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KELAS : TI.17.D2

TUGAS PRAKTIKUM

1. Buat sebuah database dengan nama **latihan1**!
2. Buat sebuah tabel dengan nama **biodata** dengan field nama dan alamat pada database **latihan1**!
3. Tambahkan sebuah kolom **keterangan** (varchar 15), sebagai kolom terakhir!
4. Tambahkan kolom **id** (int 11) di awal (sebagai kolom pertama)!
5. Sisipkan sebuah kolom dengan nama **phone** (varchar 15) setelah kolom alamat!
6. Ubah kolom **id** menjadi char(11)!
7. Ubah nama kolom **phone** menjadi **hp** (varchar 20)!
8. Hapus kolom **keterangan** dari tabel!
9. Ganti nama tabel menjadi **data_mahasiswa**!
10. Ganti nama **field** id menjadi **nim**!
11. Jadikan **nim** sebagai primary key!

EVALUASI DAN PERTANYAAN

1. Tulis semua perintah-perintah SQL percobaan di atas beserta outputnya!
2. Apa maksud dari int (11)?
3. Ketika kita melihat struktur tabel dengan perintah desc, ada kolom **Null** yang berisi **Yes** dan **No**. Apa maksudnya ?
4. Buat laporan praktikum beserta langkah-langkah yang dilakukan dalam bentuk tutorial beserta screenshot outputnya (point 1)
5. Upload hasilnya pada calssroom.

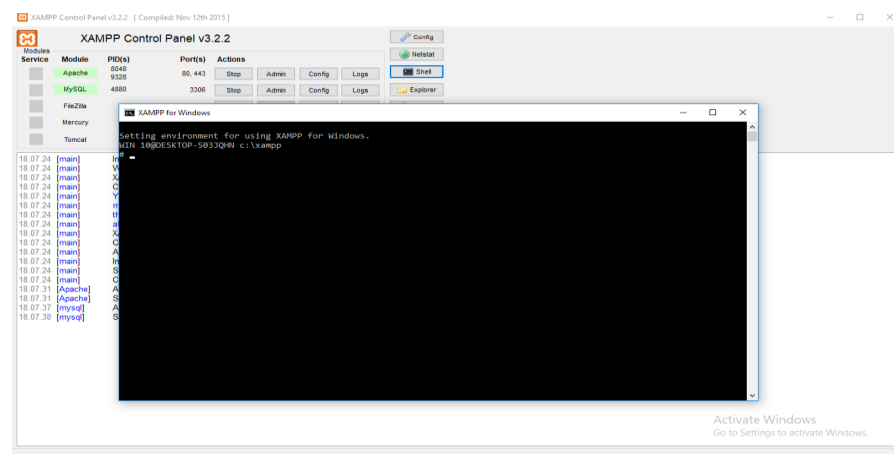
Buka aplikasi XAMPP



Pada tombol bottom Actions

- Apache klik star
- Mysql klik star
- Kemudian klik bottom shell

Dan tampilan akan seperti ini



Jika xampp di instal di local C :

Langsung lewat CMD

- Buka CMD lalu ketik
- Cd
- Cd mysql\bin
- Mysql -u root

```
XAMPP for Windows - mysql -u root

Setting environment for using XAMPP for Windows.
WIN 10@DESKTOP-503JQHN c:\xampp
# cd
c:\xampp

WIN 10@DESKTOP-503JQHN c:\xampp
# cd mysql\bin

WIN 10@DESKTOP-503JQHN c:\xampp\mysql\bin
# mysql -u root
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 4
Server version: 10.1.10-MariaDB mariadb.org binary distribution

Copyright (c) 2000, 2015, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.
```

