

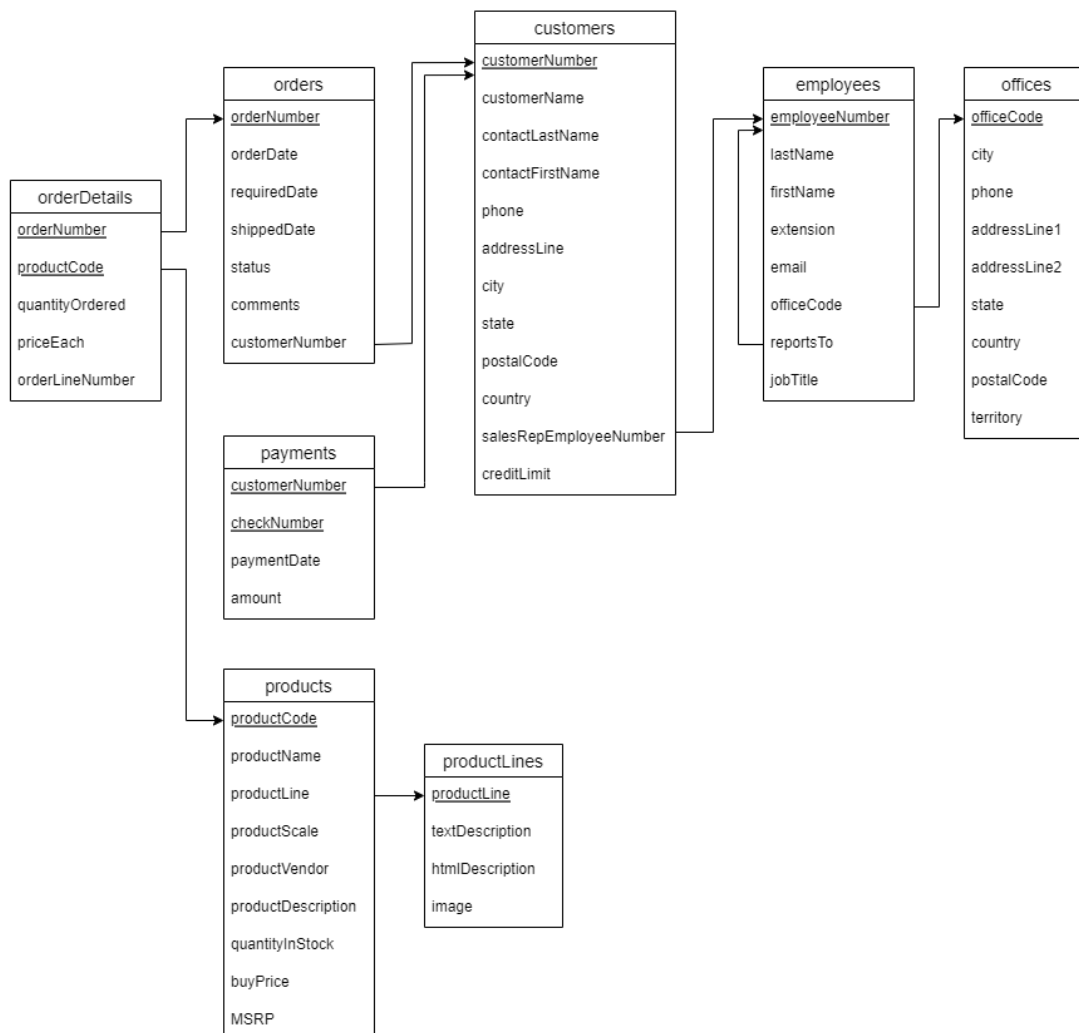
NIM : *<isi dengan NIM>*
Nama : *<isi dengan nama lengkap>*
Kelas : *<contoh: K0>*

Pembahasan Praktikum 3 IF2240 Basis Data

Materi: SQL (Part 1 - 4)

I. Skema Basis Data

Diberikan skema basis data sebagai [berikut](#), yang tersimpan dalam database prak3. Database ini memiliki skema yang sama dengan database prak1 dan prak2.



II. Soal

1. Buatlah query untuk menampilkan nama pelanggan yang pernah melakukan pembayaran pada tahun 2003 dengan amount >50000 atau <10000. Tampilkan dengan amount terurut membesar.

QUERY:

```
SELECT customerName, amount
FROM customers as c, payments as p
WHERE
    c.customerNumber = p.customerNumber
    AND YEAR(p.paymentDate) = 2003
    AND (p.amount < 10000 OR p.amount > 50000)
ORDER BY amount ASC;
```

