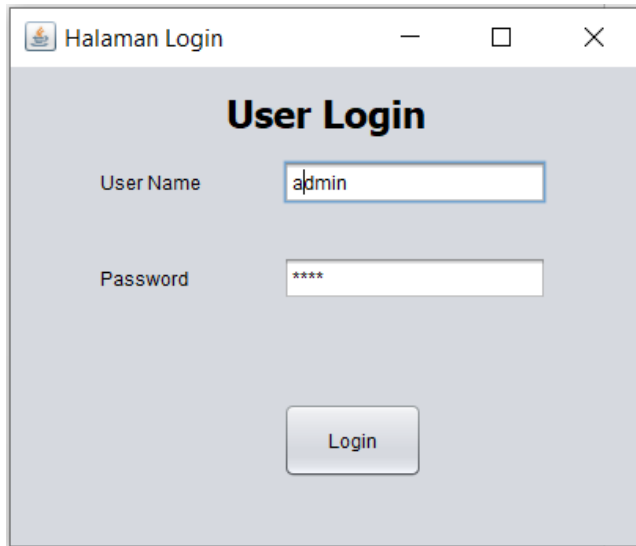
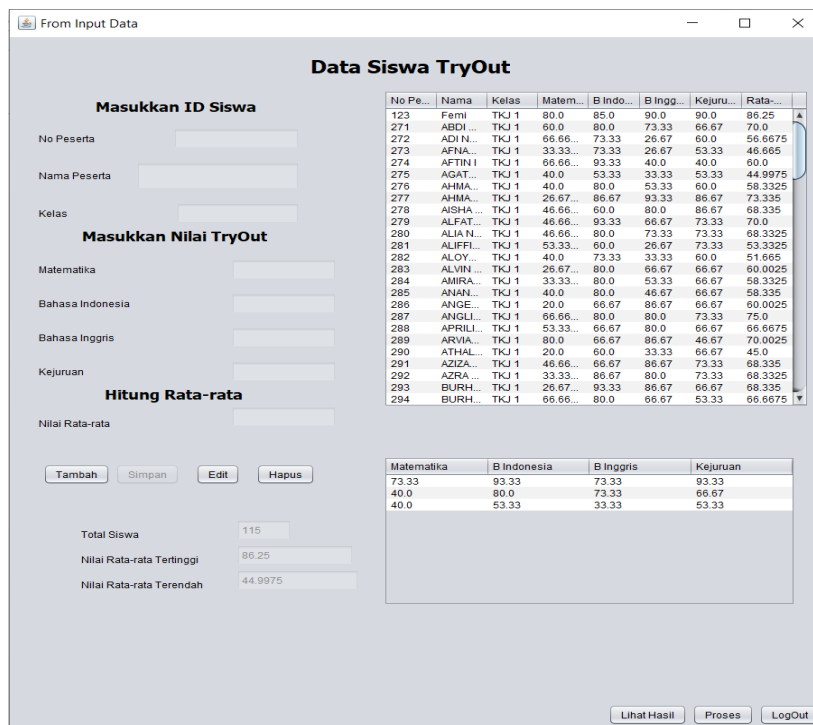


CARA MENJALANKAN PROGRAM

1. Langkah pertama membuka form login dan memasukkan username serta password yang sudah terdaftar pada databases.



2. Kemudian akan masuk kedalam form data siswa, untuk dapat menambah data, menghapus data, dan memproses data yang dituju.