1. Buat sebuah database dengan nama **latihan1**

- Untuk membuat data base baru dengan nama **latihan1** ketik **create database latihan1** ;
- Lalu Enter , dan tampilan akan seperti ini

```
XAMPP for Windows - mysql -u root

Setting environment for using XAMPP for Windows.
WIN 10@DESKTOP-503JQHN c:\xampp
# cd
c:\xampp

WIN 10@DESKTOP-503JQHN c:\xampp
# cd mysql\bin

WIN 10@DESKTOP-503JQHN c:\xampp\mysql\bin
# mysql -u root
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 4
Server version: 10.1.10-MariaDB mariadb.org binary distribution

Copyright (c) 2000, 2015, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MariaDB [(none)]> use latihan1 ;
Database changed
MariaDB [latihan1]> create table biodata
```

2. Buat sebuah tabel dengan nama **biodata** dengan field nama dan alamat pada database **latihan1**!

- Sebelum membuat tabel **biodata** pilih database yang telah di buat dengan ketik **use latihan1**;
- Setelah itu untuk membuat tabel dengan field nama dan alamat maka perintahnya:

create table biodata

=>(nama varchar (15) not null,

=>alamat varchar (20) not null) ;

```
XAMPP for Windows - mysql -u root

Setting environment for using XAMPP for Windows.
WIN 10@DESKTOP-503JQHN c:\xampp
# cd
c:\xampp

WIN 10@DESKTOP-503JQHN c:\xampp
# cd mysql\bin

WIN 10@DESKTOP-503JQHN c:\xampp\mysql\bin
# mysql -u root
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 4
Server version: 10.1.10-MariaDB mariadb.org binary distribution

Copyright (c) 2000, 2015, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MariaDB [(none)]> use latihan1 ;
Database changed
MariaDB [latihan1]> create table biodata
-> ( nama varchar (15) not null,
-> alamat varchar (20) not null ) ;
Query OK, 0 rows affected (0.31 sec)
```

- Untuk melihat struktur tabel ketik **desc biodata**

```
MariaDB [latihan1]> desc biodata ;
+-----+-----+-----+-----+-----+-----+
| Field | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| nama  | varchar(15)   | NO   |     | NULL    |       |
| alamat| varchar(20)   | NO   |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.02 sec)
```

3. Tambahkan sebuah kolom **keterangan** (varchar 15), sebagai kolom terakhir!

- Untuk menambah kolom **keterangan (varchar 15)** perintahnya :

alter table biodata

=>alter table biodata

=>add keterangan varchar (15) not null ;

```
MariaDB [latihan1]> alter table biodata
-> add keterangan varchar (15) not null ;
Query OK, 0 rows affected (0.54 sec)
Records: 0 Duplicates: 0 Warnings: 0
```

- Untuk melihat struktur tabel ketik **desc biodata ;**

```
MariaDB [latihan1]> desc biodata ;
+-----+-----+-----+-----+-----+-----+
| Field | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| nama  | varchar(15)   | NO   |     | NULL    |       |
| alamat| varchar(20)   | NO   |     | NULL    |       |
| keterangan| varchar(15) | NO   |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.03 sec)
```

4. Tambahkan kolom **id** (int 11) di awal (sebagai kolom pertama)!

- Untuk menambah kolom **id (int 11)** di kolom pertama perintahnya;

```
MariaDB [latihan1]> desc biodata ;
+-----+-----+-----+-----+-----+-----+
| Field | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| nama  | varchar(15)   | NO   |     | NULL    |       |
| alamat| varchar(20)   | NO   |     | NULL    |       |
| keterangan| varchar(15) | NO   |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.03 sec)
```

alter table biodata

=>alter table biodata

=>add id int (11) null first ;

```
MariaDB [latihan1]> alter table biodata
-> add id int (11) null first ;
Query OK, 0 rows affected (0.48 sec)
Records: 0 Duplicates: 0 Warnings: 0
```

- Untuk melihat struktur tabel ketik **desc biodata ;**

```
MariaDB [latihan1]> desc biodata ;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| id    | int(11) | YES | | NULL | |
| nama  | varchar(15) | NO | | NULL | |
| alamat | varchar(20) | NO | | NULL | |
| keterangan | varchar(15) | NO | | NULL | |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.05 sec)
```