SCREENSHOT:

customerName	amount
Royale Belge	1128.20
Baane Mini Imports	1491.38
Royale Belge	1627.56
Down Under Souvenirs, Inc	2880.00
Enaco Distributors	3101.40
Toys4GrownUps.com	3879.96
Boards & Toys Co.	4465.85
Vitachrome Inc.	5494.78
Auto-Moto Classics Inc.	6036.96
Gift Ideas Corp.	6631.36
Australian Collectors, Co.	7565.08
Volvo Model Replicas, Co	7674.94
West Coast Collectables Co.	7678.25
Australian Gift Network, Co	9821.32
FunGiftIdeas.com	9977.85
Baane Mini Imports	50218.95
Toys4GrownUps.com	50342.74
Technics Stores Inc.	50743.65
Marseille Mini Autos	50824.66
Cruz & Sons Co.	51001.22
Rovelli Gifts	52151.81
Mini Creations Ltd.	52548.49
Danish Wholesale Imports	53959.21
Online Diecast Creations Co.	55425.77
Corrida Auto Replicas, Ltd	57131.92
Muscle Machine Inc	58793.53
Muscle Machine Inc	58841.35
Diecast Collectables	59265.14
Euro+ Shopping Channel	63843.55
Herkku Gifts	85024.46
Corporate Gift Ideas Co.	85559.12
Dragon Souvenirs, Ltd.	105743.00
Mini Gifts Distributors Ltd.	111654.40

33 rows in set (0.008 sec)

2. Buatlah sebuah view yang bernama "cancelled_order" untuk pesanan dengan status "Cancelled". Dalam view tersebut, data yang disertakan adalah nama lengkap contact sebagai "contact_name", nomor telepon, tanggal pemesanan, nama produk yang dipesan, status, dan komentar. Urutkan dari tanggal yang terbaru.

QUERY:

```
CREATE VIEW cancelled_order AS
```

```

SELECT
    CONCAT(c.contactFirstName, " ", c.contactLastName) as contact_name,
    c.phone,
    o.orderDate,
    p.productName,
    o.status,
    o.comments
FROM customers as c, orders as o, products as p, orderdetails as od
WHERE
    o.status = "Cancelled"
    AND p.productCode = od.productCode
    AND od.orderNumber = o.orderNumber
    AND o.customerNumber = c.customerNumber
ORDER BY o.orderDate DESC;

```

SCREENSHOT:

MariaDB [dbprak1]> select * from cancelled_order;

contact_name	phone	orderDate	productName	status	comments
Diego Freyre	(91) 555 94 44	2004-06-24	1980s Black Hawk Helicopter	Cancelled	This customer found a better offer from one of our competitors. Will call back to renegotiate.
Diego Freyre	(91) 555 94 44	2004-06-24	1999 Yamaha Speed Boat	Cancelled	This customer found a better offer from one of our competitors. Will call back to renegotiate.
Diego Freyre	(91) 555 94 44	2004-06-24	1941 Chevrolet Special Deluxe Cabriolet	Cancelled	This customer found a better offer from one of our competitors. Will call back to renegotiate.
Diego Freyre	(91) 555 94 44	2004-06-24	1928 British Royal Navy Airplane	Cancelled	This customer found a better offer from one of our competitors. Will call back to renegotiate.
Diego Freyre	(91) 555 94 44	2004-06-24	1900s Vintage Bi-Plane	Cancelled	This customer found a better offer from one of our competitors. Will call back to renegotiate.
Diego Freyre	(91) 555 94 44	2004-06-24	1937 Horch 930V Limousine	Cancelled	This customer found a better offer from one of our competitors. Will call back to renegotiate.
Diego Freyre	(91) 555 94 44	2004-06-24	1940 Ford Delivery Sedan	Cancelled	This customer found a better offer from one of our competitors. Will call back to renegotiate.
Diego Freyre	(91) 555 94 44	2004-06-24	Corsair F4U (Bird Cage)	Cancelled	This customer found a better offer from one of our competitors. Will call back to renegotiate.
Diego Freyre	(91) 555 94 44	2004-06-24	1928 Ford Phaeton Deluxe	Cancelled	This customer found a better offer from one of our competitors. Will call back to renegotiate.
Diego Freyre	(91) 555 94 44	2004-06-24	1930 Buick Marquette Phaeton	Cancelled	This customer found a better offer from one of our competitors. Will call back to renegotiate.
Diego Freyre	(91) 555 94 44	2004-06-24	American Airlines: B767-300	Cancelled	This customer found a better offer from one of our competitors. Will call back to renegotiate.
Diego Freyre	(91) 555 94 44	2004-06-24	HMS Bounty	Cancelled	This customer found a better offer from one of our competitors. Will call back to renegotiate.
Diego Freyre	(91) 555 94 44	2004-06-24	America West Airlines B757-200	Cancelled	This customer found a better offer from one of our competitors. Will call back to renegotiate.
Diego Freyre	(91) 555 94 44	2004-06-24	F/A 18 Hornet 1/72	Cancelled	This customer found a better offer from one of our competitors. Will call back to renegotiate.
Diego Freyre	(91) 555 94 44	2004-06-24	American Airlines: MD-11S	Cancelled	This customer found a better offer from one of our competitors. Will call back to renegotiate.
Diego Freyre	(91) 555 94 44	2004-06-24	Boeing X-32A JSF	Cancelled	This customer found a better offer from one of our competitors. Will call back to renegotiate.
Wales MacKinlay	64-9-3763555	2004-06-16	2001 Ferrari Enzo	Cancelled	Customer heard complaints from their customers and called to cancel

- Buatlah query untuk mengubah posisi pekerjaan menjadi 'Sales Manager' dari pegawai dengan total payment yang dilakukan oleh semua pelanggan dari negara USA yang dilayaninya lebih dari 500000.

