

TUGAS 3

PRAKTIKUM SISTEM BASIS DATA

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Tugas 3

TABEL MAHASISWA

NPM	NAMA	KOTA
2010500225	Jasson	Bogor
2010500239	Bintang	Bogor
2011500331	Talitha	Bekasi
2011500193	Findy	Jakarta
2009500579	Jasson	Depok
2009500690	Marco	Jakarta
2009500667	Selly	Jakarta

TABEL MATAKULIAH

KD_MK	Nama_MK	SKS
KK021	Sistem Basis Data	2
KD123	Sistem Informasi Manajemen	3
KU122	Ilmu Budaya Dasar	2
KK001	Algoritma 1	2

TABEL NILAI

NPM	KD_MK	UTS	UAS
2010500225	KK021	60	75
2010500239	KD123	70	90
2011500331	KK021	50	40
2011500193	KU122	90	80
2009500579	KU122	55	75
2009500690	KD132	85	95
2009500667	KD132	95	85

PERSIAPAN:

1. membuat database Tugas3.
2. mengaktifkan database Tugas3.
3. membuat tabel mahasiswa, matakuliah, dan nilai.

```
MariaDB [(none)]> create database Tugas3;
Query OK, 1 row affected (0.00 sec)

MariaDB [(none)]> USE Tugas3;
Database changed
MariaDB [Tugas3]> create table MAHASISWA (NPM varchar(10),NAMA varchar(30),KOTA varchar(20));
Query OK, 0 rows affected (0.04 sec)

MariaDB [Tugas3]> create table MATAKULIAH (KD_MK varchar(5),Nama_MK varchar(30),SKS INT(1));
Query OK, 0 rows affected (0.04 sec)

MariaDB [Tugas3]> create table NILAI (NPM varchar(10),KD_MK varchar(30),UTS INT,UAS INT);
Query OK, 0 rows affected (0.04 sec)

MariaDB [Tugas3]> SHOW TABLES;
+-----+
| Tables_in_tugas3 |
+-----+
| mahasiswa        |
| matakuliah        |
| nilai             |
+-----+
3 rows in set (0.00 sec)
```

4. Penginputan record di setiap tabel.

```
MariaDB [Tugas3]> INSERT INTO MAHASISWA (NPM, NAMA, KOTA) VALUES ("2010500225","Jasson","Bogor"),
-> ("2010500239","Bintang","Bogor"),("2011500331","Talitha","Bekasi"),("2011500193","Findy","Jakarta"),
-> ("2009500579","Jasson","Depok"),("2009500690","Marco","Jakarta"),("2009500667","Selly","Jakarta");
Query OK, 7 rows affected (0.00 sec)
Records: 7 Duplicates: 0 Warnings: 0
```

```
MariaDB [Tugas3]> select * from mahasiswa;
+-----+-----+-----+
| NPM      | NAMA      | KOTA      |
+-----+-----+-----+
| 2010500225 | Jasson     | Bogor     |
| 2010500239 | Bintang    | Bogor     |
| 2011500331 | Talitha    | Bekasi    |
| 2011500193 | Findy      | Jakarta   |
| 2009500579 | Jasson     | Depok     |
| 2009500690 | Marco      | Jakarta   |
| 2009500667 | Selly      | Jakarta   |
+-----+-----+-----+
7 rows in set (0.00 sec)
```

```
MariaDB [Tugas3]> insert into MATAKULIAH(KD_MK,Nama_MK,SKS) VALUES ("KK021","Sistem Basis Data",2),
-> ("KD123","Sistem Informasi Manajemen",3), ("KU122","Ilmu
"> Budaya Dasar",2),("KK001","Algoritma 1",2);
Query OK, 4 rows affected (0.00 sec)
Records: 4 Duplicates: 0 Warnings: 0
```

```
MariaDB [Tugas3]> select *from matakuliah;
+-----+-----+-----+
| KD_MK | Nama_MK      | SKS |
+-----+-----+-----+
| KK021 | Sistem Basis Data | 2 |
| KD123 | Sistem Informasi Manajemen | 3 |
| KU122 | Ilmu          | 2 |
| KK001 | Algoritma 1    | 2 |
+-----+-----+-----+
4 rows in set (0.00 sec)
```

```
MariaDB [Tugas3]> update matakuliah set Nama_MK="Ilmu Budaya Dasar" where KD_MK="KU122";
Query OK, 1 row affected (0.00 sec)
Rows matched: 1 Changed: 1 Warnings: 0
```

```
MariaDB [Tugas3]> select *from matakuliah;
+-----+-----+-----+
| KD_MK | Nama_MK      | SKS |
+-----+-----+-----+
| KK021 | Sistem Basis Data | 2 |
| KD123 | Sistem Informasi Manajemen | 3 |
| KU122 | Ilmu Budaya Dasar | 2 |
| KK001 | Algoritma 1    | 2 |
+-----+-----+-----+
```

```
MariaDB [Tugas3]> insert into NILAI (NPM,KD_MK,UTS,UAS) VALUES ("2010500225","KK021",60,75),
-> ("2010500239","KD123",70,90),("2011500331","KK021",50,40),("2011500193","KU122",90,80),
-> ("2009500579","KU122",55,75),("2009500690","KD132",85,95),("2009500667","KD132",95,85);
Query OK, 7 rows affected (0.00 sec)
Records: 7 Duplicates: 0 Warnings: 0
```

```
MariaDB [Tugas3]> SELECT * FROM NILAI;
+-----+-----+-----+-----+
| NPM      | KD_MK | UTS | UAS |
+-----+-----+-----+-----+
| 2010500225 | KK021 | 60  | 75  |
| 2010500239 | KD123 | 70  | 90  |
| 2011500331 | KK021 | 50  | 40  |
| 2011500193 | KU122 | 90  | 80  |
| 2009500579 | KU122 | 55  | 75  |
| 2009500690 | KD132 | 85  | 95  |
| 2009500667 | KD132 | 95  | 85  |
+-----+-----+-----+-----+
7 rows in set (0.00 sec)
```