5. Sisipkan sebuah kolom dengan nama **phone** (varchar 15) setelah kolom alamat!

- Untuk menyisipkan kolom dengan nama **phone (varchar 15)** setelah kolom alamat perintahnya :

alter table biodata

=>add column

=>phone varchar (15) not null

=>after alamat ;

```
MariaDB [latihan1]> alter table biodata
-> add column
-> phone varchar (15) not null
-> after alamat ;
Query OK, 0 rows affected (0.54 sec)
Records: 0 Duplicates: 0 Warnings: 0
```

- Untuk melihat struktur tabel ketik **desc biodata ;**

```
MariaDB [latihan1]> desc biodata ;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| id    | int(11) | YES | | NULL | |
| nama  | varchar(15) | NO | | NULL | |
| alamat | varchar(20) | NO | | NULL | |
| phone | varchar(15) | NO | | NULL | |
| keterangan | varchar(15) | NO | | NULL | |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.02 sec)
```

6. Ubah kolom **id** menjadi char(11)!

- Mengubah kolom **id** menjadi **char(11)** perintahnya:

alter table biodata

=>modify id char (11) null ;

```

MariaDB [latihan1]> alter table biodata
  -> modify id char (11) null ;
Query OK, 0 rows affected (0.93 sec)
Records: 0 Duplicates: 0 Warnings: 0

```

- Untuk melihat struktur tabel ketik **desc biodata** ;

```

MariaDB [latihan1]> desc biodata ;
+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| id    | char(11) | YES | | NULL | |
| nama  | varchar(15) | NO | | NULL | |
| alamat | varchar(20) | NO | | NULL | |
| phone  | varchar(15) | NO | | NULL | |
| keterangan | varchar(15) | NO | | NULL | |
+-----+-----+-----+-----+-----+
5 rows in set (0.02 sec)

```

7. Ubah nama kolom **phone** menjadi **hp** (varchar 20)!

- Merubah nama kolom **phone** menjadi **hp** (**varchar 20**) perintahnya :

alter table biodata

=>change phone hp varchar (20) not null ;

```

MariaDB [latihan1]> alter table biodata
  -> change phone hp varchar (20) not null ;
Query OK, 0 rows affected (0.69 sec)
Records: 0 Duplicates: 0 Warnings: 0

```

- Untuk melihat struktur tabel ketik **desc biodata** ;

```

MariaDB [latihan1]> desc biodata ;
+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| id    | char(11) | YES | | NULL | |
| nama  | varchar(15) | NO | | NULL | |
| alamat | varchar(20) | NO | | NULL | |
| hp    | varchar(20) | NO | | NULL | |
| keterangan | varchar(15) | NO | | NULL | |
+-----+-----+-----+-----+-----+
5 rows in set (0.02 sec)

```

8. Hapus kolom **keterangan** dari tabel!

- Untuk menghapus kolom **keterangan** dari tabel **biodata** perintahnya ;

alter table biodata

=>drop keterangan ;

```

MariaDB [latihan1]> alter table biodata
  -> drop keterangan ;
Query OK, 0 rows affected (0.46 sec)
Records: 0 Duplicates: 0 Warnings: 0

```

- Untuk melihat struktur tabel ketik **desc biodata** ;

```
MariaDB [latihan1]> desc biodata ;
```

Field	Type	Null	Key	Default	Extra
id	char(11)	YES		NULL	
nama	varchar(15)	NO		NULL	
alamat	varchar(20)	NO		NULL	
hp	varchar(20)	NO		NULL	

```
4 rows in set (0.02 sec)
```

9. Ganti nama tabel menjadi **data_mahasiswa**!

- Mengganti nama tabel **biodata** menjadi **data_mahasiswa** perintahnya adalah :

rename table biodata to data_mahasiswa ;

```
MariaDB [latihan1]> rename table biodata to data_mahasiswa ;
Query OK, 0 rows affected (0.24 sec)
```

