Nama   : Dzaky Alaudin

Kelas   : TI.22.A.5

NIM   : 312210495

LAPORAN PRAKTIKUM 5

Langkah-Langkah Praktikum Beserta Outputnya

- Membuat database

```
create database Latihan05;
```

- Masuk ke database

```
use Latihan05;
```

- Membuat table

```
create table mahasiswa (
    nim int not null,
    nama varchar(45) null,
    jk varchar(45) null,
    tgl_lahir varchar(45) null,
    jalan varchar(45) null,
    kodepos varchar(45) null,
    nohp varchar(45) null,
    kd_ds varchar(45) null,
    primary key (nim)
);
```

- Mengisi table

```
insert into (`nim`, `nama`, `jk`, `tgl_lahir`, `kota`, `kd_ds`) values
   ('1812345', 'Ari Santoso', 'L', '1999-10-11', 'bekasi', 'DS002');

insert into mahasiswa (`nim`, `nama`, `jk`, `tgl_lahir`, `kota`) values
   ('1823456', 'Dina Marlina', 'P', '1998-11-20', 'jakarta');

insert into mahasiswa  (`nim`, `nama`, `jk`, `tgl_lahir`, `kota`) values
('1834567', 'Rahmat Hidayat', 'L', '1999-05-10', 'bekasi');

insert into mahasiswa (`nim`, `nama`, `jk`, `tgl_lahir`, `kota`) values
   ('1845678', 'Jaka Sampurna', 'L', '2000-10-19', 'cikarang');

insert into mahasiswa  (`nim`, `nama`, `jk`, `tgl_lahir`, `kota`) values
('1867890', 'Anton Sinaga', 'L', '1998-06-22', 'bekasi');

insert into mahasiswa (`nim`, `nama`, `jk`, `tgl_lahir`, `kota`) values
('1912345', 'Listia Nasiti', 'P', '2001-10-23', 'jakarta');

insert into mahasiswa (`nim`, `nama`, `jk`, `tgl_lahir`, `kota`, `kd_ds`)
   values ('1923456', 'Amira Jarisa ', 'P', '2001-01-24', 'karawang',
   'DS004');

insert into mahasiswa (`nim`, `nama`, `jk`, `tgl_lahir`, `kota`) values
   ('1934567', 'Laksana Mardito', 'L', '1999-01-14', 'cikarang');

insert into mahasiswa (`nim`, `nama`, `jk`, `tgl_lahir`, `kota`) values
   ('1945678', 'Jura Marsina', 'P', '2000-05-10', 'cikarang ');

insert into mahasiswa (`nim`, `nama`, `jk`, `tgl_lahir`, `kota`, `kd_ds`)
   values ('1956789', 'Dadi Martani', 'L', '2001-08-29', 'bekasi',
   'DS005');

insert into mahasiswa (`nim`, `nama`, `jk`, `tgl_lahir`, `kota`, `kd_ds`)
   values ('1967890', 'Bayu Laksono', 'L', '1999-07-22', 'cikarang',
   'DS004');
```

nim	nama	jk	tgl_lahir	jalan	kota	kodepos	nohp	kd_ds
1812345	Ari Santoso	L	1999-10-11	NULL	bekasi	NULL	NULL	DS002
1823456	Dina Marlina	P	1998-11-20	NULL	jakarta	NULL	NULL	NULL
1834567	Rahmat Hida...	L	1999-05-10	NULL	bekasi	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
1867890	Anton Sinaga	L	1998-06-22	NULL	bekasi	NULL	NULL	NULL
1912345	Listia Nasiti	P	2001-10-23	NULL	jakarta	NULL	NULL	NULL
1923456	Amira Jarisa	P	2001-01-24	NULL	karawang	NULL	NULL	DS004
1934567	Laksana Mar...	L	1999-01-14	NULL	cikarang	NULL	NULL	NULL
1945678	Jura Marsina	P	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

