

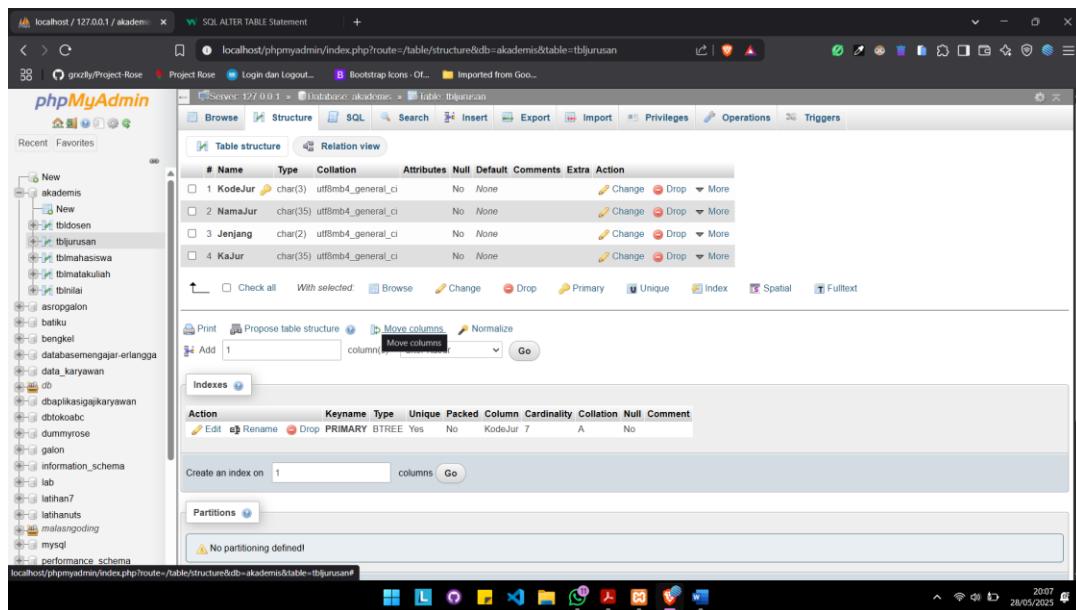
Nama: Erlangga Rafli Pramudya

Kelas: 06TPLP027

NIM: 221011401024

PRAKTIKUM BASIS DATA II

1. Menambahkan kolom Fakultas pada tabel tbjurusan Sebelum



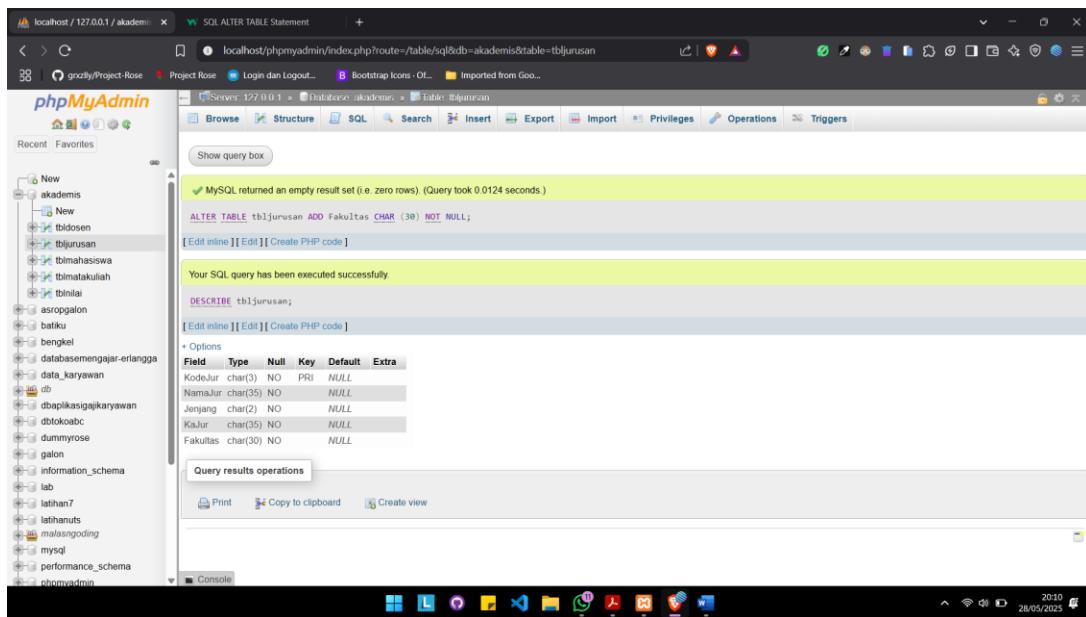
The screenshot shows the 'tbljurusan' table structure in phpMyAdmin. The table has four columns:

Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1 KodeJur	char(3)	utf8mb4_general_ci		No	None			
2 NamaJur	char(35)	utf8mb4_general_ci		No	None			
3 Jenjang	char(2)	utf8mb4_general_ci		No	None			
4 Kalur	char(35)	utf8mb4_general_ci		No	None			

An index is defined on the KodeJur column:

Action	Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
	PRIMARY	BTREE	Yes	No	KodeJur	7	A	No	

Sesudah



The screenshot shows the 'tbljurusan' table structure in phpMyAdmin after adding a new column. The table now has five columns:

Field	Type	Null	Key	Default	Extra
KodeJur	char(3)	NO	PRI	NULL	
NamaJur	char(35)	NO		NULL	
Jenjang	char(2)	NO		NULL	
Kalur	char(35)	NO		NULL	
Fakultas	char(30)	NO		NULL	

The SQL query executed was:

```
ALTER TABLE `tbljurusan` ADD Fakultas CHAR (30) NOT NULL;
```

The message indicates the query was successful:

Your SQL query has been executed successfully.

2. Menambahkan kolom Email pada tabel tblmahasiswa

Sebelum

The screenshot shows the 'Structure' tab for the 'tblmahasiswa' table in the 'akademis' database. The table contains 11 columns:

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	NIM	char(10)	utf8mb4_general_ci	No	None				Change Drop More
2	NamaMHS	char(35)	utf8mb4_general_ci	No	None				Change Drop More
3	TmpLahir	char(26)	utf8mb4_general_ci	No	None				Change Drop More
4	TglLahir	datetime		No	None				Change Drop More
5	JKelamin	char(1)	utf8mb4_general_ci	No	None				Change Drop More
6	Agama	char(10)	utf8mb4_general_ci	No	None				Change Drop More
7	Alamat	char(100)	utf8mb4_general_ci	Yes	NULL				Change Drop More
8	Kota	char(26)	utf8mb4_general_ci	Yes	NULL				Change Drop More
9	KodePos	char(5)	utf8mb4_general_ci	Yes	NULL				Change Drop More
10	NoTelp	char(15)	utf8mb4_general_ci	Yes	NULL				Change Drop More
11	KodeJur	char(3)	utf8mb4_general_ci	Yes	NULL				Change Drop More

Sesudah

The screenshot shows the 'Structure' tab for the 'tblmahasiswa' table in the 'akademis' database. A new column 'Email' has been added at the end of the table structure.

Query results:

```
MySQL returned an empty result set (i.e. zero rows). (Query took 0.0107 seconds)

ALTER TABLE tblmahasiswa ADD Email CHAR (50);

[Edit inline] [Edit] [Create PHP code]
```

Your SQL query has been executed successfully.

Table structure:

Field	Type	Null	Key	Default	Extra
NIM	char(10)	NO	PRI	NULL	
NamaMHS	char(35)	NO		NULL	
TmpLahir	char(26)	NO		NULL	
TglLahir	datetime	NO		NULL	
JKelamin	char(1)	NO		NULL	
Agama	char(10)	NO		NULL	
Alamat	char(100)	YES		NULL	
Kota	char(26)	YES		NULL	
KodePos	char(5)	YES		NULL	
NoTelp	char(15)	YES		NULL	
KodeJur	char(3)	YES	MUL	NULL	
Email	char(50)	YES		NULL	

3. Menambahkan kolom dosen pada tabel tblmatakuliah

Sebelum

The screenshot shows the 'tblmatakuliah' table structure in phpMyAdmin. The table has four columns: KodeMK, NamaMK, SKS, and Semester. A new column, 'Dosen', is being added after the 'Semester' column. The 'Indexes' section shows a primary key named 'PRIMARY' on the 'KodeMK' column.

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	KodeMK	char(5)	utf8mb4_general_ci		No	None			Change Drop More
2	NamaMK	char(35)	utf8mb4_general_ci		No	None			Change Drop More
3	SKS	int(11)			No	None			Change Drop More
4	Semester	char(1)	utf8mb4_general_ci		No	None			Change Drop More

Sesudah

The screenshot shows the 'tblmatakuliah' table structure after the 'Dosen' column has been added. The 'Dosen' column is now listed as the fifth column in the table structure. The table structure is identical to the one shown in the 'Sebelum' screenshot, except for the additional column.