No Pe...	Nama	Kelas	Matem...	B Indo...	B Ingg...	Kejuru...	Rata...
123	Femi	TKJ 1	80.0	85.0	90.0	90.0	86.25
271	ABDI ...	TKJ 1	60.0	80.0	73.33	66.67	70.0
272	ADI N...	TKJ 1	66.66...	73.33	26.67	60.0	56.6675
273	AFNA...	TKJ 1	33.33...	73.33	26.67	53.33	46.665
274	AFTIN I	TKJ 1	66.66...	93.33	40.0	40.0	60.0
275	AGAT...	TKJ 1	40.0	53.33	33.33	53.33	44.9975
276	AHMA...	TKJ 1	40.0	80.0	53.33	60.0	58.3325
277	AHMA...	TKJ 1	26.67...	86.67	93.33	86.67	73.335
278	AISHA...	TKJ 1	46.66...	60.0	80.0	86.67	68.335
279	ALFAT...	TKJ 1	46.66...	93.33	66.67	73.33	70.0
280	ALIAN...	TKJ 1	46.66...	80.0	73.33	73.33	68.3325
281	ALIFL...	TKJ 1	53.33...	60.0	26.67	73.33	53.3325
282	ALOY...	TKJ 1	40.0	73.33	33.33	60.0	51.665
283	ALVIN...	TKJ 1	26.67...	80.0	66.67	66.67	60.0025
284	AMIRA...	TKJ 1	33.33...	80.0	53.33	66.67	58.3325
285	ANAN...	TKJ 1	40.0	80.0	46.67	66.67	58.335
286	ANGE...	TKJ 1	20.0	66.67	86.67	66.67	60.0025
287	ANGLI...	TKJ 1	66.66...	80.0	80.0	73.33	75.0
288	APRILI...	TKJ 1	53.33...	66.67	80.0	66.67	66.6675
289	ARWA...	TKJ 1	80.0	66.67	86.67	46.67	70.0025
290	ATHAL...	TKJ 1	20.0	60.0	33.33	66.67	45.0
291	AZIZA...	TKJ 1	46.66...	66.67	86.67	73.33	68.335
292	AZRA...	TKJ 1	33.33...	86.67	80.0	73.33	68.3325
293	BURH...	TKJ 1	26.67...	93.33	86.67	66.67	68.335
294	BURH...	TKJ 1	66.66...	80.0	66.67	53.33	66.6675

Matematika	B Indonesia	B Inggris	Kejuruan
73.33	93.33	73.33	93.33
40.0	80.0	73.33	66.67
40.0	53.33	33.33	53.33

3. Tekan button tambah lalu masukkan no peserta siswa, nama peserta, dan kelas kemudian inputkan nilai mata pelajaran untuk dapat menambahkan siswa.

Data Siswa TryOut

Masukkan ID Siswa

No Peserta: 145410173

Nama Peserta: Gigandaru

Kelas: TKJ 3

Masukkan Nilai TryOut

Matematika: 80

Bahasa Indonesia: 80

Bahasa Inggris: 80

Kejuruan: 80

Hitung Rata-rata

Nilai Rata-rata: 80.0

Tambah Simpan Edit Hapus

No Pe...	Nama	Kelas	Matem...	B Indo...	B Ingg...	Kejuru...	Rata...
145	Gigan...	TKJ 3	80.0	80.0	80.0	80.0	80.0
271	ABDI...	TKJ 1	60.0	80.0	73.33	66.67	70.0
272	ADI N...	TKJ 1	66.66...	73.33	26.67	60.0	56.6675
273	AFNA...	TKJ 1	33.33...	73.33	26.67	53.33	46.665
274	AFTIN I	TKJ 1	66.66...	93.33	40.0	40.0	59.99...
275	AGAT...	TKJ 1	40.0	53.33	33.33	53.33	44.9975
276	AHMA...	TKJ 1	40.0	80.0	53.33	60.0	58.3325
277	AHMA...	TKJ 1	26.67...	86.67	93.33	86.67	73.335
278	AISHA ...	TKJ 1	46.66...	60.0	80.0	86.67	68.335
279	ALFAT...	TKJ 1	46.66...	93.33	66.67	73.33	70.0
280	ALIA N...	TKJ 1	46.66...	80.0	73.33	73.33	68.3325
281	ALIFFL...	TKJ 1	53.33...	60.0	26.67	73.33	53.3325
282	ALOY...	TKJ 1	40.0	73.33	33.33	60.0	51.665
283	ALVIN...	TKJ 1	26.67...	80.0	66.67	66.67	60.0025
284	AMIRA...	TKJ 1	33.33...	80.0	53.33	66.67	58.3325
285	ANAN...	TKJ 1	40.0	80.0	46.67	66.67	58.335
286	ANGE...	TKJ 1	20.0	66.67	86.67	66.67	60.0025
287	ANGLL...	TKJ 1	66.66...	80.0	80.0	73.33	75.0
288	APRILL...	TKJ 1	53.33...	66.67	80.0	66.67	66.6675
289	ARVIA...	TKJ 1	80.0	66.67	86.67	46.67	70.0025
290	ATHAL...	TKJ 1	20.0	60.0	33.33	66.67	45.0
291	AZIZA...	TKJ 1	46.66...	66.67	86.67	73.33	68.335
292	AZRA...	TKJ 1	33.33...	86.67	80.0	73.33	68.3325
293	BURH...	TKJ 1	26.67...	93.33	86.67	66.67	68.335
294	BURH...	TKJ 1	66.66...	80.0	66.67	53.33	66.6675

