

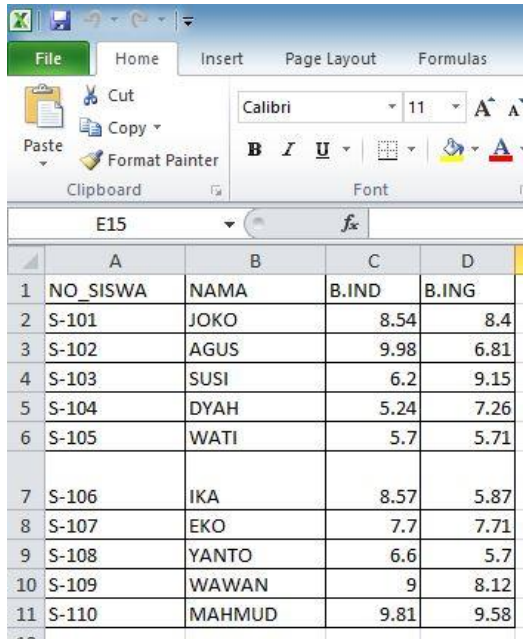
Nama: Rifqi Wirawan

NIM: L200170141

Modul: 10

Percobaan

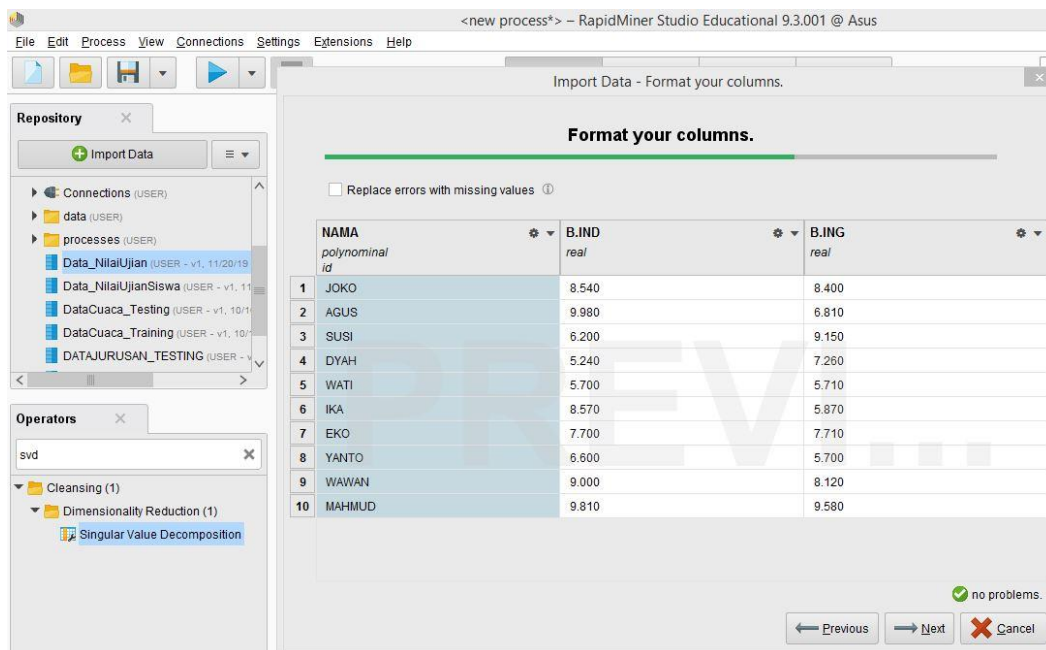
Membuat table nilai siswa



The screenshot shows the Microsoft Excel interface with the 'File' ribbon selected. The data is entered into a table with the following structure:

|    | A        | B      | C     | D     |
|----|----------|--------|-------|-------|
|    | 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  |