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	KodeMK	char(5)	utf8mb4_general_ci		No	None			Change Drop More
2	NamaMK	char(35)	utf8mb4_general_ci		No	None			Change Drop More
3	SKS	int(11)			No	None			Change Drop More
4	Semester	char(1)	utf8mb4_general_ci		No	None			Change Drop More
5	Dosen	char(50)		YES	Yes	NULL			

4. Menghapus kolom GajiPokok pada tbldosen

Sebelum

The screenshot shows the phpMyAdmin interface for the 'tbldosen' table in the 'akademis' database. The table has 10 columns:

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	NoDos	char(3)	utf8mb4_general_ci		No	None			Change Drop More
2	NamaDos	char(35)	utf8mb4_general_ci		No	None			Change Drop More
3	TmpLahir	char(25)	utf8mb4_general_ci		No	None			Change Drop More
4	TglLahir	datetime			No	None			Change Drop More
5	JKelamin	char(1)	utf8mb4_general_ci		No	None			Change Drop More
6	Agama	char(10)	utf8mb4_general_ci		No	None			Change Drop More
7	Alamat	char(100)	utf8mb4_general_ci		Yes	NULL			Change Drop More
8	Kota	char(25)	utf8mb4_general_ci		Yes	NULL			Change Drop More
9	Kodepos	char(5)	utf8mb4_general_ci		Yes	NULL			Change Drop More
10	GajiPokok	double			No	None			Change Drop More

Sesudah

The screenshot shows the phpMyAdmin interface for the 'tbldosen' table in the 'akademis' database. The table now has 9 columns, as the 'GajiPokok' column has been dropped.

Query results:

```
ALTER TABLE tbldosen DROP GajiPokok;
```

Message: MySQL returned an empty result set (i.e. zero rows). (Query took 0.0079 seconds.)

Table structure:

Field	Type	Null	Key	Default	Extra
NoDos	char(3)	NO	PRI	NULL	
NamaDos	char(35)	NO		NULL	
TmpLahir	char(25)	NO		NULL	
TglLahir	datetime	NO		NULL	
JKelamin	char(1)	NO		NULL	
Agama	char(10)	NO		NULL	
Alamat	char(100)	YES		NULL	
Kota	char(25)	YES		NULL	
Kodepos	char(5)	YES		NULL	

5. Data Definition Language

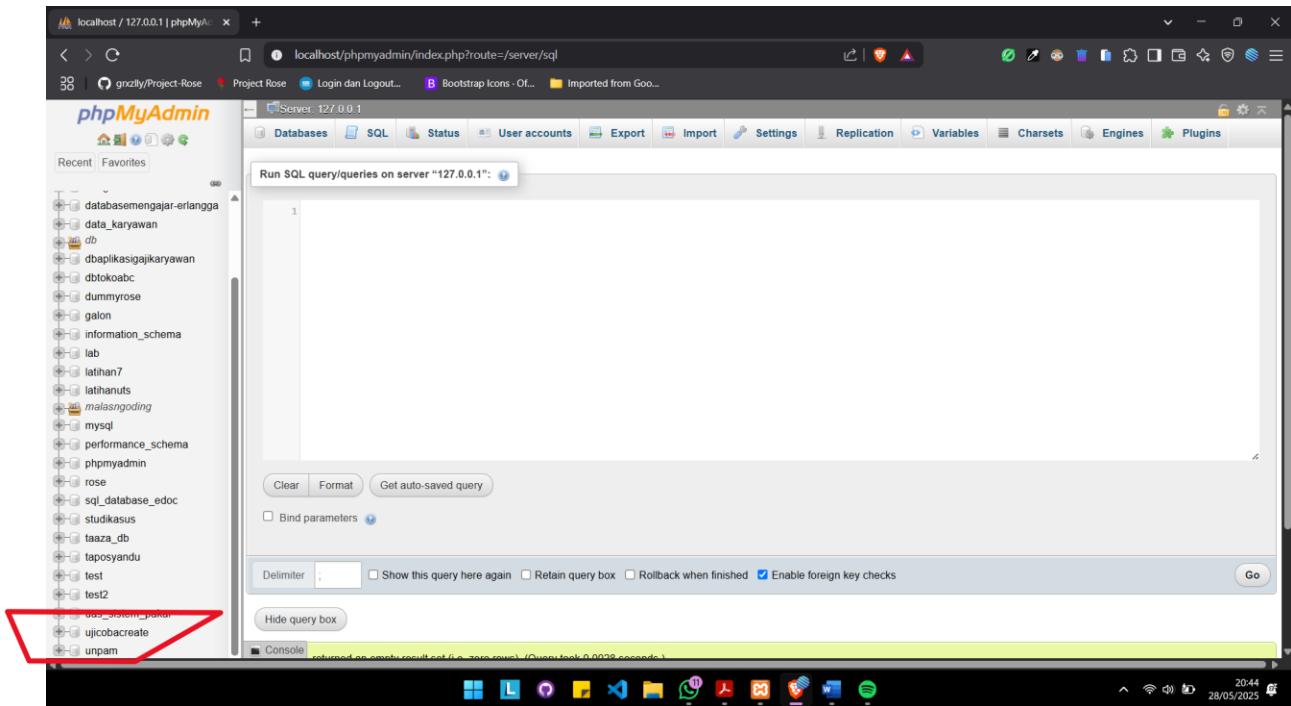
- Membuat database baru dengan menggunakan CREATE
Sebelum

