

## 2. Membuat Table

The screenshot shows the phpMyAdmin interface in a web browser. The browser address bar shows the URL: `localhost/phpmyadmin/db_sql.php?db=informatika`. The phpMyAdmin interface has a sidebar on the left with a tree view showing the database structure: `bank`, `informatika`, `information_schema`, `mysql`, `perbankan`, `performance_schema`, `phpmyadmin`, and `test`. The main panel is titled "Jalankan perintah SQL pada basis data informatika:" and contains a text area with the following SQL code:

```
1 CREATE TABLE mahasiswa (  
2   NIM varchar(10) PRIMARY KEY NOT NULL,  
3   nama char(50) NULL,  
4   kelas char(5) NULL,  
5   Alamat char(50) NULL  
6 )
```

Below the SQL code, there are buttons: "Bersihkan", "Format", and "Get auto-saved query". There is also a checkbox for "Bind parameters" and a text input for "Markahi kueri SQL ini:". At the bottom of the SQL execution panel, there are checkboxes for "Tampilkan ulang perintah SQL", "Menahan kotak kueri", "Rollback when finished", and "Perbolehkan cek foreign key", along with a "Kirim" button.

The second screenshot shows the phpMyAdmin interface with the URL: `localhost/phpmyadmin/tbl_structure.php?db=informatika&table=mahasiswa`. The main panel is titled "Struktur tabel" and shows the table structure for "mahasiswa". The table has the following columns:

#	Nama	Jenis	Penyortiran	Atribut	Tak Ternilai	Bawaan	Komentar	Ekstra	Tindakan
1	NIM	varchar(10)	latin1_swedish_ci	Tidak	Tidak ada				Ubah Hapus Lainnya
2	Nama	char(50)	latin1_swedish_ci	Ya	NULL				Ubah Hapus Lainnya
3	Kelas	char(5)	latin1_swedish_ci	Ya	NULL				Ubah Hapus Lainnya
4	Alamat	char(50)	latin1_swedish_ci	Ya	NULL				Ubah Hapus Lainnya

Below the table structure, there are buttons: "Pilih Semua", "Dengan pilihan:", "Jelajahi", "Ubah", "Hapus", "Utama", "Unik", "Indeks", "Teks penuh", and "Add to central columns". There is also a "Remove from central columns" button. At the bottom, there are buttons: "Cetak", "Usulkan struktur tabel", "Lacak tabel", "Move columns", and "Normalisasi". There is also a "Tambahkan" button with a dropdown menu and a "Kirim" button.

The third screenshot shows the phpMyAdmin interface with the URL: `localhost/phpmyadmin/tbl_relation.php?db=informatika&table=mahasiswa`. The main panel is titled "Indeks" and shows the index structure for "mahasiswa". The index has the following columns:

Tindakan	Nama kunci	Jenis	Unik	Dipadatkan	Kolom	Kardinalitas	Penyortiran	Tak Ternilai	Komentar
Ubah Hapus	PRIMARY	BTREE	Ya	Tidak	NIM	0	A	Tidak	

Below the index structure, there are buttons: "Buat indeks pada", "1", "kolom", and "Kirim". There is also a "Partitions" button and a "Partition table" button.

### 3. Memasukan Data

The image displays two screenshots of the phpMyAdmin interface, showing the process of entering data into a database table named 'mahasiswa'.

**Top Screenshot:** The interface shows the 'mahasiswa' table with 1 record displayed. The record details are:

NIM	Nama	Kelas	Alamat
L200080001	Ani Wibowo	A	Solo

**Bottom Screenshot:** The interface shows the 'mahasiswa' table with 2 records displayed. The record details are:

NIM	Nama	Kelas	Alamat
L200080001	Ani Wibowo	A	Solo
L200080080	Agustina	B	NULL

## 4. Mengubah Data

The screenshot shows the phpMyAdmin web interface in a browser window. The address bar indicates the URL: `localhost/phpmyadmin/sql.php?db=informatika&table=mahasiswa&pos=0`. The interface is for the 'informatika' database, specifically for the 'mahasiswa' table. A green message bar at the top states: 'Menampilkan baris 0 - 1 (total 2, Pencarian dilakukan dalam 0.0000 detik.)'. Below this, a SQL query is shown: `SELECT * FROM `mahasiswa``. The table data is displayed as follows:

	NIM	Nama	Kelas	Alamat
<input type="checkbox"/>	L200080001	Ani Wibowo	A	Solo
<input type="checkbox"/>	L200080080	Agustina Anggraini	B	NULL

Below the table, there are options for 'Operasi hasil kueri' (Print, Salin ke clipboard, Ekspor, Tampilkan bagan, Buat tampilan) and a section for 'Markahi kueri SQL ini' (Mark the SQL query) with a title field and a checkbox for 'Izinkan semua pengguna untuk mengakses markah ini'. The bottom status bar shows the time as 12:48 PM on 10/1/2019.