Buktikan dengan screenshot sebelum dan sesudah dilakukan perubahan. Pastikan screenshot memperlihatkan juga bagian jumlah rows.

QUERY:

```

UPDATE employees
SET jobTitle = 'Sales Manager'
WHERE employeeNumber =
    (SELECT e.employeeNumber
     FROM employees as e
     INNER JOIN customers as c ON e.employeeNumber =
     c.salesRepEmployeeNumber

```

```

NATURAL INNER JOIN payments p
WHERE c.country = 'USA'
GROUP BY e.employeeNumber
HAVING SUM(p.amount) > 500000)

```

SCREENSHOT:

Sebelum

employeeNumber	lastName	firstName	extension	email	officeCode	reportsTo	jobTitle
1002	Murphy	Diane	x5800	dmurphy@classicmodelcars.com	1	NULL	President
1056	Patterson	Mary	x4611	mpatterson@classicmodelcars.com	1	1002	VP Sales
1076	Firrelli	Jeff	x9273	jfirrelli@classicmodelcars.com	1	1002	VP Marketing
1088	Patterson	William	x4871	wpatterson@classicmodelcars.com	6	1056	Sales Manager (APAC)
1102	Bondur	Gerard	x5408	gbondur@classicmodelcars.com	4	1056	Sale Manager (EMEA)
1143	Bow	Anthony	x5428	abow@classicmodelcars.com	1	1056	Sales Manager (NA)
1165	Jennings	Leslie	x3291	ljennings@classicmodelcars.com	1	1143	Sales Rep
1166	Thompson	Leslie	x4065	lthompson@classicmodelcars.com	1	1143	Sales Rep
1188	Firrelli	Julie	x2173	jfirrelli@classicmodelcars.com	2	1143	Sales Rep
1216	Patterson	Steve	x4334	spatterson@classicmodelcars.com	2	1143	Sales Rep
1286	Tseng	Foon Yue	x2248	ftseng@classicmodelcars.com	3	1143	Sales Rep
1323	Vanauf	George	x4102	gvanauf@classicmodelcars.com	3	1143	Sales Rep
1337	Bondur	Loui	x6493	lbondur@classicmodelcars.com	4	1102	Sales Rep
1370	Hernandez	Gerard	x2028	ghernande@classicmodelcars.com	4	1102	Sales Rep
1401	Castillo	Pamela	x2759	pcastillo@classicmodelcars.com	4	1102	Sales Rep
1501	Bott	Larry	x2311	lbott@classicmodelcars.com	7	1102	Sales Rep
1504	Jones	Barry	x102	bjones@classicmodelcars.com	7	1102	Sales Rep
1611	Fixter	Andy	x101	afixter@classicmodelcars.com	6	1088	Sales Rep
1612	Marsh	Peter	x102	pmarsh@classicmodelcars.com	6	1088	Sales Rep
1619	King	Tom	x103	tking@classicmodelcars.com	6	1088	Sales Rep
1621	Nishi	Mami	x101	mnishi@classicmodelcars.com	5	1056	Sales Rep
1625	Kato	Yoshimi	x102	ykato@classicmodelcars.com	5	1621	Sales Rep
1702	Gerard	Martin	x2312	mgerard@classicmodelcars.com	4	1102	Sales Rep

23 rows in set (0.001 sec)

Sesudah

employeeNumber	lastName	firstName	extension	email	officeCode	reportsTo	jobTitle
1002	Murphy	Diane	x5800	dmurphy@classicmodelcars.com	1	NULL	President
1056	Patterson	Mary	x4611	mpatterson@classicmodelcars.com	1	1002	VP Sales
1076	Firrelli	Jeff	x9273	jfirrelli@classicmodelcars.com	1	1002	VP Marketing
1088	Patterson	William	x4871	wpatterson@classicmodelcars.com	6	1056	Sales Manager (APAC)
1102	Bondur	Gerard	x5408	gbondur@classicmodelcars.com	4	1056	Sale Manager (EMEA)
1143	Bow	Anthony	x5428	abow@classicmodelcars.com	1	1056	Sales Manager (NA)
1165	Jennings	Leslie	x3291	ljennings@classicmodelcars.com	1	1143	Sales Manager
1166	Thompson	Leslie	x4065	lthompson@classicmodelcars.com	1	1143	Sales Rep
1188	Firrelli	Julie	x2173	jfirrelli@classicmodelcars.com	2	1143	Sales Rep
1216	Patterson	Steve	x4334	spatterson@classicmodelcars.com	2	1143	Sales Rep
1286	Tseng	Foon Yue	x2248	ftseng@classicmodelcars.com	3	1143	Sales Rep
1323	Vanauf	George	x4102	gvanauf@classicmodelcars.com	3	1143	Sales Rep
1337	Bondur	Loui	x6493	lbondur@classicmodelcars.com	4	1102	Sales Rep
1370	Hernandez	Gerard	x2028	ghernande@classicmodelcars.com	4	1102	Sales Rep
1401	Castillo	Pamela	x2759	pcastillo@classicmodelcars.com	4	1102	Sales Rep
1501	Bott	Larry	x2311	lbott@classicmodelcars.com	7	1102	Sales Rep
1504	Jones	Barry	x102	bjones@classicmodelcars.com	7	1102	Sales Rep
1611	Fixter	Andy	x101	afixter@classicmodelcars.com	6	1088	Sales Rep
1612	Marsh	Peter	x102	pmarsh@classicmodelcars.com	6	1088	Sales Rep
1619	King	Tom	x103	tking@classicmodelcars.com	6	1088	Sales Rep
1621	Nishi	Mami	x101	mnishi@classicmodelcars.com	5	1056	Sales Rep
1625	Kato	Yoshimi	x102	ykato@classicmodelcars.com	5	1621	Sales Rep
1702	Gerard	Martin	x2312	mgerard@classicmodelcars.com	4	1102	Sales Rep

