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19201216

C1 BASIS DATA

Tugas 1

Praktik !

1. Buat sebuah database dengan nama coba !

Perintah:

Create database namadatabase ;

- Membuat database.

Create database coba;

- membuat database dengan nama coba.

Show databases ;

- menampilkan semua database

```
Microsoft Windows [Version 6.3.9600]
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C:\Users\MIA>cd..
C:\Users>cd..
C:\>cd xampp
C:\xampp>cd mysql
C:\xampp\mysql>cd bin
C:\xampp\mysql\bin>mysql -u root
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 13
Server version: 10.4.14-MariaDB mariadb.org binary distribution
Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MariaDB [(none)]> show databases;
+-----+
| Database |
+-----+
| information_schema |
| institutasia |
| mysql |
| performance_schema |
| perusahaan |
| phpmyadmin |
| test |
| toko |
+-----+
3 rows in set (0.001 sec)

MariaDB [(none)]> create database coba;
Query OK, 1 row affected (0.002 sec)

MariaDB [(none)]> use coba
Database changed
```

2. Buat sebuah tabel dengan nama mahasiswa di dalam database coba !

Perintah :

Create table mahasiswa ;

- membuat table dengan nama mahasiswa.

Show tables;

- menampilkan tabel yang dibuat

```
MariaDB [(none)]> use coba
Database changed
MariaDB [coba]> create table mahasiswa(keterangan varchar(15));
Query OK, 0 rows affected (0.335 sec)

MariaDB [coba]> show tables;
+-----+
| Tables_in_coba |
+-----+
| mahasiswa      |
+-----+
1 row in set (0.001 sec)
```

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

Perintah :

Alter table mahasiswa add keterangan varchar(15);

- membuat kolom **keterangan** dengan tipe data **varchar** dan **panjang karakter 15**.

Desc mahasiswa ;

- menampilkan deskripsi tabel mahasiswa.

```
MariaDB [coba]> create table mahasiswa(keterangan varchar(15));
Query OK, 0 rows affected (0.335 sec)

MariaDB [coba]> show tables;
+-----+
| Tables_in_coba |
+-----+
| mahasiswa      |
+-----+
1 row in set (0.001 sec)

MariaDB [coba]> desc mahasiswa;
+-----+-----+-----+-----+-----+-----+
| Field      | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| keterangan | varchar(15)   | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
1 row in set (0.020 sec)
```

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

Perintah:

Alter table mahasiswa add nim int (11) first ;

- membuat kolom keterangan dengan tipe data integer ,panjang karakter 11 dan berada di kolom pertama.

```
MariaDB [cobal]> alter table mahasiswa add nim int(11) first;
Query OK, 0 rows affected (0.149 sec)
Records: 0 Duplicates: 0 Warnings: 0

MariaDB [cobal]> desc mahasiswa;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| nim   | int(11) | YES |     | NULL    |       |
| keterangan | varchar(15) | YES |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.020 sec)
```

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

Perintah:

Alter table mahasiswa add alamat varchar (15) after nim ;

- membuat kolom alamat setelah kolom nim.

Alter table mahasiswa add phone varchar (15) after alamat ;

- membuat kolom phone setelah kolom alamat.

```
MariaDB [cobal]> alter table mahasiswa add alamat varchar(15) after nim;
Query OK, 0 rows affected (0.472 sec)
Records: 0 Duplicates: 0 Warnings: 0

MariaDB [cobal]> desc mahasiswa;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| nim   | int(11) | YES |     | NULL    |       |
| alamat | varchar(15) | YES |     | NULL    |       |
| keterangan | varchar(15) | YES |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.018 sec)

MariaDB [cobal]> alter table mahasiswa add phone varchar(15) after alamat;
Query OK, 0 rows affected (0.126 sec)
Records: 0 Duplicates: 0 Warnings: 0

MariaDB [cobal]> desc mahasiswa;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| nim   | int(11) | YES |     | NULL    |       |
| alamat | varchar(15) | YES |     | NULL    |       |
| phone | varchar(15) | YES |     | NULL    |       |
| keterangan | varchar(15) | YES |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.019 sec)
```

6. Ubah kolom nim menjadi char(11) !

Perintah:

Alter table mahasiswa modify column nim char(11);

- mengubah tipe dan panjang data pada kolom nim.

```
MariaDB [cobal]> alter table mahasiswa modify column nim char(11);
Query OK, 0 rows affected (1.682 sec)
Records: 0 Duplicates: 0 Warnings: 0

MariaDB [cobal]> desc mahasiswa;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| nim   | char(11) | YES | | NULL | |
| alamat | varchar(15) | YES | | NULL | |
| phone  | varchar(15) | YES | | NULL | |
| keterangan | varchar(15) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.021 sec)
```

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

Perintah :

Alter table mahasiswa change column phone telepon varchar(20);

- mengubah nama kolom yang sebelumnya phone menjadi telepon dan mengubah panjangnya menjadi (20)

```
MariaDB [cobal]> alter table mahasiswa change column phone telepon varchar(20);
Query OK, 0 rows affected (0.127 sec)
Records: 0 Duplicates: 0 Warnings: 0

MariaDB [cobal]> desc mahasiswa;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| nim   | char(11) | YES | | NULL | |
| alamat | varchar(15) | YES | | NULL | |
| telepon | varchar(20) | YES | | NULL | |
| keterangan | varchar(15) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.018 sec)
```

8. Hapus kolom keterangan dari tabel !

Perintah:

Alter table mahasiswa drop column keterangan;

- menghapus kolom keterangan pada tabel mahasiswa.

```

MariaDB [cobal]> alter table mahasiswa drop column keterangan;
Query OK, 0 rows affected (0.132 sec)
Records: 0 Duplicates: 0 Warnings: 0

MariaDB [cobal]> desc mahasiswa;
+-----+-----+-----+-----+-----+-----+
| Field | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| nim    | char(11)      | YES  |     | NULL    |       |
| alamat | varchar(15)   | YES  |     | NULL    |       |
| telepon| varchar(20)   | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.018 sec)

```

9. Ganti nama tabel menjadi student!

Perintah:

Alter table mahasiswa rename student ;

- mengganti nama tabel mahasiswa dengan nama tabel student.

```

MariaDB [cobal]> alter table mahasiswa rename student;
Query OK, 0 rows affected (0.494 sec)

MariaDB [cobal]> show tables;
+-----+
| Tables_in_coba |
+-----+
| student         |
+-----+

```

10. Buat index untuk tabel tersebut !

Perintah :

Create index idxno no student(nim);

- mempercepat proses pencarian data dalam suatu tabel

```

MariaDB [cobal]> create index idxno on student(nim);
Query OK, 0 rows affected (1.115 sec)
Records: 0 Duplicates: 0 Warnings: 0

MariaDB [cobal]>

```

11. Jadikan nim sebagai primary key !

Perintah:

Alter table student add constraint primary key (nim);

- Menjadikan kolom nim menjadi primary key pada table student.

```
MariaDB [cobal> alter table student add constraint primary key (nim);
Query OK, 0 rows affected (4.293 sec)
Records: 0 Duplicates: 0 Warnings: 0
```

```
MariaDB [cobal> desc student;
```

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

```
3 rows in set (0.054 sec)
```

```
MariaDB [cobal>
```