## 5. Join

The screenshot shows the phpMyAdmin interface for a database named 'informatika'. The 'Tabel: mahasiswa' table is selected. The SQL query editor contains the following code:

```
1 CREATE TABLE Nilai(  
2     NIM varchar(10) PRIMARY KEY NULL,  
3     Nama_JK char(20) NULL,  
4     Nilai_Angka INT NULL,  
5     Nilai_Huruf char(5) NULL  
6 )
```

The 'Kolom' (Columns) list on the right shows: NIM, Nama, Kelas, and Alamat. Below the query editor, the 'Kirim' (Execute) button is visible. A red error message is displayed at the bottom of the query editor area:

**Galat**  
Query SQL:  
SELECT Mahasiswa.NIM, Mahasiswa>Nama, Mahasiswa>Nama, Nilai>Nama\_JK, Nilai.Nilai\_Angka, Nilai.Nilai\_Huruf FROM (Mahasiswa JOIN Nilai ON Mahasiswa.NIM=Nilai.NIM) LIMIT 0, 25

The error message indicates a syntax error in the SQL query, specifically in the JOIN clause where the column names are not properly enclosed in quotes.

The screenshot shows the phpMyAdmin interface for the same database and table. The SQL query editor contains the following code:

```
1 SELECT Mahasiswa.NIM, Mahasiswa>Nama, Nilai>Nama_JK, Nilai.Nilai_Angka, Nilai.Nilai_Huruf FROM (Mahasiswa JOIN Nilai ON  
Mahasiswa.NIM=Nilai.NIM)
```

The 'Kolom' (Columns) list on the right shows: NIM, Nama, Kelas, and Alamat. Below the query editor, the 'Kirim' (Execute) button is visible. The query has been executed successfully, and the results are displayed in the 'Konsol' (Console) area at the bottom of the interface.

localhost / 127.0.0.1 / informatika x

localhost/phpmyadmin/tbl\_structure.php?db=informatika&table=nilai

phpMyAdmin

Server: 127.0.0.1 » Basis data: informatika » Tabel: nilai

Struktur tabel

#	Nama	Jenis	Penyortiran	Atribut	Tak Ternilai	Bawaan	Komentar	Ekstra	Tindakan
1	NIM	varchar(10)	latin1_swedish_ci	Tidak		Tidak ada			Ubah Hapus Lainnya
2	Nama_MK	char(20)	latin1_swedish_ci	Ya	NULL				Ubah Hapus Lainnya
3	Nilai_Angka	int(11)		Ya	NULL				Ubah Hapus Lainnya
4	Nilai_Huruf	char(5)	latin1_swedish_ci	Ya	NULL				Ubah Hapus Lainnya

Pilih Semua Dengan pilihan: Jelajahi Ubah Hapus Utama Unik Indeks Teks penuh Add to central columns

Remove from central columns

Cetak Usulkan struktur tabel Lacak tabel Move columns Normalisasi

Tambahkan 1 kolom setelah Nilai\_Huruf Kirim

Indeks

Tindakan	Nama kunci	Jenis	Unik	Dipadatkan	Kolom	Kardinalitas	Penyortiran	Tak Ternilai	Komentar
Ubah Hapus	PRIMARY	BTREE	Ya	Tidak	NIM	0	A	Tidak	

Buat indeks pada 1 kolom Kirim

Partitions

No partitioning defined!

Konsol

Partition table

12:58 PM 10/1/2019

localhost / 127.0.0.1 / informatika: x

localhost/phpmyadmin/db\_sql.php?db=informatika

Server: 127.0.0.1 » Basis data: informatika

Struktur SQL Cari Kueri Ekspor Impor Operasi Hak Akses Routine Event Trigger Lainnya

Tampilkan kotak kueri

✓ Menampilkan baris 0 - 0 (total 1, Pencarian dilakukan dalam 0.0000 detik.)