23 rows in set (0.001 sec)

- Perusahaan memutuskan untuk membuat kantor cabang baru. Buatlah entri baru di dalam tabel offices dengan data sebagai berikut!

officeCode : 8
city : Bandung
phone : +62 831 8243 4940
addressLine1 : Jl. Ganesha No. 10
addressLine2 : Labtek V

state : NULL
country : Indonesia
postalCode : 40132
territory : APAC

Buktikan dengan screenshot sebelum dan sesudah dilakukan perubahan.

QUERY:

```
insert into offices (officeCode, city, phone, addressLine1, addressLine2,
state, country, postalCode, territory) values (8, 'Bandung', '+62 831 8243
4940', 'Jl. Ganesha No. 10', 'Labtek V', NULL, 'Indonesia', '40132',
'APAC');
```

SCREENSHOT:

```
MariaDB [prak1]> select * from offices;
```

	officeCode	city	phone	addressLine1	addressLine2	state	country	postalCode	territory
1		San Francisco	+1 650 219 4782	100 Market Street	Suite 300	CA	USA	94080	NA
2		Boston	+1 215 837 0825	1550 Court Place	Suite 102	MA	USA	02107	NA
3		NYC	+1 212 555 3000	523 East 53rd Street	apt. 5A	NY	USA	10022	NA
4		Paris	+33 14 723 4404	43 Rue Jouffroy D'abbans	NULL	NULL	France	75017	EMEA
5		Tokyo	+81 33 224 5000	4-1 Kioicho	NULL	Chiyoda-Ku	Japan	102-8578	Japan
6		Sydney	+61 2 9264 2451	5-11 Wentworth Avenue	Floor #2	NULL	Australia	NSW 2010	APAC
7		London	+44 20 7877 2041	25 Old Broad Street	Level 7	NULL	UK	EC2N 1HN	EMEA

```
7 rows in set (0.000 sec)
```

```
MariaDB [prak1]> insert into offices (officeCode, city, phone, addressLine1, addressLine2, state, country, postalCode, territory) values (8, 'Bandung', '+62 831 8243 4940', 'Jl. Ganesha No. 10', 'Labtek V', NULL, 'Indonesia', '40132', 'APAC');
```

```
Query OK, 1 row affected (0.003 sec)
```

```
MariaDB [prak1]> select * from offices;
```

	officeCode	city	phone	addressLine1	addressLine2	state	country	postalCode	territory
1		San Francisco	+1 650 219 4782	100 Market Street	Suite 300	CA	USA	94080	NA
2		Boston	+1 215 837 0825	1550 Court Place	Suite 102	MA	USA	02107	NA
3		NYC	+1 212 555 3000	523 East 53rd Street	apt. 5A	NY	USA	10022	NA
4		Paris	+33 14 723 4404	43 Rue Jouffroy D'abbans	NULL	NULL	France	75017	EMEA
5		Tokyo	+81 33 224 5000	4-1 Kioicho	NULL	Chiyoda-Ku	Japan	102-8578	Japan
6		Sydney	+61 2 9264 2451	5-11 Wentworth Avenue	Floor #2	NULL	Australia	NSW 2010	APAC
7		London	+44 20 7877 2041	25 Old Broad Street	Level 7	NULL	UK	EC2N 1HN	EMEA
8		Bandung	+62 831 8243 4940	Jl. Ganesha No. 10	Labtek V	NULL	Indonesia	40132	APAC

```
8 rows in set (0.000 sec)
```

5. Beberapa nomor telepon customer tidak terhubung ke *whatsapp* sehingga pengeluaran perusahaan membengkak hanya untuk membeli pulsa. Perusahaan memutuskan untuk menambahkan kolom baru bernama 'email' ke tabel *customers*. Kolom ini memiliki tipe data *varchar(255)* dan nilai default *NULL*. Kemudian, ubah semua nilai kolom email dengan format sebagai berikut.

"<contactFirstName><contactLastName>@gmail.com"

Buktikan dengan screenshot eksekusi *query* penambahan kolom 'email' dan isi dari kolom tersebut setelah dilakukan perubahan!