Matematika	B Indonesia	B Inggris	Kejuruan
73.33	93.33	73.33	93.33
40.0	80.0	73.33	66.67
40.0	53.33	33.33	53.33

4. Jika sudah terisi semua data siswa maka klik button simpan.

Data Siswa TryOut

Masukkan ID Siswa

No Peserta: 145

Nama Peserta: Gigandaru

Kelas: TKJ 3

Masukkan Nilai TryOut

Matematika: 80

Bahasa Indonesia: 80

Bahasa Inggris: 80

Kejuruan: 80

Hitung Rata-rata

Nilai Rata-rata: 80.0

Tambah **Simpan** Edit Hapus

No Pe...	Nama	Kelas	Matem...	B Indo...	B Ingg...	Kejuru...	Rata...
271	ABDI...	TKJ 1	60.0	80.0	73.33	66.67	70.0
272	ADI N...	TKJ 1	66.66...	73.33	26.67	60.0	56.6675
273	AFNA...	TKJ 1	33.33...	73.33	26.67	53.33	46.665
274	AFTIN I	TKJ 1	66.66...	93.33	40.0	40.0	59.99...
275	AGAT...	TKJ 1	40.0	53.33	33.33	53.33	44.9975
276	AHMA...	TKJ 1	40.0	80.0	53.33	60.0	58.3325
277	AHMA...	TKJ 1	26.67...	86.67	93.33	86.67	73.335
278	AISHA ...	TKJ 1	46.66...	60.0	80.0	86.67	68.335
279	ALFAT...	TKJ 1	46.66...	93.33	66.67	73.33	70.0
280	ALIA N...	TKJ 1	46.66...	80.0	73.33	73.33	68.3325
281	ALIFFL...	TKJ 1	53.33...	60.0	26.67	73.33	53.3325
282	ALOY...	TKJ 1	40.0	73.33	33.33	60.0	51.665
283	ALVIN...	TKJ 1	26.67...	80.0	66.67	66.67	60.0025
284	AMIRA...	TKJ 1	33.33...	80.0	53.33	66.67	58.3325
285	ANAN...	TKJ 1	40.0	80.0	46.67	66.67	58.335
286	ANGE...	TKJ 1	20.0	66.67	86.67	66.67	60.0025
287	ANGLL...	TKJ 1	66.66...	80.0	80.0	73.33	75.0
288	APRILL...	TKJ 1	53.33...	66.67	80.0	66.67	66.6675
289	ARVIA...	TKJ 1	80.0	66.67	86.67	46.67	70.0025
290	ATHAL...	TKJ 1	20.0	60.0	33.33	66.67	45.0
291	AZIZA...	TKJ 1	46.66...	66.67	86.67	73.33	68.335
292	AZRA...	TKJ 1	33.33...	86.67	80.0	73.33	68.3325
293	BURH...	TKJ 1	26.67...	93.33	86.67	66.67	68.335
294	BURH...	TKJ 1	66.66...	80.0	66.67	53.33	66.6675
295	CHRI...	TKJ 1	26.67...	86.67	86.67	60.0	65.0025

Matematika	B Indonesia	B Inggris	Kejuruan
73.33	93.33	73.33	93.33
40.0	80.0	73.33	66.67
40.0	53.33	33.33	53.33

- Data akan masuk kedalam table, setelah klik button simpan. Kemudian untuk edit klik data siswa yang ingin di edit pada table data siswa, jika sudah klik buton edit, maka data yang di edit akan tersimpan.