`SELECT Mahasiswa.NDM, Mahasiswa>Nama, Nilai>Nama_MK, Nilai.Nilai_Angka, Nilai.Nilai_Huruf FROM(Mahasiswa JOIN Nilai ON Mahasiswa.NDM=Nilai.NDM)`

☐ Profil ☐ [Edit dikotak] ☐ [Ubah] ☐ [Jelaskan SQL] ☐ [Buat kode PHP] ☐ [Segarkan]

☐ Tampilkan semua | Jumlah baris: 25 Saring baris: Cari di tabel ini

+ Opsi

NIM	Nama	Nama_MK	Nilai_Angka	Nilai_Huruf
L200080080	Agustina Anggraini	Pemrograman Web	90	A

☐ Tampilkan semua | Jumlah baris: 25 Saring baris: Cari di tabel ini

Operasi hasil kueri

Cetak Salin ke clipboard Ekspor Tampilkan bagan Buat tampilan

Markahi kueri SQL ini

Judul:  ☐ Izinkan semua pengguna untuk mengakses markah ini

Markahi kueri SQL ini

Konsol

1:08 PM 10/1/2019

## 6. Left Join

localhost / 127.0.0.1 / informatika: x

localhost/phpmyadmin/db\_sql.php?db=informatika

Server: 127.0.0.1 » Basis data: informatika

Struktur SQL Cari Kueri Ekspor Impor Operasi Hak Akses Routine Event Trigger Lainnya

Tampilkan kotak kueri

✓ Menampilkan baris 0 - 1 (total 2, Pencarian dilakukan dalam 0.0000 detik.)

`SELECT Mahasiswa.NDM, Mahasiswa>Nama, Nilai>Nama_MK, Nilai.Nilai_Angka, Nilai.Nilai_Huruf FROM(Mahasiswa LEFT JOIN Nilai ON Mahasiswa.NDM=Nilai.NDM)`

☐ Profil ☐ [Edit dikotak] ☐ [Ubah] ☐ [Jelaskan SQL] ☐ [Buat kode PHP] ☐ [Segarkan]

☐ Tampilkan semua | Jumlah baris: 25 Saring baris: Cari di tabel ini

+ Opsi

NIM	Nama	Nama_MK	Nilai_Angka	Nilai_Huruf
L200080001	Ani Wibowo	NULL	NULL	NULL
L200080080	Agustina Anggraini	Pemrograman Web	90	A

☐ Tampilkan semua | Jumlah baris: 25 Saring baris: Cari di tabel ini

Operasi hasil kueri

Cetak Salin ke clipboard Ekspor Tampilkan bagan Buat tampilan

Markahi kueri SQL ini

Judul:  ☐ Izinkan semua pengguna untuk mengakses markah ini

Markahi kueri SQL ini

Konsol

1:08 PM 10/1/2019

## 7. Right Join

The screenshot shows the phpMyAdmin interface with a database named 'informatika'. The left sidebar shows the database structure, including tables like 'mahasiswa' and 'nilai'. The main panel displays the results of a Right Join query between 'mahasiswa' and 'nilai' on the 'NIM' column. The query is: `SELECT mahasiswa.NIM, mahasiswa>Nama, nilai>Nama_MK, nilai.Nilai_Angka, nilai.Nilai_Huruf FROM(mahasiswa RIGHT JOIN nilai ON mahasiswa.NIM=nilai.NIM)`. The results show 3 rows, with the first two rows having NULL values for 'nama' and 'nama\_mk'.

NIM	Nama	Nama_MK	Nilai_Angka	Nilai_Huruf
NULL	NULL	Kapita Selektia	60	BC
NULL	NULL	Pemrograman Web	87	A
L200080080	Agustina Anggraini	Pemrograman Web	90	A

## 8. AVG

The screenshot shows the phpMyAdmin interface with the same database 'informatika'. The left sidebar shows the database structure. The main panel displays the results of an AVG query on the 'nilai' table. The query is: `SELECT AVG(nilai_Angka) 'Rata-rata Nilai' FROM nilai`. The result shows a single row with the value '79.0000' for the 'Rata-rata Nilai' column.

Rata-rata Nilai
79.0000

## 9. SUM

The screenshot shows the phpMyAdmin web interface in a browser window. The address bar indicates the URL is `localhost/phpmyadmin/tbl_sql.php?db=informatika&table=nilai`. The left sidebar shows a database structure with 'informatika' selected, containing tables 'Baru', 'mahasiswa', and 'nilai'. The main panel is titled 'Server: 127.0.0.1 > Basis data: informatika > Tabel: Nilai'. It features a toolbar with options like 'Jelajahi', 'Struktur', 'SQL', 'Cari', 'Tambahkan', 'Ekspor', 'Impor', 'Hak Akses', 'Operasi', 'Pelacakan', and 'Trigger'. A message states: 'Current selection does not contain a unique column. Grid edit, checkbox, Edit, Copy and Delete features are not available.' Below this, a green success message says: 'Menampilkan baris 0 - 0 (total 1, Pencarian dilakukan dalam 0,0000 detik.)'. The SQL query entered is: `SELECT SUM(nilai_Angka) 'Total Nilai' FROM Nilai`. Below the query, there are controls for 'Tampilkan semua', 'Jumlah baris' (set to 25), and 'Saring baris' (set to 'Cari di tabel ini'). A '+ Opsi' button is visible. The query result is shown as a single row: 

Total Nilai	237
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. At the bottom, there are sections for 'Operasi hasil kueri' (with options like 'Cetak', 'Salin ke clipboard', 'Ekspor', 'Tampilkan bagan', 'Buat tampilan') and 'Markahi kueri SQL ini' (with a 'Judul:' field and a checkbox 'Izinkan semua pengguna untuk mengakses markah ini'). The Windows taskbar at the bottom shows the time as 1:11 PM on 10/1/2019.



