Nama : Rafif Taqiuddin
Kode Peserta : FSDO001ONL022
Tugas : Assignment 2

Query:

```
-- Membuat database BANK --
create database BANK;

-- Mengganti database yang digunakan menjadi BANK --
use BANK;

-- Membuat table customer --
create table customers (
	customerNumber int identity (1,1) primary key,
	customerName varchar(50) null,
	contactLastName varchar(50) null,
	contactFirstName varchar(50) null,
	phone varchar(15) null,
	addressLine1 varchar(100) null,
	addressLine2 varchar(100) null,
	city varchar(20) null,
	state varchar(20) null,
	postalCode varchar(5) null,
	salesRepEmployeeNumber int,
	creditLimit float
)

-- Alter tipe data kolom creditLimit menjadi money (karena lebih cocok untuk
keuangan)--
alter table customers alter column creditLimit money;

-- Membuat table products --
create table products (
	productCode int identity (1,1) primary key,
	productName varchar(50),
	productLine int,
	productScale tinyint,
	productVendor varchar(50),
	productDescription text,
	quantityInStock int,
	buyPrice money,
	MSRP money
)

-- Membuat table productlines --
create table productlines (
	productLine int identity (1,1) primary key,
	textDescription text not null,
	htmlDescription text,
	imageProduct varchar(255)
)

-- Mengubah kolom productLine pada table products menjadi foreign key terhadap table
productlines --
```

```
alter table products add foreign key (productLine) references
productlines(productLine);

-- Membuat table orders --
create table orders (
	orderNumber int identity (1,1) primary key,
	orderDate date not null,
	requiredDate date not null,
	shippedDate date not null,
	status bit not null,
	comments text,
	customerNumber int,
	constraint FK_CustomerOrder foreign key (customerNumber) references
customers(customerNumber)
)

-- Membuat table orderdetails --
create table orderdetails (
	orderNumber int identity (1,1) primary key,
	productCode int not null,
	quantityOrdered int not null,
	priceEach money not null,
	orderLineNumber int not null,
	constraint FK_ProductOrderDetail foreign key (productCode) references
products(productCode),
	constraint FK_OrderOrderDetail foreign key (orderLineNumber) references
orders(orderNumber)
)

-- Membuat table payments --
create table payments (
	customerNumber int not null,
	checkNumber int identity (1,1) primary key,
	paymentDate date not null,
	amount money not null
	constraint FK_CustomerPayment foreign key (customerNumber) references
customers(customerNumber)
)

-- Membuat table employee --
create table employee (
	employeeNumber int identity (1,1) primary key,
	firstName varchar(25) not null,
	lastName varchar(25) not null,
	extension varchar(25),
	email varchar(25) not null,
	officeCode int,
	reportsTo int,
	jobTitle varchar(25),
	constraint FK_EmployeeEmployee foreign key (reportsTo) references
employee(employeeNumber)
)

-- Membuat table offices --
create table offices (
```

```
	officeCode int identity (1,1) primary key,
	city varchar(25) not null,
	phone varchar(15) not null,
	addressLine1 varchar(100),
	addressLine2 varchar(100),
	state varchar(20) not null,
	country varchar(20) not null,
	postalCode varchar(5) not null,
	territory varchar(20)
)

-- Mengubah kolom officeCode pada table employee menjadi foreign key terhadap table
offices --
alter table employee add constraint FK_OfficesEmployee foreign key (officeCode)
references offices(officeCode);

-- Mengubah kolom salesRepEmployeeNumber pada table customers menjadi foreign key
terhadap table employee --
alter table customers add constraint FK_EmployeeCustomers foreign key
(salesRepEmployeeNumber) references employee(employeeNumber);

-- Insert nilai table customers --
insert into customers (customerName, contactLastName, contactFirstName, phone,
addressLine1, addressLine2, city, state, postalCode, salesRepEmployeeNumber,
creditLimit)
values
('Lana Lovell', 'Lovell', 'Lana', '0812100', 'Street 1', 'District 1', 'Jakarta',
'DKI Jakarta', '20115', null, 20000000),
('Malakai Newman', 'Newman', 'Malakai', '0812101', 'Street 2', 'District 1',
'Jakarta', 'DKI Jakarta', '20116', null, 40000000),
('Kaylan Parra', 'Parra', 'Kaylan', '0812102', 'Street 1', 'District 2', 'Bogor',
'Jawa Barat', '30115', null, 20000000),
('Arvin Richard', 'Richard', 'Arvin', '0812103', 'Street 3', 'District 2',
'Semarang', 'Jawa Tengah', '40115', null, 15000000),
('Arda Barclay', 'Barclay', 'Arda', '0812104', 'Street 2', 'District 1', 'Bogor',
'Jawa Barat', '30116', null, 5000000);

