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NPM : 2141416
KELAS : SI – A
MATKUL : Database Implementation Semester 3

E. Tugas Praktikum

//tabel mahasiswa

```
INSERT INTO mahasiswa VALUES  
("101","Arif","L","Jl.Kenangan"),  
("102","Budi","L","Jl.Jombang"),  
("103","Wati","P","Jl.Surabaya"),  
("104","Ika","P","Jl.Jombang"),  
("105","Tono","L","Jl.Jakarta"),  
("106","Iwan","L","Jl.Bandung"),  
("107","Sari","P","Jl.Malang");
```

//tabel ambil_mk

```
INSERT INTO ambil_mk VALUES  
("101","PTI447"),  
("103","TIK333"),  
("104","PTI333"),  
("104","PTI777"),  
("111","PTI123"),  
("123","PTI999");
```

//tabel matakuliah

```
INSERT INTO matakuliah VALUES  
("PTI447","Praktikum Basis Data","1","3"),  
("TIK342","Praktikum Basis Data","1","3"),  
("PTI333","Basis Data Terdistribusi","3","5"),  
("TIK123","Jaringan Komputer","2","5"),  
("TIK333","Sistem Operasi","3","5"),  
("PTI123","Grafika Multimedia","3","5"),  
("PTI777","Sistem Informasi","2","3");
```

//nomor 1 eksplisit

```
SELECT COUNT(DISTINCT mahasiswa.nim)  
AS mahasiswa_ambil_matkul FROM mahasiswa INNER JOIN ambil_mk  
ON mahasiswa.nim = ambil_mk.nim;
```

mahasiswa_ambil_matkul

//nomor 1 implisit

```
SELECT COUNT(DISTINCT(nama))  
AS mahasiswa_ambil_matkul FROM mahasiswa, ambil_mk  
WHERE mahasiswa.nim = ambil_mk.nim;
```

mahasiswa_ambil_matkul	
.	3

//nomor 2

```
SELECT jenis_kelamin, COUNT(jenis_kelamin)  
AS jumlah FROM mahasiswa  
LEFT OUTER JOIN ambil_mk  
ON mahasiswa.nim = ambil_mk.nim  
WHERE ambil_mk.nim IS NULL  
GROUP BY jenis_kelamin;
```

jenis_kelamin	jumlah
L	3
P	1

//nomor 3 eksplisit

```
SELECT mahasiswa.nim, nama, matakuliah.kode_mk, nama_mk  
FROM mahasiswa  
INNER JOIN(matakuliah INNER JOIN ambil_mk ON matakuliah.kode_mk = ambil_mk.kode_mk)  
ON mahasiswa.nim = ambil_mk.nim;
```

nim	NAMA	kode_mk	nama_mk
101	Arif	PTI447	Praktikum Basis Data
103	Wati	TIK333	Sistem Operasi
104	Ika	PTI333	Basis Data Terdistribusi
104	Ika	PTI777	Sistem Informasi

//nomor 3 implisit

```
SELECT mahasiswa.nim, nama, matakuliah.kode_mk, nama_mk  
FROM mahasiswa, matakuliah, ambil_mk  
WHERE matakuliah.kode_mk = ambil_mk.kode_mk  
AND mahasiswa.nim = ambil_mk.nim;
```

nim	NAMA	kode_mk	nama_mk
101	Arif	PTI447	Praktikum Basis Data
103	Wati	TIK333	Sistem Operasi
104	Ika	PTI333	Basis Data Terdistribusi
104	Ika	PTI777	Sistem Informasi

//nomor 4

```
SELECT mahasiswa.nim, nama, SUM(sks) AS jumlah_sks
FROM mahasiswa
INNER JOIN(matakuliah INNER JOIN ambil_mk ON matakuliah.kode_mk=ambil_mk.kode_mk)
ON mahasiswa.nim=ambil_mk.nim
GROUP BY nama
HAVING SUM(sks)>4 AND SUM(sks)<10;
```

nim	nama	jumlah_sks
104	Ika	5

//nomor 5

```
SELECT matakuliah.kode_mk, nama_mk, sks, semester
FROM matakuliah
LEFT OUTER JOIN(mahasiswa LEFT OUTER JOIN ambil_mk ON mahasiswa.nim=ambil_mk.nim)
ON matakuliah.kode_mk=ambil_mk.kode_mk
WHERE mahasiswa.nim IS NULL;
```

nama_mk	sks	semester
Grafika Multimedia	3	5
Jaringan Komputer	2	5
Praktikum Basis Data	1	3