- Buat tabel dosen

```
Create table dosen ( `kd_ds` int not null, `nama` varchar (45) NULL, primary key (`kd_ds`));
```

```
Insert into (`kd_ds`,`nama`) values ('DS001','Noval Arianto');
Insert into (`kd_ds`,`nama`) values ('DS002','Ario Talib');
Insert into (`kd_ds`,`nama`) values ('DS003','Ayu Rahmadina');
Insert into (`kd_ds`,`nama`) values ('DS004','Ratna Kumala');
Insert into (`kd_ds`,`nama`) values ('DS005','vika Prasetyo');
```

Output

kd_ds	nama
DS001	Noval Arianto
DS002	Ario Talib
DS003	Ayu Rahmadina
DS004	Ratna Kumala
DS005	vika Prasetyo

- Buat table matakuliah

```
Create table matakuliah (`kd_mk` int not null, `nama` varchar (45) null,`sks` varchar(45) null, primary key  (`kd_mk`));
```

```
Insert into (`kd_mk`,`nama`,`sks`) values ('MK001','Algoritma dan Pemrograman',3);
Insert into (`kd_mk`,`nama`,`sks`) values ('MK002','Prsktikum Algoritma dn Pemrograman',1);
Insert into (`kd_mk`,`nama`,`sks`) values ('MK003','Teknologi Basis Data',3);
Insert into (`kd_mk`,`nama`,`sks`) values ('MK004','Praktikum Teknologi Basis Data',1);
Insert into (`kd_mk`,`nama`,`sks`) values ('MK005','Pemrograman Dasar',3);
Insert into (`kd_mk`,`nama`,`sks`) values ('MK006','Pemrograman Berorientasi Objek',3);
Insert into (`kd_mk`,`nama`,`sks`) values ('MK007','Struktur Data',3);
Insert into (`kd_mk`,`nama`,`sks`) values ('MK008','Arsitektur Komputer',2);
```

Output

kd_mk	nama	sks
MK001	Algoritma dan Pemrograman	3
MK002	Prsktikum Algoritma dn 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

- Buat table jadwal mengajar

```
Create table jadwalmengajar (`kd_mk` int not null,`kd_ds` varchar(45) null,`hari` varchar(45) null,`jam` varchar(45) null, `ruang` varchar(45) null, primary key (`kd_mk`));
```

Insert into (`kd_mk`,`kd_ds`,`hari`,`jam`,`ruang`) values ('MK001','DS002','senin','10:00:00','102');

Insert into (`kd_mk`,`kd_ds`,`hari`,`jam`,`ruang`) values ('MK002','DS002','senin','13:00:00','Lab. 01');

Insert into (`kd_mk`,`kd_ds`,`hari`,`jam`,`ruang`) values ('MK003','DS001','selasa','8:00:00','201');

Insert into (`kd_mk`,`kd_ds`,`hari`,`jam`,`ruang`) values ('MK004','DS001','rabu','10:00:00','Lab. 02');

Insert into (`kd_mk`,`kd_ds`,`hari`,`jam`,`ruang`) values ('MK005','DS003','selasa','10:00:00','Lab. 01');

Insert into (`kd_mk`,`kd_ds`,`hari`,`jam`,`ruang`) values ('MK006','DS004','kamis','9:00:00','Lab. 03');

Insert into (`kd_mk`,`kd_ds`,`hari`,`jam`,`ruang`) values ('MK007','DS005','rabu','8:00:00','102');

Insert into (`kd_mk`,`kd_ds`,`hari`,`jam`,`ruang`) values ('MK008','DS005','kamis','13:00:00','201');

Output

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	8:00:00	201
MK004	DS001	rabu	10:00:00	Lab. 02
MK005	DS003	selasa	10:00:00	Lab. 01
MK006	DS004	kamis	9:00:00	Lab. 03
MK007	DS005	rabu	8:00:00	102
MK008	DS005	kamis	13:00:00	201