-- Insert nilai table --
insert into products (productName, productLine, productScale, productVendor,
productDescription, quantityInStock, buyPrice, MSRP)
values
('RTX 3060 Ti', null, '6', 'Nvidia', 'Mid-range GPU from Nvidia', 4, 1000, 400),
('RX 6700 XT', null, '7', 'AMD', 'Mid-range GPU from AMD', 6, 1200, 500),
('RTX 3090', null, '9', 'Nvidia', 'High-end GPU from Nvidia', 2, 2500, 1500),
('R7 5800X', null, '8', 'AMD', 'High-end CPU from AMD', 2, 750, 600),
('i5 11400F', null, '4', 'Intel', 'Mid-range CPU from Intel', 10, 200, 150);

-- Insert nilai productlines --
insert into productlines (textDescription, imageProduct)
values
('CPU - Central Processing Unit', 'img/cpu.img'),
('GPU - Graphics Processing Unit', 'img/gpu.img');

-- Menambahkan productline pada products --
update products set productLine = 1 where productDescription like '%CPU%';
```

```sql
update products set productLine = 2 where productDescription like '%GPU%';

-- Insert nilai orders --
insert into orders (orderDate, requiredDate, shippedDate, status, comments,
customerNumber)
values
('2021-08-29', '2021-09-01', '2021-08-30', 3, 'delivered', 2),
('2021-09-01', '2021-09-05', '2021-09-04', 2, 'ongoing', 2),
('2021-09-01', '2021-10-01', '2021-09-15', 1, 'processed', 3),
('2021-08-29', '2021-09-01', '2021-08-30', 3, 'delivered', 4),
('2021-09-01', '2021-09-05', '2021-09-04', 2, 'ongoing', 4);

-- Insert nilai orderdetails --
insert into orderdetails (productCode, quantityOrdered, priceEach, orderLineNumber)
values
(1, 1, 1000, 2),
(4, 1, 750, 3),
(2, 1, 1200, 4),
(3, 1, 2500, 5),
(5, 1, 200, 6);

-- Insert nilai payments --
insert into payments (customerNumber, paymentDate, amount)
values
(2, '2021-08-29', 1000),
(2, '2021-09-01', 750),
(3, '2021-09-01', 1200),
(4, '2021-08-29', 2500),
(4, '2021-09-01', 200);

-- Insert nilai offices --
insert into offices (city, phone, addressLine1, state, country, postalCode)
values
('Jakarta', '06112', 'Street 1', 'DKI Jakarta','Indonesia','20115'),
('Bogor', '06113', 'Street 2', 'Jawa Barat','Indonesia','30115'),
('Semarang', '06114', 'Street 3', 'Jawa Tengah','Indonesia','40115'),
('Surabaya', '06115', 'Street 4', 'Jawa Timur','Indonesia','50115'),
('Malang', '06116', 'Street 5', 'Jawa Timur','Indonesia','30115');

-- Insert nilai employee --
insert into employee (firstName, lastName, email, officeCode, reportsTo, jobTitle)
values
('Lulu', 'Mcgee', 'employee1@email.com', 1, null, 'Manager'),
('Ahyan', 'Sullivan', 'employee2@email.com', 1, 1, 'Assistant Manager'),
('Dilan', 'Ball', 'employee3@email.com', 1, 2, 'Team Leader'),
('Roger', 'Riley', 'employee4@email.com', 1, 3, 'Staff'),
('Lemar', 'Barr', 'employee5@email.com', 1, 3, 'Staff');

-- Menambahkan salesRepEmployeeNumber pada customer --
update customers set salesRepEmployeeNumber = 4 where city like 'Jakarta';
update customers set salesRepEmployeeNumber = 5 where city like 'Bogor';

-- Custom Query 1 : Tampilkan customer yang berada pada kota office bersangkutan --
select offices.city as officeCity, customers.customerName
from offices full join customers
```

```sql
on offices.city = customers.city;

-- Custom Query 2 : Tampilkan product dengan deskripsi productline yang bersangkutan
--
select products.productName, products.productDescription,
productlines.textDescription as productCategory
from products left join productlines
on products.productLine = productlines.productLine;

-- Custom Query 3 : Tampilkan jumlah employee per kantor dari yang terbanyak --
select offices.city as kotaOffice, count(employee.employeeNumber) as jumlahPegawai
from employee right join offices
on employee.officeCode = offices.officeCode
group by offices.city
order by count(employee.employeeNumber) desc;

-- Custom Query 4 : Tampilkan semua customer dengan jumlah order lebih dari satu --
select customers.customerName, customers.phone, count(orders.orderNumber) as
jumlahOrder
from customers left join orders
on orders.customerNumber = customers.customerNumber
group by customers.customerName, customers.phone
having count(orders.orderNumber) > 1;

-- Custom Query 5 : Tampilkan semua customer dan pegawai beserta kota dan statusnya -
-
select customers.customerName as nama, customers.city as city, 'Customer' as status
from customers
group by customers.city, customers.customerName
union
select employee.firstName, sub.* , 'Pegawai' as status from employee, (select
offices.city from employee, offices where offices.officeCode = employee.officeCode)
sub;
```