- Untuk melihat struktur tabel ketik **desc data_mahasiswa ;**
- Karena nama tabel sudah di ubah sebelumnya

```
MariaDB [latihan1]> desc data_mahasiswa ;
```

Field	Type	Null	Key	Default	Extra
nim	char(11)	YES		NULL	
nama	varchar(15)	NO		NULL	
alamat	varchar(20)	NO		NULL	
hp	varchar(20)	NO		NULL	

10. Ganti nama **field** id menjadi **nim**!

- Mengganti nama field **id** menjadi **nim** perintahnya adalah :

alter table data_mahasiswa

=>change is nim char (11) null ;

```
MariaDB [latihan1]> alter table data_mahasiswa
-> change id nim char (11) null ;
Query OK, 0 rows affected (0.00 sec)
Records: 0 Duplicates: 0 Warnings: 0
```

- Untuk melihat struktur tabel ketik **desc data_mahasiswa ;**

```
MariaDB [latihan1]> desc data_mahasiswa ;
```

Field	Type	Null	Key	Default	Extra
nim	char(11)	YES		NULL	
nama	varchar(15)	NO		NULL	
alamat	varchar(20)	NO		NULL	
hp	varchar(20)	NO		NULL	

```
4 rows in set (0.02 sec)
```

11. Jadikan **nim** sebagai primary key!

- Menjadikan **nim** sebagai **primary key** perintahnya :

=>alter table data_mahasiswa add primary key (nim) ;

```
MariaDB [latihan1]> alter table data_mahasiswa add primary key (nim) ;
Query OK, 0 rows affected (0.62 sec)
Records: 0 Duplicates: 0 Warnings: 0
```

- Untuk melihat struktur tabel ketik **desc data_mahasiswa ;**

```
MariaDB [latihan1]> desc data_mahasiswa ;
+-----+-----+-----+-----+-----+
| Field | Type      | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| nim   | char(11)  | NO   | PRI | NULL    |       |
| nama  | varchar(15)| NO   |     | NULL    |       |
| alamat| varchar(20)| NO   |     | NULL    |       |
| hp    | varchar(20)| NO   |     | NULL    |       |
+-----+-----+-----+-----+-----+
4 rows in set (0.02 sec)
```

