PRAKTIKUM 5

NIM 312310668

Nama : Thondy Autarliandi

Kelas : TI.23.A6 Mata Kuliah : Basis Data

Dosen : Agung Nugroho, S.Kom., M.Kom.

Link GITHUB: https://github.com/Thndyyy/praktikum5.git

Buat Tabel Seperti Berikut:

Tabel Mahasiswa

nim	nama	jk	tgl_lahir	jalan	kota	kodepos	no_hp	kd_ds
1812345	Ari Santoso	L	1999-10-11	NULL	Bekasi	NULL	NULL	DS002
1823456	Dina Marlina	Р	1998-11-20	NULL	Jakarta	NULL	NULL	NULL
1834567	Rahmat Hidayat	L	1999-05-10	NULL	Bekasi	NULL	NULL	NULL
1845678	Jaka Sampurna	L	2000-10-19	NULL	Cikarang	NULL	NULL	NULL
1856789	Tia Lestari	Р	1999-02-15	NULL	Karawang	NULL	NULL	NULL
1867890	Anton Sinaga	L	1998-06-22	NULL	Bekasi	NULL	NULL	NULL
1912345	Listia Nastiti	Р	2001-10-23	NULL	Jakarta	NULL	NULL	NULL
1923456	Amira Jarisa	Р	2001-01-24	NULL	Karawang	NULL	NULL	DS004
1934567	Laksana Mardito	L	1999-04-14	NULL	Cikarang	NULL	NULL	NULL
1945678	Jura Marsina	Р	2000-05-10	NULL	Cikarang	NULL	NULL	NULL
1956789	Dadi Martani	L	2001-08-29	NULL	Bekasi	NULL	NULL	DS005
1967890	Bayu Laksono	L	1999-07-22	NULL	Cikarang	NULL	NULL	DS004

Tabel Dosen

Tabel Matakuliah

kd_ds	nama
DS001	Nofal Arianto
DS002	Ario Talib
DS003	Ayu Rahmadina
DS004	Ratna Kumala
DS005	Vika Prasetyo

kd_mk	nama	sks
MK001	Algoritma Dan Pemrogaman	3
MK002	Praktikum Algoritma Dan Pemrograman	1
MK003	Teknologi Basis Data	3
MK004	Praktikum Teknologi Basis Data	1
MK005	Pemrograman Dasar	3
MK006	Pemrograman Berorientasi Objek	3
MK007	Struktur Data	3
MK008	Arsitektur Komputer	2

Tabel JadwalMengajar

kd_mk	kd_ds	hari	jam	ruang
MK001	DS002	Senin	10:00:00	102
MK002	DS002	Senin	13:00:00	Lab. 01
MK003	DS001	Selasa	08:00:00	201
MK004	DS001	Rabu	10:00:00	Lab. 02
MK005	DS003	Selasa	10:00:00	Lab. 01
MK006	DS004	Kamis	09:00:00	Lab. 03
MK007	DS005	Rabu	08:00:00	102
MK008	DS005	Kamis	13:00:00	201

Tabel KRSMahasiswa

nim	kd_mk	kd_ds	sem	ester nilai
1823456	MK001	DS002	3	NULL
1823456	MK002	DS002	1	NULL
1823456	MK003	DS001	3	NULL
1823456	MK004	DS001	3	NULL
1823456	MK007	DS005	3	NULL
1823456	MK008	DS005	3	NULL

Tugas Latihan

- Lakukan join table Mahasiswa dan Dosen
- Lakukan join tabel Matakuliah dan Dosen
- Lakukan join table JadwalMengajar, Dosen, dan Matakuluan
- Lakukan join tabel KrsMahasiswa, Mahasiswa, Matakuliah, dan Dosen

Membuat Table Mahasiswa

```
CREATE TABLE Mahasiswa(
nim VARCHAR(50) NOT NULL,
nama VARCHAR(100) NOT NULL,
jk VARCHAR(20) NOT NULL,
tgl_lahir VARCHAR(30) NOT NULL,
jalan VARCHAR(30) DEFAULT NULL,
Kota VARCHAR(50) NOT NULL,
kodepos VARCHAR(20) DEFAULT NULL,
no_hp VARCHAR(20) DEFAULT NULL,
kd_ds VARCHAR(20) DEFAULT NULL,
PRIMARY KEY (nim));
```

```
MariaDB [praktikum5] > CREATE TABLE Mahasiswa(
-> nim VARCHAR(50) NOT NULL,
-> nama VARCHAR(100) NOT NULL,
-> jk VARCHAR(20) NOT NULL,
-> tgl_lahir VARCHAR(30) NOT NULL,
-> jalan VARCHAR(30) DEFAULT NULL,
-> kota VARCHAR(50) NOT NULL,
-> kodepos VARCHAR(20) DEFAULT NULL,
-> no_hp VARCHAR(20) DEFAULT NULL,
-> kd_ds VARCHAR(20) DEFAULT NULL,
-> PRIMARY KEY (nim));
Query OK, 0 rows affected (0.008 sec)
```

