

## DATABASE TUGAS 1

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NPM:201843500324

### Tugas 1 Praktikum Sistem Basis Data

#### Mahasiswa

NPM	Nama	Alamat
201143500439	Andi	Jakarta
201143500121	Desi	Bekasi
201143500234	Endah	Depok
201143500165	Firdaus	Jakarta
201143500228	Gandi	Depok
201143500326	Hilda	Bogor

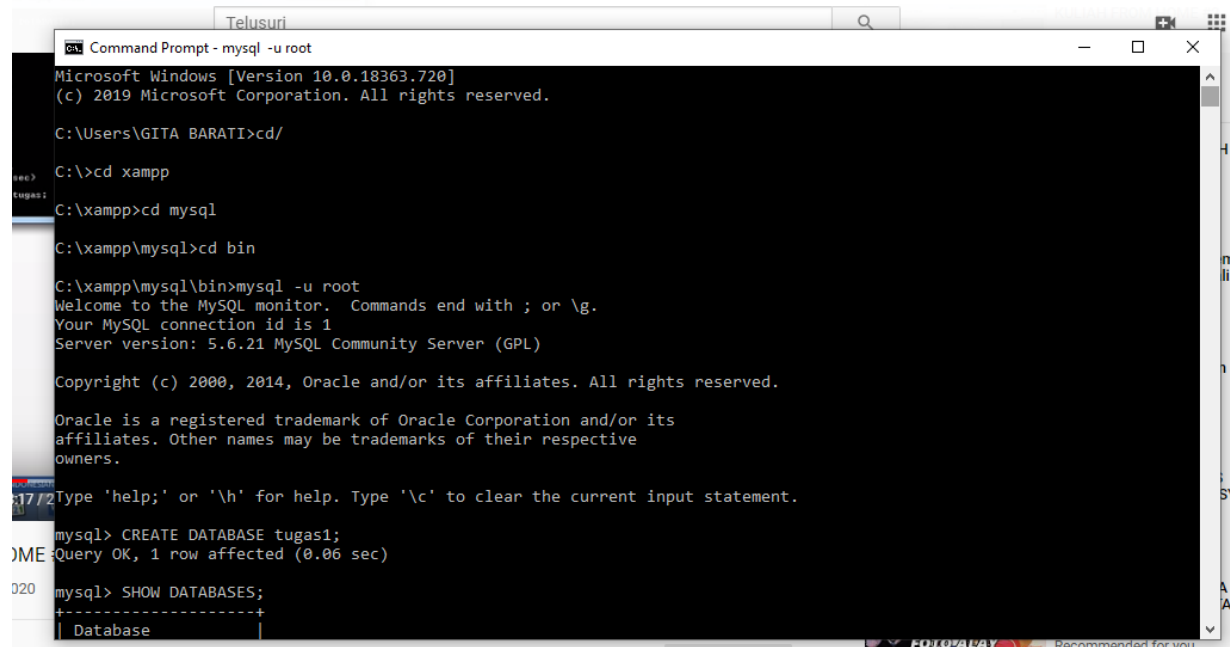
#### Matakuliah

KD_MK	Nama_MK	SKS
KK021	Sistem Basis Data	2
KD132	Interaksi Manusia Komputer	3
KU122	Ilmu Budaya Dasar	2

#### Nilai

NPM	KD_MK	UTS	UAS
201143500439	KK021	60	75
201143500121	KD123	70	90
201143500234	KK021	50	40
201143500165	KU122	90	80
201143500228	KU122	75	75
201143500326	KD123	80	0
201143500439	KD123	40	30

## 1. Buatlah Database Tugas1



```
Microsoft Windows [Version 10.0.18363.720]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Users\GITA BARATI>cd/

C:\>cd xampp

C:\xampp>cd mysql

C:\xampp\mysql>cd bin

C:\xampp\mysql\bin>mysql -u root
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 1
Server version: 5.6.21 MySQL Community Server (GPL)

Copyright (c) 2000, 2014, Oracle and/or its affiliates. All rights reserved.

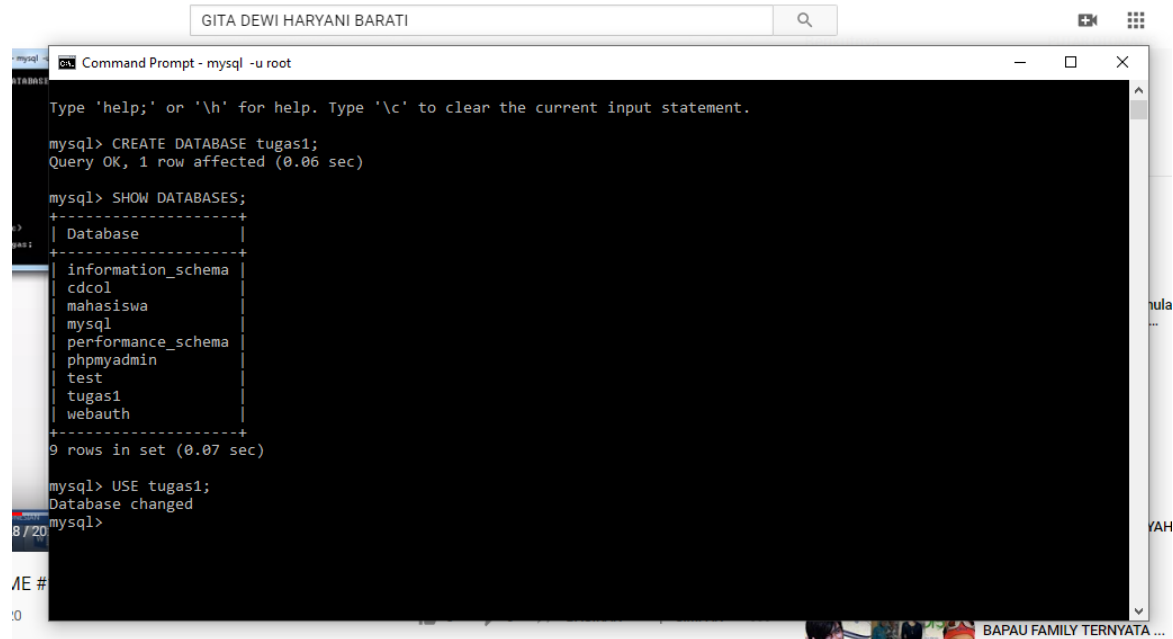
Oracle is a registered trademark of Oracle Corporation and/or its
affiliates. Other names may be trademarks of their respective
owners.

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

mysql> CREATE DATABASE tugas1;
Query OK, 1 row affected (0.06 sec)

mysql> SHOW DATABASES;
+-----+
| Database |
+-----+
```