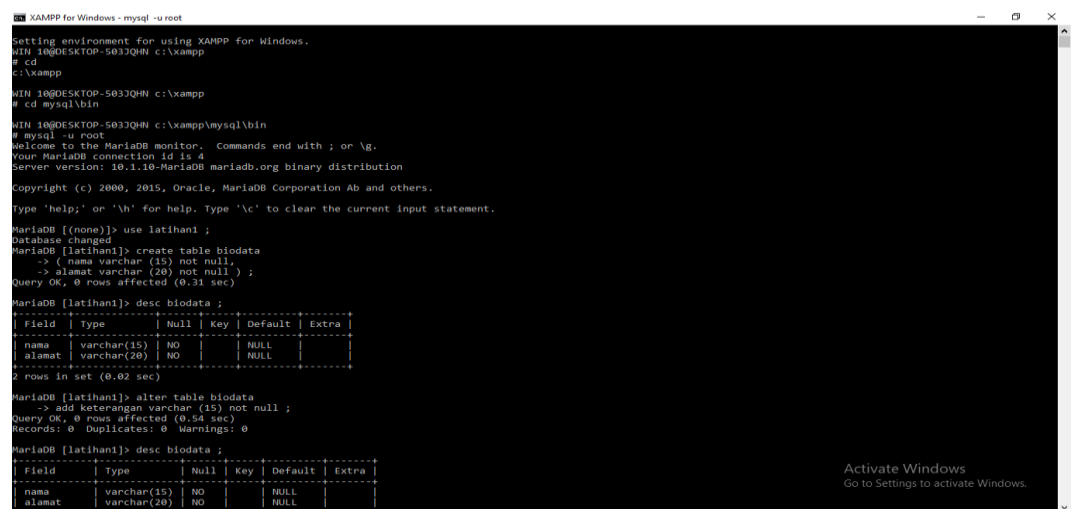
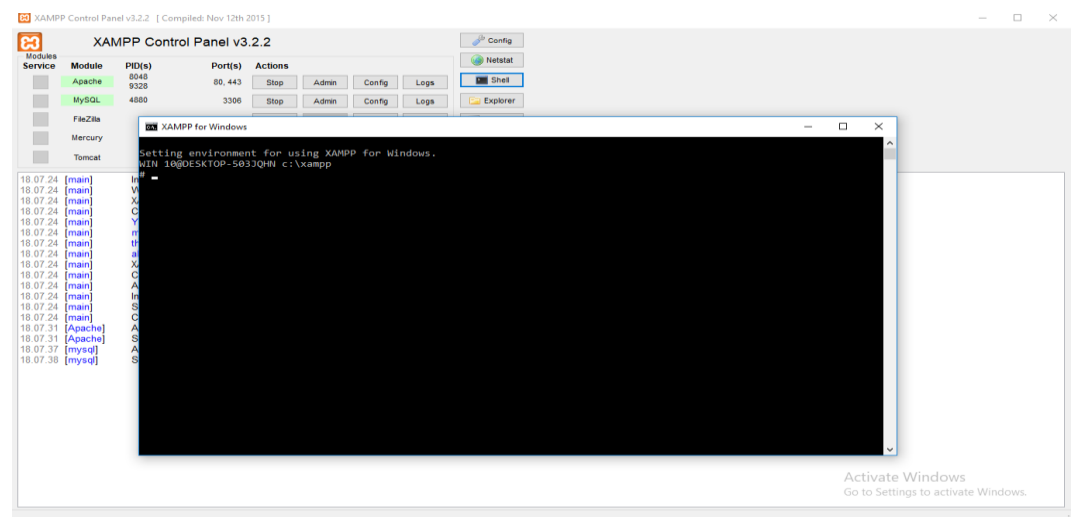

XAMPP Control Panel v3.2.2 [Compiled: Nov 12th 2015]

Service	Module	PID(s)	Port(s)	Actions
	Apache	8045 9328	80, 443	[Stop] [Admin] [Config] [Logs]
	MySQL	4880	3306	[Stop] [Admin] [Config] [Logs]
	FileZilla			[Start] [Admin] [Config] [Logs]
	Mercury			[Start] [Admin] [Config] [Logs]
	Tomcat			[Start] [Admin] [Config] [Logs]

[Config] [Netstat] [Shell] [Explorer] [Services] [Help] [Quit]

```
18.07.24 [main] Initializing Control Panel
18.07.24 [main] Windows Version: Enterprise 64-bit
18.07.24 [main] XAMPP Version: 5.6.19
18.07.24 [main] Control Panel Version: 3.2.2 [ Compiled: Nov 12th 2015 ]
18.07.24 [main] You are not running with administrator rights! This will work for
18.07.24 [main] most application stuff but whenever you do something with services
18.07.24 [main] there will be a security dialogue or things will break! So think
18.07.24 [main] about running this application with administrator rights!
18.07.24 [main] XAMPP Installation Directory: "c:\xampp\"
18.07.24 [main] Checking for prerequisites
18.07.24 [main] All prerequisites found
18.07.24 [main] Initializing Modules
18.07.24 [main] Starting Check-Timer
18.07.24 [main] Control Panel Ready
18.07.31 [Apache] Attempting to start Apache app...
18.07.31 [Apache] Status change detected: running
18.07.37 [mysql] Attempting to start MySQL app...
18.07.38 [mysql] Status change detected: running
```

Activate Windows
Go to Settings to activate Windows.