INSERT INTO Mahasiswa(nim, nama, jk, tgl_lahir, jalan, kota, kodepos, no_hp, kd_ds) values

('1812345', 'Ari Santoso', 'L', '1999-10-11', NULL, 'Bekasi', NULL, NULL, 'DS002'),

('1823456', 'Dina Marlina', 'P', '1998-11-20', NULL, 'Jakarta', NULL, NULL, NULL, NULL),

('1834567', 'Rahmat Hidayat', 'L', '1999-05-10', NULL, 'Bekasi', NULL, NULL, NULL, NULL),

('1845678', 'Jaka Sampurna', 'L', '2000-10-19', NULL, 'Cikarang', NULL, NULL, NULL),

('1856789', 'Tia Lestari', 'P', '1999-02-15', NULL, 'Karawang', NULL, NULL, NULL, NULL),

('1867890', 'Anton Sinaga', 'L', '1998-06-22', NULL, 'Bekasi', NULL, NULL, NULL, NULL),

('19123456', 'Lakia Nastiti', 'P', '2001-10-23', NULL, 'Jakarta', NULL, NULL, NULL, NULL),

('1923456', 'Amira Jarisa', 'P', '2001-01-24', NULL, 'Karawang', NULL, NULL, NULL, 'DS004'),

('1934567', 'Laksana Mardito', 'L', '1999-04-14', NULL, 'Cikarang', NULL, NULL, NULL),

('1956789', 'Dadi Martani', 'L', '2001-08-29', NULL, 'Bekasi', NULL, NULL, 'DS005'),

('1967890', 'Bayu Laksono', 'L', '1999-07-22', NULL, 'Eikarang', NULL, NULL, 'DS004');

MariaDB [praktikum5] INSERT INTO mahasiswa(nin, nama, jk, tgl_tahir, jalan, lota, kodepos, no_hp, kd_ds) values

- ('1812345', 'Ari Santoso', 'L', '1999-07-22', NULL, 'Bekasi', NULL, NULL, 'DS005'),

- ('1823456', 'Bayu Laksono', 'L', '1999-06-10', NUL, 'Bekasi', NUL, NUL, NULL, 'DS004');

- ('181323456', 'Bait Lestari', 'P', '1999-06-10', NUL, 'Bekasi', NUL, NUL, NULL, NUL),

- ('1867899', 'Anton Sinaga', 'L', '1999-06-11', NUL, 'Bekasi', NUL, NUL, NULL),

- ('1867899', 'Anton Sinaga', 'L', '1999-06-10', NULL, 'Gikarang', NULL, NULL, NULL),

- ('1967896', 'Jaka Sampurna', 'L', '2001-01-14', NULL, 'Gikarang', NULL, NULL, NULL),

- ('1967896', 'Jaka Sampurna', 'L', '2001-01-14', NULL, 'Gikarang', NULL, NULL, NULL),

- ('1967896', 'Jaka Sampurna', 'L', '2001-01-24', NULL, 'Bekasi', NULL, NULL, NULL),

- ('1967896', 'Jaka Sampurna', 'L', '2001-01-24', NULL, 'Bekasi', NULL, NULL, NULL),

