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KELAS : SI – A  
MATKUL : Database Implementation Semester 3

## F. Tugas Rumah

### 1. Buat Database dengan nama “Universitas”

```
CREATE DATABASE Universitas;  
USE Universitas;
```

#### Buat Table Instruktur

```
CREATE TABLE Instruktur(  
    NIP INT(1) PRIMARY KEY,  
    nama_ins VARCHAR(30),  
    jurusan VARCHAR(20),  
    asal_kota VARCHAR(10)  
);  
INSERT INTO Instruktur(NIP, nama_ins, jurusan, asal_kota) VALUES  
("1", "Muhammad Akbar", "Ilmu Sejarah", "Malang"),  
("2", "Saichul Fitriani A.", "Ilmu Komputer", "Malang"),  
("3", "Annafia Oktafian", "Ilmu Komputer", "Klaten"),  
("4", "Budy Pratama", "Ilmu Komputer", "Magelang");
```

#### Buat Table Matakuliah

```
CREATE TABLE Matakuliah(  
    kode_mk VARCHAR(6) PRIMARY KEY,  
    nama_mk VARCHAR(30),  
    sks INT(1)  
);  
INSERT INTO matakuliah(kode_mk, nama_mk, sks) VALUES  
("PTI01", "Algoritma dan Pemrograman", "3"),  
("PTI02", "Basis Data", "3"),  
("PTI03", "Visual Basic", "3"),  
("IS101", "Sejarah Indonesia", "3");
```

#### Buat Table ambil\_mk

```
CREATE TABLE ambil_mk(  
    NIP INT(1),  
    kd_mk VARCHAR(6),  
    ruangan VARCHAR(5),
```

```

jml_mhs INT(2)
);
INSERT INTO ambil_mk(NIP, kd_mk, ruangan, jml_mhs) VALUES
("3","PTI01","H5211","40"),
("2","PTI02","H5212","45"),
("2","PTI03","H5206","40"),
("1","IS101","I7312","30");

```

**a. Tampilkan kd\_mk dan mata kuliah yang jumlah mahasiswanya 40**

```

SELECT ambil_mk.kd_mk, nama_mk, jml_mhs
FROM matakuliah
INNER JOIN ambil_mk
ON matakuliah.kode_mk=ambil_mk.kd_mk
WHERE jml_mhs=40;

```

kd_mk	nama_mk	jml_mhs
PTI01	Algoritma dan Pemrograman	40
PTI03	Visual Basic	40

**b. Tampilkan data Instruktur yang mengajarkan 'Basis Data'**

```

SELECT instruktur.NIP, nama_ins, jurusan, asal_kota, nama_mk
FROM instruktur
INNER JOIN(matakuliah INNER JOIN ambil_mk ON
matakuliah.kode_mk=ambil_mk.kd_mk)
ON instruktur.NIP=ambil_mk.NIP
WHERE nama_mk="Basis Data";

```

NIP	nama_ins	jurusan	asal_kota	nama_mk
2	Saichul Fitrian A.	Ilmu Komputer	Malang	Basis Data

**c. Tampilkan data Instruktur yang tidak mengajar**

```

SELECT instruktur.NIP,nama_ins,jurusan,asal_kota
FROM instruktur
LEFT OUTER JOIN ambil_mk
ON instruktur.NIP=ambil_mk.NIP
WHERE ambil_mk.NIP IS NULL;

```

NIP	nama_ins	jurusan	asal_kota
4	Budy Pratama	Ilmu Komputer	Magelang

## 2. Membuat Table Customer Dan Orders

**a. Table Customer**

```

CREATE TABLE customer(
customer_id VARCHAR(5) PRIMARY KEY,

```

```

customer_name VARCHAR(10),
customer_address VARCHAR(15)
);
INSERT INTO customer(customer_id, customer_name, customer_address)VALUES
("CS001","Aan","Pasuruan"),
("CS002","Hanif","Banyuwangi"),
("CS003","Mirza","Malang"),
("CS004","Tanti","Tegal"),
("CS005","Budie","Kediri");

```

**b. Table Orders**

```

CREATE TABLE orders(
    order_id VARCHAR(5) PRIMARY KEY,
    order_date DATE,
    customer_id VARCHAR(5),
    qty INT(2),
    amount INT(5)
);
INSERT INTO orders(order_id,order_date,customer_id,qty,amount)VALUES
("CS001","2016-12-10","CS001","1","40000"),
("CS002","2017-01-11","CS002","2","50000"),
("CS003","2017-01-12","CS005","3","35000");

```

**c. Penggabungan kedua tabel dengan JOIN dan UNION**

**i. INNER JOIN**

```

SELECT customer.customer_id, customer_name, customer_address,
order_id, order_date,
amount FROM customer
INNER JOIN orders
ON customer.customer_id=orders.customer_id;

```

**ii. LEFT OUTER JOIN**

```

SELECT customer.customer_id, customer_name, customer_address,
order_id, order_date, qty, amount FROM customer
LEFT OUTER JOIN orders
ON customer.customer_id=orders.customer_id;

```

**iii. UNION**

```

SELECT customer.customer_id, customer_name, customer_address,
order_id, order_date, qty, amount FROM customer
INNER JOIN orders
ON customer.customer_id=orders.order_id
UNION
SELECT customer.customer_id, customer_name, customer_address,
order_id, order_date, qty, amount FROM customer

```

LEFT OUTER JOIN orders  
ON customer.customer\_id=orders.customer\_id;

**iv. JOIN**

SELECT customer.customer\_id,  
customer\_name,customer\_address,order\_date  
FROM customer  
INNER JOIN orders  
ON customer.customer\_id=orders.customer\_id  
WHERE MONTH(order\_date)=12;