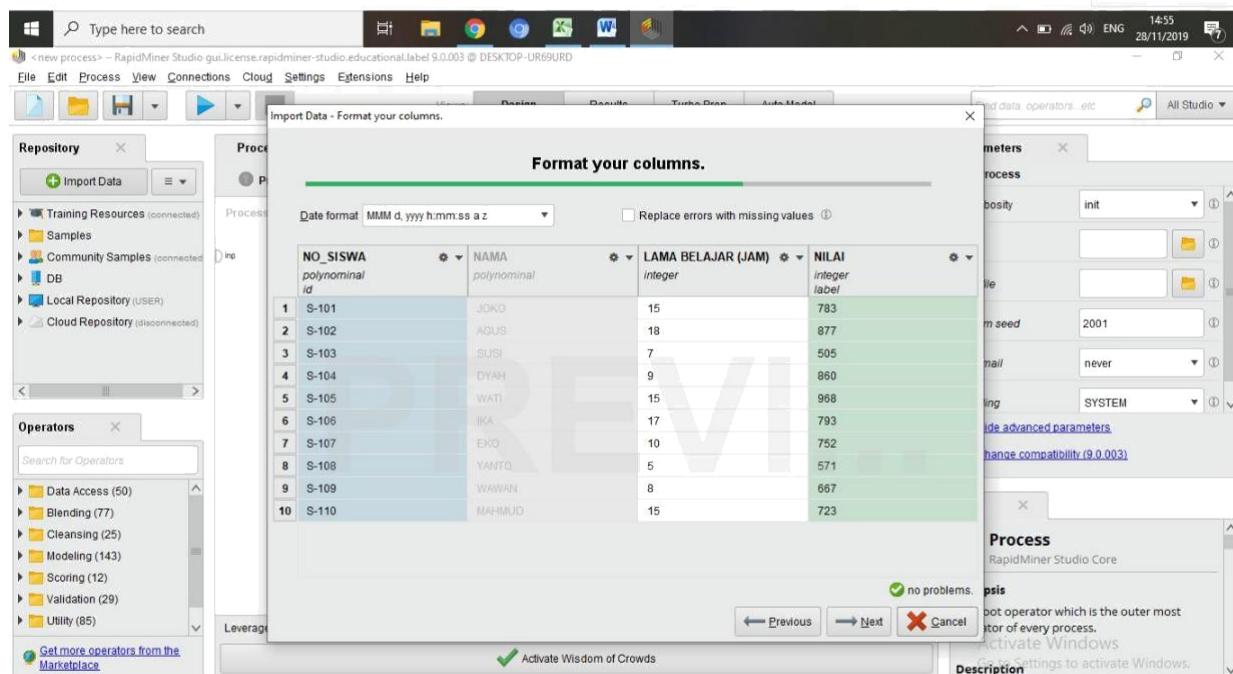
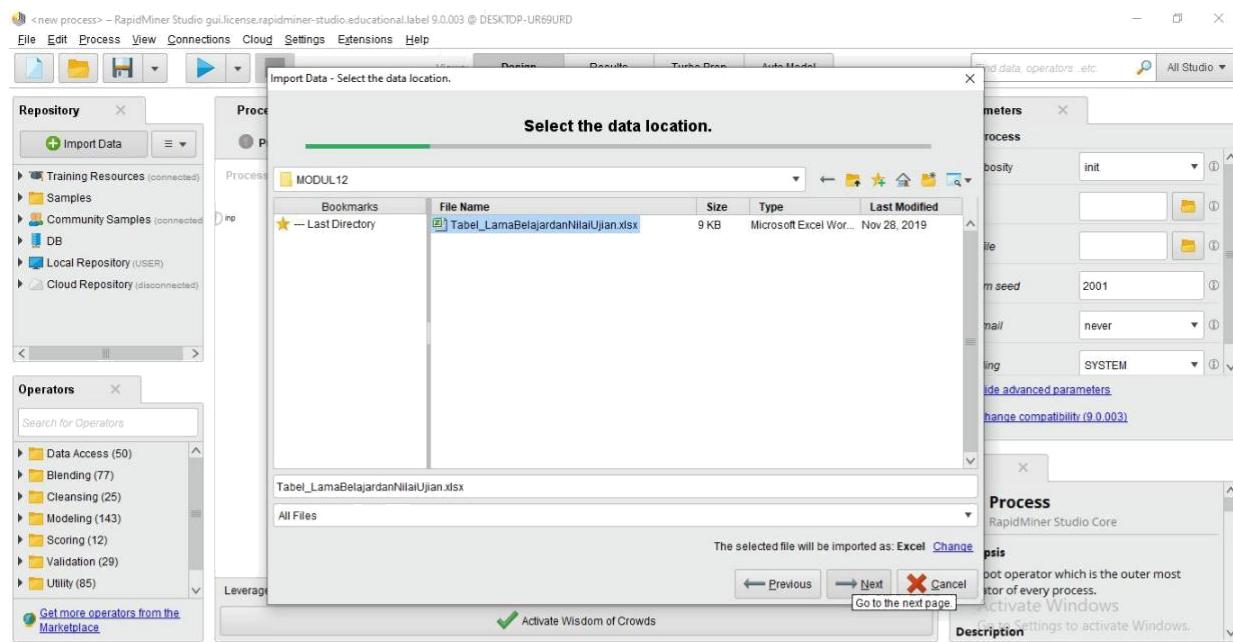
Activate Windows
Go to Settings to activate Windows

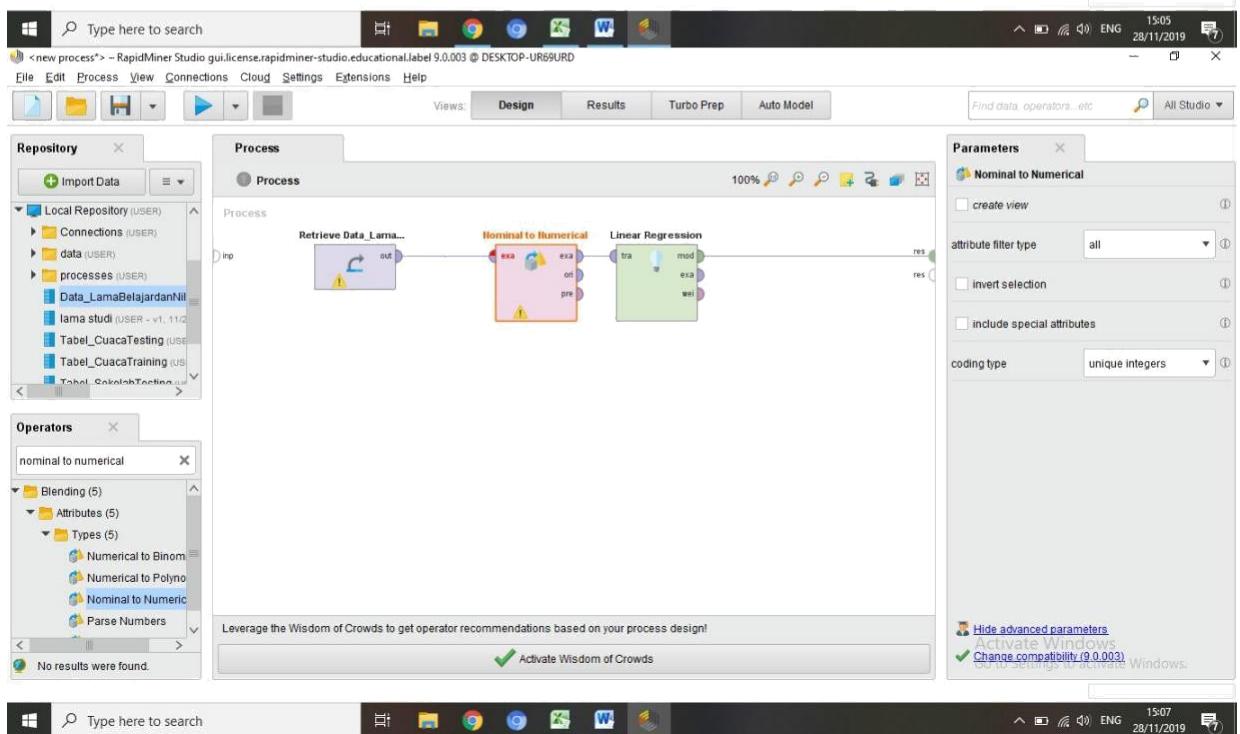
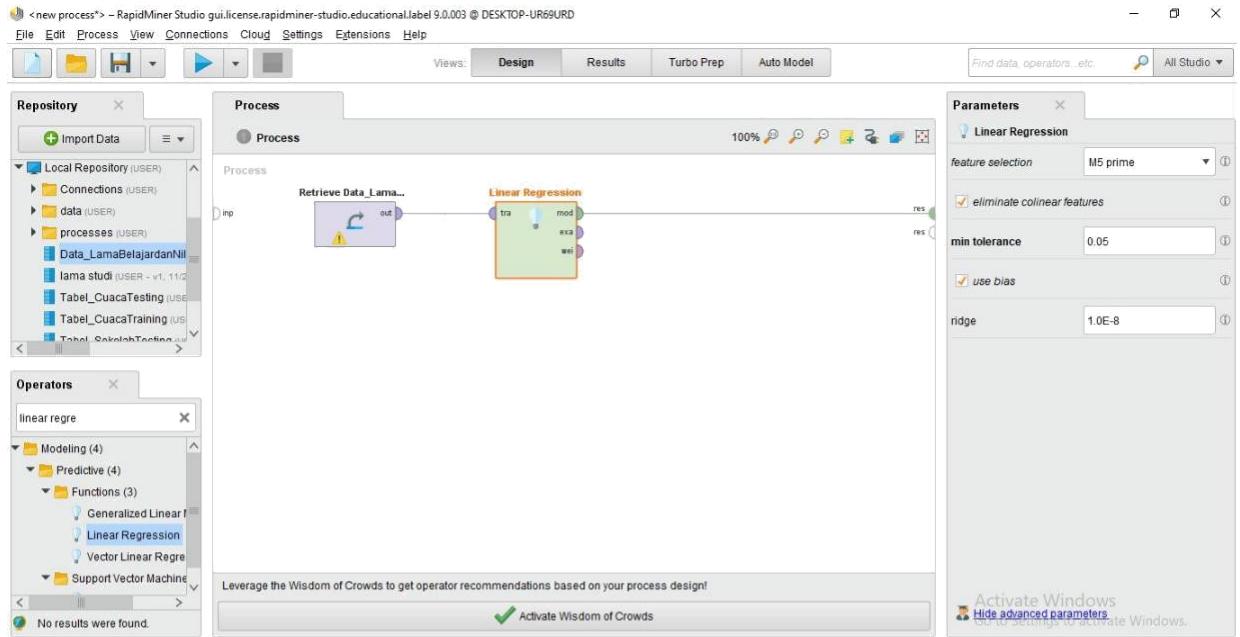
Graph View