- Buat tabel krs mahasiswa

Create table krsmahasiswa (`nim` int not null,`kd_mk` varchar(45) null,`kd_ds` varchar(45) null, `semester` varchar(45) null, `nilai` varchar(45) null, primary key (`nim`));

Insert into (`nim`,`kd_mk`,`kd_ds`,`semester`,`nilai`) values (1823456,'MK001','DS002',3,NULL);
Insert into (`nim`,`kd_mk`,`kd_ds`,`semester`,`nilai`) values (1823456,'MK002','DS002',1,NULL);
Insert into (`nim`,`kd_mk`,`kd_ds`,`semester`,`nilai`) values (1823456,'MK003','DS001',3,NULL);
Insert into (`nim`,`kd_mk`,`kd_ds`,`semester`,`nilai`) values (1823456,'MK004','DS001',3,NULL);
Insert into (`nim`,`kd_mk`,`kd_ds`,`semester`,`nilai`) values (1823456,'MK007','DS005',3,NULL);
Insert into (`nim`,`kd_mk`,`kd_ds`,`semester`,`nilai`) values (1823456,'MK008','DS006',3,NULL);

Output

nim	kd_mk	kd_ds	semester	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	DS006	3	NULL

Praktikum

- Join tabel mahasiswa dan dosen

```
Select nim,mahasiswa.nama,jk, dosen.nama as pembimbing fro, mahasiswa join dosen on
mahasiswa.kd_ds= dosen.kd_ds;
```
Output

```
+---------+--------------+------+---------------+
| nim     | nama         | jk   | pembimbing    |
+---------+--------------+------+---------------+
| 1812345 | Ari Santoso  | L    | Ario Talib    |
| 1923456 | Amira Jarisa | P    | Ratna Kumala  |
| 1956789 | Dadi Martani | L    | vika Prasetyo |
| 1967890 | Bayu Laksono | L    | Ratna Kumala  |
+---------+--------------+------+---------------+
4 rows in set (0.00 sec)
```

- Left join tabel mahasiswa dan dosen

```
Select nim,mahasiswa.nama,jk, dosen.nama as pembimbing from mahasiswa left join dosen on
mahasiswa.kd_ds= dosen.kd_ds;
```
Output

```
+---------+----------------+------+---------------+
| nim     | nama           | jk   | pembimbing    |
+---------+----------------+------+---------------+
| 1812345 | Ari Santoso    | L    | Ario Talib    |
| 1823456 | Dina Marlina   | P    | NULL          |
| 1834567 | Rahmat Hidayat | L    | NULL          |
| 1845678 | Jaka Sampurna  | L    | NULL          |
| 1856789 | Tia Lestari    | P    | NULL          |
| 1867890 | Anton Sinaga   | L    | NULL          |
| 1912345 | Listia Nasiti  | P    | NULL          |
| 1923456 | Amira Jarisa   | P    | Ratna Kumala  |
| 1934567 | Laksana Mardito| L    | NULL          |
| 1945678 | Jura Marsina   | P    | NULL          |
| 1956789 | Dadi Martani   | L    | vika Prasetyo |
| 1967890 | Bayu Laksono   | L    | Ratna Kumala  |
```

- Join tabel jadwal mengajar dosen dan matakuliah

  select jadwalmengajar.kd_mk, matakuliah.nama,sks, dosen.nama as pengampu from jadwalmengajar join dosen on jadwalmengajar.kd_ds=dosen.kd_ds join matakuliah on jadwalmengajar.kd_mk=matakuliah.kd_mk;

  Output

```
+--------+-----------------------------------+------+----------------+
| kd_mk  | nama                              | sks  | pengampu       |
+--------+-----------------------------------+------+----------------+
| MK004  | Praktikum Teknologi Basis Data    |    1 | Noval Arianto  |
| MK003  | Teknologi Basis Data              |    3 | Noval Arianto  |
| MK002  | Prsktikum Algoritma dn Pemrograman|    1 | Ario Talib     |
| MK001  | Algoritma dan Pemrograman         |    3 | Ario Talib     |
| MK005  | Pemrograman Dasar                 |    3 | Ayu Rahmadina  |
| MK006  | Pemrograman Berorientasi Objek    |    3 | Ratna Kumala   |
| MK008  | Arsitektur Komputer               |    2 | vika Prasetyo  |
| MK007  | Struktur Data                     |    3 | vika Prasetyo  |
+--------+-----------------------------------+------+----------------+
8 rows in set (0.07 sec)
```