The screenshot shows a web application window titled "From Input Data" with the main heading "Data Siswa TryOut". On the left, there are input fields for "Masukkan ID Siswa" (No Peserta: 145, Nama Peserta: Gigandaru, Kelas: TKJ 3) and "Masukkan Nilai TryOut" (Matematika: 80.0, Bahasa Indonesia: 80.0, Bahasa Inggris: 80.0, Kejuruan: 80.0). Below these is a "Hitung Rata-rata" section with a "Nilai Rata-rata" field set to 80.0. At the bottom left are buttons for "Tambah", "Simpan", "Edit" (highlighted with a red box), and "Hapus". On the right, a table displays student data with columns: No Pe..., Nama, Kelas, Matem..., B Indo..., B Ingg..., Kejuru..., and Rata... The table contains 20 rows of data, with the first row (ID 145) highlighted in blue. Below the table is a summary table with columns: Matematika, B Indonesia, B Inggris, and Kejuruan, showing average values for the first three rows.

No Pe...	Nama	Kelas	Matem...	B Indo...	B Ingg...	Kejuru...	Rata...
145	Gigan...	TKJ 1	80.0	80.0	80.0	80.0	80.0
271	ABDI...	TKJ 1	60.0	80.0	73.33	66.67	70.0
272	ADI N...	TKJ 1	66.66...	73.33	26.67	60.0	56.6675
273	AFNA...	TKJ 1	33.33...	73.33	26.67	53.33	46.665
274	AFTIN I	TKJ 1	66.66...	93.33	40.0	40.0	59.99...
275	AGAT...	TKJ 1	40.0	53.33	33.33	53.33	44.9975
276	AHMA...	TKJ 1	40.0	80.0	53.33	60.0	58.3325
277	AHMA...	TKJ 1	26.67...	86.67	93.33	86.67	73.335
278	AISHA...	TKJ 1	46.66...	60.0	80.0	86.67	68.335
279	ALFAT...	TKJ 1	46.66...	93.33	66.67	73.33	70.0
280	ALIA N...	TKJ 1	46.66...	80.0	73.33	73.33	68.3325
281	ALIFFI...	TKJ 1	53.33...	60.0	26.67	73.33	53.3325
282	ALOY...	TKJ 1	40.0	73.33	33.33	60.0	51.665
283	ALVIN...	TKJ 1	26.67...	80.0	66.67	66.67	60.0025
284	AMIRA...	TKJ 1	33.33...	80.0	53.33	66.67	58.3325
285	ANAN...	TKJ 1	40.0	80.0	46.67	66.67	58.335
286	ANGE...	TKJ 1	20.0	66.67	86.67	66.67	60.0025
287	ANGLI...	TKJ 1	66.66...	80.0	80.0	73.33	75.0
288	APRILI...	TKJ 1	53.33...	66.67	80.0	66.67	66.6675
289	ARVIA...	TKJ 1	80.0	66.67	86.67	46.67	70.0025
290	ATHAL...	TKJ 1	20.0	60.0	33.33	66.67	45.0
291	AZIZA...	TKJ 1	46.66...	66.67	86.67	73.33	68.335
292	AZRA...	TKJ 1	33.33...	86.67	80.0	73.33	68.3325
293	BURH...	TKJ 1	26.67...	93.33	86.67	66.67	68.335
294	BURH...	TKJ 1	66.66...	80.0	66.67	53.33	66.6675

Matematika	B Indonesia	B Inggris	Kejuruan
73.33	93.33	73.33	93.33
40.0	80.0	73.33	66.67
40.0	53.33	33.33	53.33

- Jika ingin menghapus data klik salah satu data siswa yang ingin dihapus lalu klik button hapus. Maka data siswa akan terhapus.