MODUL 12

| | A | B | C | D |
|----|----------|--------|--------------------|-------|
| 1 | NO_SISWA | NAMA | LAMA BELAJAR (JAM) | NILAI |
| 2 | S-101 | JOKO | 15 | 783 |
| 3 | S-102 | AGUS | 18 | 877 |
| 4 | S-103 | SUSI | 7 | 505 |
| 5 | S-104 | DYAH | 9 | 860 |
| 6 | S-105 | WATI | 15 | 968 |
| 7 | S-106 | IKA | 17 | 793 |
| 8 | S-107 | EKO | 10 | 752 |
| 9 | S-108 | YANTO | 5 | 571 |
| 10 | S-109 | WAWAN | 8 | 667 |
| 11 | S-110 | MAHMUD | 15 | 723 |





Hasil proses regresi linier :

a) Table View (mencari besarnya nilai t-hitung)

The screenshot shows the RapidMiner Studio interface with the 'Results' tab selected. A table titled 'LinearRegression (Linear Regression)' is displayed, showing the following data:

| Attribute | Coefficient | Std. Error | Std. Coefficient | Tolerance | t-Stat | p-Value | Code |
|--------------------|-------------|------------|------------------|-----------|--------|---------|------|
| LAMA BELAJAR (JAM) | 21.608 | 7.645 | 0.707 | 1 | 2.827 | 0.022 | ** |
| (Intercept) | 492.769 | 96.909 | ? | ? | 5.085 | 0.001 | **** |

b) Text View (mencari model regresi)

The screenshot shows the RapidMiner Studio interface with the 'Results' tab selected. The text view displays the following regression equation:

$$21.608 * \text{LAMA BELAJAR (JAM)} + 492.769$$

2. Mencari Nilai t dan Model Regresi Linier Menggunakan RapidMiner

Screenshot showing the Microsoft Excel interface with a data table and the RapidMiner Studio interface.

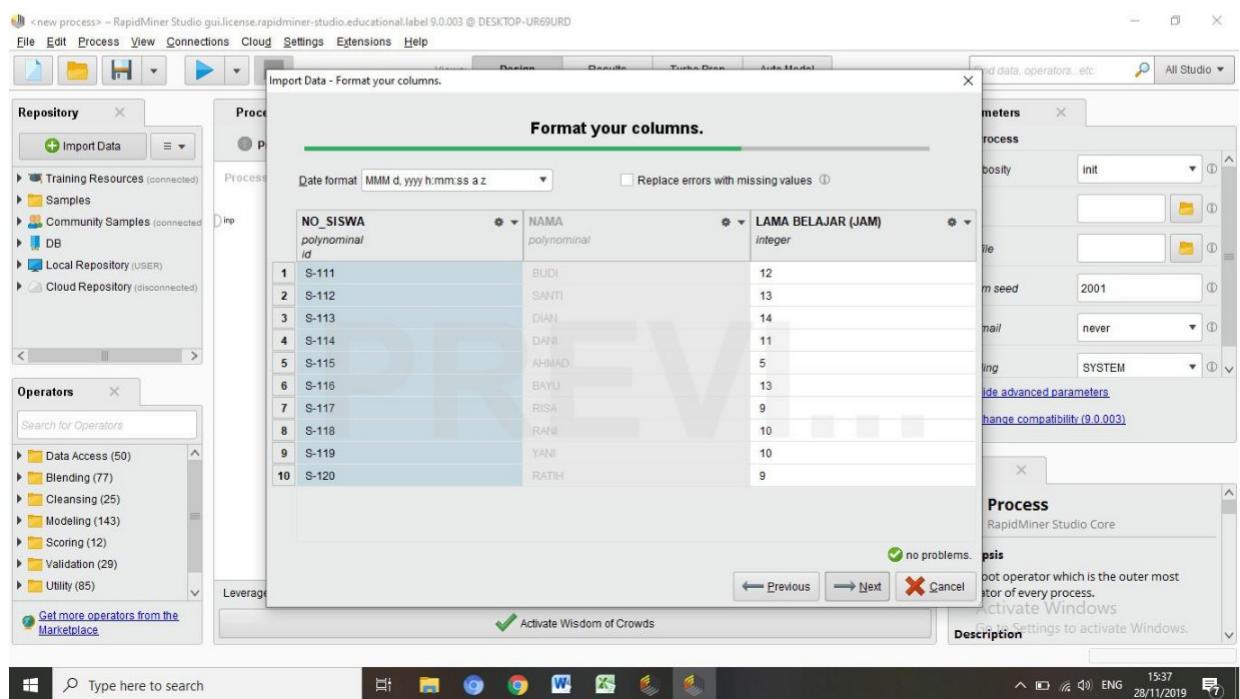
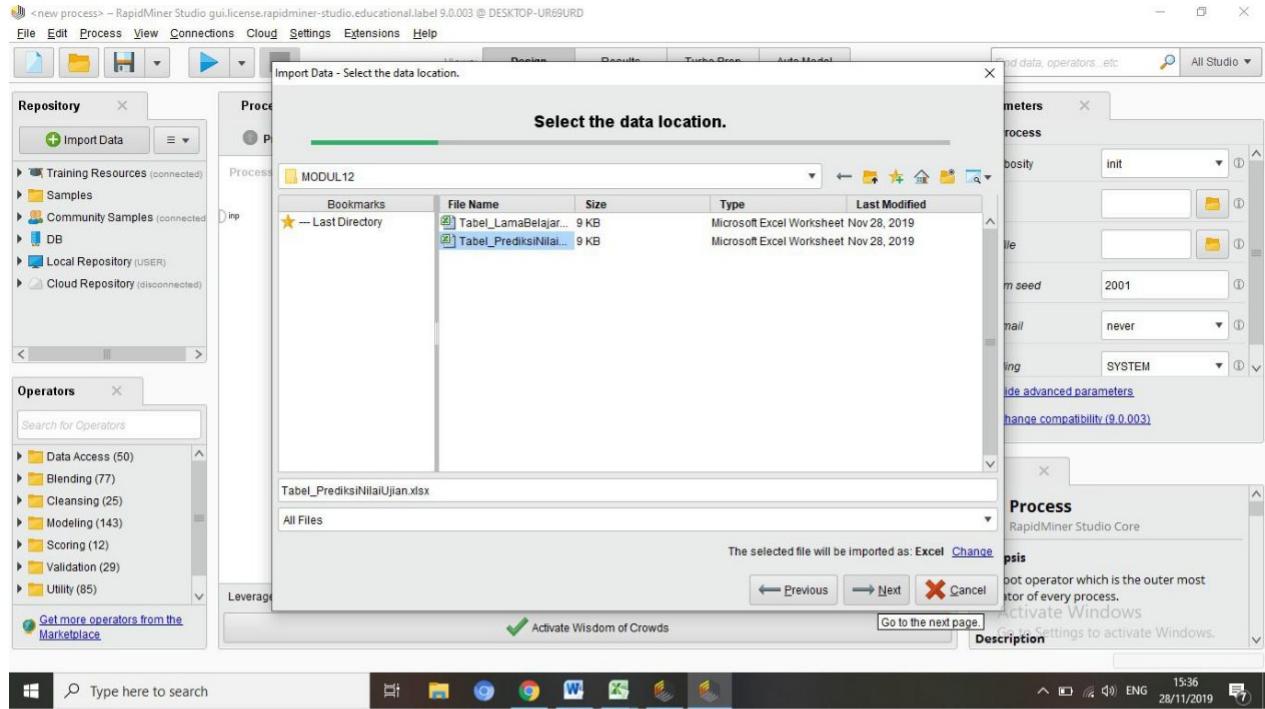
Microsoft Excel Screenshot:

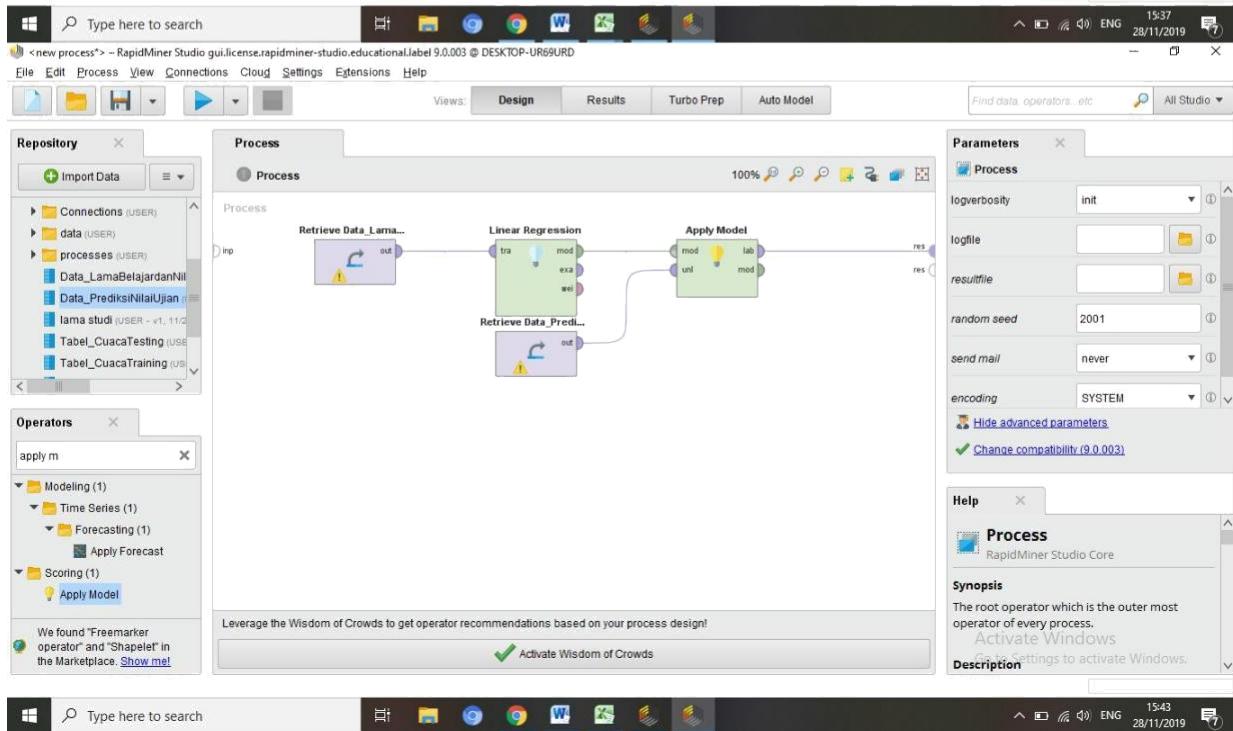
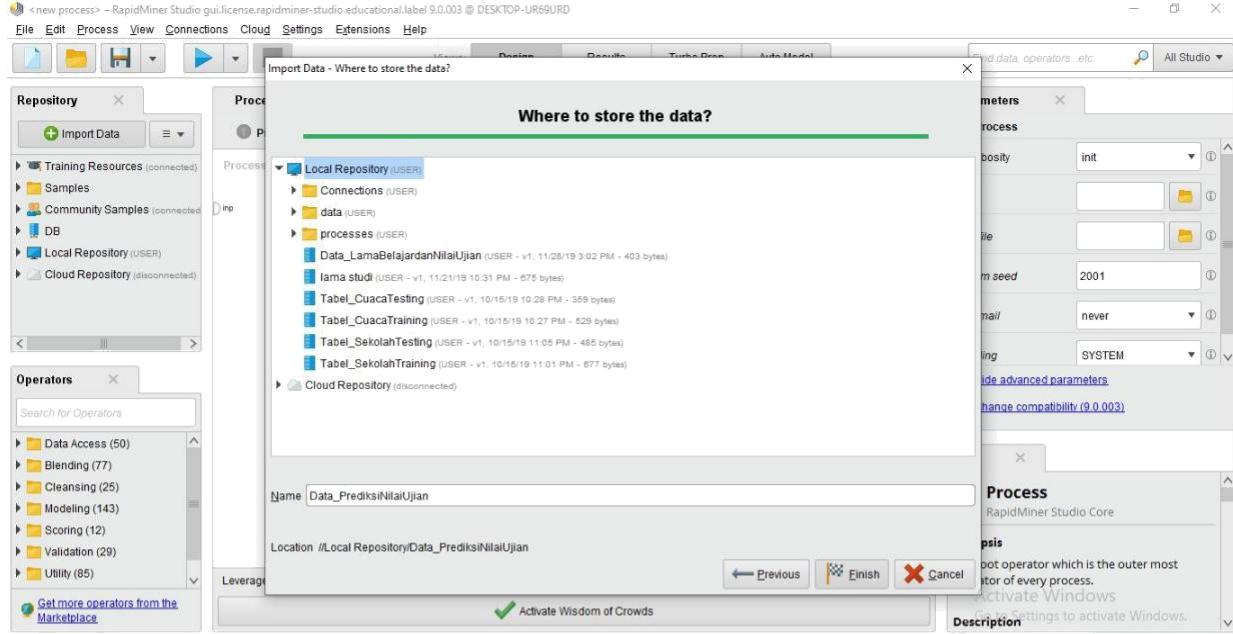
| | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S |
|----|----------|-------|--------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | NO_SISWA | NAMA | LAMA BELAJAR (JAM) | | | | | | | | | | | | | | | | |
| 2 | S-111 | BUDI | 12 | | | | | | | | | | | | | | | | |
| 3 | S-112 | SANTI | 13 | | | | | | | | | | | | | | | | |
| 4 | S-113 | DIAN | 14 | | | | | | | | | | | | | | | | |
| 5 | S-114 | DANI | 11 | | | | | | | | | | | | | | | | |
| 6 | S-115 | AHMAD | 5 | | | | | | | | | | | | | | | | |
| 7 | S-116 | BAYU | 13 | | | | | | | | | | | | | | | | |
| 8 | S-117 | RISA | 9 | | | | | | | | | | | | | | | | |
| 9 | S-118 | RANI | 10 | | | | | | | | | | | | | | | | |
| 10 | S-119 | YANI | 10 | | | | | | | | | | | | | | | | |
| 11 | S-120 | RATIH | 9 | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | |
| 13 | | | | | | | | | | | | | | | | | | | |
| 14 | | | | | | | | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | | | | | | | | |
| 16 | | | | | | | | | | | | | | | | | | | |
| 17 | | | | | | | | | | | | | | | | | | | |
| 18 | | | | | | | | | | | | | | | | | | | |
| 19 | | | | | | | | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | | | | | | | | |
| 21 | | | | | | | | | | | | | | | | | | | |
| 22 | | | | | | | | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | | | | | | | |
| 25 | | | | | | | | | | | | | | | | | | | |

RapidMiner Studio Screenshot:

The screenshot shows the RapidMiner Studio interface with the following components:

- Repository:** Training Resources (connected), Samples, Community Samples (connected), DB, Local Repository (USER), Cloud Repository (disconnected).
- Process:** A process titled "Process" is shown, with the message "Your process looks empty. Add some data first. Drag data or operators here."
- Operators:** A list of operators including Data Access (50), Blending (77), Cleansing (25), Modeling (143), Scoring (12), Validation (29), Utility (85). A link to "Get more operators from the Marketplace" is also present.
- Parameters:** Parameters for the "Process" operator are set to: verbosity: init, logfile: (empty), resultfile: (empty), random seed: 2001, send mail: never, encoding: SYSTEM. Options to "Hide advanced parameters" and "Change compatibility (9.0.003)" are available.
- Help:** Information about the "Process" operator, including Synopsis (The root operator which is the outer most operator of every process) and Description.
- System Bar:** Shows the Windows taskbar with various icons and the system clock indicating 15:34 on 28/11/2019.



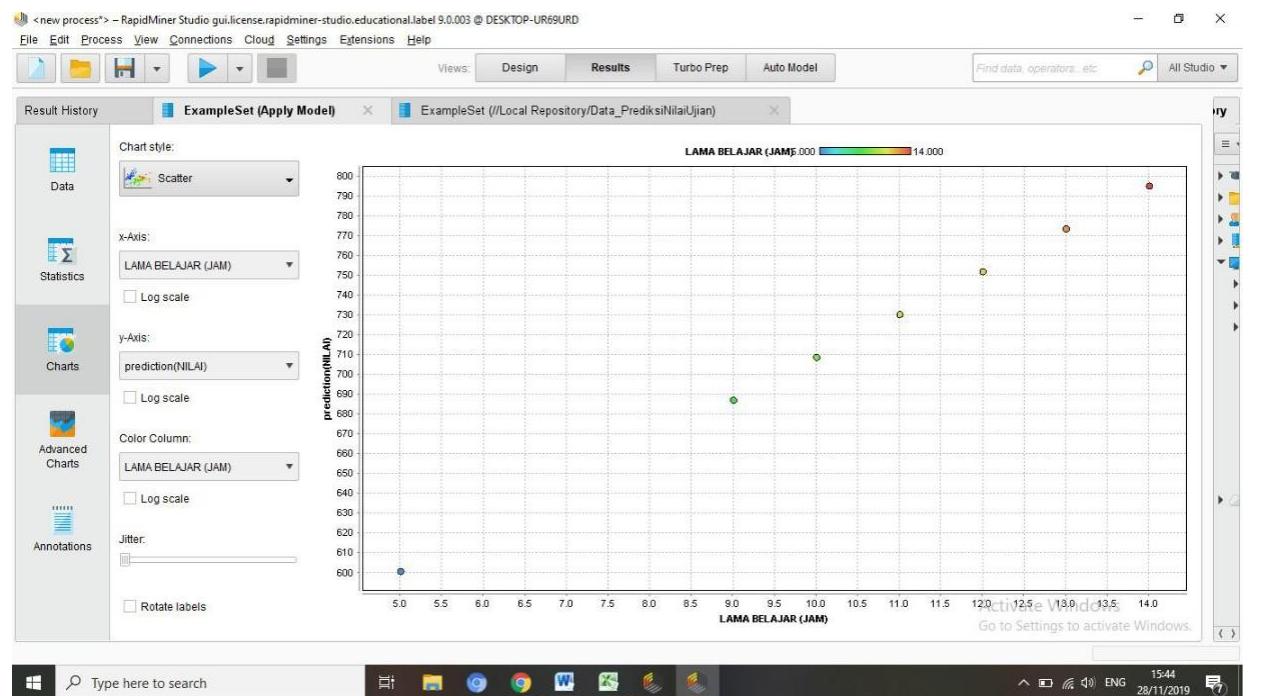


Hasil proses prediksi terhadap data testing menggunakan regresi linier :