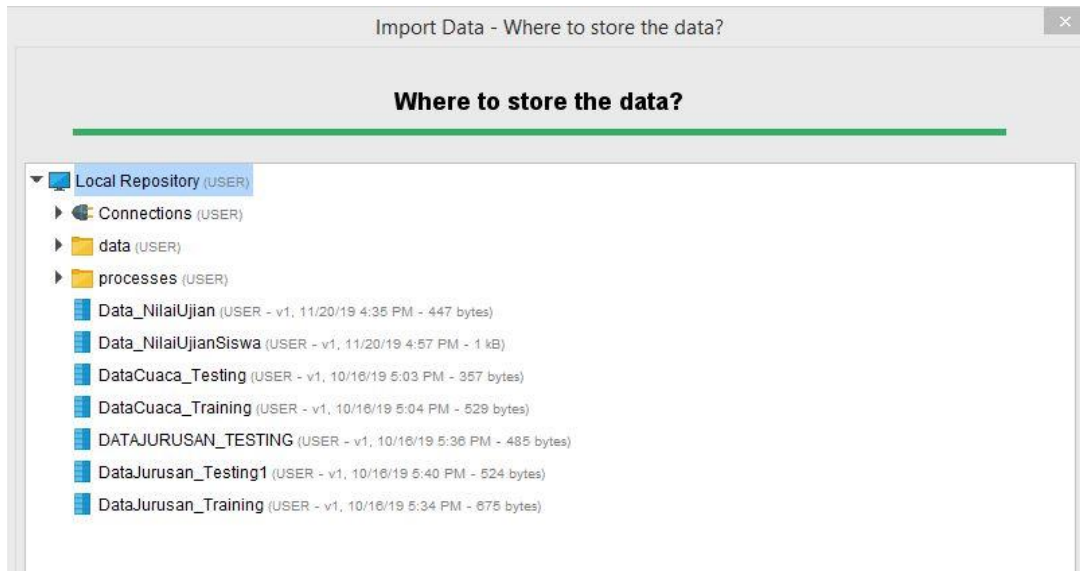
Buka rapid miner dan import data nilai siswa kemudian pilih kolom nama, nilai b.ind dan b.ing. Setelah itu pilih kolom nama dan ganti pada bagian Change Role dengan id



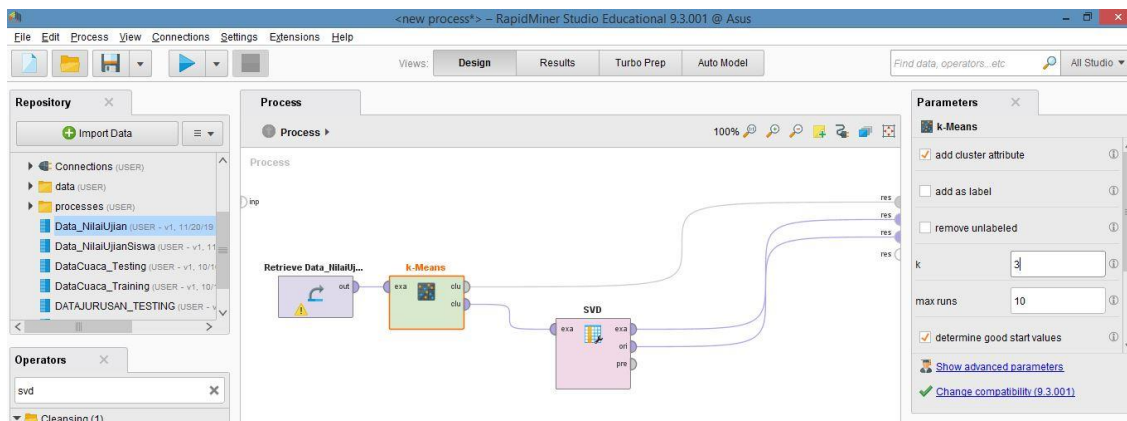
The screenshot shows the RapidMiner Studio interface. The 'Import Data - Format your columns.' dialog is open, displaying a table of student data. The columns are labeled 'NAMA', 'B.IND', and 'B.ING'. The 'NAMA' column is set to 'polynomial id', 'B.IND' is set to 'real', and 'B.ING' is set to 'real'. The 'Replace errors with missing values' checkbox is unchecked. The 'no problems.' status is shown at the bottom right.