The screenshot shows the phpMyAdmin configuration page. The left sidebar lists various databases: New, akademis, asrogpalon, batiku, bengkel, databasemengajar-erlangga, data_karyawan, db, dbaplikasiagakaryawan, dtokoa, dummyrose, galon, information_schema, lab, latihan7, latihanuts, malangsoding, mysql, performance_schema, phpmadmin, rose, sql_database_edoc, studikasus, taaza_db, taposyandu, and test. The main panel contains several sections: 'General settings' (Server connection collation: utf8mb4_unicode_ci), 'Appearance settings' (Language: English, Theme: pmahomme), 'Database server' (Server: 127.0.0.1 via TCP/IP, Server type: MariaDB, Server version: 10.4.22-MariaDB - mariadb.org binary distribution, Protocol version: 10, User: root@localhost, Server charset: UTF-8 Unicode (utf8mb4)), 'Web server' (Apache/2.4.51 (Win64) OpenSSL/1.1.1i PHP/8.4.5, Database client version: libmysql - mysqld 8.4.5, PHP extension: mysqli mbstring), and 'phpMyAdmin' (Version information: 5.1.1, Documentation, Official Homepage, Contribute, Get support).

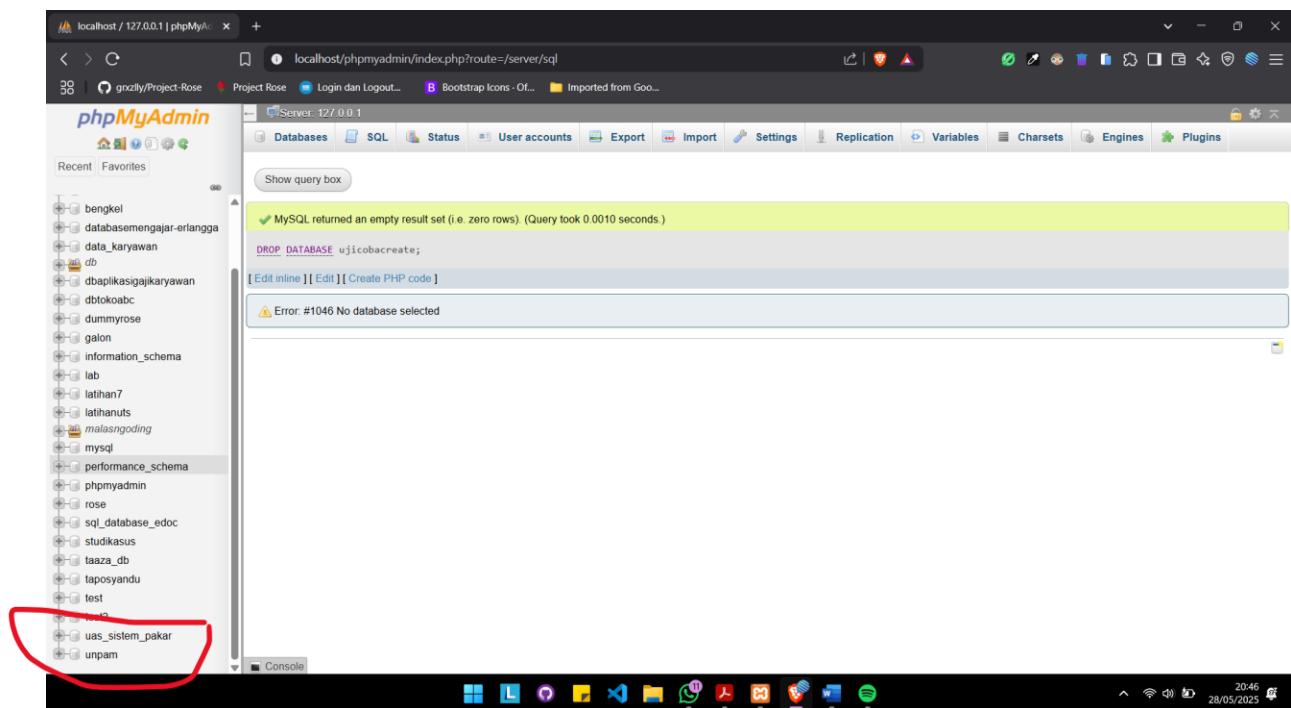
Sesudah

The screenshot shows the phpMyAdmin interface after creating a new database. The left sidebar remains the same. The main panel displays a success message: "MySQL returned an empty result set (i.e. zero rows). (Query took 0.0028 seconds)." Below it, a SQL query is shown: "CREATE DATABASE UjiCobaCreate;". A warning message at the bottom states: "Error: #1046 No database selected". A red box highlights the newly created database "UjiCobaCreate" in the sidebar.