a) Data View (mencari besarnya nilai t-hitung)

| Row No. | NO_SISWA | prediction(NILAI) | LAMA BELAJAR (JAM) |
|---------|----------|-------------------|--------------------|
| 1 | S-111 | 752.061 | 12 |
| 2 | S-112 | 773.668 | 13 |
| 3 | S-113 | 795.276 | 14 |
| 4 | S-114 | 730.453 | 11 |
| 5 | S-115 | 600.807 | 5 |
| 6 | S-116 | 773.668 | 13 |
| 7 | S-117 | 687.238 | 9 |
| 8 | S-118 | 708.845 | 10 |
| 9 | S-119 | 708.845 | 10 |
| 10 | S-120 | 687.238 | 9 |

b) Charts View (Scatter Plot)



Pembuktian Model Regresi Y =

$$21,608X_1 + 492,769$$

| Tabel Prediksi Nilai Siswa | | | | | |
|----------------------------|-------|--------------------|--------------------|---------|---------|
| NO_SISWA | NAMA | LAMA BELAJAR (JAM) | Prediction (NILAI) | E | F |
| 3 | S-111 | BUDI | 12 | 752,061 | 752,065 |
| 4 | S-112 | SANTI | 13 | 773,668 | 773,673 |
| 5 | S-113 | DIAN | 14 | 795,276 | 795,281 |
| 6 | S-114 | DANI | 11 | 730,453 | 730,457 |
| 7 | S-115 | AHMAD | 5 | 600,807 | 600,809 |
| 8 | S-116 | BAYU | 13 | 773,668 | 773,673 |
| 9 | S-117 | RISA | 9 | 687,238 | 687,241 |
| 10 | S-118 | RANI | 10 | 708,845 | 708,849 |
| 11 | S-119 | YANI | 10 | 708,845 | 708,849 |
| 12 | S-120 | RATIH | 9 | 687,238 | 687,241 |

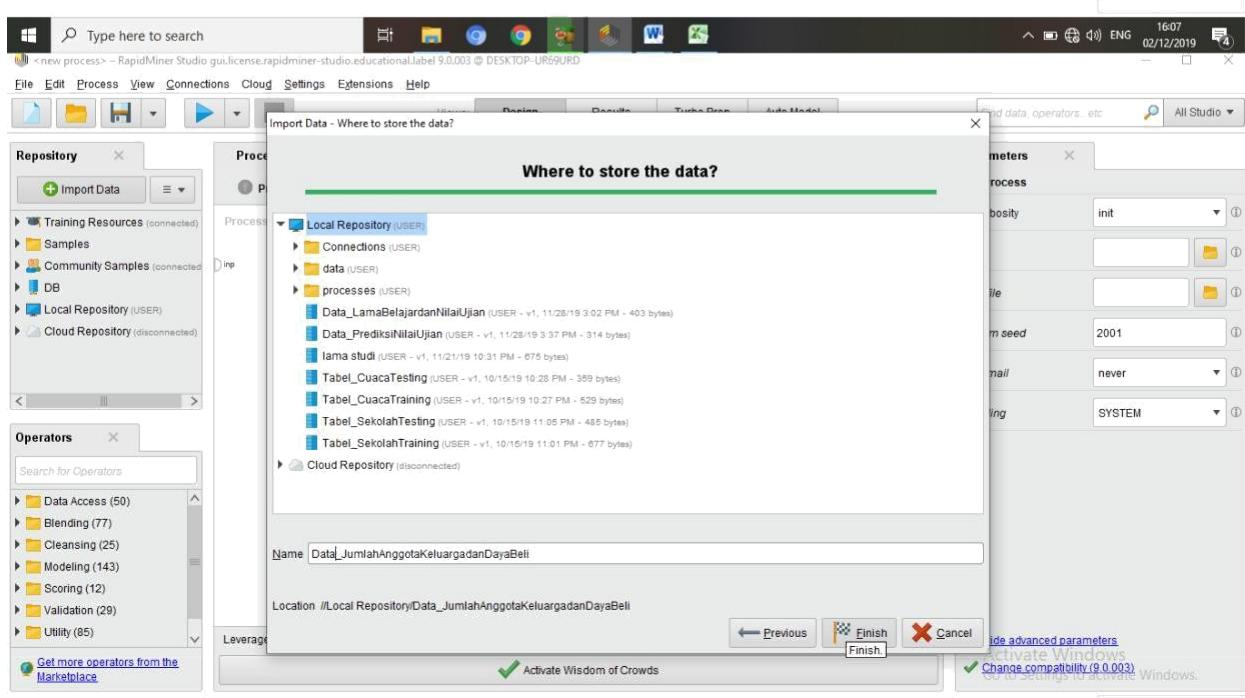
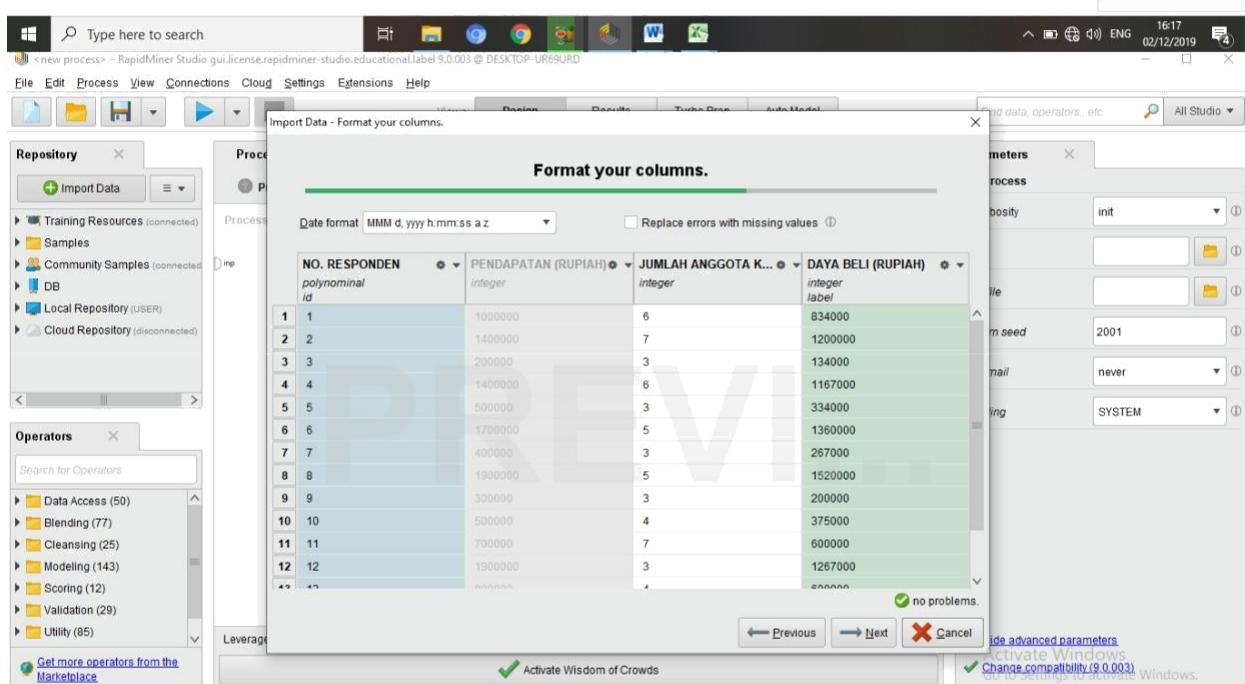
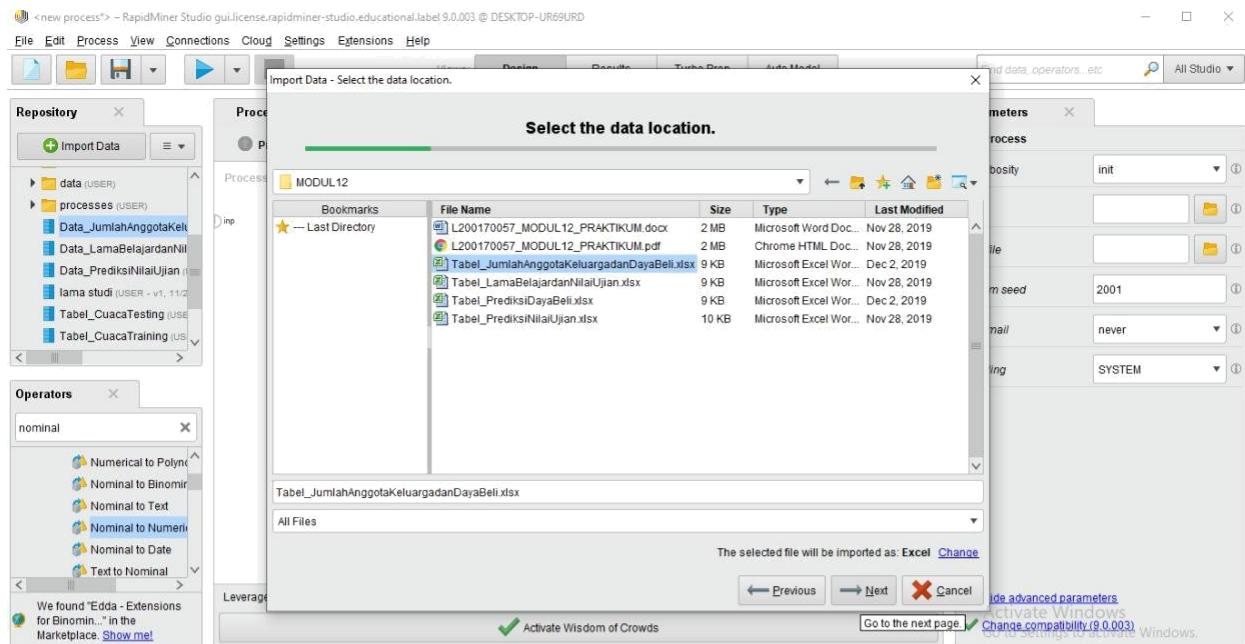
TUGAS