Catatan: Pastikan alamat email tidak mengandung spasi dan semuanya huruf kecil. Gunakan fungsi *REPLACE()*, *LOWER()*, dan *CONCAT()*

QUERY:

```
ALTER TABLE customers ADD COLUMN email VARCHAR(255) DEFAULT NULL;
```

```
UPDATE customers
SET email = REPLACE(LOWER(CONCAT(contactFirstName, contactLastName,
```

```
'@gmail.com'))), ' ', ''');
```

SCREENSHOT:

```
MariaDB [prakt1]> alter table customers add column email varchar(255) default null;  
Query OK, 0 rows affected (0.010 sec)  
Records: 0 Duplicates: 0 Warnings: 0
```

```
MariaDB [prakt1]> select email from customers;  
+-----+  
| email  
+-----+  
| carineschmitt@gmail.com  
| jeanking@gmail.com  
| peterferguson@gmail.com  
| janinelabrune@gmail.com  
| jonasbergulfsen@gmail.com  
| susannelson@gmail.com  
| zbyszekpiestrzeniewicz@gmail.com  
| rolandkeitel@gmail.com  
| juliemurphy@gmail.com  
| kwailee@gmail.com  
| diegofreyre@gmail.com  
| christinaberglund@gmail.com  
+-----+  
| jos??pedroroel@gmail.com  
| rosasalazar@gmail.com  
| suetaylor@gmail.com  
| thomassmith@gmail.com  
| valariefranco@gmail.com  
| tonysnowden@gmail.com  
+-----+  
122 rows in set (0.000 sec)
```

6. Perusahaan memutuskan untuk memecat pegawai dari kantor cabang di kota London yang belum pernah melayani customer dari kota Liverpool

Clue:

- Gunakan temporary table [mariadb documentation](#)
- sebelum menghapus data pegawai, set NULL untuk kolom foreign key pada tabel customers yang pernah dilayani pegawai tersebut

Buktikan dengan screenshot eksekusi query yang memuat **nama customer** (dari kota Liverpool) dan **nomor pegawai yang melayaninya** (dari kantor cabang kota London) sebelum dan sesudah dilakukan perubahan.

QUERY:

```
CREATE TEMPORARY TABLE badEmployee AS (  
SELECT DISTINCT employeeNumber  
FROM employees, customers, offices  
WHERE offices.city = "London"  
AND employeeNumber = salesRepEmployeeNumber  
AND employees.officeCode = offices.officeCode  
AND employeeNumber NOT IN  
(
```

```

SELECT employeeNumber
FROM employees, customers
WHERE employeeNumber = salesRepEmployeeNumber
AND customers.city = "Liverpool"
AND offices.city = "London"
)
);

UPDATE customers
SET salesRepEmployeeNumber = NULL
WHERE salesRepEmployeeNumber IN (SELECT employeeNumber FROM badEmployee);

DELETE FROM employees WHERE employeeNumber IN (SELECT employeeNumber FROM
badEmployee);

```

SCREENSHOT:

customerName	employeeNumber
Toys of Finland, Co.	1501
AV Stores, Co.	1501
UK Collectables, Ltd.	1501
giftsbymail.co.uk	1501
Oulu Toy Supplies, Inc.	1501
Stylish Desk Decors, Co.	1501
Suominen Souvenirs	1501
Double Decker Gift Stores, Ltd	1501
Baane Mini Imports	1504
Blauer See Auto, Co.	1504
Volvo Model Replicas, Co	1504
Herkku Gifts	1504
Clover Collections, Co.	1504
Toms Spezialitäten, Ltd	1504
Norway Gifts By Mail, Co.	1504
Bavarian Collectables Imports, Co.	1504
Scandinavian Gift Ideas	1504

17 rows in set (0.00 sec)

customerName	employeeNumber
Toys of Finland, Co.	1501
AV Stores, Co.	1501
UK Collectables, Ltd.	1501
giftsbyemail.co.uk	1501
Oulu Toy Supplies, Inc.	1501
Stylish Desk Decors, Co.	1501
Suominen Souvenirs	1501
Double Decker Gift Stores, Ltd	1501

8 rows in set (0.00 sec)

7. Perusahaan berencana untuk menambahkan daftar pabrik yang memproduksi produk-produk yang ada dalam tabel produk. Setiap pabrik bisa memproduksi lebih dari satu produk. Selain itu, karena *demand* produk yang cukup tinggi, setiap produk juga bisa diproduksi oleh beberapa pabrik. Oleh karena itu, dibutuhkan dua tabel baru. Tabel pertama adalah tabel bernama warehouse yang mencatat daftar pabrik yang ada. Berikut adalah deskripsi tabel warehouse yang harus dibuat:

- warehouseCode : *primary key* dengan tipe data *integer*
- warehouseName : maksimal 50 karakter dan setiap pabrik harus mempunyai nama
- managerName: maksimal 255 karakter dan setiap pabrik harus mempunyai manager
- addressLine : maksimal 255 karakter dan setiap pabrik harus mempunyai informasi ini
- city: setiap pabrik harus mempunyai informasi ini
- country: setiap pabrik harus mempunyai informasi ini

Tabel kedua adalah tabel manufacture yang hanya mempunyai 2 kolom dengan deskripsi sebagai berikut:

- productCode: *foreign key* yang menunjuk ke kolom productCode pada tabel product dan tidak boleh NULL, tipe data adalah VARCHAR dengan maksimal karakter sebanyak 15 karakter
- warehouseCode: *foreign key* yang menunjuk ke kolom warehouseCode pada tabel warehouse dan tidak boleh NULL

Primary key pada tabel kedua merupakan *primary key* komposit, yaitu kolom productCode dan warehouseCode. Tampilkan juga *screenshot* hasil perintah [DESCRIBE](#) untuk tabel pertama dan kedua setelah berhasil dibuat.