Screenshots:

1. Customers => stores data customer

	customerNumber	customerName	contactLastName	contactFirstName	phone	addressLine1	addressLine2	city	state	postalCode	salesRepEmployeeNumber
1	2	Lana Lovell	Lovell	Lana	0812100	Street 1	District 1	Jakarta	DKI Jakarta	20115	4
2	3	Malakai Newman	Newman	Malakai	0812101	Street 2	District 1	Jakarta	DKI Jakarta	20116	4
3	4	Kaylan Parra	Parra	Kaylan	0812102	Street 1	District 2	Bogor	Jawa Barat	30115	5
4	5	Arvin Richard	Richard	Arvin	0812103	Street 3	District 2	Semarang	Jawa Tengah	40115	[NULL]
5	6	Arda Barclay	Barclay	Arda	0812104	Street 2	District 1	Bogor	Jawa Barat	30116	5

2. Products => stores daftar/list model product

	productCode	productName	productLine	productScale	productVendor	productDescription	quantityInStock	buyPrice	MSRP
1	1	RTX 3060 Ti	2	6	Nvidia	Mid-range GPU from Nvidia	4	1000.0000	400.0000
2	2	RX 6700 XT	2	7	AMD	Mid-range GPU from AMD	6	1200.0000	500.0000
3	3	RTX 3090	2	9	Nvidia	High-end GPU from Nvidia	2	2500.0000	1500.0000
4	4	R7 5800X	1	8	AMD	High-end CPU from AMD	2	750.0000	600.0000
5	5	i5 11400F	1	4	Intel	Mid-range CPU from Intel	10	200.0000	150.0000

3. Productlines => stores daftar/list kategori product

	productLine	textDescription	htmlDescription	imageProduct
1	1	CPU - Central Processing	[NULL]	img/cpu.img
2	2	GPU - Graphics Processir	[NULL]	img/gpu.img