- ('1967896', 'Jaka Sampurna', 'L', '2001-01-24', NULL, 'Gikarang', NULL,

MariaDB [p:	raktikum5]> SELECT	* FR()M Mahasiswa; 	+	+	+	+	+
nim	nama	jk	tgl_lahir	jalan	Kota	kodepos	no_hp	kd_ds
1812345 1823456	Ari Santoso Dina Marlina	L P	 1999-10-11 1998-11-20	 NULL NULL	 Bekasi Jakarta	 NULL NULL	NULL NULL	DS002 NULL
1834567	Rahmat Hidayat	֡֝֝֡֞֝֡֞֜֝֡֡֡֝	1999-05-10	NULL	Bekasi	NULL	NULL	NULL
1845678 1856789	Jaka Sampurna Tia Lestari	L P	2000-10-19 1999-02-15	NULL NULL	Cikarang Karawang	NULL NULL	NULL NULL	NULL NULL
1867890 1912345	Anton Sinaga Listia Nastiti	L P	1998-06-22 2001-10-23	NULL NULL	Bekasi Jakarta	NULL NULL	NULL NULL	NULL NULL
1923456 1934567	Amira Jarisa Laksana Mardito	P L	2001-01-24 1999-04-14	NULL NULL	Karawang Cikarang	NULL NULL	NULL NULL	DS004 NULL
1945678 1956789	Jura Marsina Dadi Martani	p L	2000-05-10 2001-08-29	NULL NULL	Cikarang Bekasi	NULL NULL	NULL NULL	NULL DS005
1967890	Bayu Laksono	L	1999-07-22	NULL	Cikarang	NULL	NULL	DS004
12 rows in	set (0.001 sec)							

• Membuat Table Dosen

```
CREATE TABLE Dosen(
kd_ds VARCHAR(50) NOT NULL PRIMARY KEY,
nama VARCHAR(100) NOT NULL
);
INSERT INTO dosen (kd_ds, nama) values
('DS001', 'Nofal Arianto'),
('DS002', 'Ario Talib'),
('DS003', 'Ayu Rahmadina'),
('DS004', 'Ratna Kumala'),
('DS005', 'Vika Prasetyo');
MariaDB [praktikum5]> CREATE TABLE Dosen(
     -> kd_ds VARCHAR(50) NOT NULL PRIMARY KEY,
     -> nama VARCHAR(100) NOT NULL);
Query OK, 0 rows affected (0.008 sec)
MariaDB [praktikum5] > INSERT INTO dosen (kd_ds, nama) values
     -> ('DS001', 'Nofal Arianto'),
     -> ('DS002', 'Ario Talib'),
-> ('DS003', 'Ayu Rahmadina'),
-> ('DS004', 'Ratna Kumala'),
-> ('DS005', 'Vika Prasetyo');
Query OK, 5 rows affected (0.004 sec)
Records: 5 Duplicates: 0 Warnings: 0
```

• Membuat Table Matakuliah

```
CREATE TABLE Matakuliah(
kd mk VARCHAR(50) NOT NULL PRIMARY KEY,
nama VARCHAR(100) NOT NULL,
sks VARCHAR(10));
INSERT INTO Matakuliah (kd_mk, nama, sks) values
('MK001', 'Algoritma Dan Pemrograman', '3'),
('MK002', 'Praktikum Algoritma Dan Pemrograman', '1'),
('MK003', 'Teknologi Basis Data', '3'),
('MK004', 'Praktikum Teknologi Basis Data', '1'),
('MK005', 'Pemrograman Dasar', '3'),
('MK006', 'Pemrograman Berorientasi Objek', '3'),
('MK007', 'Struktur Data', '3'),
('MK008', 'Arsitektur Komputer', '2');
MariaDB [praktikum5]> CREATE TABLE Matakuliah(
    -> kd_mk VARCHAR(50) NOT NULL PRIMARY KEY,
    -> nama VARCHAR(100) NOT NULL,
```

```
MariaDB [praktikum5]> CREATE TABLE Matakuliah(
    -> kd_mk VARCHAR(50) NOT NULL PRIMARY KEY,
    -> nama VARCHAR(100) NOT NULL,
    -> sks VARCHAR(10));
Query OK, 0 rows affected (0.010 sec)

MariaDB [praktikum5]> INSERT INTO Matakuliah (kd_mk, nama, sks) values
    -> ('MK001', 'Algoritma Dan Pemrograman', '3'),
    -> ('MK002', 'Praktikum Algoritma Dan Pemrograman', '1'),
    -> ('MK003', 'Teknologi Basis Data', '3'),
    -> ('MK004', 'Praktikum Teknologi Basis Data', '1'),
    -> ('MK005', 'Pemrograman Dasar', '3'),
    -> ('MK006', 'Pemrograman Berorientasi Objek', '3'),
    -> ('MK007', 'Struktur Data', '3'),
    -> ('MK008', 'Arsitektur Komputer', '2');
Query OK, 8 rows affected (0.008 sec)
Records: 8 Duplicates: 0 Warnings: 0
```

```
MariaDB [praktikum5]> select * from matakuliah;
 kd_mk | nama
                                                 sks
          Algoritma Dan Pemrograman
                                                  3
  MK001
          Praktikum Algoritma Dan Pemrograman
                                                 1
  MK002
                                                 3
 MK003
          Teknologi Basis Data
          Praktikum Teknologi Basis Data
                                                 1
 MK004
                                                 3
  MK005
          Pemrograman Dasar
          Pemrograman Berorientasi Objek
                                                 3
  MK006
  MK007
          Struktur Data
                                                 3
  MK008
          Arsitektur Komputer
                                                 2
 rows in set (0.001 sec)
```

