Nama : Muhamad Jati Wasesa

Nim : 312210481

Kelas : TI.22.A.5

TUGAS : Basis Data Praktikum5

❖ Buat table mahasiswa

```
CREATE TABLE `latihan5`.`mahasiswa` ( `nim` INT NOT NULL, `nama` VARCHAR(45)
NULL,`jk` VARCHAR(45) NULL,`tgl_lahir` VARCHAR(45) NULL, `jalan` VARCHAR(45)
NULL, `kota` VARCHAR(45) NULL, `kodepos` VARCHAR(45) NULL,`nohp`
VARCHAR(45) NULL,`kd_ds` VARCHAR(45) NULL, PRIMARY KEY (`nim`));
```

```
INSERT INTO `latihan5`.`mahasiswa` (`nim`, `nama`, `jk`, `tgl_lahir`, `kota`, `kd_ds`)
VALUES ('1812345', 'Ari Santoso', 'L', '1999-10-11', 'bekasi', 'DS002');

INSERT INTO `latihan5`.`mahasiswa` (`nim`, `nama`, `jk`, `tgl_lahir`, `kota`) VALUES
('1823456', 'Dina Marlina', 'P', '1998-11-20', 'jakarta');

INSERT INTO `latihan5`.`mahasiswa` (`nim`, `nama`, `jk`, `tgl_lahir`, `kota`) VALUES
('1834567', 'Rahmat Hidayat', 'L', '1999-05-10', 'bekasi');

INSERT INTO `latihan5`.`mahasiswa` (`nim`, `nama`, `jk`, `tgl_lahir`, `kota`) VALUES
('1845678', 'Jaka Sampurna', 'L', '2000-10-19', 'cikarang');

INSERT INTO `latihan5`.`mahasiswa` (`nim`, `nama`, `jk`, `tgl_lahir`, `kota`) VALUES
('1856789', 'Tia Lestari', 'P', '1999-02-15', 'karawang');

INSERT INTO `latihan5`.`mahasiswa` (`nim`, `nama`, `jk`, `tgl_lahir`, `kota`) VALUES
('1867890', 'Anton Sinaga', 'L', '1998-06-22', 'bekasi');

INSERT INTO `latihan5`.`mahasiswa` (`nim`, `nama`, `jk`, `tgl_lahir`, `kota`) VALUES
('1912345', 'Listia Nasiti', 'P', '2001-10-23', 'jakarta');

INSERT INTO `latihan5`.`mahasiswa` (`nim`, `nama`, `jk`, `tgl_lahir`, `kota`, `kd_ds`)
VALUES ('1923456', 'Amira Jarisa ', 'P', '2001-01-24', 'karawang', 'DS004');

INSERT INTO `latihan5`.`mahasiswa` (`nim`, `nama`, `jk`, `tgl_lahir`, `kota`) VALUES
('1934567', 'Laksana Mardito', 'L', '1999-01-14', 'cikarang');

INSERT INTO `latihan5`.`mahasiswa` (`nim`, `nama`, `jk`, `tgl_lahir`, `kota`) VALUES
('1945678', 'Jura Marsina', 'P', '2000-05-10', 'cikarang ');

INSERT INTO `latihan5`.`mahasiswa` (`nim`, `nama`, `jk`, `tgl_lahir`, `kota`, `kd_ds`)
VALUES ('1956789', 'Dadi Martani', 'L', '2001-08-29', 'bekasi', 'DS005');

INSERT INTO `latihan5`.`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 `latihan5`.`dosen` ( `kd_ds` INT NOT NULL, `nama` VARCHAR(45)
NULL, PRIMARY KEY (`kd_ds`));
```
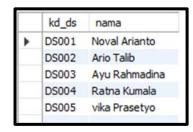
```
INSERT INTO `` (`kd_ds`,`nama`) VALUES ('DS001','Noval Arianto');

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');
```

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

❖ Buat table mata kuliah

```
CREATE TABLE `latihan5`.`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);
```

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 tabel jadwal mengajar

```
CREATE TABLE `latihan5`.`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');
```

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 `latihan5`.`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);

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 from mahasiswa
  > JOIN dosen on mahasiswa.kd_ds= dosen.kd_ds;

  ```
  +---------+----------------+------+---------------+
  | 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;

  ```
  +---------+-----------------+------+---------------+
  | 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  |
  +---------+-----------------+------+---------------+
  ```
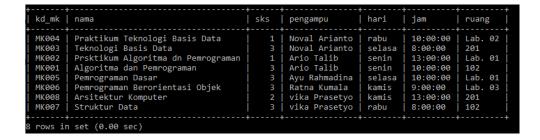
- Join tabel jadwalmengajar,dosen dan matakuliah

  > 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;

  ```
  +-------+---------------------------------+------+----------------+
  | 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 jadwalmengajar,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;

```
+-------+---------------------------------+------+---------------+--------+----------+---------+
| 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 krsmahasiswa,mahasiswa,mata kuliah,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;

```
+---------+--------------+---------------+-----------------------------------+------+----------------+
| 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)
```