## 2. Aktifkan database



```
GITA DEWI HARYANI BARATI

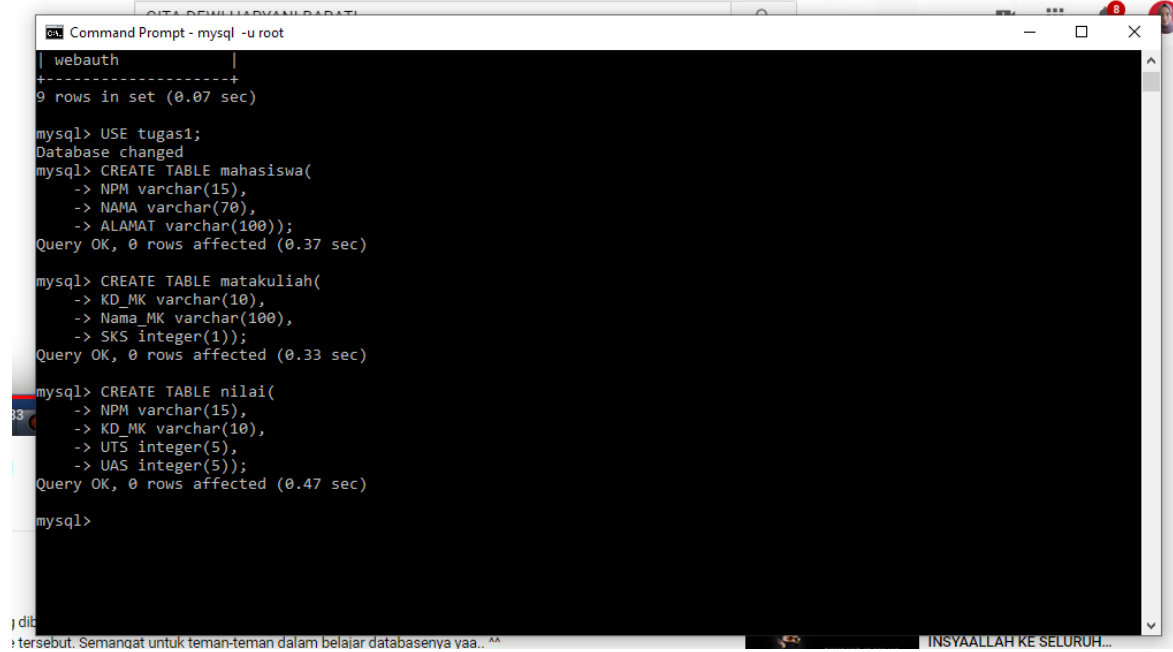
mysql> CREATE DATABASE tugas1;
Query OK, 1 row affected (0.06 sec)

mysql> SHOW DATABASES;
+-----+
| Database |
+-----+
| information_schema |
| cdcol |
| mahasiswa |
| mysql |
| performance_schema |
| phpmyadmin |
| test |
| tugas1 |
| webauth |
+-----+
9 rows in set (0.07 sec)

mysql> USE tugas1;
Database changed

mysql>
```