|    | NAMA   | B.IND | B.ING |
|----|--------|-------|-------|
| 1  | JOKO   | 8.540 | 8.400 |
| 2  | AGUS   | 9.980 | 6.810 |
| 3  | SUSI   | 6.200 | 9.150 |
| 4  | DYAH   | 5.240 | 7.260 |
| 5  | WATI   | 5.700 | 5.710 |
| 6  | IKA    | 8.570 | 5.870 |
| 7  | EKO    | 7.700 | 7.710 |
| 8  | YANTO  | 6.600 | 5.700 |
| 9  | WAWAN  | 9.000 | 8.120 |
| 10 | MAHMUD | 9.810 | 9.580 |

Kemudian save dengan nama seperti dibawah



Setelah itu pada operatornya kita pilih k-Means dan singular value decomposition dan hubungan dengan retrieve data nilai siswa. Dan pada bagian k-Means diubah nilai paramaternya 3



Setelah dilakukan clustering, maka akan muncul hasilnya

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

Kesimpulan

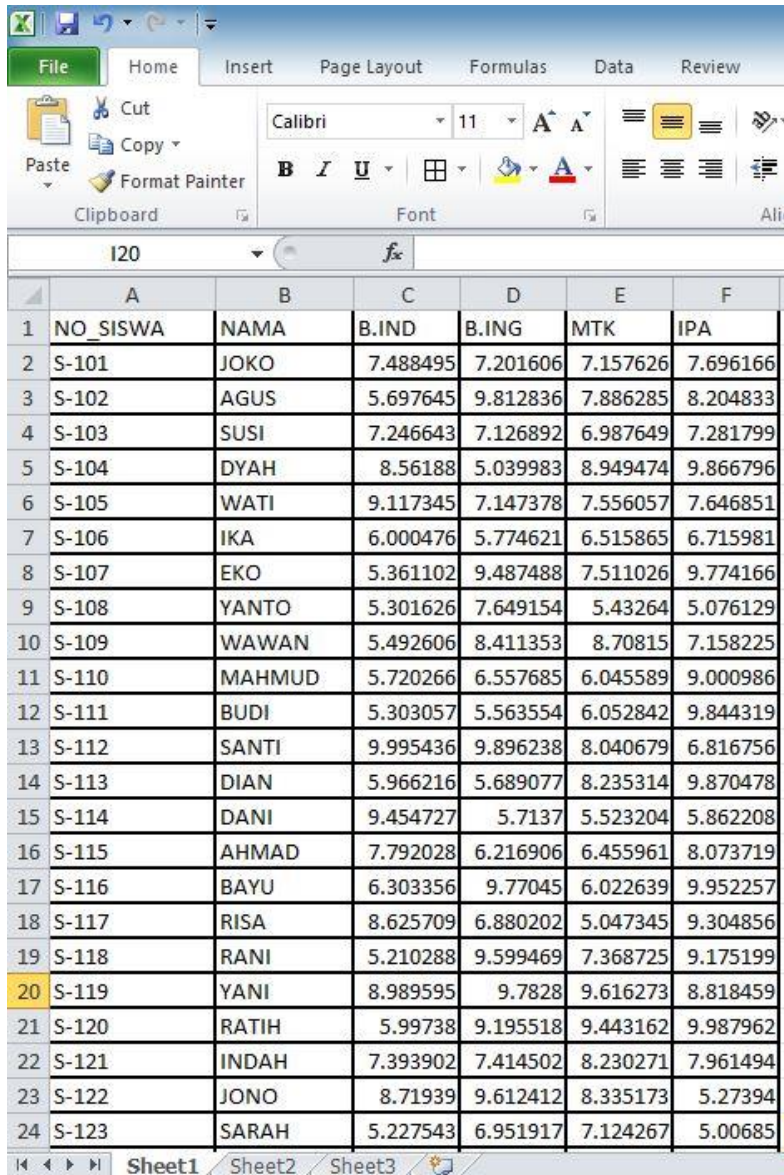
| cluster | NO_SISWA | NAMA   | B.IND | B.ING |
|---------|----------|--------|-------|-------|
| 0       | S-101    | JOKO   | 8.54  | 8.4   |
| 0       | S-102    | AGUS   | 9.98  | 6.81  |
| 0       | S-107    | EKO    | 7.7   | 7.71  |
| 0       | S-109    | WAWAN  | 9.0   | 8.12  |
| 0       | S-110    | MAHMUD | 9.81  | 9.58  |
| 1       | S-103    | SUSI   | 6.2   | 9.15  |
| 1       | S-104    | DYAH   | 5.24  | 7.26  |
| 2       | S-105    | WATI   | 5.7   | 5.71  |
| 2       | S-106    | IKA    | 8.57  | 5.87  |
| 2       | S-108    | YANTO  | 6.6   | 5.7   |