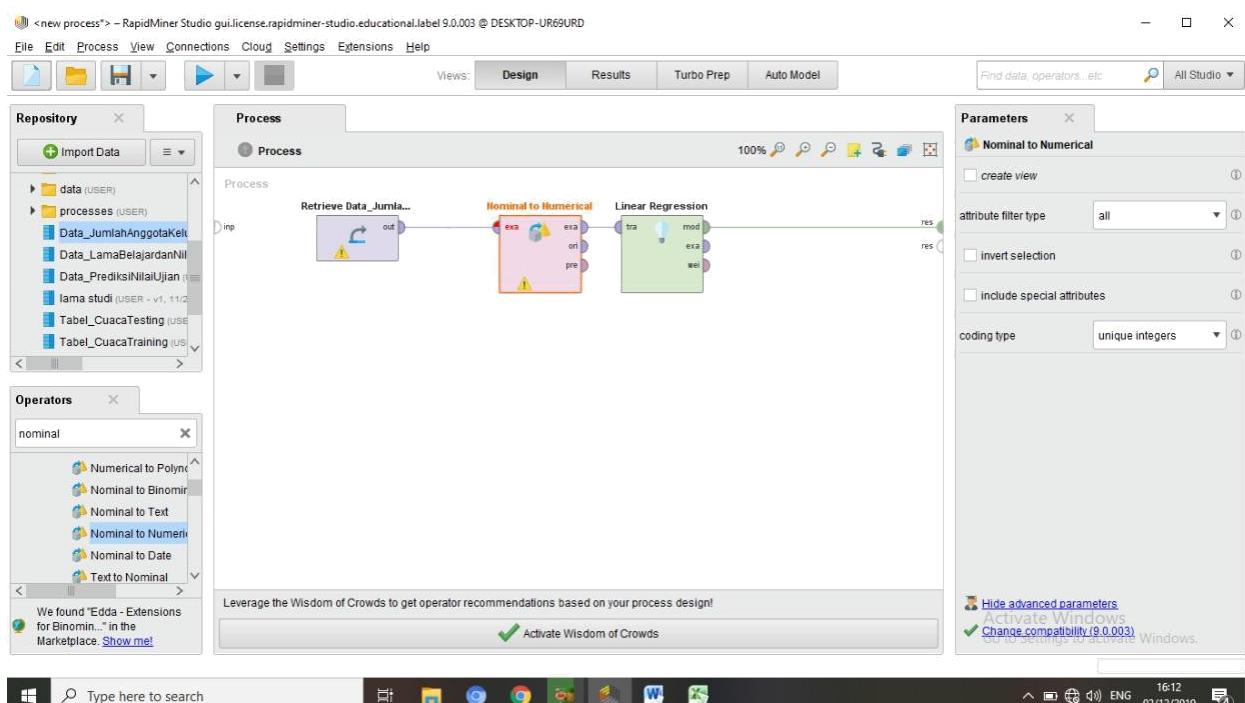
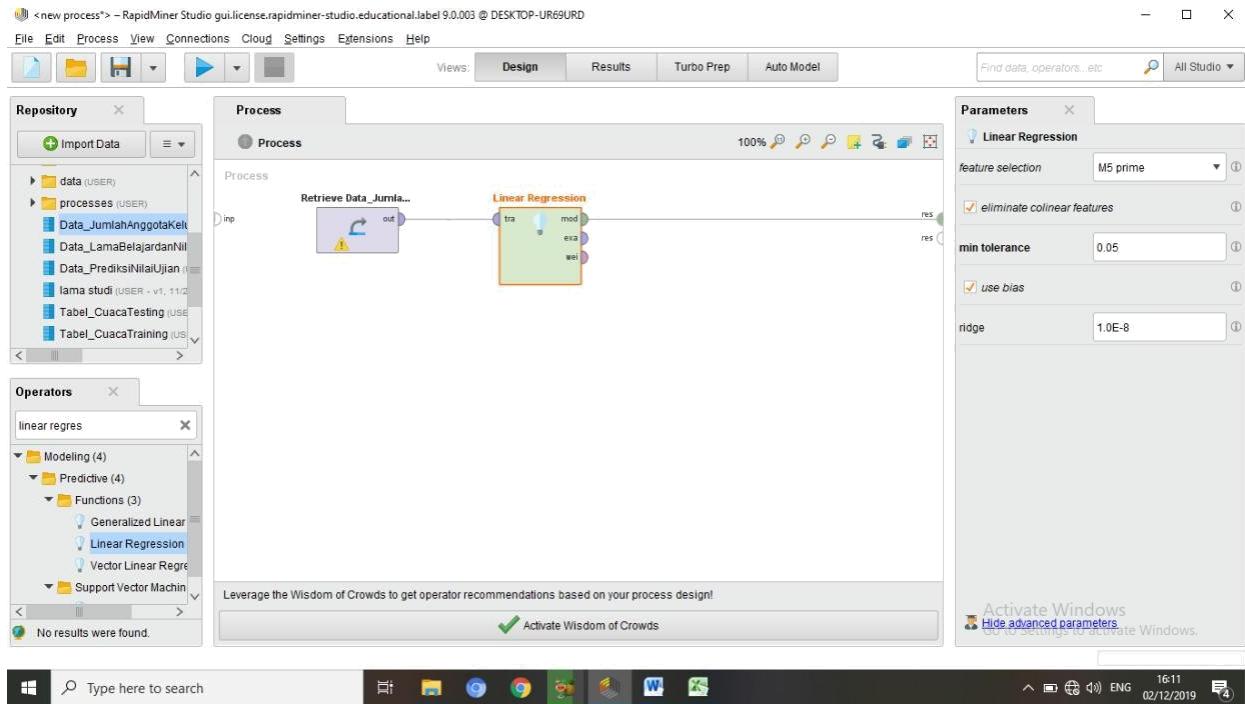
Mencari Nilai t-hitung dan Model Regresi Linier

The screenshot shows a Microsoft Excel spreadsheet titled "Tabel Jumlah Anggota Keluarga dan Daya Beli". The data is organized into columns: NO. RESPONDEŃ, PENDAPATAN (RUPIAH), JUMLAH ANGGOTA KELUARGA, and DAYA BELI (RUPIAH). The data rows range from 1 to 16, with row 13 currently selected.

| NO. RESPONDEŃ | PENDAPATAN (RUPIAH) | JUMLAH ANGGOTA KELUARGA | DAYA BELI (RUPIAH) |
|---------------|---------------------|-------------------------|--------------------|
| 1 | 1.000.000 | 6 | 834.000 |
| 2 | 1.400.000 | 7 | 1.200.000 |
| 3 | 200.000 | 3 | 134.000 |
| 4 | 1.400.000 | 6 | 1.167.000 |
| 5 | 500.000 | 3 | 334.000 |
| 6 | 1.700.000 | 5 | 1.360.000 |
| 7 | 400.000 | 3 | 267.000 |
| 8 | 1.900.000 | 5 | 1.520.000 |
| 9 | 300.000 | 3 | 200.000 |
| 10 | 500.000 | 4 | 375.000 |
| 11 | 700.000 | 7 | 600.000 |
| 12 | 1.900.000 | 3 | 1.267.000 |
| 13 | 800.000 | 4 | 600.000 |
| 14 | 1.500.000 | 4 | 1.125.000 |
| 15 | 1.300.000 | 7 | 1.115.000 |
| 16 | | | |