PENTING: Set *collation* menjadi *latin1_swedish_ci* saat membuat tabel *manufacture* pada akhir *syntax* CREATE TABLE, seperti berikut ini:

CREATE TABLE manufacture (

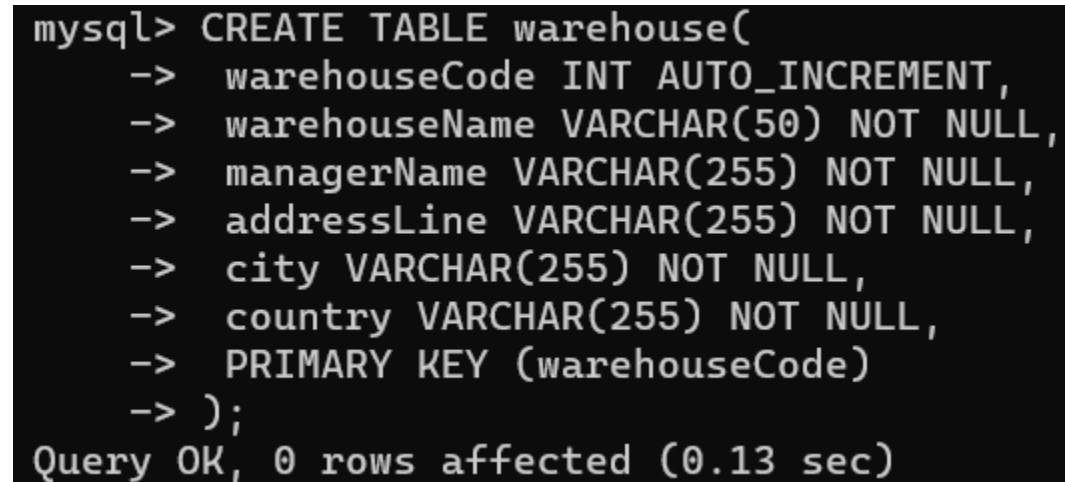
....

) COLLATE=latin1_swedish_ci;

QUERY:

```
CREATE TABLE warehouse(  
  warehouseCode INT AUTO_INCREMENT,  
  warehouseName VARCHAR(50) NOT NULL,  
  managerName VARCHAR(255) NOT NULL,  
  addressLine VARCHAR(255) NOT NULL,  
  city VARCHAR(255) NOT NULL,  
  country VARCHAR(255) NOT NULL,  
  PRIMARY KEY (warehouseCode)  
);  
  
CREATE TABLE manufacture (  
  productCode VARCHAR(30) NOT NULL,  
  warehouseCode INT NOT NULL,  
  CONSTRAINT `fk_product_code`  
    FOREIGN KEY (productCode)  
      REFERENCES products(productCode),  
  CONSTRAINT `fk_warehouse_code`  
    FOREIGN KEY (warehouseCode)  
      REFERENCES warehouse(warehouseCode),  
  PRIMARY KEY (productCode, warehouseCode)  
) COLLATE=latin1_swedish_ci;
```

SCREENSHOT:



```
mysql> CREATE TABLE warehouse(  
->  warehouseCode INT AUTO_INCREMENT,  
->  warehouseName VARCHAR(50) NOT NULL,  
->  managerName VARCHAR(255) NOT NULL,  
->  addressLine VARCHAR(255) NOT NULL,  
->  city VARCHAR(255) NOT NULL,  
->  country VARCHAR(255) NOT NULL,  
->  PRIMARY KEY (warehouseCode)  
-> );  
Query OK, 0 rows affected (0.13 sec)
```

```
mysql> CREATE TABLE manufacture (
->   productCode VARCHAR(30) NOT NULL,
->   warehouseCode INT NOT NULL,
->   CONSTRAINT `fk_product_code`
->   FOREIGN KEY (productCode)
->   REFERENCES products(productCode),
->   CONSTRAINT `fk_warehouse_code`
->   FOREIGN KEY (warehouseCode)
->   REFERENCES warehouse(warehouseCode),
->   PRIMARY KEY (productCode, warehouseCode)
-> ) COLLATE=latin1_swedish_ci;
Query OK, 0 rows affected (0.05 sec)
```

```
mysql> describe warehouse;
```

Field	Type	Null	Key	Default	Extra
warehouseCode	int	NO	PRI	NULL	auto_increment
warehouseName	varchar(50)	NO		NULL	
managerName	varchar(255)	NO		NULL	
addressLine	varchar(255)	NO		NULL	
city	varchar(255)	NO		NULL	
country	varchar(255)	NO		NULL	

```
6 rows in set (0.00 sec)
```

```
mysql> describe manufacture;
```

Field	Type	Null	Key	Default	Extra
productCode	varchar(30)	NO	PRI	NULL	
warehouseCode	int	NO	PRI	NULL	

```
2 rows in set (0.00 sec)
```

8. Tahukah kalian? Penggunaan tipe data BLOB (Binary Large Object) untuk menaruh file seperti gambar, musik, dan file executable dalam database sangat tidak direkomendasikan karena dapat mempengaruhi kinerja dari database terhubung ukuran BLOB sangat besar. Sayangnya, di database yang digunakan terdapat penggunaan tipe data blob, yaitu di productLines. Salah satu solusi yang biasa dilakukan adalah dengan menggunakan pihak ketiga untuk menyimpan data biner dan menaruh url gambar tersebut di database.