Tampilan seluruh langkah-langkah

```
XAMPP for Windows - mysql -u root
MariaDB [latihani1]> desc biodata ;
+-----+
| Field | Type          | Null | Key | Default | Extra |
+-----+
| nama  | varchar(15)   | NO   |     | NULL    |       |
| alamat| varchar(20)   | NO   |     | NULL    |       |
+-----+
2 rows in set (0.02 sec)

MariaDB [latihani1]> alter table biodata
-> add keterangan varchar(15) not null ;
Query OK, 0 rows affected (0.54 sec)
Records: 0 Duplicates: 0 Warnings: 0

MariaDB [latihani1]> desc biodata ;
+-----+
| Field | Type          | Null | Key | Default | Extra |
+-----+
| nama  | varchar(15)   | NO   |     | NULL    |       |
| alamat| varchar(20)   | NO   |     | NULL    |       |
| keterangan | varchar(15) | NO   |     | NULL    |       |
+-----+
3 rows in set (0.03 sec)

MariaDB [latihani1]> alter table biodata
-> add id int(11) null first ;
Query OK, 0 rows affected (0.48 sec)
Records: 0 Duplicates: 0 Warnings: 0

MariaDB [latihani1]> desc biodata ;
+-----+
| Field | Type          | Null | Key | Default | Extra |
+-----+
| id     | int(11)       | YES  |     | NULL    |       |
| nama  | varchar(15)   | NO   |     | NULL    |       |
| alamat| varchar(20)   | NO   |     | NULL    |       |
| keterangan | varchar(15) | NO   |     | NULL    |       |
+-----+
4 rows in set (0.05 sec)

MariaDB [latihani1]> alter table biodata
-> add column
-> phone varchar(15) not null
-> after alamat ;
Query OK, 0 rows affected (0.54 sec)
Records: 0 Duplicates: 0 Warnings: 0
```

Activate Windows
Go to Settings to activate Windows.

```
XAMPP for Windows - mysql -u root
MariaDB [latihani1]> alter table biodata
-> add column
-> phone varchar(15) not null
-> after alamat ;
Query OK, 0 rows affected (0.54 sec)
Records: 0 Duplicates: 0 Warnings: 0

MariaDB [latihani1]> desc biodata ;
+-----+
| Field | Type          | Null | Key | Default | Extra |
+-----+
| id     | int(11)       | YES  |     | NULL    |       |
| nama  | varchar(15)   | NO   |     | NULL    |       |
| alamat| varchar(20)   | NO   |     | NULL    |       |
| phone  | varchar(15)   | NO   |     | NULL    |       |
| keterangan | varchar(15) | NO   |     | NULL    |       |
+-----+
5 rows in set (0.02 sec)

MariaDB [latihani1]> alter table biodata
-> modify id char(11) null ;
Query OK, 0 rows affected (0.93 sec)
Records: 0 Duplicates: 0 Warnings: 0

MariaDB [latihani1]> desc biodata ;
+-----+
| Field | Type          | Null | Key | Default | Extra |
+-----+
| id     | char(11)      | YES  |     | NULL    |       |
| nama  | varchar(15)   | NO   |     | NULL    |       |
| alamat| varchar(20)   | NO   |     | NULL    |       |
| phone  | varchar(15)   | NO   |     | NULL    |       |
| keterangan | varchar(15) | NO   |     | NULL    |       |
+-----+
5 rows in set (0.02 sec)

MariaDB [latihani1]> alter table biodata
-> change phone hp varchar(20) not null ;
Query OK, 0 rows affected (0.69 sec)
Records: 0 Duplicates: 0 Warnings: 0

MariaDB [latihani1]> desc biodata ;
+-----+
| Field | Type          | Null | Key | Default | Extra |
+-----+
| id     | char(11)      | YES  |     | NULL    |       |
+-----+
```