PERINTAH:

1. Tampilkan record '2010500240', 'Allya', 'Jakarta' ke tabel Mahasiswa!

```
MariaDB [Tugas3]> INSERT INTO MAHASISWA(NPM,NAMA,KOTA) VALUES
("2010500240","Allya","Jakarta");
```

Perintah diatas digunakan untuk menambah record baru di tabel mahasiswa untuk nantinya ditampilkan recordnya karena sebelumnya belum ada record dengan NPM 20105002440.

MariaDB [Tugas3]>SELECT NPM,NAMA,KOTA FROM MAHASISWA WHERE NPM="2010500240";

Barulah kita dapat menampilkan record yang ingin kita tampilkan dari tabel mahasiswa.

```
MariaDB [Tugas3]> INSERT INTO MAHASISWA (NPM,NAMA,KOTA) VALUES ("2010500240","Allya","Jakarta");
Query OK, 1 row affected (0.00 sec)
```

```
MariaDB [Tugas3]> select NPM,NAMA,KOTA FROM MAHASISWA WHERE NPM="2010500240";
```

NPM	NAMA	KOTA
2010500240	Allya	Jakarta

1 row in set (0.00 sec)

2. Tambahkan field semester pada tabel Matakuliah!

MariaDB [Tugas3]>ALTER TABLE MATAKULIAH ADD COLUMN SEMESTER VARCHAR(10);

Perintah tersebut digunakan untuk menambahkan kolom/field pada tabel matakuliah berupa kolom semester.

```
MariaDB [Tugas3]> SELECT *FROM MATAKULIAH;
```

KD_MK	Nama_MK	SKS	SEMESTER
KK021	Sistem Basis Data	2	NULL
KD123	Sistem Informasi Manajemen	3	NULL
KU122	Ilmu Budaya Dasar	2	NULL
KK001	Algoritma 1	2	NULL

4 rows in set (0.00 sec)

3. Isilah field semester untuk

Sistem Basis Data semester 4

MariaDB [Tugas3]>UPDATE MATAKULIAH SET SEMESTER="Semester 4" where Nama_MK="Sistem Basis Data";

Sistem Informasi Manajemen semester 6

MariaDB [Tugas3]>UPDATE MATAKULIAH SET SEMESTER="Semester 6" where Nama_MK="Sistem Informasi Manajemen";

Ilmu Budaya Dasar semester 2

MariaDB [Tugas3]>UPDATE MATAKULIAH SET SEMESTER="Semester 2" where Nama_MK="Ilmu Budaya Dasar";