Pembagian kelompok yang diajukan untuk lomba olimpiade:

1. Cluster\_2 yang diajukan untuk lomba olimpiade Bidang B.Indonesia
2. Cluster\_0 yang diajukan untuk lomba olimpiade Bidang B.Inggris

Tugas

Membuat table nilai ujian 30 siswa



|    | A        | B      | C        | D        | E        | F        |
|----|----------|--------|----------|----------|----------|----------|
| 1  | NO_SISWA | NAMA   | B.IND    | B.ING    | MTK      | IPA      |
| 2  | S-101    | JOKO   | 7.488495 | 7.201606 | 7.157626 | 7.696166 |
| 3  | S-102    | AGUS   | 5.697645 | 9.812836 | 7.886285 | 8.204833 |
| 4  | S-103    | SUSI   | 7.246643 | 7.126892 | 6.987649 | 7.281799 |
| 5  | S-104    | DYAH   | 8.56188  | 5.039983 | 8.949474 | 9.866796 |
| 6  | S-105    | WATI   | 9.117345 | 7.147378 | 7.556057 | 7.646851 |
| 7  | S-106    | IKA    | 6.000476 | 5.774621 | 6.515865 | 6.715981 |
| 8  | S-107    | EKO    | 5.361102 | 9.487488 | 7.511026 | 9.774166 |
| 9  | S-108    | YANTO  | 5.301626 | 7.649154 | 5.43264  | 5.076129 |
| 10 | S-109    | WAWAN  | 5.492606 | 8.411353 | 8.70815  | 7.158225 |
| 11 | S-110    | MAHMUD | 5.720266 | 6.557685 | 6.045589 | 9.000986 |
| 12 | S-111    | BUDI   | 5.303057 | 5.563554 | 6.052842 | 9.844319 |
| 13 | S-112    | SANTI  | 9.995436 | 9.896238 | 8.040679 | 6.816756 |
| 14 | S-113    | DIAN   | 5.966216 | 5.689077 | 8.235314 | 9.870478 |
| 15 | S-114    | DANI   | 9.454727 | 5.7137   | 5.523204 | 5.862208 |
| 16 | S-115    | AHMAD  | 7.792028 | 6.216906 | 6.455961 | 8.073719 |
| 17 | S-116    | BAYU   | 6.303356 | 9.77045  | 6.022639 | 9.952257 |
| 18 | S-117    | RISA   | 8.625709 | 6.880202 | 5.047345 | 9.304856 |
| 19 | S-118    | RANI   | 5.210288 | 9.599469 | 7.368725 | 9.175199 |
| 20 | S-119    | YANI   | 8.989595 | 9.7828   | 9.616273 | 8.818459 |
| 21 | S-120    | RATIH  | 5.99738  | 9.195518 | 9.443162 | 9.987962 |
| 22 | S-121    | INDAH  | 7.393902 | 7.414502 | 8.230271 | 7.961494 |
| 23 | S-122    | JONO   | 8.71939  | 9.612412 | 8.335173 | 5.27394  |
| 24 | S-123    | SARAH  | 5.227543 | 6.951917 | 7.124267 | 5.00685  |