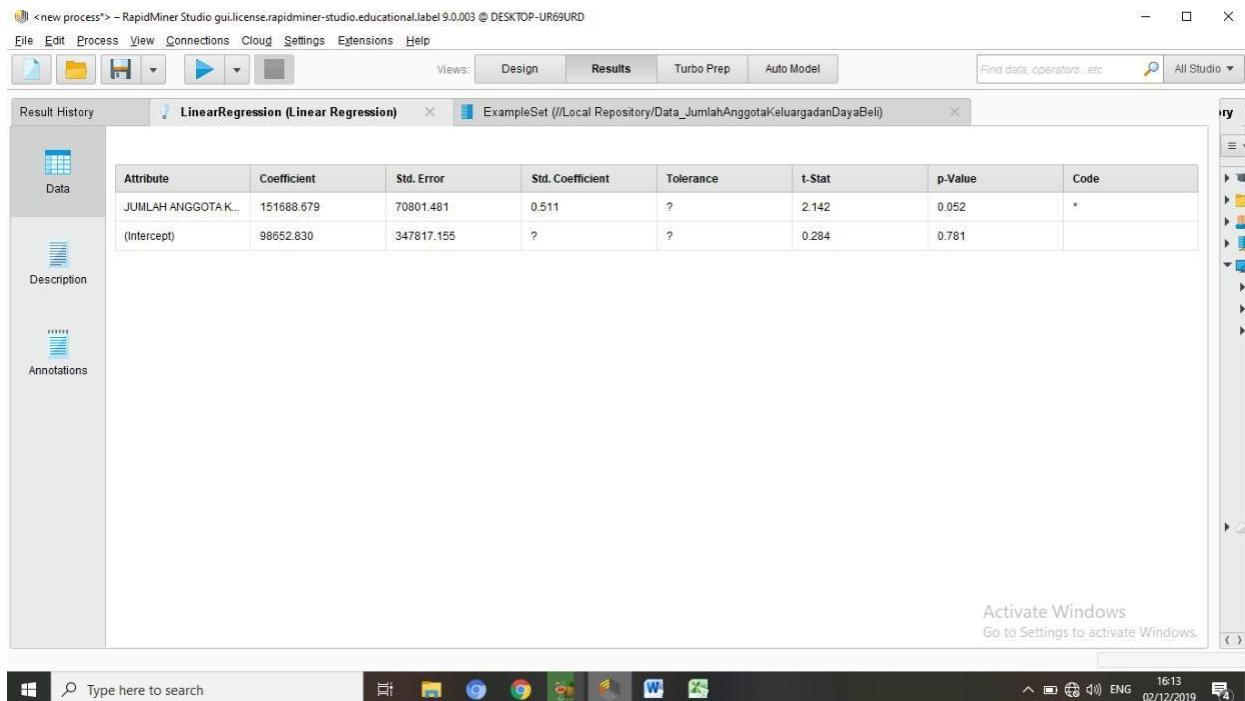
The screenshot shows the RapidMiner Studio interface. The central workspace displays the message "Your process looks empty. Add some data first. Drag data or operators here." Below this, there is a note: "Leverage the Wisdom of Crowds to get operator recommendations based on your process design!" At the bottom right of the workspace, there is a button labeled "Activate Wisdom of Crowds". The interface includes tabs for Design, Results, Turbo Prep, and Auto Model. On the left, there are panels for Repository, Operators, and Parameters. The Operators panel lists categories like Data Access, Blending, Cleansing, Modeling, Scoring, Validation, and Utility. The Parameters panel shows settings for the current process, such as logverbosity, logfile, resultfile, random seed, send mail, and encoding.





Hasil proses regresi linier :

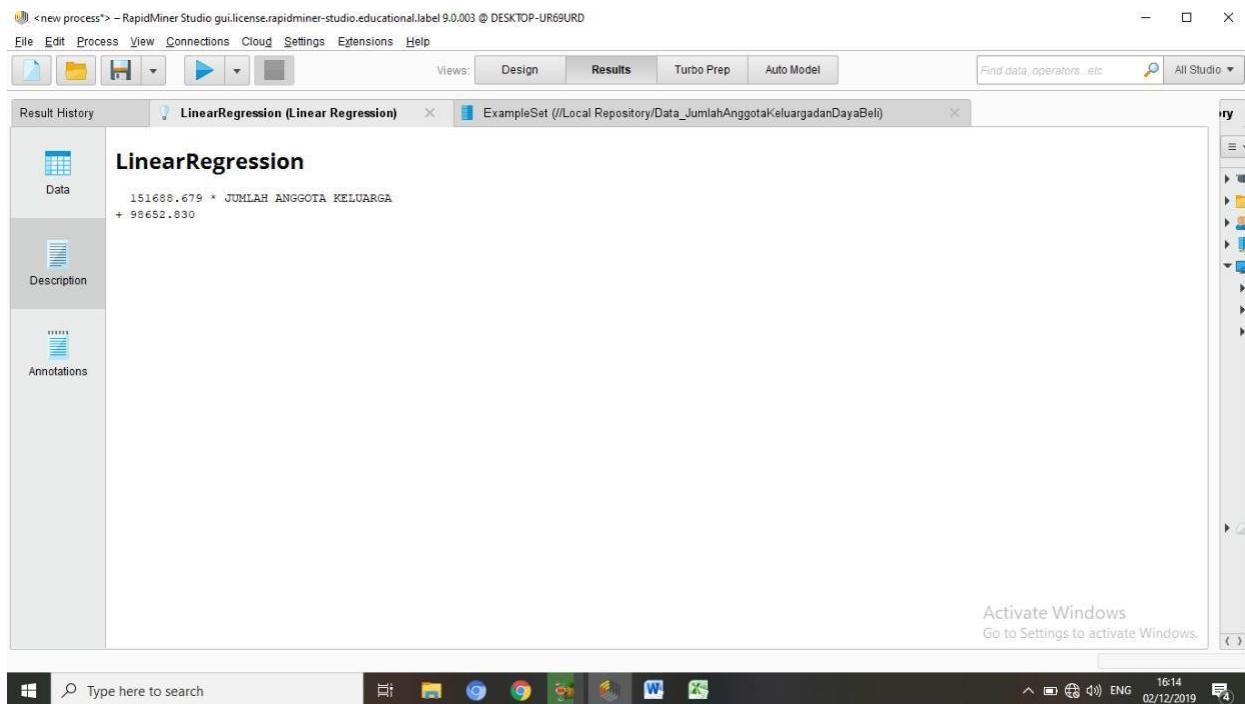
a) Table View (mencari besarnya nilai t-hitung)



The screenshot shows the RapidMiner Studio interface with the 'Results' tab selected. A table titled 'LinearRegression (Linear Regression)' is displayed, showing the following data:

| Attribute | Coefficient | Std. Error | Std. Coefficient | Tolerance | t-Stat | p-Value | Code |
|---------------------|-------------|------------|------------------|-----------|--------|---------|------|
| JUMLAH ANGGOTA K... | 151688.679 | 70801.481 | 0.511 | ? | 2.142 | 0.052 | * |
| (Intercept) | 98652.830 | 347817.155 | ? | ? | 0.284 | 0.781 | |

Text View (mencari model regresi)



The screenshot shows the RapidMiner Studio interface with the 'Results' tab selected. A text area titled 'LinearRegression' displays the following regression equation:

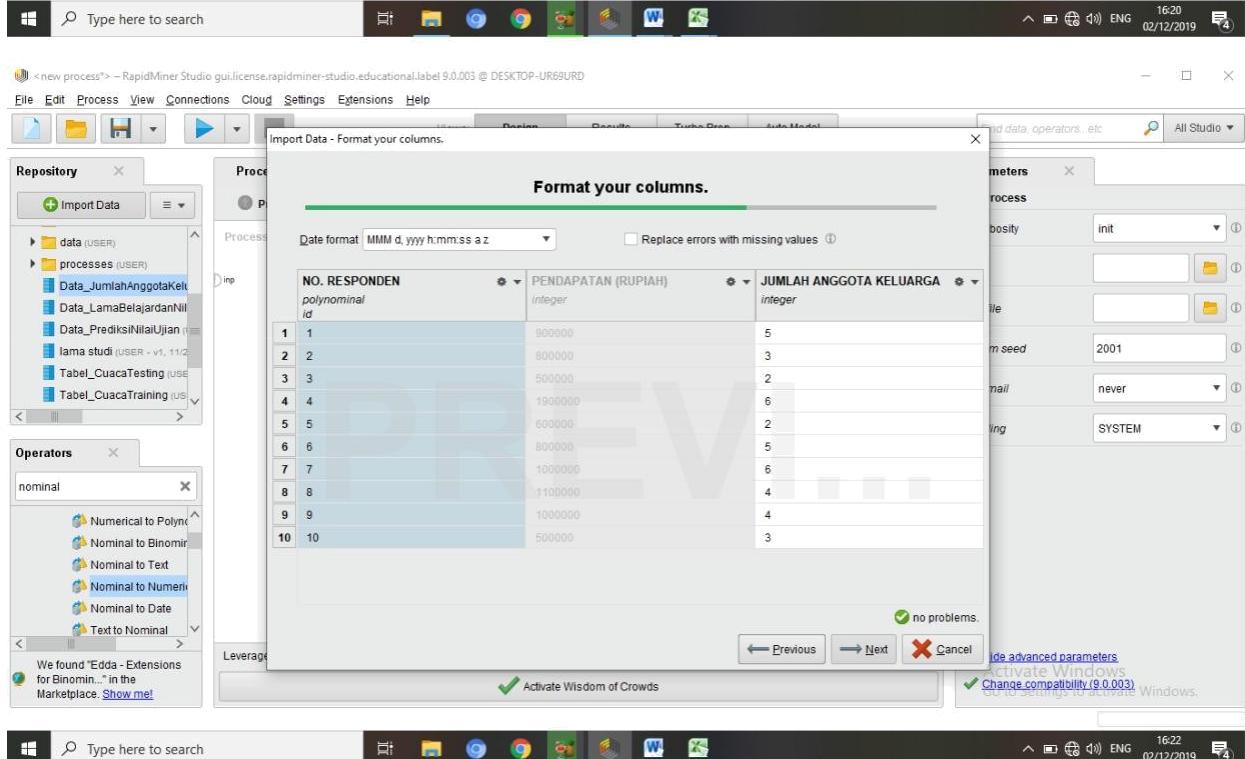
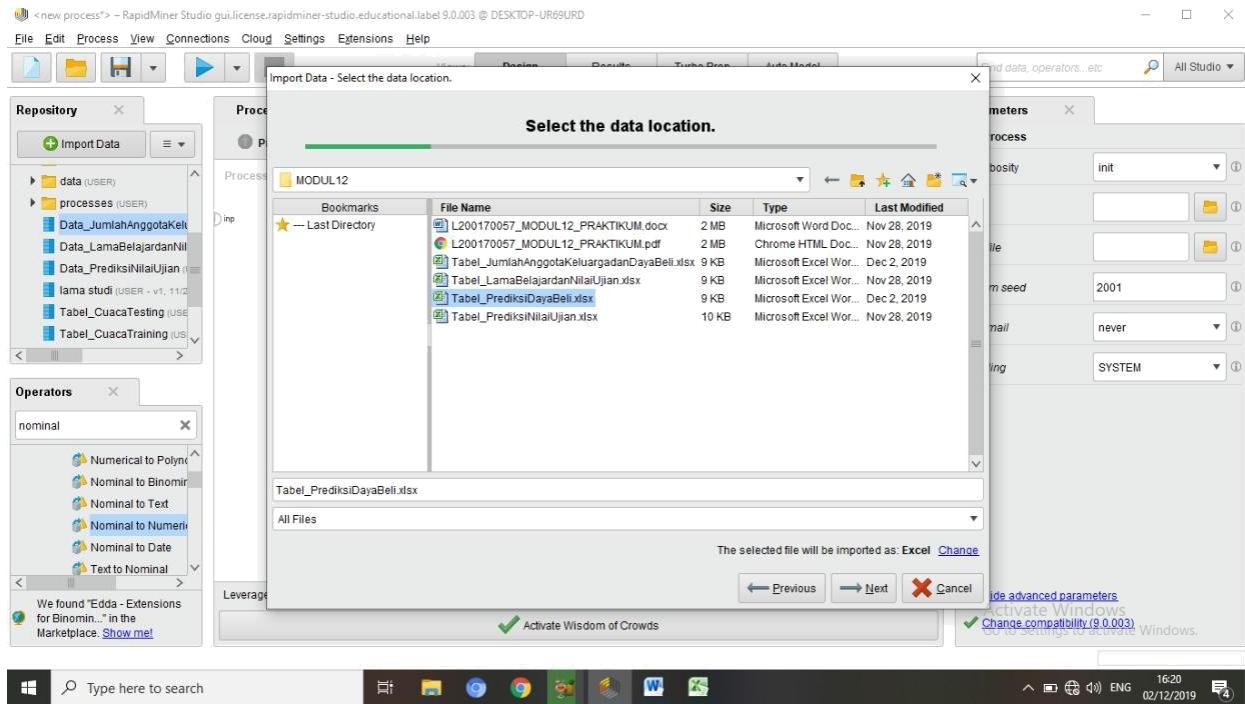
151688.679 * JUMLAH ANGGOTA KELUARGA
+ 98652.830.