- Menghapus database yang baru dibuat tadi dengan menggunakan DROP Sebelum



Sesudah



- Mengedit struktur tabel tbldosen dengan menambahkan kolom baru menggunakan ALTER

Sebelum

The screenshot shows the 'Structure' tab of the phpMyAdmin interface for the 'tbldosen' table. The table structure is as follows:

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	NoDOS	char(3)	utf8mb4_general_ci		No	None			Change Drop More
2	NamaDOS	char(35)	utf8mb4_general_ci		No	None			Change Drop More
3	TmpTLahir	char(25)	utf8mb4_general_ci		No	None			Change Drop More
4	TglLahir	datetime			No	None			Change Drop More
5	JKkelamin	char(1)	utf8mb4_general_ci		No	None			Change Drop More
6	Agama	char(10)	utf8mb4_general_ci		No	None			Change Drop More
7	Alamat	char(100)	utf8mb4_general_ci		Yes	NULL			Change Drop More
8	Kota	char(25)	utf8mb4_general_ci		Yes	NULL			Change Drop More
9	Kodepos	char(5)	utf8mb4_general_ci		Yes	NULL			Change Drop More

Below the table structure, there is a button labeled 'Add 1 column(s) after Kodepos'.

Sesudah

The screenshot shows the 'Structure' tab of the phpMyAdmin interface for the 'tbldosen' table after adding a new column. The table structure is as follows:

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	NoDOS	char(3)	utf8mb4_general_ci		NO	PRI	NULL		Change Drop More
2	NamaDOS	char(35)	utf8mb4_general_ci		NO		NULL		Change Drop More
3	TmpTLahir	char(25)	utf8mb4_general_ci		NO		NULL		Change Drop More
4	TglLahir	datetime			NO		NULL		Change Drop More
5	JKkelamin	char(1)	utf8mb4_general_ci		NO		NULL		Change Drop More
6	Agama	char(10)	utf8mb4_general_ci		NO		NULL		Change Drop More
7	Alamat	char(100)	utf8mb4_general_ci		YES		NULL		Change Drop More
8	Kota	char(25)	utf8mb4_general_ci		YES		NULL		Change Drop More
9	Kodepos	char(5)	utf8mb4_general_ci		YES		NULL		Change Drop More
10	tesalter	char(5)	utf8mb4_general_ci		YES		NULL		Change Drop More

Below the table structure, there is a message indicating that MySQL returned an empty result set (i.e. zero rows). The SQL query executed was:

```
ALTER TABLE tbldosen ADD tesalter CHAR (5);
```

Below the message, it says 'Your SQL query has been executed successfully'.

6. Data Manipulation Language

- Menambahkan data baru ke tabel tbldosen menggunakan INSERT
Sebelum

The screenshot shows the phpMyAdmin interface for the 'tbldosen' table. The table structure includes columns: NoDos, NamaDos, TmpLahir, TglLahir, JKelamin, Agama, Alamat, Kota, Kodepos, and tesalter. The data consists of 7 rows:

NoDos	NamaDos	TmpLahir	TglLahir	JKelamin	Agama	Alamat	Kota	Kodepos	tesalter
001	Ardiansyah Giandi	Tangerang Selatan	2000-02-18 15:05:04	L	Islam	Jl. Haji Rean	Tangerang Selatan	12345	NULL
002	Falah RabiuSSani	Sukabumi	2001-03-10 20:03:19	L	Kristen	Jl. Apel	Ciledug	11335	NULL
003	Dinda	Depok	1999-05-06 23:59:02	P	Islam	Jl. Merbabu	Depok	16417	NULL
004	Asyrof Zaidan	Cirendeuy	2002-02-02 02:02:02	L	Islam	Jl. Pondok Cabe Raya	Pondok Cabe	12552	NULL
005	Jasmine	Pamulang	2001-09-08 05:10:23	P	Islam	Jl. Pinus 4	Pamulang	14113	NULL
006	Danisa	Jakarta	2001-10-04 16:59:50	P	Islam	Jl. Palang Merah Raya	Jakarta	54321	NULL
007	Antonius Damar	Pamulang	1999-12-15 18:30:12	L	Kristen	Jl. Haji Rean	Pamulang	14113	NULL

Sesudah

The screenshot shows the phpMyAdmin interface for the 'tbldosen' table after a new row has been inserted. The table structure remains the same, but now it contains 8 rows of data. The newly inserted row is highlighted in the table.