## 10. View

The image displays two screenshots of the phpMyAdmin interface, demonstrating the process of creating and viewing a SQL query.

**Top Screenshot: SQL Query Execution**

The top screenshot shows the phpMyAdmin interface with the "Jalankan perintah SQL pada basis data informatika:" (Execute SQL command on the informatika database) tab selected. The SQL command entered is:

```
1 CREATE VIEW KHS AS SELECT Mahasiswa.NIM, Nilai>Nama_MK, Nilai.Nilai_Angka, Nilai.Nilai_Huruf FROM (Mahasiswa INNER JOIN Nilai ON Mahasiswa.NIM=Nilai.NIM)
```

Below the query editor, there are buttons for "Bersihkan" (Clear), "Format", and "Get auto-saved query". There is also a checkbox for "Bind parameters" and a text input for "Markahi kueri SQL ini:". At the bottom, there are checkboxes for "Tampilkan ulang perintah SQL", "Menahan kotak kueri", "Rollback when finished", and "Perbolehkan cek foreign key", along with a "Kirim" (Send) button.

**Bottom Screenshot: Query Results**

The bottom screenshot shows the phpMyAdmin interface with the "Gambarkan: KHS" (Visualize: KHS) tab selected. The "Tampilkan kotak kueri" (Show query box) section displays the SQL command. Below this, a message indicates that the current selection does not contain a unique column, which may result in undesired behavior for grid edit, copy, and delete features. A green bar indicates that 0 rows were displayed (search completed in 0.0000 seconds).

The "Select \* FROM KHS" query is shown, and the results are displayed in a table with the following columns: NIM, Nama\_MK, Nilai\_Angka, and Nilai\_Huruf. The table contains one row of data:

NIM	Nama_MK	Nilai_Angka	Nilai_Huruf
L200080080	Pemrograman Web	90	A

Below the table, there are buttons for "Salin" (Copy), "Hapus" (Delete), "Ubah" (Edit), and "Ekspor" (Export). There are also checkboxes for "Pilih Semua" (Select All) and "Dengan pilihan:" (With selection:). At the bottom, there is a section for "Operasi hasil kueri" (Query result operations) with buttons for "Cetak" (Print), "Salin ke clipboard" (Copy to clipboard), "Ekspor" (Export), "Tampilkan bagan" (Show diagram), and "Buat tampilan" (Create view). There is also a section for "Markahi kueri SQL ini" (Mark this SQL query) with a text input for "Judul:" (Title) and a checkbox for "Izinkan semua pengguna untuk mengakses markah ini" (Allow all users to access this mark).

## TUGAS

1.

- SELECT = digunakan untuk mengambil data dari table database dan mengembalikan data dalam bentuk tabel
- Join = untuk melakukan relasi antara table kiri dan kanan
- Left Join = cara menghubungkan tabel dan menampilkan semua data (kiri) pada tabel yang tidak berhubungan, sedangkan data yang kosong akan bernilai NULL.
- Right Join = menghubungkan tabel dan menampilkan semua data (kanan) pada tabel yang tidak berhubungan, dan data yang kosong akan bernilai NULL.
- AVG = untuk menghitung Rata Rata
- SUM = Untuk menjumlahkan semua nilai

2. UPDATE Mahasiswa SET Alamat = 'Sragen' WHERE NIM='L200080080'

The screenshot shows the phpMyAdmin web interface. The left sidebar displays a tree view of the database structure, including 'bank', 'informatika', 'mahasiswa', 'nilai', 'information\_schema', 'mysql', 'perbankan', 'performance\_schema', 'phpmyadmin', and 'test'. The main panel shows the 'mahasiswa' table with the following data:

NIM	Nama	Kelas	Alamat
L200080001	Ari Wibowo	A	Solo
L200080080	Agustina Anggraini	B	Sragen

Below the table, there are options for 'Operasi hasil kueri' (Print, Salin ke clipboard, Ekspor, Tampilkan bagan, Buat tampilan) and a section for 'Markahi kueri SQL ini' (Judul, Izinkan semua pengguna untuk mengakses markah ini, Markahi kueri SQL ini button). The bottom status bar shows the time as 1:23 PM on 10/1/2019.