Oleh karena itu, buatlah 2 query yang mengubah nama kolom image menjadi imageUrl, serta mengubah kolom image dengan tipe mediumblob menjadi kolom imageUrl dengan

maksimal 255 karakter. Buktikan dengan screenshot [DESCRIBE](#) dari productLines sebelum dan sesudah perubahan. (Clue: Gunakan [ALTER TABLE](#))

QUERY:

```
ALTER TABLE productLines RENAME COLUMN image TO imageUrl;  
ALTER TABLE productLines MODIFY COLUMN imageUrl VARCHAR(255);
```

SCREENSHOT:

```
MariaDB [prak2]> describe productLines;  
+-----+-----+-----+-----+-----+-----+  
| Field          | Type          | Null | Key | Default | Extra |  
+-----+-----+-----+-----+-----+-----+  
| productLine    | varchar(50)   | NO   | PRI | NULL    |      |  
| textDescription | varchar(4000) | YES  |     | NULL    |      |  
| htmlDescription | mediumtext    | YES  |     | NULL    |      |  
| image          | mediumblob    | YES  |     | NULL    |      |  
+-----+-----+-----+-----+-----+-----+  
4 rows in set (0.016 sec)  
  
MariaDB [prak2]> alter table productLines rename column image to imageUrl;  
Query OK, 0 rows affected (0.017 sec)  
Records: 0 Duplicates: 0 Warnings: 0  
  
MariaDB [prak2]> alter table productLines modify column imageUrl varchar(255);  
Query OK, 7 rows affected (0.034 sec)  
Records: 7 Duplicates: 0 Warnings: 0  
  
MariaDB [prak2]> describe productLines;  
+-----+-----+-----+-----+-----+-----+  
| Field          | Type          | Null | Key | Default | Extra |  
+-----+-----+-----+-----+-----+-----+  
| productLine    | varchar(50)   | NO   | PRI | NULL    |      |  
| textDescription | varchar(4000) | YES  |     | NULL    |      |  
| htmlDescription | mediumtext    | YES  |     | NULL    |      |  
| imageUrl       | varchar(255)  | YES  |     | NULL    |      |  
+-----+-----+-----+-----+-----+-----+  
4 rows in set (0.016 sec)
```

III. Soal Susulan Praktikum

1. Buatlah query untuk menampilkan nama pelanggan yang pernah melakukan pembayaran pada tahun 2004 dengan amount >20000 dan <50000. Tampilkan dengan amount terurut mengecil.

QUERY:

```
SELECT customerName, amount  
FROM customers as c, payments as p  
WHERE  
    c.customerNumber = p.customerNumber  
    AND YEAR(p.paymentDate) = 2004  
    AND (p.amount > 20000 AND p.amount < 50000)  
ORDER BY amount DESC;
```

SCREENSHOT:

customerName	amount
Saveley & Henriot, Co.	49614.72
Auto Canal+ Petit	49165.16
Tokyo Collectables, Ltd	48927.64
Scandinavian Gift Ideas	48809.90
FunGiftIdeas.com	48355.87
Amica Models & Co.	48298.99
La Rochelle Gifts	47924.19
Marta's Replicas Co.	47411.33
Vida Sport, Ltd	47375.92
Osaka Souvenirs Co.	47177.59
AV Stores, Co.	47159.11
Mini Gifts Distributors Ltd.	47142.70
giftsbymail.co.uk	46788.14
Motor Mint Distributors Inc.	45994.07
Petit Auto	45352.47
Australian Collectors, Co.	44894.74
Vitachrome Inc.	44400.50
Handji Gifts& Co	44160.92
Mini Gifts Distributors Ltd.	43369.30
Marta's Replicas Co.	43134.04
Salzburg Collectables	42813.83
Mini Classics	42339.76
Gift Depot Inc.	42044.77
Saveley & Henriot, Co.	40978.53
Muscle Machine Inc	39964.63
Down Under Souvenirs, Inc	39440.59
Handji Gifts& Co	38785.48
Rovelli Gifts	37654.09
Royal Canadian Collectables, Ltd.	37527.58
Down Under Souvenirs, Inc	37281.36
UK Collectables, Ltd.	37258.94
GiftsForHim.com	36442.34
Euro+ Shopping Channel	36140.38
West Coast Collectables Co.	36070.47
Mini Caravy	36069.26
Volvo Model Replicas, Co	36005.71

2. Buatlah sebuah view yang bernama "inprocess_order" untuk pesanan dengan status "In Process". Dalam view tersebut, data yang disertakan adalah nama lengkap contact sebagai "contact_name", nomor telepon, tanggal pemesanan, nama produk yang dipesan, dan status. Urutkan dari tanggal yang terbaru.