• Membuat Table Jadwal Mengajar

```
CREATE TABLE JadwalMengajar(kd_mk VARCHAR(50) NOT NULL, kd_ds VARCHAR(50) NOT NULL, hari ENUM('Senin', 'Selasa', 'Rabu', 'Kamis'), jam TIME NOT NULL, ruang VARCHAR(50), PRIMARY KEY(kd mk, kd ds));
```

```
MariaDB [praktikum5]> CREATE TABLE JadwalMengajar(
    -> kd_mk VARCHAR(50) NOT NULL,
    -> kd_ds VARCHAR(50) NOT NULL,
    -> hari ENUM('Senin', 'Selasa', 'Rabu', 'Kamis'),
    -> jam TIME NOT NULL,
    -> ruang VARCHAR(50),
    -> PRIMARY KEY(kd_mk, kd_ds));
Query OK, 0 rows affected (0.008 sec)
INSERTINTO JadwalMengajar(kd_mk, kd_ds, hari, jam, ruang) values
```

```
INSERT INTO JadwalMengajar(kd_mk, kd_ds, hari, jam, ruang) values ('MK001', 'DS002', 'Senin', '10:00:00', '102'), ('MK002', 'DS002', 'Senin', '13:00:00', 'Lab. 01'), ('MK003', 'DS001', 'Selasa', '08:00:00', '201'), ('MK004', 'DS001', 'Rabu', '10:00:00', 'Lab. 02'), ('MK005', 'DS003', 'Selasa', '10:00:00', 'Lab. 01'), ('MK006', 'DS004', 'Kamis', '09:00:00', 'Lab. 03'), ('MK007', 'DS005', 'Rabu', '08:00:00', '102'), ('MK008', 'DS005', 'Kamis', '13:00:00', '201');
```

```
MariaDB [praktikum5]> select * from jadwalmengajar;
 kd_mk
          kd_ds
                   hari
                                        ruang
                            jam
 MK001
          DS002
                   Senin
                             10:00:00
                                         102
 MK002
          DS002
                   Senin
                             13:00:00
                                         Lab. 01
 MK003
          DS001
                   Selasa
                                         201
                             08:00:00
 MK004
          DS001
                   Rabu
                             10:00:00
                                        Lab. 02
 MK005
          DS003
                   Selasa
                             10:00:00
                                        Lab. 01
 MK006
          DS004
                   Kamis
                             09:00:00
                                        Lab. 03
 MK007
          DS005
                   Rabu
                             08:00:00
                                         102
 MK008
          DS005
                   Kamis
                             13:00:00
                                         201
8 rows in set (0.001 sec)
```