### 3. Buatlah 3 buah tabel diatas



```
Command Prompt - mysql -u root

| webauth |
+-----+
9 rows in set (0.07 sec)

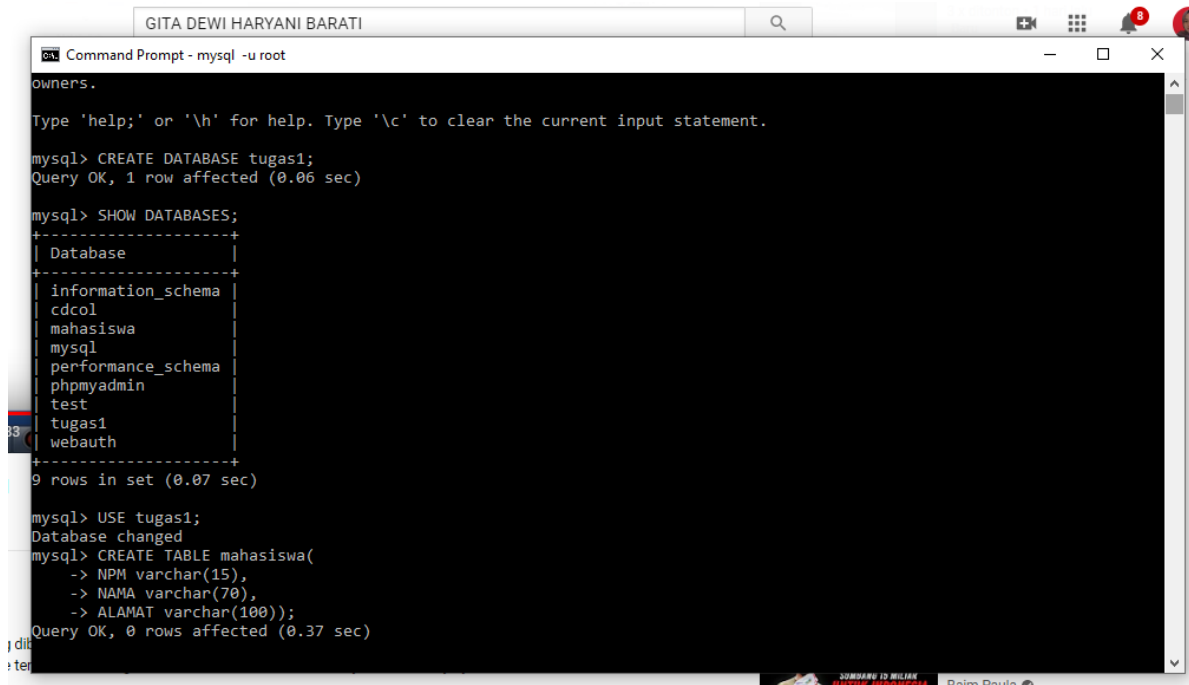
mysql> USE tugas1;
Database changed
mysql> CREATE TABLE mahasiswa(
  -> NPM varchar(15),
  -> NAMA varchar(70),
  -> ALAMAT varchar(100));
Query OK, 0 rows affected (0.37 sec)

mysql> CREATE TABLE matakuliah(
  -> KD_MK varchar(10),
  -> Nama_MK varchar(100),
  -> SKS integer(1));
Query OK, 0 rows affected (0.33 sec)

mysql> CREATE TABLE nilai(
  -> NPM varchar(15),
  -> KD_MK varchar(10),
  -> UTS integer(5),
  -> UAS integer(5));
Query OK, 0 rows affected (0.47 sec)

mysql>
```

### 4. Tampilkan seluruh database



```
Command Prompt - mysql -u root

owners.

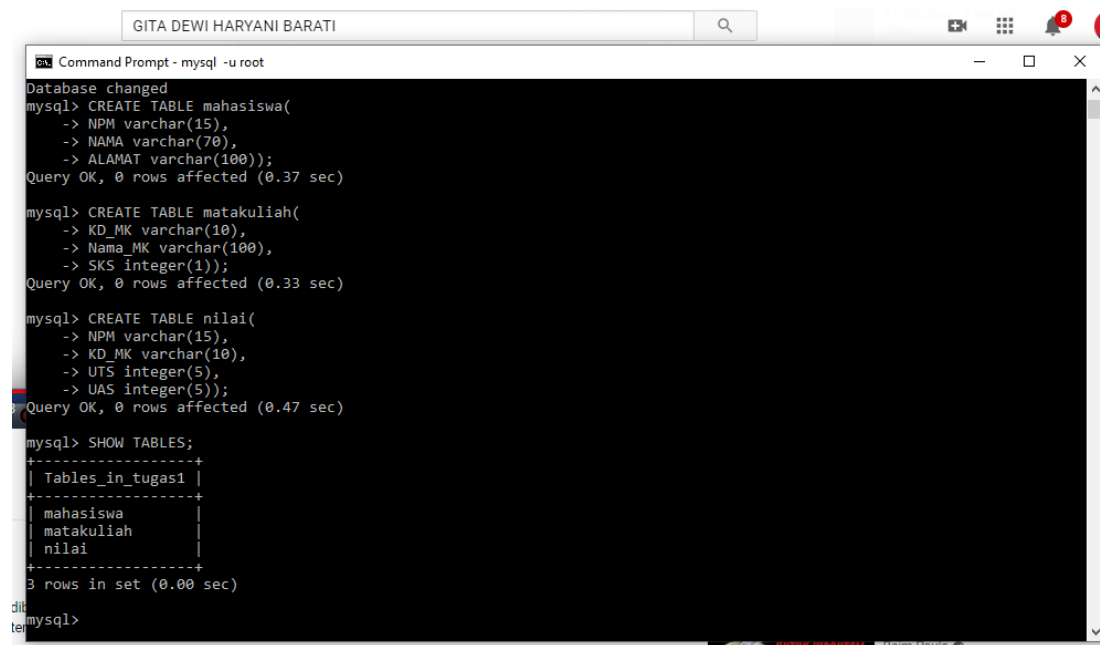
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> CREATE DATABASE tugas1;
Query OK, 1 row affected (0.06 sec)

mysql> SHOW DATABASES;
+-----+
| Database |
+-----+
| information_schema |
| cdcol |
| mahasiswa |
| mysql |
| performance_schema |
| phpmyadmin |
| test |
| tugas1 |
| webauth |
+-----+
9 rows in set (0.07 sec)

mysql> USE tugas1;
Database changed
mysql> CREATE TABLE mahasiswa(
  -> NPM varchar(15),
  -> NAMA varchar(70),
  -> ALAMAT varchar(100));
Query OK, 0 rows affected (0.37 sec)
```