NoDos	NamaDos	TmpLahir	TglLahir	JKelamin	Agama	Alamat	Kota	Kodepos	tesalter
008	Arif Rahmat	Padang	1998-03-10 19:19:02	L	Islam	Jl. Cemara II	Tangerang Selatan	19871	NULL
001	Ardiansyah Giandi	Tangerang Selatan	2000-02-18 15:05:04	L	Islam	Jl. Haji Rean	Tangerang Selatan	12345	NULL
002	Falah RabiuSSani	Sukabumi	2001-03-10 20:03:19	L	Kristen	Jl. Apel	Ciledug	11335	NULL
003	Dinda	Depok	1999-05-06 23:59:02	P	Islam	Jl. Merbabu	Depok	16417	NULL
004	Asyrof Zaidan	Cirendeuy	2002-02-02 02:02:02	L	Islam	Jl. Pondok Cabe Raya	Pondok Cabe	12552	NULL
005	Jasmine	Pamulang	2001-09-08 05:10:23	P	Islam	Jl. Pinus 4	Pamulang	14113	NULL
006	Danisa	Jakarta	2001-10-04 16:59:50	P	Islam	Jl. Palang Merah Raya	Jakarta	54321	NULL
007	Antonius Damar	Pamulang	1999-12-15 18:30:12	L	Kristen	Jl. Haji Rean	Pamulang	14113	NULL
008	Arif Rahmat	Padang	1998-03-10 19:19:02	L	Islam	Jl. Cemara II	Tangerang Selatan	19871	NULL

- Menghapus data dengan menggunakan DELETE

Sebelum

The screenshot shows the phpMyAdmin interface for the 'akademis' database. The left sidebar lists various tables, including 'tbldosen'. The main area displays the 'tbldosen' table with 8 rows of data. The columns are: NoDOS, NamaDOS, TmpTLahir, TglLahir, JKelamin, Agama, Alamat, Kota, Kodepos, and tesalter. The data includes entries for Ardiyah Giandi, Falah Rabiusani, Dinda, Asyraf Zaidan, Jasmine, Danisa, Antonius Damar, and Anif Rahmat.

Sesudah

The screenshot shows the phpMyAdmin interface for the 'akademis' database after a row has been deleted. The message '1 row affected. (Query took 0.0002 seconds.)' is displayed at the top. The SQL query shown is 'DELETE FROM tbldosen WHERE NoDOS = 008;'. The main area still displays the 'tbldosen' table with 7 rows of data, excluding the one that was deleted.

- Mengedit data dengan menggunakan UPDATE

Sebelum

The screenshot shows the phpMyAdmin interface for the 'akademis' database. The left sidebar lists various tables: akademis, New, tbldosen, tblijurusan, tbmahasiswa, tbmatkulah, tbnilai, asropgalon, batiku, bengkel, databasemengajar-erlangga, data_karyawan, db, dbaplikasigajikaryawan, dtokoabc, dummyrose, galor, information_schema, lab, latihan7, latihanuts, malasnoding, mysql, performance_schema, and phonyadmin. The 'tbldosen' table is selected. The main area displays the table structure with columns: NoDos, NamaDos, TmpLahir, TglLahir, JKelamin, Agama, Alamat, Kota, Kodepos, and tesalter. A green status bar at the top indicates 'Showing rows 0 - 6 (7 total, Query took 0.0005 seconds)'. Below the table, there are buttons for Browse, Structure, SQL, Search, Insert, Export, Import, Privileges, Operations, and Triggers. The bottom of the screen shows a taskbar with various icons.

Sesudah

The screenshot shows the same phpMyAdmin interface after performing an update query. The status bar now says '1 row affected. (Query took 0.0002 seconds.)'. The 'Operations' section contains the SQL command: 'UPDATE tbldosen SET TmpLahir = 'Padang' WHERE NoDos = 003;'. The rest of the interface and data table remain identical to the 'Sebelum' screenshot.

7. Praktik menggunakan fungsi AGGREGATE

- Menggunakan fungsi MIN() dan MAX() pada tabel tblnilai kolom NilaiUAS

Sebelum

The screenshot shows the 'tblnilai' table in the 'akademis' database. The table structure includes columns: ThnAkademik, Semester, NIM, KodeMK, NoDOS, NilaiAbsen, NilaiTugas, NilaiUTS, and NilaiUAS. There are 7 rows of data. The last row is highlighted.