The screenshot shows the same application interface as above, but the "Hapus" button at the bottom is highlighted with a red box. The table on the right is identical to the previous screenshot, with the first row (ID 145) highlighted in blue.

7. Untuk memproses clustering, klik button proses.

Data Siswa TryOut

Masukkan ID Siswa

No Peserta: 145
Nama Peserta: Gigandaru
Kelas: TKJ 3

Masukkan Nilai TryOut

Matematika: 80.0
Bahasa Indonesia: 80.0
Bahasa Inggris: 80.0
Kejuruan: 80.0

Hitung Rata-rata

Nilai Rata-rata: 80.0

Tambah Simpan Edit Hapus

Total Siswa: 115
Nilai Rata-rata Tertinggi: 83.33000045776366
Nilai Rata-rata Terendah: 44.9975

No Pe...	Nama	Kelas	Matem...	B Indo...	B Ingg...	Kejuru...	Rata...
145	Gigan...	TKJ 3	80.0	80.0	80.0	80.0	80.0
271	ABDI...	TKJ 1	60.0	80.0	73.33	66.67	70.0
272	ADI N...	TKJ 1	66.66...	73.33	26.67	60.0	56.6675
273	AFNA...	TKJ 1	33.33...	73.33	26.67	53.33	46.665
274	AFTIN I	TKJ 1	66.66...	93.33	40.0	40.0	59.99...
275	AGAT...	TKJ 1	40.0	53.33	33.33	53.33	44.9975
276	AHMA...	TKJ 1	40.0	80.0	53.33	60.0	58.3325
277	AHMA...	TKJ 1	26.67...	86.67	93.33	86.67	73.335
278	AISHA...	TKJ 1	46.66...	60.0	80.0	86.67	68.335
279	ALFAT...	TKJ 1	46.66...	93.33	66.67	73.33	70.0
280	ALIA N...	TKJ 1	46.66...	80.0	73.33	73.33	68.3325
281	ALIFFI...	TKJ 1	53.33...	60.0	26.67	73.33	53.3325
282	ALOY...	TKJ 1	40.0	73.33	33.33	60.0	51.665
283	ALVIN...	TKJ 1	26.67...	80.0	66.67	66.67	60.0025
284	AMIRA...	TKJ 1	33.33...	80.0	53.33	66.67	58.3325
285	ANAN...	TKJ 1	40.0	80.0	46.67	66.67	58.335
286	ANGE...	TKJ 1	20.0	66.67	86.67	66.67	60.0025
287	ANGLI...	TKJ 1	66.66...	80.0	80.0	73.33	75.0
288	APRILI...	TKJ 1	53.33...	66.67	80.0	66.67	66.6675
289	ARWA...	TKJ 1	80.0	66.67	86.67	46.67	70.0025
290	ATHAL...	TKJ 1	20.0	60.0	33.33	66.67	45.0
291	AZIZA...	TKJ 1	46.66...	66.67	86.67	73.33	68.335
292	AZRA...	TKJ 1	33.33...	86.67	80.0	73.33	68.3325
293	BURH...	TKJ 1	26.67...	93.33	86.67	66.67	68.335
294	BURH...	TKJ 1	66.66...	80.0	66.67	53.33	66.6675

Matematika	B Indonesia	B Inggris	Kejuruan
73.33	93.33	73.33	93.33
40.0	80.0	73.33	66.67
40.0	53.33	33.33	53.33

Lihat Hasil Proses LogOut

8. Maka hasil akan keluar dan dapat dilihat dengan cara menekan button hasil.

Data Siswa TryOut

Masukkan ID Siswa

No Peserta: 145
Nama Peserta: Gigandaru
Kelas: TKJ 3

Masukkan Nilai TryOut

Matematika: 80.0
Bahasa Indonesia: 80.0
Bahasa Inggris: 80.0
Kejuruan: 80.0

Hitung Rata-rata

Nilai Rata-rata: 80.0

Tambah Simpan Edit Hapus

Total Siswa: 115
Nilai Rata-rata Tertinggi: 83.33000045776366
Nilai Rata-rata Terendah: 44.9975