Activate Windows
Go to Settings to activate Windows.

```
XAMPP for Windows - mysql -u root
MariaDB [latihani1]> alter table biodata
-> change phone hp varchar(20) not null ;
Query OK, 0 rows affected (0.69 sec)
Records: 0 Duplicates: 0 Warnings: 0

MariaDB [latihani1]> desc biodata ;
+-----+
| Field | Type          | Null | Key | Default | Extra |
+-----+
| id     | char(11)      | YES  |     | NULL    |       |
| nama  | varchar(15)   | NO   |     | NULL    |       |
| alamat| varchar(20)   | NO   |     | NULL    |       |
| hp     | varchar(20)   | NO   |     | NULL    |       |
| keterangan | varchar(15) | NO   |     | NULL    |       |
+-----+
5 rows in set (0.02 sec)

MariaDB [latihani1]> alter table biodata
-> drop keterangan ;
Query OK, 0 rows affected (0.46 sec)
Records: 0 Duplicates: 0 Warnings: 0

MariaDB [latihani1]> desc biodata ;
+-----+
| Field | Type          | Null | Key | Default | Extra |
+-----+
| id     | char(11)      | YES  |     | NULL    |       |
| nama  | varchar(15)   | NO   |     | NULL    |       |
| alamat| varchar(20)   | NO   |     | NULL    |       |
| hp     | varchar(20)   | NO   |     | NULL    |       |
+-----+
4 rows in set (0.02 sec)

MariaDB [latihani1]> rename table biodata to data_mahasiswa ;
Query OK, 0 rows affected (0.24 sec)

MariaDB [latihani1]> alter table data_mahasiswa
-> change id nim char(11) null ;
Query OK, 0 rows affected (0.09 sec)
Records: 0 Duplicates: 0 Warnings: 0

MariaDB [latihani1]> desc data_mahasiswa ;
+-----+
| Field | Type          | Null | Key | Default | Extra |
+-----+
| nim    | char(11)      | YES  |     | NULL    |       |
+-----+
```

Activate Windows
Go to Settings to activate Windows.

Tampilan seluruh langkah-langkah

```
XAMPP for Windows - mysql -u root
MariaDB [latihan1]> rename table biodata to data_mahasiswa ;
Query OK, 0 rows affected (0.24 sec)

MariaDB [latihan1]> alter table data_mahasiswa
  > change id nim char(11) null ;
Query OK, 0 rows affected (0.09 sec)
Records: 0  Duplicates: 0  Warnings: 0

MariaDB [latihan1]> desc data_mahasiswa ;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| nim   | char(11) | YES | | NULL | |
| nama  | varchar(15) | NO | | NULL | |
| alamat | varchar(20) | NO | | NULL | |
| hp    | varchar(20) | NO | | NULL | |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.02 sec)

MariaDB [latihan1]> alter table data_mahasiswa add primary key (nim) ;
Query OK, 0 rows affected (0.62 sec)
Records: 0  Duplicates: 0  Warnings: 0

MariaDB [latihan1]> desc data_mahasiswa ;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| nim   | char(11) | NO | PRI | NULL | |
| nama  | varchar(15) | NO | | NULL | |
| alamat | varchar(20) | NO | | NULL | |
| hp    | varchar(20) | NO | | NULL | |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.02 sec)

MariaDB [latihan1]>
```

Activate Windows
Go to Settings to activate Windows.

EVALUASI DAN PERTANYAAN

2. Apa maksud dari int (11)?

3. Ketika kita melihat struktur tabel dengan perintah desc, ada kolom Null yang berisi Yes dan No. Apa maksudnya ?

Jawab

2. Pengertian dari int (11) adalah suatu data yang di pakai atau digunakan menggunakan tipe data int atau integer dengan length atau panjang karakter 11 karakter. Jadi data yang dapat di masukan hanya angka bulat (tidak mengandung nilai pecahan atau nilai desimal) dan jumlah karakter tidak boleh lebih dari 11 karakter.

3. kolom NULL yang berisi YES artinya kolom tersebut boleh di kosongkan artinya kolom tersebut tidak harus berisi nilai.

Kolom NULL yang berisi NO fungsinya untuk memastikan bahwa nilai pada kolom tersebut tidak boleh kosong artinya kolom itu harus di isi nilai. Jika tidak di beri nilai maka menghasilkan error .