Algoritma semester 2

MariaDB [Tugas3]>UPDATE MATAKULIAH SET SEMESTER="Semester 2" where Nama_MK="Algoritma 1";

```

MariaDB [Tugas3]> SELECT *FROM MATAKULIAH;
+-----+-----+-----+-----+
| KD_MK | Nama_MK                | SKS | SEMESTER |
+-----+-----+-----+-----+
| KK021 | Sistem Basis Data      | 2   | NULL     |
| KD123 | Sistem Informasi Manajemen | 3   | NULL     |
| KU122 | Ilmu Budaya Dasar      | 2   | NULL     |
| KK001 | Algoritma 1            | 2   | NULL     |
+-----+-----+-----+-----+
4 rows in set (0.00 sec)

MariaDB [Tugas3]> UPDATE MATAKULIAH SET SEMESTER="Semester 4" where Nama_MK="Sistem Basis Data";
Query OK, 1 row affected (0.00 sec)
Rows matched: 1 Changed: 1 Warnings: 0

MariaDB [Tugas3]> UPDATE MATAKULIAH SET SEMESTER="Semester 6" where Nama_MK="Sistem Informasi Manajemen";
Query OK, 1 row affected (0.00 sec)
Rows matched: 1 Changed: 1 Warnings: 0

MariaDB [Tugas3]> UPDATE MATAKULIAH SET SEMESTER="Semester 2" where Nama_MK="Ilmu Budaya Dasar";
Query OK, 1 row affected (0.00 sec)
Rows matched: 1 Changed: 1 Warnings: 0

MariaDB [Tugas3]> UPDATE MATAKULIAH SET SEMESTER="Semester 2" where Nama_MK="Algoritma 2";
Query OK, 0 rows affected (0.00 sec)
Rows matched: 0 Changed: 0 Warnings: 0

MariaDB [Tugas3]> select *from matakuliah;
+-----+-----+-----+-----+
| KD_MK | Nama_MK                | SKS | SEMESTER |
+-----+-----+-----+-----+
| KK021 | Sistem Basis Data      | 2   | Semester 4 |
| KD123 | Sistem Informasi Manajemen | 3   | Semester 6 |
| KU122 | Ilmu Budaya Dasar      | 2   | Semester 2 |
| KK001 | Algoritma 1            | 2   | NULL       |
+-----+-----+-----+-----+
4 rows in set (0.00 sec)

MariaDB [Tugas3]> UPDATE MATAKULIAH SET SEMESTER="Semester 2" where Nama_MK="Algoritma 1";
Query OK, 1 row affected (0.00 sec)
Rows matched: 1 Changed: 1 Warnings: 0

MariaDB [Tugas3]> select *from matakuliah;
+-----+-----+-----+-----+
| KD_MK | Nama_MK                | SKS | SEMESTER |
+-----+-----+-----+-----+
| KK021 | Sistem Basis Data      | 2   | Semester 4 |
| KD123 | Sistem Informasi Manajemen | 3   | Semester 6 |
| KU122 | Ilmu Budaya Dasar      | 2   | Semester 2 |
| KK001 | Algoritma 1            | 2   | Semester 2 |
+-----+-----+-----+-----+
4 rows in set (0.00 sec)

```

4. Rubahlah record pada tabel Nilai yang mempunyai NPM '2009500579' dirubah KD_MK menjadi KK021, Nilai UTS ditambah 10 !

MariaDB [Tugas3]>UPDATE NILAI SET KD_MK="KK021",UTS=65 WHERE NPM="2009500579";
Perintah memperbaharui record dengan NPM"2009500579" mengubah KD_MK dan Nilai uts.

```

MariaDB [Tugas3]> UPDATE NILAI SET KD_MK="KK021",UTS=65 WHERE NPM="2009500579";
Query OK, 1 row affected (0.00 sec)
Rows matched: 1 Changed: 1 Warnings: 0

MariaDB [Tugas3]> SELECT *FROM NILAI;
+-----+-----+-----+-----+
| NPM      | KD_MK | UTS | UAS |
+-----+-----+-----+-----+
| 2010500225 | KK021 | 60  | 75  |
| 2010500239 | KD123 | 70  | 90  |
| 2011500331 | KK021 | 50  | 40  |
| 2011500193 | KU122 | 90  | 80  |
| 2009500579 | KK021 | 65  | 75  |
| 2009500690 | KD132 | 85  | 95  |
| 2009500667 | KD132 | 95  | 85  |
+-----+-----+-----+-----+
7 rows in set (0.00 sec)