## 5. Tampilkan seluruh tabel



```
Command Prompt - mysql -u root
Database changed
mysql> CREATE TABLE mahasiswa(
  -> NPM varchar(15),
  -> NAMA varchar(70),
  -> ALAMAT varchar(100));
Query OK, 0 rows affected (0.37 sec)

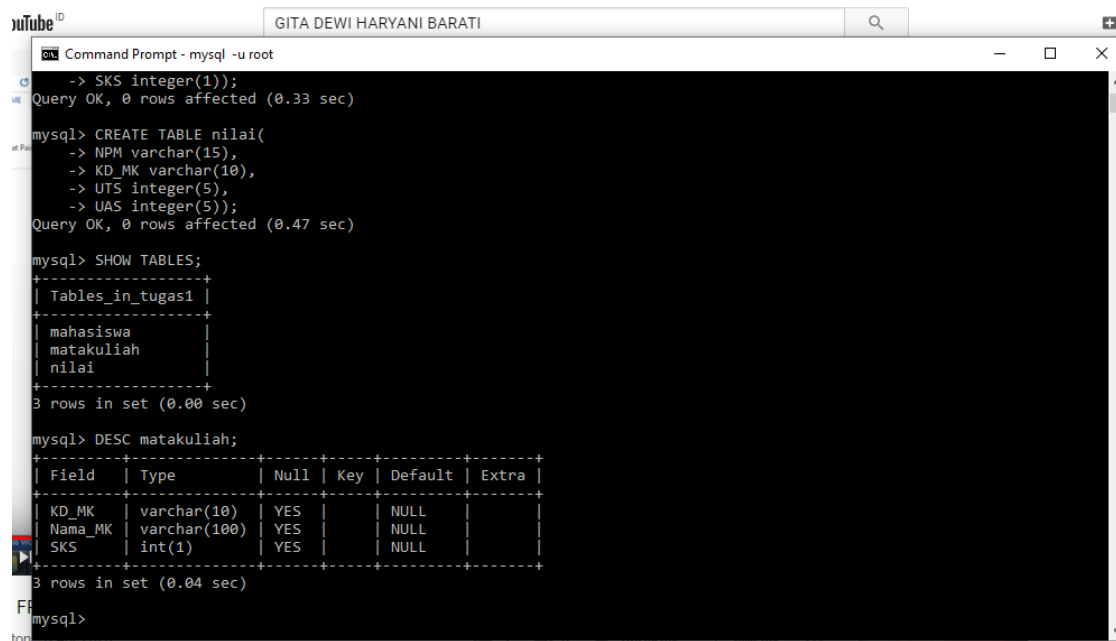
mysql> CREATE TABLE matakuliah(
  -> KD_MK varchar(10),
  -> Nama_MK varchar(100),
  -> SKS integer(1));
Query OK, 0 rows affected (0.33 sec)

mysql> CREATE TABLE nilai(
  -> NPM varchar(15),
  -> KD_MK varchar(10),
  -> UTS integer(5),
  -> UAS integer(5));
Query OK, 0 rows affected (0.47 sec)

mysql> SHOW TABLES;
+-----+
| Tables_in_tugas1 |
+-----+
| mahasiswa        |
| matakuliah       |
| nilai            |
+-----+
3 rows in set (0.00 sec)

mysql>
```