- Join tabel jadwal mengajar dosen dan matakuliah

  Select jadwalmengajar.kd_mk, matakuliah.nama,sks, dosen.nama as pengampu,hari, jam,ruang from jadwalmengajar join dosen on jadwalmengajar.kd_ds=dosen.kd_ds join matakuliah on jadwalmengajar.kd_mk=matakuliah.kd_mk;

  Output

```
+--------+-----------------------------------+------+---------------+--------+----------+---------+
| kd_mk  | nama                              | sks  | pengampu      | hari   | jam      | ruang   |
+--------+-----------------------------------+------+---------------+--------+----------+---------+
| MK004  | Praktikum Teknologi Basis Data    |    1 | Noval Arianto | rabu   | 10:00:00 | Lab. 02 |
| MK003  | Teknologi Basis Data              |    3 | Noval Arianto | selasa | 8:00:00  | 201     |
| MK002  | Prsktikum Algoritma dn Pemrograman|    1 | Ario Talib    | senin  | 13:00:00 | Lab. 01 |
| MK001  | Algoritma dan Pemrograman         |    3 | Ario Talib    | senin  | 10:00:00 | 102     |
| MK005  | Pemrograman Dasar                 |    3 | Ayu Rahmadina | selasa | 10:00:00 | Lab. 01 |
| MK006  | Pemrograman Berorientasi Objek    |    3 | Ratna Kumala  | kamis  | 9:00:00  | Lab. 03 |
| MK008  | Arsitektur Komputer               |    2 | vika Prasetyo | kamis  | 13:00:00 | 201     |
| MK007  | Struktur Data                     |    3 | vika Prasetyo | rabu   | 8:00:00  | 102     |
+--------+-----------------------------------+------+---------------+--------+----------+---------+
8 rows in set (0.00 sec)
```

- Join tabel krs mahasiswa, mahasiswa, matakuliah dosen

Select mahasiswa.nim, mahasiswa.nama, dosen.nama as dosen_pa, matakuliah.nama as matakuliah, sks, dosen.nama as dosen_pengampu from krsmahasiswa
join dosen on krsmahasiswa.kd_ds=dosen.kd_ds
join mahasiswa on mahasiswa.nim=krsmahasiswa.nim
join matakuliah on matakuliah.kd_mk= krsmahasiswa.kd_mk;

Output

```
+---------+--------------+--------------+-----------------------------------+------+--------------+
| nim     | nama         | dosen_pa     | matakuliah                        | sks  | dosen_pengampu |
+---------+--------------+--------------+-----------------------------------+------+--------------+
| 1812345 | Ari Santoso  | Ario Talib   | Algoritma dan Pemrograman         |    3 | Ario Talib   |
| 1812345 | Ari Santoso  | Ario Talib   | Praktikum Algoritma dan Pemrograman |  1 | Ario Talib   |
|    NULL | NULL         | NULL         | Teknologi Basis Data              |    3 | NULL         |
|    NULL | NULL         | NULL         | Praktikum Teknologi Basis Data    |    1 | NULL         |
|    NULL | NULL         | NULL         | Pemrograman Dasar                 |    3 | NULL         |
|    NULL | NULL         | NULL         | Pemrograman Berorientasi Objek    |    3 | NULL         |
| 1956789 | Dadi Martani | vika Prasetyo | Struktur Data                    |    3 | vika Prasetyo |
|    NULL | NULL         | NULL         | Arsitektur Komputer               |    2 | NULL         |
+---------+--------------+--------------+-----------------------------------+------+--------------+
8 rows in set (0.00 sec)
```