No Pe...	Nama	Kelas	Matem...	B Indo...	B Ingg...	Kejuru...	Rata...
145	Gigan...	TKJ 3	80.0	80.0	80.0	80.0	80.0
271	ABDI...	TKJ 1	60.0	80.0	73.33	66.67	70.0
272	ADI N...	TKJ 1	66.66...	73.33	26.67	60.0	56.6675
273	AFNA...	TKJ 1	33.33...	73.33	26.67	53.33	46.665
274	AFTIN I	TKJ 1	66.66...	93.33	40.0	40.0	59.99...
275	AGAT...	TKJ 1	40.0	53.33	33.33	53.33	44.9975
276	AHMA...	TKJ 1	40.0	80.0	53.33	60.0	58.3325
277	AHMA...	TKJ 1	26.67...	86.67	93.33	86.67	73.335
278	AISHA...	TKJ 1	46.66...	60.0	80.0	86.67	68.335
279	ALFAT...	TKJ 1	46.66...	93.33	66.67	73.33	70.0
280	ALIA N...	TKJ 1	46.66...	80.0	73.33	73.33	68.3325
281	ALIFFI...	TKJ 1	53.33...	60.0	26.67	73.33	53.3325
282	ALOY...	TKJ 1	40.0	73.33	33.33	60.0	51.665
283	ALVIN...	TKJ 1	26.67...	80.0	66.67	66.67	60.0025
284	AMIRA...	TKJ 1	33.33...	80.0	53.33	66.67	58.3325
285	ANAN...	TKJ 1	40.0	80.0	46.67	66.67	58.335
286	ANGE...	TKJ 1	20.0	66.67	86.67	66.67	60.0025
287	ANGLI...	TKJ 1	66.66...	80.0	80.0	73.33	75.0
288	APRILI...	TKJ 1	53.33...	66.67	80.0	66.67	66.6675
289	ARWA...	TKJ 1	80.0	66.67	86.67	46.67	70.0025
290	ATHAL...	TKJ 1	20.0	60.0	33.33	66.67	45.0
291	AZIZA...	TKJ 1	46.66...	66.67	86.67	73.33	68.335
292	AZRA...	TKJ 1	33.33...	86.67	80.0	73.33	68.3325
293	BURH...	TKJ 1	26.67...	93.33	86.67	66.67	68.335
294	BURH...	TKJ 1	66.66...	80.0	66.67	53.33	66.6675

Matematika	B Indonesia	B Inggris	Kejuruan
73.33	93.33	73.33	93.33
40.0	80.0	73.33	66.67
40.0	53.33	33.33	53.33

Lihat Hasil Proses LogOut

9. Maka form hasil akan muncul dan dapat dilihat hasil dari clustering k-means.

No	Iterasi	No Pes...	Nama	Kelas	M1	M2	M3	Nilai	Cluster	Pindah
1	1	271	ABDI K...	TKJ 1	32.6516...	20.0	53.7516...	20.0	C2	
2	1	272	ADI NU...	TKJ 1	61.0933...	54.5657...	34.6429...	34.6429...	C3	
3	1	273	AFNAN ...	TKJ 1	76.0076...	49.4377...	22.1098...	22.1098...	C3	
4	1	274	AFTIN I ...	TKJ 1	63.2402...	52.0687...	50.3335...	50.3335...	C3	
5	1	275	AGATHA...	TKJ 1	76.8823...	49.8923...	0.0	0.0	C3	
6	1	276	AHMAD ...	TKJ 1	52.9099...	21.0829...	33.9967...	21.0829...	C2	
7	1	277	AHMAD ...	TKJ 1	51.6320...	31.9715...	77.4648...	31.9715...	C2	
8	1	278	AISHA R...	TKJ 1	43.7091...	29.8157...	58.1259...	29.8157...	C2	
9	1	279	ALFATH...	TKJ 1	33.9869...	17.6320...	56.1786...	17.6320...	C2	
10	1	280	ALIA NA...	TKJ 1	35.8949...	9.42573...	52.4955...	9.42573...	C2	
11	1	281	ALIFFIA...	TKJ 1	63.9378...	52.9074...	25.8173...	25.8173...	C3	
12	1	282	ALOYSI...	TKJ 1	64.9752...	41.0971...	21.0829...	21.0829...	C3	
13	1	283	ALVIN A...	TKJ 1	55.7669...	14.9011...	46.6742...	14.9011...	C2	
14	1	284	AMIRA ...	TKJ 1	53.7442...	21.0829...	36.5203...	21.0829...	C2	
15	1	285	ANAND...	TKJ 1	52.0585...	26.6599...	32.6680...	26.6599...	C2	
16	1	286	ANGEL ...	TKJ 1	66.6600...	27.4889...	60.0088...	27.4889...	C2	
17	1	287	ANGLIL...	TKJ 1	25.8173...	28.2866...	63.2508...	25.8173...	C1	