## 6. Tampilkan struktur tabel Matakuliah



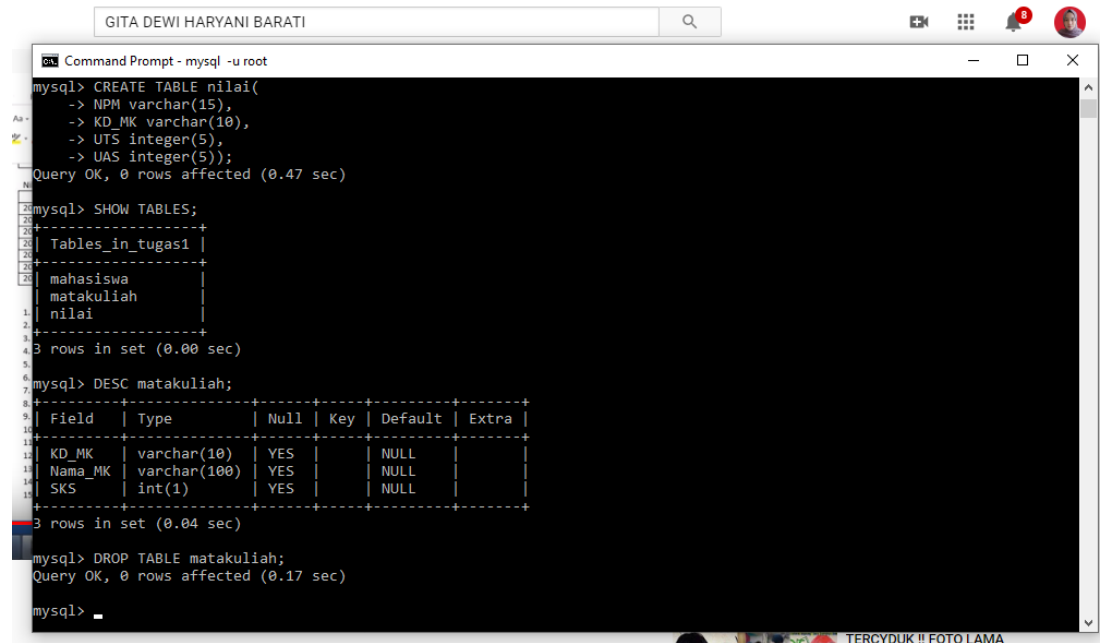
```
Command Prompt - mysql -u root
mysql> CREATE TABLE nilai(
  -> NPM varchar(15),
  -> KD_MK varchar(10),
  -> UTS integer(5),
  -> UAS integer(5));
Query OK, 0 rows affected (0.47 sec)

mysql> SHOW TABLES;
+-----+
| Tables_in_tugas1 |
+-----+
| mahasiswa        |
| matakuliah       |
| nilai            |
+-----+
3 rows in set (0.00 sec)

mysql> DESC matakuliah;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| KD_MK | varchar(10) | YES | | NULL | |
| Nama_MK | varchar(100) | YES | | NULL | |
| SKS | int(1) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.04 sec)

mysql>
```

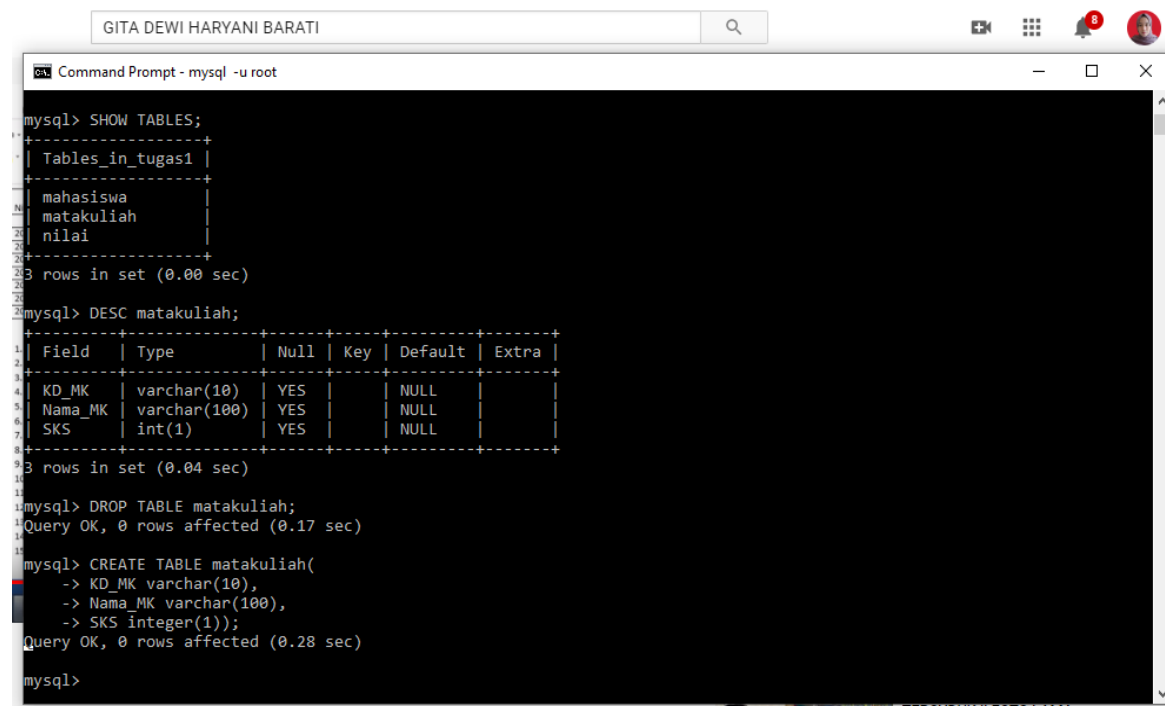
## 7. Hapus tabel Matakuliah



GITA DEWI HARYANI BARATI

```
mysql> CREATE TABLE nilai(  
-> NPM varchar(15),  
-> KD_MK varchar(10),  
-> UTS integer(5),  
-> UAS integer(5));  
Query OK, 0 rows affected (0.47 sec)  
  
mysql> SHOW TABLES;  
+-----+  
| Tables_in_tugas1 |  
+-----+  
| mahasiswa  
| matakuliah  
| nilai  
+-----+  
3 rows in set (0.00 sec)  
  
mysql> DESC matakuliah;  
+-----+  
| Field | Type | Null | Key | Default | Extra |  
+-----+  
| KD_MK | varchar(10) | YES | | NULL | |  
| Nama_MK | varchar(100) | YES | | NULL | |  
| SKS | int(1) | YES | | NULL | |  
+-----+  
3 rows in set (0.04 sec)  
  
mysql> DROP TABLE matakuliah;  
Query OK, 0 rows affected (0.17 sec)  
  
mysql>
```