ThnAkademik	Semester	NIM	KodeMK	NoDOS	NilaiAbsen	NilaiTugas	NilaiUTS	NilaiUAS
2001	1	10107846	MK001	001	90	80	87	92
2010	2	19022004	MK002	002	90	90	87	94
2011	3	20201001	MK003	003	98	89	78	98
2012	4	20202005	MK004	004	87	89	84	90
2013	5	20211005	MK005	005	89	87	93	91
2014	6	20221024	MK006	006	90	82	87	97
2015	7	90987002	MK007	007	100	98	99	98

Sesudah

The screenshot shows the 'tblnilai' table in the 'akademis' database. The table structure includes columns: ThnAkademik, Semester, NIM, KodeMK, NoDOS, NilaiAbsen, NilaiTugas, NilaiUTS, and NilaiUAS. The table now contains only one row, which is the result of the MIN() function applied to the NilaiUAS column. The result is displayed in the 'Query results operations' section.

Query results operations

NilaiUAS Terbesar
90

NilaiUAS Terkecil
98

- Menggunakan fungsi COUNT() untuk melihat berapa banyak nilai absen > 90
- Sebelum

The screenshot shows the phpMyAdmin interface for the 'akademis' database. The left sidebar lists various tables, including 'tblnilai'. The main area displays the 'tblnilai' table with the following data:

	ThnAkademik	Semester	NIM	KodeMK	NoDos	NilaiAbsen	NilaiTugas	NilaiUTS	NilaiUAS
1	2001	1	10107846	MK001	001	90	80	87	92
2	2010	2	19022004	MK002	002	90	90	87	94
3	2011	3	20201001	MK003	003	98	89	78	98
4	2012	4	20202005	MK004	004	87	89	84	90
5	2013	5	20211000	MK005	005	89	87	93	91
6	2014	6	20221024	MK006	006	90	82	87	97
7	2015	7	90987002	MK007	007	100	98	99	98

Sesudah

The screenshot shows the phpMyAdmin interface for the 'akademis' database after executing a COUNT query. The message bar states: "Current selection does not contain a unique column. Grid edit, checkbox, Edit, Copy and Delete features are not available." The query results show:

```
SELECT COUNT(NilaiAbsen) AS 'Nilai Absen' FROM tblnilai WHERE NilaiAbsen >= 90;
```

The results table shows a single row with the value '5'.

- Menggunakan fungsi AVG() untuk mencari rata-rata nilai UAS mahasiswa Sebelum

The screenshot shows the phpMyAdmin interface for the 'akademis' database. The left sidebar lists various tables, including 'tblnilai'. The main area displays the 'tblnilai' table with the following data:

	ThnAkademik	Semester	NIM	KodeMK	NoDos	NilaiAbsen	NilaiTugas	NilaiUTS	NilaiUAS
1	2001	1	10107846	MK001	001	90	80	87	92
2	2010	2	19022004	MK002	002	90	90	87	94
3	2011	3	20201001	MK003	003	98	89	78	98
4	2012	4	20202005	MK004	004	87	89	84	90
5	2013	5	20211000	MK005	005	89	87	93	91
6	2014	6	20221024	MK006	006	90	82	87	97
7	2015	7	90987002	MK007	007	100	98	99	98

Sesudah

The screenshot shows the phpMyAdmin interface for the 'akademis' database. The left sidebar lists various tables, including 'tblnilai'. The main area displays the 'tblnilai' table with the following data:

	ThnAkademik	Semester	NIM	KodeMK	NoDos	NilaiAbsen	NilaiTugas	NilaiUTS	NilaiUAS
--	-------------	----------	-----	--------	-------	------------	------------	----------	----------

A message indicates: "Current selection does not contain a unique column. Grid edit, checkbox, Edit, Copy and Delete features are not available." Below this, the SQL query used is:

```
SELECT AVG(NilaiUAS) AS 'Average Nilai Uas' FROM tblnilai;
```

The result of the query is displayed as:

Average Nilai Uas
94.2857

- Menghitung total nilai UTS yang diperoleh mahasiswa menggunakan fungsi NilaiUTS Sebelum

The screenshot shows the phpMyAdmin interface for the 'akademis' database. The left sidebar lists various databases and tables, including 'tblnilai'. The main area displays the 'tblnilai' table with the following data:

	ThnAkademik	Semester	NIM	KodeMK	NoDos	NilaiAbsen	NilaiTugas	NilaiUTS	NilaiUAS
1	2001	1	10107846	MK001	001	90	80	87	92
2	2010	2	19022004	MK002	002	90	90	87	94
3	2011	3	20201001	MK003	003	98	89	78	98
4	2012	4	20202005	MK004	004	87	89	84	90
5	2013	5	20211000	MK005	005	89	87	93	91
6	2014	6	20221024	MK006	006	90	82	87	97
7	2015	7	90987002	MK007	007	100	98	99	98

Sesudah

The screenshot shows the phpMyAdmin interface for the 'akademis' database. The left sidebar lists various databases and tables, including 'tblnilai'. The main area displays the 'tblnilai' table with the following data:

	ThnAkademik	Semester	NIM	KodeMK	NoDos	NilaiAbsen	NilaiTugas	NilaiUTS	NilaiUAS
1	2001	1	10107846	MK001	001	90	80	87	92
2	2010	2	19022004	MK002	002	90	90	87	94
3	2011	3	20201001	MK003	003	98	89	78	98
4	2012	4	20202005	MK004	004	87	89	84	90
5	2013	5	20211000	MK005	005	89	87	93	91
6	2014	6	20221024	MK006	006	90	82	87	97
7	2015	7	90987002	MK007	007	100	98	99	98

A message in the top right corner states: "Current selection does not contain a unique column. Grid edit, checkbox, Edit, Copy and Delete features are not available." Below the table, the query used is:

```
SELECT SUM(NilaiUTS) AS 'Total Nilai UTS' FROM tblnilai;
```

The result of the query is displayed below the table:

Total Nilai UTS
615

8. Mengurutkan data berdasarkan nilai UTS terkecil ke terbesar (ASCENDING) Sebelum

The screenshot shows the phpMyAdmin interface for the 'akademis' database. The left sidebar lists various tables, including 'tblnilai'. The main area displays the 'tblnilai' table with the following data:

	ThnAkademik	Semester	NIM	KodeMK	NoDOS	NilaiAbsen	NilaiTugas	NilaiUTS	NilaiUAS
1	2001	1	10107846	MK001	001	90	80	87	92
2	2010	2	19022004	MK002	002	90	90	87	94
3	2011	3	20201001	MK003	003	98	89	78	98
4	2012	4	20202005	MK004	004	87	89	84	90
5	2013	5	20211005	MK005	005	89	87	93	91
6	2014	6	20221024	MK006	006	90	82	87	97
7	2015	7	90987002	MK007	007	100	98	99	98

Sesudah

The screenshot shows the phpMyAdmin interface for the 'akademis' database, identical to the previous one but with a different query result. The message at the top indicates the results are ordered by 'NilaiUTS ASC':

Showing rows 0 - 6 (total: 7) [NilaiUTS: 78... - 99..]

The data in the table is now sorted by 'NilaiUTS' in ascending order:

	ThnAkademik	Semester	NIM	KodeMK	NoDOS	NilaiAbsen	NilaiTugas	NilaiUTS	NilaiUAS
1	2011	3	20201001	MK003	003	98	89	78	98
2	2012	4	20202005	MK004	004	87	89	84	90
3	2001	1	10107846	MK001	001	90	80	87	92
4	2010	2	19022004	MK002	002	90	90	87	94
5	2014	6	20221024	MK006	006	90	82	87	97
6	2013	5	20211005	MK005	005	89	87	93	91
7	2015	7	90987002	MK007	007	100	98	99	98

9. Mengurutkan data berdasarkan nilai UTS terbesar ke terkecil (ASCENDING) Sebelum

The screenshot shows the phpMyAdmin interface for the 'akademis' database. The left sidebar lists various tables, and the main area displays the 'tblnilai' table. The table has columns: ThnAkademik, Semester, NIM, KodeMK, NoDOS, NilaiAbsen, NilaiTugas, NilaiUTS, and NilaiUAS. The data is currently sorted by 'NilaiUTS' in ascending order. A green status bar at the top indicates 7 total rows.

ThnAkademik	Semester	NIM	KodeMK	NoDOS	NilaiAbsen	NilaiTugas	NilaiUTS	NilaiUAS
2001	1	10107846	MK001	001	90	80	87	92
2010	2	19022004	MK002	002	90	90	87	94
2011	3	20201001	MK003	003	98	89	78	98
2012	4	20202005	MK004	004	87	89	84	90
2013	5	20211000	MK005	005	89	87	93	91
2014	6	20221024	MK006	006	90	82	87	97
2015	7	90987002	MK007	007	100	98	99	98

Sesudah

The screenshot shows the same phpMyAdmin interface after sorting the 'tblnilai' table by 'NilaiUTS' in descending order (DESC). The data is now ordered from highest to lowest UTS score. The green status bar at the top indicates 7 total rows.

ThnAkademik	Semester	NIM	KodeMK	NoDOS	NilaiAbsen	NilaiTugas	NilaiUTS	NilaiUAS
2015	7	90987002	MK007	007	100	98	99	98
2013	5	20211005	MK005	005	89	87	93	91
2011	3	20201001	MK003	003	98	89	78	98
2010	2	19022004	MK002	002	90	90	87	94
2014	6	20221024	MK006	006	90	82	87	97
2012	4	20202005	MK004	004	87	89	84	90
2001	1	10107846	MK001	001	90	80	87	92