Kriteria Cluster

c1 : Golongan nilai tinggi

c2 : Golongan nilai sedang

c3 : Golongan nilai rendah

10. Tekan button tutup, untuk menutup form hasil.

11. Kemudian tekan button log out untuk keluar dari program.

Data Siswa TryOut

Masukkan ID Siswa

No Peserta:

Nama Peserta:

Kelas:

Masukkan Nilai TryOut

Matematika:

Bahasa Indonesia:

Bahasa Inggris:

Kejuruan:

Hitung Rata-rata

Nilai Rata-rata:

Total Siswa:

Nilai Rata-rata Terfinggi:

Nilai Rata-rata Terendah:

No Pe...	Nama	Kelas	Matem...	B Indo...	B Ingg...	Kejuru...	Rata...
145	Gigan...	TKJ 3	80.0	80.0	80.0	80.0	80.0
271	ABDI ...	TKJ 1	60.0	80.0	73.33	66.67	70.0
272	ADI N...	TKJ 1	66.66...	73.33	26.67	60.0	56.6675
273	AFNA...	TKJ 1	33.33...	73.33	26.67	53.33	46.665
274	AFTIN I	TKJ 1	66.66...	93.33	40.0	40.0	59.98
275	AGAT...	TKJ 1	40.0	53.33	33.33	53.33	44.9975
276	AHMA...	TKJ 1	40.0	80.0	53.33	80.0	58.3325
277	AHMA...	TKJ 1	26.67...	86.67	93.33	86.67	73.335
278	AISHA...	TKJ 1	46.66...	60.0	80.0	86.67	68.335
279	ALFAT...	TKJ 1	46.66...	93.33	66.67	73.33	70.0
280	ALIA N...	TKJ 1	46.66...	80.0	73.33	73.33	68.3325
281	ALIFFI...	TKJ 1	53.33...	60.0	26.67	73.33	53.3325
282	ALOY...	TKJ 1	40.0	73.33	33.33	80.0	51.665
283	ALVIN...	TKJ 1	26.67...	80.0	66.67	66.67	60.0025
284	AMIRA...	TKJ 1	33.33...	80.0	53.33	66.67	58.3325
285	ANAN...	TKJ 1	40.0	80.0	46.67	66.67	58.335
286	ANGE...	TKJ 1	20.0	66.67	86.67	66.67	60.0025
287	ANGLI...	TKJ 1	66.66...	80.0	80.0	73.33	75.0
288	APRILI...	TKJ 1	53.33...	66.67	80.0	66.67	66.6675
289	ARWA...	TKJ 1	80.0	66.67	86.67	46.67	70.0025
290	ATHAL...	TKJ 1	20.0	60.0	33.33	66.67	45.0
291	AZIZA...	TKJ 1	46.66...	66.67	86.67	73.33	68.335
292	AZRA...	TKJ 1	33.33...	86.67	80.0	73.33	68.3325
293	BURH...	TKJ 1	26.67...	93.33	86.67	66.67	68.335
294	BURH...	TKJ 1	66.66...	80.0	66.67	53.33	66.6675

Matematika	B Indonesia	B Inggris	Kejuruan
73.33	93.33	73.33	93.33
40.0	80.0	73.33	66.67
40.0	53.33	33.33	53.33