## 8. Buat tabel Matakuliah



GITA DEWI HARYANI BARATI

```
mysql> SHOW TABLES;  
+-----+  
| Tables_in_tugas1 |  
+-----+  
| mahasiswa  
| matakuliah  
| nilai  
+-----+  
3 rows in set (0.00 sec)  
  
mysql> DESC matakuliah;  
+-----+  
| Field | Type | Null | Key | Default | Extra |  
+-----+  
| KD_MK | varchar(10) | YES | | NULL | |  
| Nama_MK | varchar(100) | YES | | NULL | |  
| SKS | int(1) | YES | | NULL | |  
+-----+  
3 rows in set (0.04 sec)  
  
mysql> DROP TABLE matakuliah;  
Query OK, 0 rows affected (0.17 sec)  
  
mysql> CREATE TABLE matakuliah(  
-> KD_MK varchar(10),  
-> Nama_MK varchar(100),  
-> SKS integer(1));  
Query OK, 0 rows affected (0.28 sec)  
  
mysql>
```

## 9. Ganti tabel Matakuliah dengan MT\_Kuliah

```
GITA DEWI HARYANI BARATI
Command Prompt - mysql -u root

Field | Type | Null | Key | Default | Extra |
-----+-----+-----+-----+-----+-----+
KD_MK | varchar(10) | YES | | NULL | |
Nama_MK | varchar(100) | YES | | NULL | |
SKS | int(1) | YES | | NULL | |
-----+-----+-----+-----+-----+
3 rows in set (0.04 sec)

mysql> DROP TABLE matakuliah;
Query OK, 0 rows affected (0.17 sec)

mysql> CREATE TABLE matakuliah(
  -> KD_MK varchar(10),
  -> Nama_MK varchar(100),
  -> SKS integer(1));
Query OK, 0 rows affected (0.28 sec)

mysql> ALTER TABLE matakuliah rename MT_Kuliah;
Query OK, 0 rows affected (0.16 sec)

mysql> SHOW TABLES;
+-----+
| Tables_in_tugas1 |
+-----+
| mahasiswa |
| mt_kuliah |
| nilai |
+-----+
3 rows in set (0.00 sec)

mysql>
```

## 10. Ganti nama field Nama\_MK dengan NM\_MK dan panjang field 30

```
GITA DEWI HARYANI BARATI
Command Prompt - mysql -u root

Query OK, 0 rows affected (0.28 sec)

mysql> ALTER TABLE matakuliah rename MT_Kuliah;
Query OK, 0 rows affected (0.16 sec)

mysql> SHOW TABLES;
+-----+
| Tables_in_tugas1 |
+-----+
| mahasiswa |
| mt_kuliah |
| nilai |
+-----+
3 rows in set (0.00 sec)

mysql> ALTER TABLE MT_Kuliah change Nama_MK
  -> NM_MK varchar(30);
Query OK, 0 rows affected (0.78 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> DESC MT_Kuliah;
+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+
| KD_MK | varchar(10) | YES | | NULL | |
| NM_MK | varchar(30) | YES | | NULL | |
| SKS | int(1) | YES | | NULL | |
+-----+
3 rows in set (0.01 sec)

mysql>
```

## 11. Tambahkan kolom Tgl\_lahir pada tabel Mahasiswa

```
GITA DEWI HARYANI BARATI
Command Prompt - mysql -u root

mysql> ALTER TABLE MT_Kuliah change Nama_MK
-> NM_MK varchar(30);
Query OK, 0 rows affected (0.78 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> DESC MT_Kuliah;
+-----+-----+-----+-----+-----+-----+
| Field | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| KD_MK | varchar(10)   | YES  |     | NULL    |       |
| NM_MK | varchar(30)   | YES  |     | NULL    |       |
| SKS   | int(1)        | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.01 sec)

mysql> ALTER TABLE mahasiswa ADD column Tgl_lahir date;
Query OK, 0 rows affected (0.48 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> DESC mahasiswa;
+-----+-----+-----+-----+-----+-----+
| Field      | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| NPM        | varchar(15)   | YES  |     | NULL    |       |
| NAMA       | varchar(70)   | YES  |     | NULL    |       |
| ALAMAT     | varchar(100)  | YES  |     | NULL    |       |
| Tgl_lahir  | date          | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.01 sec)

mysql>
```