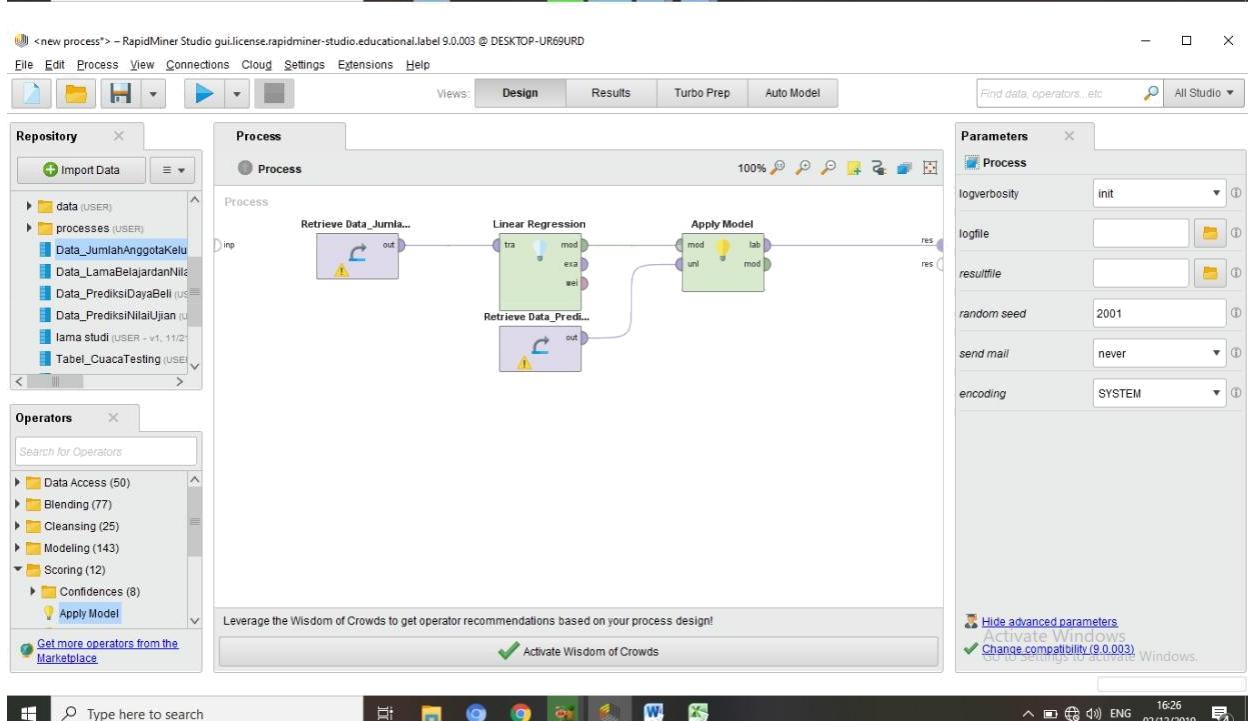
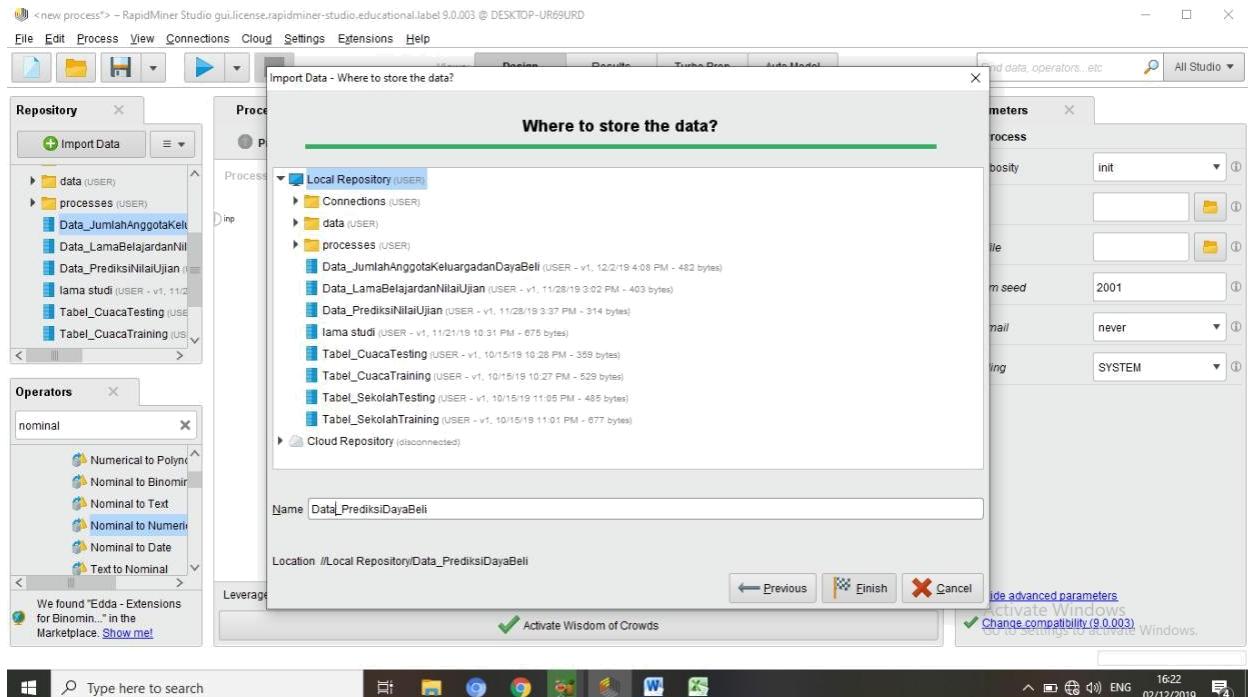
Mencari Nilai t dan Model Regresi Linier Menggunakan RapidMiner

The screenshot shows a Microsoft Excel spreadsheet titled "Tabel_PrediksiDayaBeli". The data consists of two columns: "NO. RESPONDEN" (Respondent Number) and "PENDAPATAN (RUPIAH)" (Income in Rupiah). The third column, "JUMLAH ANGGOTA KELUARGA" (Number of Household Members), is highlighted in yellow. The data is as follows:

| | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O |
|----|---------------|---------------------|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | NO. RESPONDEN | PENDAPATAN (RUPIAH) | JUMLAH ANGGOTA KELUARGA | D | E | F | G | H | I | J | K | L | M | N | O |
| 2 | 1 | 900.000 | 5 | | | | | | | | | | | | |
| 3 | 2 | 800.000 | 3 | | | | | | | | | | | | |
| 4 | 3 | 500.000 | 2 | | | | | | | | | | | | |
| 5 | 4 | 1.900.000 | 6 | | | | | | | | | | | | |
| 6 | 5 | 600.000 | 2 | | | | | | | | | | | | |
| 7 | 6 | 800.000 | 5 | | | | | | | | | | | | |
| 8 | 7 | 1.000.000 | 6 | | | | | | | | | | | | |
| 9 | 8 | 1.100.000 | 4 | | | | | | | | | | | | |
| 10 | 9 | 1.000.000 | 4 | | | | | | | | | | | | |
| 11 | 10 | 500.000 | 3 | | | | | | | | | | | | |

The screenshot shows the RapidMiner Studio interface. The central workspace displays the message: "Your process looks empty. Add some data first. Drag data or operators here." On the left, the "Repository" sidebar lists several data files and processes, including "Data_JumlahAnggotaKeluarga", "Data_LamaBelajarDanNilai", "Data_PrediksNilaiUjian", and "Data_studi". The "Operators" sidebar shows various data transformation operators like "Numerical to Polynom", "Nominal to Binominal", etc. The "Parameters" sidebar contains settings for the current process, such as "logverbosity: init", "logfile: ", "resultfile: ", "random seed: 2001", "send mail: never", and "encoding: SYSTEM". The bottom status bar shows the date and time as "16:19 ENG 02/12/2019".