Membuat Table KRSMahasiswa

CREATE TABLE KRSMahasiswa(nim VARCHAR(50) NOT NULL, kd_mk VARCHAR(50) NOT NULL, kd_ds VARCHAR(50) NOT NULL, semester VARCHAR(30) NOT NULL, nilai VARCHAR(50) DEFAULT NULL);

```
INSERT INTO KRSMahasiswa(nim, kd_mk, kd_ds, semester) values ('1823456', 'MK001', 'DS002', '3'), ('1823456', 'MK002', 'DS002', '1'), ('1823456', 'MK003', 'DS001', '3'), ('1823456', 'MK004', 'DS001', '3'), ('1823456', 'MK007', 'DS005', '3'), ('1823456', 'MK008', 'DS005', '3');
```

```
MariaDB [praktikum5]> create table krsmahasiswa(
-> nim VARCHAR(50) NOT NULL,
-> kd_mk VARCHAR(50) NOT NULL,
-> kd_ds VARCHAR(50) NOT NULL,
-> semester VARCHAR(30) NOT NULL,
-> nilai VARCHAR(50) DEFAULT NULL);
Query OK, 0 rows affected (0.011 sec)
```

```
into krsmahasiswa(nim, kd_mk, kd_ds, semester) values
        ('1823456',
('1823456',
                       MK001',
                                  'DS002',
'DS002',
                       'MK002'
        ('1823456'
('1823456'
                       'MK004',
                                  'DS001',
     -> ('1823456'
                       'MK007'
                                  'DS005'
        ('1823456'
                       'MK008
Query OK, 6 rows affected (0.003 sec)
Records: 6 Duplicates: 0 Warnings: 0
MariaDB [praktikum5]> select * from krsmahasiswa;
              kd_mk |
                        kd_ds | semester |
                                               nilai
  nim
              MK001
MK002
  1823456
                        DS002
  1823456
                        DS002
                                                NULL
              MK003
                                                NULL
  1823456
              MK004
                        DS001
                                                NULL
              MK007
  1823456
                        DS005
                                                NULL
              MK008
  1823456
                        DS005
                                                NULL
  rows in set (0.001 sec)
```

MELAKUKAN JOIN PADA TABLE

1. Lakukan join table Mahasiswa dan Dosen

SELECT Mahasiswa.nim, Mahasiswa.nama, Mahasiswa.jk, Dosen.nama AS "Dosen PA" FROM Mahasiswa INNER JOIN Dosen ON Dosen.kd_ds = Mahasiswa.kd_ds;

```
MariaDB [praktikum5]> SELECT Mahasiswa.nim, Mahasiswa.nama, Mahasiswa.jk, Dosen.nama AS "Dosen PA"
-> FROM Mahasiswa INNER JOIN Dosen ON Dosen.kd_ds = Mahasiswa.kd_ds;
                                        Dosen PA
 nim
                                 jk |
  1812345
              Ari Santoso
                                        Ario Talib
                                 Р
  1923456
              Amira Jarisa
                                        Ratna Kumala
  1956789
              Dadi Martani
                                        Vika Prasetyo
 1967890
              Bayu Laksono
                                        Ratna Kumala
 rows in set (0.002 sec)
```

• input dengan left join

SELECT Mahasiswa.nim, Mahasiswa.nama, Mahasiswa.jk, Dosen.nama AS "Dosen PA" FROM Mahasiswa LEFT JOIN Dosen ON Dosen.kd_ds = Mahasiswa.kd_ds;

```
MariaDB [praktikum5]> SELECT Mahasiswa.nim, Mahasiswa.nama, Mahasiswa.jk, Dosen.nama AS "Dosen PA"
    -> FROM Mahasiswa LEFT JOIN Dosen ON Dosen.kd_ds = Mahasiswa.kd_ds;
 nim
            nama
                              jk
                                 Dosen PA
            Ari Santoso
 1812345
                                    Ario Talib
 1823456
            Dina Marlina
                              P
                                   NULL
  1834567
            Rahmat Hidayat
                                    NULL
  1845678
            Jaka Sampurna
                                    NULL
 1856789
                              Р
            Tia Lestari
                                    NULL
 1867890
            Anton Sinaga
                                    NULL
  1912345
                              P
            Listia Nastiti
                                    NULL
  1923456
            Amira Jarisa
                              P
                                    Ratna Kumala
  1934567
            Laksana Mardito
                              L
                                    NULL
 1945678
            Jura Marsina
                                   NULL
                              p
  1956789
            Dadi Martani
                                    Vika Prasetyo
                                    Ratna Kumala
 1967890
            Bayu Laksono
                              L
12 rows in set (0.001 sec)
```

2. Lakukan join table Mata kuliah dan Dosen

• input

SELECT Matakuliah.kd_mk, Matakuliah.nama, Matakuliah.sks, Dosen.nama AS "Dosen Pengampu"

FROM JadwalMengajar

LEFT JOIN Matakuliah ON JadwalMengajar.kd_mk = Matakuliah.kd_mk LEFT JOIN Dosen ON JadwalMengajar.kd_ds = Dosen.kd_ds;