## 12. Hapus kolom Tgl\_lahir

```
GITA DEWI HARYANI BARATI
Command Prompt - mysql -u root

mysql> ALTER TABLE mahasiswa ADD column Tgl_lahir date;
Query OK, 0 rows affected (0.48 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> DESC mahasiswa;
+-----+-----+-----+-----+-----+-----+
| Field      | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| NPM        | varchar(15)   | YES  |     | NULL    |       |
| NAMA       | varchar(70)   | YES  |     | NULL    |       |
| ALAMAT     | varchar(100)  | YES  |     | NULL    |       |
| Tgl_lahir  | date          | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.01 sec)

mysql> ALTER TABLE mahasiswa DROP Tgl_lahir;
Query OK, 0 rows affected (0.55 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> DESC mahasiswa;
+-----+-----+-----+-----+-----+-----+
| Field      | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| NPM        | varchar(15)   | YES  |     | NULL    |       |
| NAMA       | varchar(70)   | YES  |     | NULL    |       |
| ALAMAT     | varchar(100)  | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.01 sec)

mysql>
```

13. Tambahkan kolom Tgl\_Lahir pada tabel Mahasiswa pada awal field

```
GITA DEWI HARYANI BARATI
Command Prompt - mysql -u root

mysql> ALTER TABLE mahasiswa DROP Tgl_lahir;
Query OK, 0 rows affected (0.55 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> DESC mahasiswa;
+-----+-----+-----+-----+-----+-----+
| Field | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| NPM    | varchar(15)   | YES  |     | NULL    |       |
| NAMA   | varchar(70)   | YES  |     | NULL    |       |
| ALAMAT | varchar(100)  | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.01 sec)

mysql> ALTER TABLE mahasiswa ADD column Tgl_lahir date first;
Query OK, 0 rows affected (0.48 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> DESC mahasiswa;
+-----+-----+-----+-----+-----+-----+
| Field      | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| Tgl_lahir  | date          | YES  |     | NULL    |       |
| NPM        | varchar(15)   | YES  |     | NULL    |       |
| NAMA       | varchar(70)   | YES  |     | NULL    |       |
| ALAMAT     | varchar(100)  | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.01 sec)

mysql>
```

14. Hapus kolom Tgl\_Lahir

```
GITA DEWI HARYANI BARATI
Command Prompt - mysql -u root

mysql> ALTER TABLE mahasiswa ADD column Tgl_lahir date first;
Query OK, 0 rows affected (0.48 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> DESC mahasiswa;
+-----+-----+-----+-----+-----+-----+
| Field      | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| Tgl_lahir  | date          | YES  |     | NULL    |       |
| NPM        | varchar(15)   | YES  |     | NULL    |       |
| NAMA       | varchar(70)   | YES  |     | NULL    |       |
| ALAMAT     | varchar(100)  | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.01 sec)

mysql> ALTER TABLE mahasiswa DROP Tgl_lahir;
Query OK, 0 rows affected (0.59 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> DESC mahasiswa;
+-----+-----+-----+-----+-----+-----+
| Field | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| NPM    | varchar(15)   | YES  |     | NULL    |       |
| NAMA   | varchar(70)   | YES  |     | NULL    |       |
| ALAMAT | varchar(100)  | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.01 sec)

mysql>
```



15. Tambahkan kolom Tgl\_Lahir pada tabel Mahasiswa setelah kolom nama



```
GITA DEWI HARYANI BARATI
Command Prompt - mysql -u root

mysql> ALTER TABLE mahasiswa DROP Tgl_lahir;
Query OK, 0 rows affected (0.59 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> DESC mahasiswa;
+-----+-----+-----+-----+-----+-----+
| Field | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| NPM    | varchar(15)   | YES  |     | NULL    |       |
| NAMA   | varchar(70)   | YES  |     | NULL    |       |
| ALAMAT | varchar(100)  | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.01 sec)

mysql> ALTER TABLE mahasiswa ADD column Tgl_lahir date
-> after Nama;
Query OK, 0 rows affected (0.52 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> DESC mahasiswa;
+-----+-----+-----+-----+-----+-----+
| Field      | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| NPM        | varchar(15)   | YES  |     | NULL    |       |
| NAMA       | varchar(70)   | YES  |     | NULL    |       |
| Tgl_lahir  | date          | YES  |     | NULL    |       |
| ALAMAT     | varchar(100)  | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.01 sec)

mysql>
```

## ALGORITMANYA

- 🌈 sebelum mulai pastinya kita harus meyiapkan apa saja yg kita perlukan yaitu xampp dan juga cmd
  - siapkan xampp dengan me-start apache dan mysql setelah itu di close kembal juga boleh
  - lanjut ke cmd
- 1. Membuat database dengan nama TUGAS1 > CREATE DATABASE TUGAS1; (dengan tidak menggunakan spasi jika nama database lebih dari satu kata)
- 2. Aktifkan database yang sudah dibuat nama > USE TUGAS1
- 3. Membuat 3 buah tabel dengan menentukan field, tipe data, dan sizenya,
  - > CREATE TABLE
  - > filed typedata (size),
  - > filed typedata (size));