Buka rapid miner dan import data nilai 30 siswa kemudian pilih kolom nama, nilai b.ind dan b.ing, mtk, ipa. Setelah itu pilih kolom nama dan ganti pada bagian Change Role dengan id kemudian save dengan nama Data\_NilaiUjianSiswa

**Format your columns.**

☐ Replace errors with missing values ⓘ

|    | NAMA<br><i>polynomial id</i> | B.IND<br><i>real</i> | B.ING<br><i>real</i> | MTK<br><i>real</i> | IPA<br><i>real</i> |
|----|------------------------------|----------------------|----------------------|--------------------|--------------------|
| 1  | JOKO                         | 7.498                | 7.202                | 7.158              | 7.696              |
| 2  | AGUS                         | 5.698                | 9.813                | 7.886              | 8.205              |
| 3  | SUSI                         | 7.247                | 7.127                | 6.988              | 7.282              |
| 4  | DYAH                         | 8.562                | 5.040                | 8.949              | 9.867              |
| 5  | WATI                         | 9.117                | 7.147                | 7.556              | 7.647              |
| 6  | IKA                          | 6.000                | 5.775                | 6.516              | 6.716              |
| 7  | EKO                          | 5.361                | 9.487                | 7.511              | 9.774              |
| 8  | YANTO                        | 5.302                | 7.649                | 5.433              | 5.076              |
| 9  | WAWAN                        | 5.493                | 8.411                | 8.708              | 7.158              |
| 10 | MAHMUD                       | 5.720                | 6.558                | 6.046              | 9.001              |
| 11 | BUDI                         | 5.303                | 5.564                | 6.053              | 9.844              |
| 12 | SANTI                        | 9.995                | 9.896                | 8.041              | 6.817              |
| 13 | DIAN                         | 5.966                | 5.689                | 8.235              | 9.870              |

no problems.

Previous Next Cancel

Kemudian ganti parameter nilai pada k-Means dengan k=4

**Parameters**

**k-Means**

☒ add cluster attribute ⓘ

☐ add as label ⓘ

☐ remove unlabeled ⓘ

k: 4 ⓘ

max runs: 10 ⓘ

☒ determine good start values ⓘ

[Show advanced parameters](#)

[Change compatibility \(9.3.001\)](#)



## Hasil setelah melalui proses k-Means

<new process\*> - RapidMiner Studio Educational 9.3.001 @ Asus

File Edit Process View Connections Settings Extensions Help

Views: Design Results Turbo Prep Auto Model

Find data, operators...etc

ExampleSet (/Local Repository/Data\_NilaiUjianSiswa) ExampleSet (/Local Repository/Data\_NilaiUjian)

Cluster Model (k-Means) ExampleSet (/Local Repository/Data\_NilaiUjianSiswa)

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

Open in Turbo Prep Auto Model

Filter (30 / 30 examples): all

| Row No. | NAMA   | cluster   | B.IND | B.ING | MTK   | IPA   |
|---------|--------|-----------|-------|-------|-------|-------|
| 1       | JOKO   | cluster_1 | 7.488 | 7.202 | 7.158 | 7.696 |
| 2       | AGUS   | cluster_0 | 5.698 | 9.813 | 7.886 | 8.205 |
| 3       | SUSI   | cluster_1 | 7.247 | 7.127 | 6.988 | 7.282 |
| 4       | DYAH   | cluster_3 | 8.562 | 5.040 | 8.949 | 9.867 |
| 5       | WATI   | cluster_3 | 9.117 | 7.147 | 7.556 | 7.647 |
| 6       | IKA    | cluster_1 | 6.000 | 5.775 | 6.516 | 6.716 |
| 7       | EKO    | cluster_0 | 5.361 | 9.487 | 7.511 | 9.774 |
| 8       | YANTO  | cluster_1 | 5.302 | 7.649 | 5.433 | 5.076 |
| 9       | WAWAN  | cluster_1 | 5.493 | 8.411 | 8.708 | 7.158 |
| 10      | MAHMUD | cluster_0 | 5.720 | 6.558 | 6.046 | 9.001 |
| 11      | BUDI   | cluster_0 | 5.303 | 5.564 | 6.053 | 9.844 |
| 12      | SANTI  | cluster_2 | 9.995 | 9.896 | 8.041 | 6.817 |
| 13      | DIAN   | cluster_0 | 5.966 | 5.689 | 8.235 | 9.870 |