MariaDB [praktikum5]> SELECT Matakuliah.kd_mk, -> FROM JadwalMengajar -> LEFT JOIN Matakuliah ON JadwalMengajar. -> LEFT JOIN Dosen ON JadwalMengajar.kd_ds	kd_mk =	
kd_mk nama	sks	Dosen Pengampu
MK001 Algoritma Dan Pemrograman MK002 Praktikum Algoritma Dan Pemrograman MK003 Teknologi Basis Data MK004 Praktikum Teknologi Basis Data MK005 Pemrograman Dasar MK006 Pemrograman Berorientasi Objek MK007 Struktur Data MK008 Arsitektur Komputer	3 1 3 1 3 3 3	Ario Talib
8 rows in set (0.001 sec)	-	

- 3. Lakukan join table Jadwal Mengajar, Dosen dan Matakuliah
 - input

SELECT Matakuliah.kd_mk, Matakuliah.nama, Matakuliah.sks, Dosen.nama AS "Dosen Pengampu", JadwalMengajar.hari, JadwalMengajar.jam, JadwalMengajar.ruang FROM JadwalMengajar

LEFT JOIN Matakuliah ON JadwalMengajar.kd_mk = Matakuliah.kd_mk LEFT JOIN Dosen ON JadwalMengajar.kd_ds = Dosen.kd_ds;

MariaDB [praktikum5] > SELECT Matakuliah.kd_mk,			liah.sks,	Dosen.nama	AS "Dosen	Pengampu", JadwalMe
ngajar.hari, JadwalMengajar.jam, JadwalMengaja	r.ruang					
-> FROM JadwalMengajar						
-> LEFT JOIN Matakuliah ON JadwalMengajar.						
-> LEFT JOIN Dosen ON JadwalMengajar.kd_ds	= Dose	n.ka_as;				
kd_mk nama	sks	Dosen Pengampu	hari	jam	ruang	Ī
MK001 Algoritma Dan Pemrograman	3	Ario Talib	Senin	10:00:00	+ 102	Ī
MK002 Praktikum Algoritma Dan Pemrograman	1	Ario Talib	Senin	13:00:00	Lab. 01	I
MK003 Teknologi Basis Data	3	Nofal Arianto	Selasa	08:00:00	201	l
MK004 Praktikum Teknologi Basis Data	1	Nofal Arianto	Rabu	10:00:00	Lab. 02	1
MK005 Pemrograman Dasar	3	Ayu Rahmadina	Selasa	10:00:00	Lab. 01	I
MK006 Pemrograman Berorientasi Objek	3	Ratna Kumala	Kamis	09:00:00	Lab. 03	I
MK007 Struktur Data	3	Vika Prasetyo	Rabu	08:00:00	102	I
MK008 Arsitektur Komputer	2	Vika Prasetyo	Kamis	13:00:00	201	İ
+	+	+	+	+	+	+
8 rows in set (0.001 sec)						

- 4. Lakukan join table KRSMahasiswa, Mahasiswa, Matakuliah Dan Dosen
 - input

SELECT Mahasiswa.nim, Mahasiswa.nama AS "nama", Dosen.nama AS "Dosen PA", Matakuliah.nama AS "Matakuliah", Matakuliah.sks, Dosen.nama AS "Dosen Pengampu" FROM KRSMahasiswa

JOIN Mahasiswa ON KRSMahasiswa.nim = Mahasiswa.nim JOIN Matakuliah ON KRSMahasiswa.kd_mk = Matakuliah.kd_mk JOIN Dosen ON KRSMahasiswa.kd_ds = Dosen.kd_ds;

-> FROM -> JOIM -> JOIM	1 KRSMahasiswa 1 Mahasiswa ON F 1 Matakuliah ON	Oosen.nama AS "Do KRSMahasiswa.nim KRSMahasiswa.kd ahasiswa.kd_ds =	= Mahasiswa.nim _mk = Matakuliah.kd_mk			
nim	nama	Dosen PA	Matakuliah	sks	Dosen Pengampu	
1823456	Dina Marlina	Nofal Arianto	Teknologi Basis Data	3	Nofal Arianto	
1823456	Dina Marlina	Nofal Arianto	Praktikum Teknologi Basis Data	1	Nofal Arianto	
1823456	Dina Marlina	Ario Talib	Algoritma Dan Pemrograman	3	Ario Talib	
1823456	Dina Marlina	Ario Talib	Praktikum Algoritma Dan Pemrograman	1	Ario Talib	
1823456	Dina Marlina	Vika Prasetyo	Struktur Data	3	Vika Prasetyo	
1823456	Dina Marlina	Vika Prasetyo	Arsitektur Komputer	2	Vika Prasetyo	