Hasil proses prediksi terhadap data testing menggunakan regresi linier :

Data View (mencari besarnya nilai t-hitung)

The screenshot shows the RapidMiner Studio interface with the 'Results' tab selected. On the left, there is a sidebar with icons for Data, Statistics, Charts, Advanced Charts, and Annotations. The main area displays two tables: 'ExampleSet (/Local Repository/Data_PrediksiDayaBeli)' and 'ExampleSet (Apply Model)'. The 'ExampleSet (Apply Model)' table contains 10 rows of data with columns: Row No., NO. RESPONDE..., prediction(DAYA BELI (RUPIAH)), and JUMLAH AN... . The data is as follows:

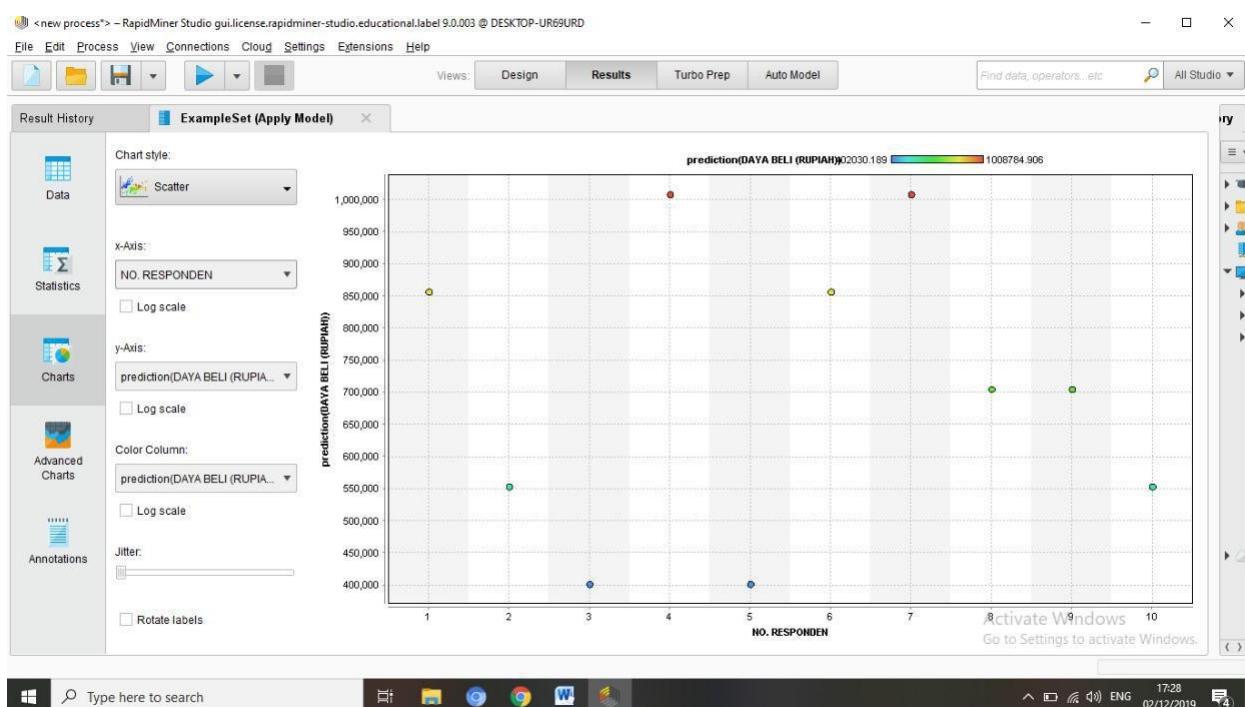
| Row No. | NO. RESPONDE... | prediction(DAYA BELI (RUPIAH)) | JUMLAH AN... |
|---------|-----------------|--------------------------------|--------------|
| 1 | 1 | 857096.226 | 5 |
| 2 | 2 | 553718.868 | 3 |
| 3 | 3 | 402030.189 | 2 |
| 4 | 4 | 1008784.906 | 6 |
| 5 | 5 | 402030.189 | 2 |
| 6 | 6 | 857096.226 | 5 |
| 7 | 7 | 1008784.906 | 6 |
| 8 | 8 | 705407.547 | 4 |
| 9 | 9 | 705407.547 | 4 |
| 10 | 10 | 553718.868 | 3 |

Charts View (Scatter Plot) x-

Axis = No. Responden,

y-Axis = Prediction (Daya Beli (Rupiah)),

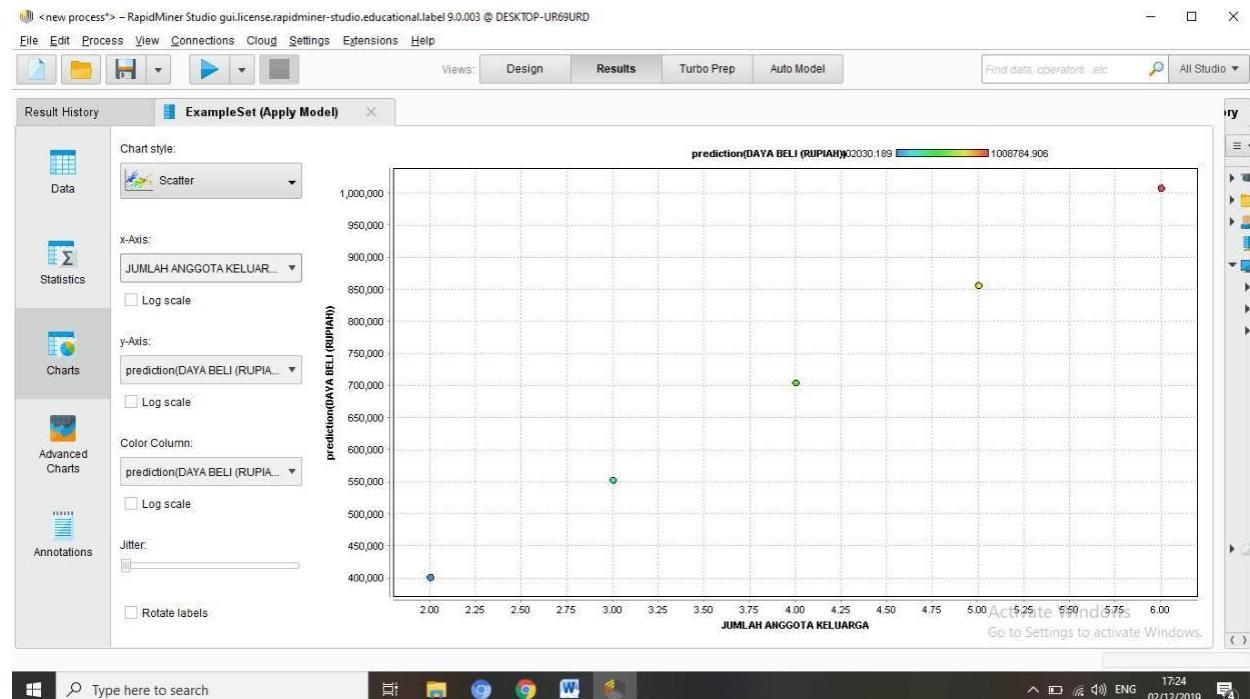
Color Column = Prediction (Daya Beli (Rupiah))



x-Axis = Jumlah Anggota Keluarga,

y-Axis = Prediction (Daya Beli (Rupiah)),

Color Column = Prediction (Daya Beli (Rupiah))



Pembuktian Model Regresi

$$Y = 151688,679 X_1 + 98652,830$$

The screenshot shows a Microsoft Excel spreadsheet titled "Tabel_PrediksiDayaBeli". The table has columns: NO. RESPONDEŃ, PENDAPATAN (RUPIAH), JUMLAH ANGGOTA KELUARGA, PREDICTION (DAYA BELI), and PREDICTION (DAYA BELI). The last two columns are bolded and labeled "Model Regresi". The data is as follows:

| NO. RESPONDEŃ | PENDAPATAN (RUPIAH) | JUMLAH ANGGOTA KELUARGA | PREDICTION (DAYA BELI) | PREDICTION (DAYA BELI) |
|---------------|---------------------|-------------------------|------------------------|------------------------|
| 3 | 1 | 900.000 | 857096,226 | 857096,225 |
| 4 | 2 | 800.000 | 553718,868 | 553718,867 |
| 5 | 3 | 500.000 | 402030,189 | 402030,188 |
| 6 | 4 | 1.900.000 | 1008784,906 | 1008784,904 |
| 7 | 5 | 600.000 | 402030,189 | 402030,188 |
| 8 | 6 | 800.000 | 857096,226 | 857096,225 |
| 9 | 7 | 1.000.000 | 1008784,906 | 1008784,904 |
| 10 | 8 | 1.100.000 | 705407,547 | 705407,546 |
| 11 | 9 | 1.000.000 | 705407,547 | 705407,546 |
| 12 | 10 | 500.000 | 553718,868 | 553718,867 |