```

5. Hapus record pada tabel Mahasiswa yang mempunyai NPM '2010500240' !
MariaDB [Tugas3]>DELETE FROM MAHASISWA WHERE NPM="2010500240";
Perintah diatas untuk menghapus baris dari record yang ber NPM 2010500240.

```
MariaDB [Tugas3]> DELETE FROM MAHASISWA WHERE NPM="2010500240";  
Query OK, 1 row affected (0.00 sec)
```

```
MariaDB [Tugas3]> SELECT *FROM MAHASISWA;
```

NPM	NAMA	KOTA
2010500225	Jasson	Bogor
2010500239	Bintang	Bogor
2011500331	Talitha	Bekasi
2011500193	Findy	Jakarta
2009500579	Jasson	Depok
2009500690	Marco	Jakarta
2009500667	Selly	Jakarta

7 rows in set (0.00 sec)

6. Tampilkan NPM, Nama yang ada di tabel Mahasiswa!

```
MariaDB [Tugas3]>SELECT NPM,NAMA FROM MAHASISWA;
```

Perintah untuk menampilkan data hanya nama dan npm dari tabel mahasiswa.

```
MariaDB [Tugas3]> SELECT NPM,NAMA FROM MAHASISWA;
```

NPM	NAMA
2010500225	Jasson
2010500239	Bintang
2011500331	Talitha
2011500193	Findy
2009500579	Jasson
2009500690	Marco
2009500667	Selly

7 rows in set (0.00 sec)

7. Tampilkan nama yang ada di tabel Mahasiswa (jika ada banyak mahasiswa dengan nama sama, tapi NPMnya berbeda, maka hanya satu nama yang tampil) gunakan DISTINCT!

```
MariaDB [Tugas3]>SELECT DISTINCT NAMA FROM MAHASISWA;
```

Perintah tersebut digunakan untuk menampilkan data nama dari tabel mahasiswa tanpa ada data yang duplikat.

```
MariaDB [Tugas3]> SELECT DISTINCT NAMA FROM MAHASISWA;
```

NAMA
Jasson
Bintang
Talitha
Findy
Marco
Selly

```
6 rows in set (0.00 sec)
```

8. Tampilkan seluruh data mahasiswa yang tinggal di kota Depok!

```
MariaDB [Tugas3]>SELECT *FROM MAHASISWA WHERE KOTA="Depok";
```

Perintah untuk menampilkan data dari tabel mahasiswa yang hanya beralamat di kota Depok saja.

```
MariaDB [Tugas3]> SELECT *FROM MAHASISWA WHERE KOTA="Depok";
```

NPM	NAMA	KOTA
2009500579	Jasson	Depok

```
1 row in set (0.00 sec)
```

9. Tampilkan seluruh data untuk mahasiswa dengan NPM '2011500331'!

```
MariaDB [Tugas3]>SELECT *FROM MAHASISWA WHERE NPM="2011500331";
```

Perintah untuk menampilkan data dari tabel mahasiswa yang ber NPM 2011500331.

```
MariaDB [Tugas3]> SELECT *FROM MAHASISWA WHERE NPM="2011500331";
```

NPM	NAMA	KOTA
2011500331	Talitha	Bekasi

```
1 row in set (0.00 sec)
```

10. Tampilkan semua data Matakuliah yang diselenggarakan di semester 4 hingga 6 ! (Gunakan Between)!

```
MariaDB [Tugas3]>SELECT *FROM MATAKULIAH WHERE SEMESTER BETWEEN "Semester4" and "Semester 6";
```

Perintah diatas untuk menampilkan data dari tabel matakuliah yang diselenggarakan di semester 4 (sebagai batas bawahnya) sampai Semester 6 (sebagai batas atasnya).

```
MariaDB [Tugas3]> SELECT *FROM MATAKULIAH WHERE SEMESTER BETWEEN "Semester 4" and "Semester 6";
```

KD_MK	Nama_MK	SKS	SEMESTER
KK021	Sistem Basis Data	2	Semester 4
KD123	Sistem Informasi Manajemen	3	Semester 6

```
2 rows in set (0.00 sec)
```