ExampleSet (30 examples, 2 special attributes, 4 regular attributes)

## Nilai yang didapatkan tiap murid dan Kelompok clusternya

| CLUSTER | NO_SISWA | NAMA   | B.IND | B.ING | MTK   | IPA   |
|---------|----------|--------|-------|-------|-------|-------|
| 0       | 2        | AGUS   | 5.697 | 9.812 | 7.886 | 8.204 |
| 0       | 7        | EKO    | 5.361 | 9.487 | 7.511 | 9.774 |
| 0       | 10       | MAHMUD | 5.720 | 6.557 | 6.045 | 9.000 |
| 0       | 11       | BUDI   | 5.303 | 5.563 | 6.052 | 9.844 |
| 0       | 13       | DIAN   | 5.966 | 5.689 | 8.235 | 9.870 |
| 0       | 16       | BAYU   | 6.303 | 9.770 | 6.022 | 9.952 |
| 0       | 18       | RANI   | 5.210 | 9.599 | 7.368 | 9.175 |
| 0       | 20       | RATIH  | 5.997 | 9.195 | 9.443 | 9.987 |
| 0       | 26       | HADI   | 6.243 | 7.774 | 9.103 | 8.772 |
| 1       | 1        | JOKO   | 7.488 | 7.201 | 7.157 | 7.696 |
| 1       | 3        | SUSI   | 7.246 | 7.126 | 6.987 | 7.281 |
| 1       | 6        | IKA    | 6.000 | 5.774 | 6.515 | 6.715 |
| 1       | 8        | YANTO  | 5.301 | 7.649 | 5.432 | 5.076 |
| 1       | 9        | WAWAN  | 5.492 | 8.411 | 8.708 | 7.158 |
| 1       | 21       | INDAH  | 7.393 | 7.414 | 8.230 | 7.961 |
| 1       | 23       | SARAH  | 5.227 | 6.951 | 7.124 | 5.006 |
| 1       | 29       | DENI   | 7.536 | 7.659 | 8.434 | 6.384 |
| 2       | 12       | SANTI  | 9.995 | 9.896 | 8.040 | 6.816 |
| 2       | 19       | YANI   | 8.989 | 9.782 | 9.616 | 8.818 |

|   |    |         |       |       |       |       |
|---|----|---------|-------|-------|-------|-------|
| 2 | 22 | JONO    | 8.719 | 9.612 | 8.335 | 5.273 |
| 2 | 30 | TONI    | 9.921 | 9.378 | 5.210 | 7.846 |
| 3 | 4  | DYAH    | 8.561 | 5.039 | 8.949 | 9.866 |
| 3 | 5  | WATI    | 9.117 | 7.147 | 7.556 | 7.646 |
| 3 | 14 | DANI    | 9.454 | 5.713 | 5.523 | 5.862 |
| 3 | 15 | AHMAD   | 7.792 | 6.216 | 6.455 | 8.073 |
| 3 | 17 | RISA    | 8.625 | 6.880 | 5.047 | 9.304 |
| 3 | 24 | RAMA    | 8.398 | 6.426 | 9.263 | 8.919 |
| 3 | 25 | BAMBANG | 9.988 | 5.953 | 6.077 | 7.918 |
| 3 | 27 | NANA    | 9.468 | 5.466 | 9.626 | 8.602 |
| 3 | 28 | FEBRI   | 8.550 | 5.421 | 6.799 | 8.646 |