- Table mahasiswa
- Field npm dengan tipe data varchar dan size 15
- Field nama dengan tipe data varchar dan size 70
- Field alamat dengan tipe data varchar dan size 100
- ✚ Setelah tampil Query Ok berarti sudah tersimpan
  - Table matakuliah
  - Field kd\_mk dengan tipe data varchar dan size 10
  - Field nama\_mk dengan tipe data varchar dan size 100
  - Field sks dengan tipe data integer dan size 1
- ✚ Setelah tampil Query Ok berarti sudah tersimpan
  - Table nilai
  - Field NPM dengan tipe data varchar dan size 15
  - Field kd\_mk dengan tipe data varchar dan size 10
  - Field uts dengan tipe data integer dan size 5
  - Field uas dengan tipe data integer dan size 5
- ✚ Setelah tampil Query Ok berarti sudah tersimpan

4. menampilkan seluruh database dengan cara >SHOW DATABASES;

Contoh sebagai berikut yg akan muncul:

Database
Information_schema
Cdcol
Mahasiswa
Mysql
Performance_schema
Phpmyadmin
Test
Tugas1
Webauth

5. menampilkan seluruh table dengan cara >SHOW TABLES;

Contoh sebagai berikut yg akan muncul:

Table_in_tugas1
Mahasiswa
Matakuliah
Nilai

6. menampilkan seluruh table matakuliah dengan cara >DESC matakuliah;

Contoh sebagai berikut yg akan muncul:

Field	Type	Null	key	Default	Extra
KD_MK	Varchar(10)	YES		NULL	
Nama_MK	Varchar(100)	YES		NULL	
SKS	Int(1)	YES		NULL	

7.menghapus table matakuliah dengan cara >DROP TABLE matakuliah;

Ketika sudah muncul query ok berarti sudah terhapus.

8.Buat tabel Matakuliah > CREATE TABLE matakuliah;

- Table matakuliah
- Field kd\_mk dengan tipe data varchar dan size 10
- Field nama\_mk dengan tipe data varchar dan size 100
- Field sks dengan tipe data integer dan size 1
- Setelah tampil Query Ok berarti sudah tersimpan

9.Ganti tabel Matakuliah dengan MT\_Kuliah > ALTER TABLE matakuliah rename MT\_Kuliah;

- Setelah tampil Query Ok berarti sudah tersimpan

10.Ganti nama field Nama\_MK dengan NM\_MK dan panjang field 30

- >ALTER TABLE MT\_Kuliah change nama\_mk
- -> NM\_MK varchar(30);
- Setelah tampil Query Ok berarti sudah tersimpan
- Tampilkan struktur tabel MT\_Kuliah > DESC MT\_Kuliah;

Field	Type	Null	key	default	extra
KD_MK	Varchar(10)	Yes		NULL	
NM_MK	Varchar (30)	Yes		NULL	
SKS	Int(10)	Yes		NULL	

11.Tambahkan kolom Tgl\_lahir pada tabel Mahasiswa

- > ALTER TABLE mahasiswa ADD column tgl\_lahir date;
- Setelah tampil Query Ok berarti sudah tersimpan
- Tampilkan struktur tabel mahasiswa > DESC mahasiswa;

Field	Type	Null	key	default	extra
Npm	Varchar (15)	Yes		NULL	
Nama	Varchar (70)	Yes		NULL	
Alamat	Varchar (100)	Yes		NULL	
Tgl_lahir	Date	Yes		NULL	

12. Hapus kolom Tgl\_lahir > ALTER TABLE mahasiswa DROP tgl\_lahir;

- Setelah tampil Query Ok berarti sudah tersimpan
- Tampilkan struktur tabel mahasiswa > DESC mahasiswa;

Field	Type	Null	key	default	extra
Npm	Varchar (15)	Yes		NULL	
Nama	Varchar (70)	Yes		NULL	
Alamat	Varchar (100)	Yes		NULL	

13. Tambahkan kolom Tgl\_Lahir pada tabel Mahasiswa pada awal field

- > ALTER TABLE mahasiswa ADD column tgl\_lahir date first;
- Setelah tampil Query Ok berarti sudah tersimpan
- Tampilkan struktur tabel mahasiswa > DESC mahasiswa;

Field	type	Null	key	default	extra
Tgl_lahir	date	Yes		NULL	
Npm	Varchar (15)	Yes		NULL	
Nama	Varchar (70)	Yes		NULL	
Alamat	Varchar (100)	Yes		NULL	

14. Hapus kolom Tgl\_lahir > ALTER TABLE mahasiswa DROP tgl\_lahir;

- Setelah tampil Query Ok berarti sudah tersimpan
- Tampilkan struktur tabel mahasiswa > DESC mahasiswa;

Field	type	Null	key	default	extra
Npm	Varchar (15)	Yes		NULL	
Nama	Varchar (70)	Yes		NULL	
Alamat	Varchar (100)	Yes		NULL	

15. Tambahkan kolom Tgl\_Lahir pada tabel Mahasiswa setelah kolom nama

- > ALTER TABLE mahasiswa ADD column tgl\_lahir date after nama;
- Setelah tampil Query Ok berarti sudah tersimpan
- Tampilkan struktur tabel mahasiswa > DESC mahasiswa;

Field	type	Null	key	default	extra
Npm	Varchar (15)	Yes		NULL	
Nama	Varchar (100)	Yes		NULL	
Tgl_lahir	date	Yes		NULL	
Alamat	Varchar (100)	Yes		NULL	

❖ SELESAI