4. Orders => store Order Sales oleh customer

	orderNumber	orderDate	requiredDate	shippedDate	status	comments	customerNumber
1	2	2021-08-29	2021-09-01	2021-08-30	1	delivered	2
2	3	2021-09-01	2021-09-05	2021-09-04	1	ongoing	2
3	4	2021-09-01	2021-10-01	2021-09-15	1	processed	3
4	5	2021-08-29	2021-09-01	2021-08-30	1	delivered	4
5	6	2021-09-01	2021-09-05	2021-09-04	1	ongoing	4

5. OrderDetails => store Item Order sales dalam setiap order sales

	orderNumber	productCode	quantityOrdered	priceEach	orderLineNumber
1	1	1	1	1000.0000	2
2	2	4	1	750.0000	3
3	3	2	1	1200.0000	4
4	4	3	1	2500.0000	5
5	5	5	1	200.0000	6

6. Payments => store Pembayaran oleh customer sesuai dengan akun pembayaran

	customerNumber	checkNumber	paymentDate	amount
1	2	1	2021-08-29	1000.0000
2	2	2	2021-09-01	750.0000
3	3	3	2021-09-01	1200.0000
4	4	4	2021-08-29	2500.0000
5	4	5	2021-09-01	200.0000

7. Employee => store informasi karyawan dalam sebuah organisasi struktur

	employee	firstName	lastName	extension	email	officeCode	reportsTo	jobTitle
1	1	Lulu	Mcgee	[NULL]	employee1@er	1	[NULL]	Manager
2	2	Ahyan	Sullivan	[NULL]	employee2@er	1	1	Assistant Manag
3	3	Dilan	Ball	[NULL]	employee3@er	1	2	Team Leader
4	4	Roger	Riley	[NULL]	employee4@er	1	3	Staff
5	5	Lemar	Barr	[NULL]	employee5@er	1	3	Staff

8. Offices => store data sales office

	office	city	phone	addressLine1	addressLine2	state	country	postalCode	territory
1	1	Jakarta	06112	Street 1	[NULL]	DKI Jakarta	Indonesia	20115	[NULL]
2	2	Bogor	06113	Street 2	[NULL]	Jawa Barat	Indonesia	30115	[NULL]
3	3	Semarang	06114	Street 3	[NULL]	Jawa Tengah	Indonesia	40115	[NULL]
4	4	Surabaya	06115	Street 4	[NULL]	Jawa Timur	Indonesia	50115	[NULL]
5	5	Malang	06116	Street 5	[NULL]	Jawa Timur	Indonesia	30115	[NULL]

Custom Query 1

	officeCity	customerName
1	Jakarta	Lana Lovell
2	Jakarta	Malakai Newman
3	Bogor	Kaylan Parra
4	Bogor	Arda Barclay
5	Semarang	Arvin Richard
6	Surabaya	[NULL]
7	Malang	[NULL]

Custom Query 2

	productName	productDescription	productCategory
1	RTX 3060 Ti	Mid-range GPU from Nvidia	GPU - Graphics Processing Unit
2	RX 6700 XT	Mid-range GPU from AMD	GPU - Graphics Processing Unit
3	RTX 3090	High-end GPU from Nvidia	GPU - Graphics Processing Unit
4	R7 5800X	High-end CPU from AMD	CPU - Central Processing Unit
5	i5 11400F	Mid-range CPU from Intel	CPU - Central Processing Unit

Custom Query 3

	kotaOffice	jumlahPegawai
1	Jakarta	5
2	Malang	0
3	Semarang	0
4	Surabaya	0
5	Bogor	0

Custom Query 4

	customerName	phone	jumlahOrder
1	Lana Lovell	0812100	2
2	Kaylan Parra	0812102	2

Custom Query 5

	nama	city	status
1	Ahyan	Jakarta	Pegawai
2	Arda Barclay	Bogor	Customer
3	Arvin Richard	Semarang	Customer
4	Dilan	Jakarta	Pegawai
5	Kaylan Parra	Bogor	Customer
6	Lana Lovell	Jakarta	Customer
7	Lemar	Jakarta	Pegawai
8	Lulu	Jakarta	Pegawai
9	Malakai Newman	Jakarta	Customer
10	Roger	Jakarta	Pegawai