QUERY:

```
CREATE VIEW inprocess_order AS
SELECT
    CONCAT(c.contactFirstName, " ", c.contactLastName) as contact_name,
    c.phone,
    o.orderDate,
    p.productName,
    o.status
FROM customers as c, orders as o, products as p, orderdetails as od
WHERE
```

```

o.status = "In Process"
AND p.productCode = od.productCode
AND od.orderNumber = o.orderNumber
AND o.customerNumber = c.customerNumber
ORDER BY o.orderDate DESC;

```

SCREENSHOT:

MariaDB [dbprak1]> select * from inprocess_order;

contact_name	phone	orderDate	productName	status
Janine Labrune	40.67.8555	2005-05-31	1964 Mercedes Tour Bus	In Process
Janine Labrune	40.67.8555	2005-05-31	1998 Chrysler Plymouth Prowler	In Process
Janine Labrune	40.67.8555	2005-05-31	1957 Chevy Pickup	In Process
Janine Labrune	40.67.8555	2005-05-31	1962 LanciaA Delta 16V	In Process
Diego Freyre	(91) 555 94 44	2005-05-31	1982 Camaro Z28	In Process
Diego Freyre	(91) 555 94 44	2005-05-31	1996 Peterbilt 379 Stake Bed with Outrigger	In Process
Diego Freyre	(91) 555 94 44	2005-05-31	1939 Cadillac Limousine	In Process
Diego Freyre	(91) 555 94 44	2005-05-31	1940 Ford Pickup Truck	In Process
Diego Freyre	(91) 555 94 44	2005-05-31	1958 Setra Bus	In Process
Diego Freyre	(91) 555 94 44	2005-05-31	1952 Alpine Renault 1300	In Process
Janine Labrune	40.67.8555	2005-05-31	Diamond T620 Semi-Skirted Tanker	In Process
Janine Labrune	40.67.8555	2005-05-31	1954 Greyhound Scenicruiser	In Process
Janine Labrune	40.67.8555	2005-05-31	1980?C0s GM Manhattan Express	In Process
Janine Labrune	40.67.8555	2005-05-31	1958 Chevy Corvette Limited Edition	In Process
Janine Labrune	40.67.8555	2005-05-31	1962 Volkswagen Microbus	In Process
Janine Labrune	40.67.8555	2005-05-31	1970 Dodge Coronet	In Process
Janine Labrune	40.67.8555	2005-05-31	1940s Ford truck	In Process
Janine Labrune	40.67.8555	2005-05-31	1992 Ferrari 360 Spider red	In Process
Janine Labrune	40.67.8555	2005-05-31	1926 Ford Fire Engine	In Process
Kelvin Leong	2155551555	2005-05-30	1936 Mercedes-Benz 500K Special Roadster	In Process
Kelvin Leong	2155551555	2005-05-30	1937 Lincoln Berline	In Process
Catherine Dewey	(02) 5554 67	2005-05-30	1936 Chrysler Airflow	In Process
Catherine Dewey	(02) 5554 67	2005-05-30	1917 Maxwell Touring Car	In Process
Catherine Dewey	(02) 5554 67	2005-05-30	18th Century Vintage Horse Carriage	In Process
Catherine Dewey	(02) 5554 67	2005-05-30	1934 Ford V8 Coupe	In Process
Catherine Dewey	(02) 5554 67	2005-05-30	1913 Ford Model T Speedster	In Process
Adrian Huxley	+61 2 9495 8555	2005-05-29	1936 Mercedes Benz 500k Roadster	In Process
Adrian Huxley	+61 2 9495 8555	2005-05-29	2002 Chevy Corvette	In Process
Adrian Huxley	+61 2 9495 8555	2005-05-29	1969 Chevrolet Camaro Z28	In Process
Adrian Huxley	+61 2 9495 8555	2005-05-29	1952 Citroen-15CV	In Process
Adrian Huxley	+61 2 9495 8555	2005-05-29	1949 Jaguar XK 120	In Process
Adrian Huxley	+61 2 9495 8555	2005-05-29	1939 Chevrolet Deluxe Coupe	In Process
Adrian Huxley	+61 2 9495 8555	2005-05-29	1966 Shelby Cobra 427 S/C	In Process
Adrian Huxley	+61 2 9495 8555	2005-05-29	1970 Chevy Chevelle SS 454	In Process
Adrian Huxley	+61 2 9495 8555	2005-05-29	1957 Ford Thunderbird	In Process
Adrian Huxley	+61 2 9495 8555	2005-05-29	1932 Alfa Romeo 8C3300 Spider Sport	In Process

- Buatlah query untuk mengubah status order dari 'In Process' menjadi 'Shipped' dari order yang dilakukan oleh pelanggan yang berasal dari negara France dan pernah melakukan pembayaran dengan amount lebih besar dari 45000 sebanyak lebih dari 1 kali.

Buktikan dengan screenshot sebelum dan sesudah dilakukan perubahan. Pastikan screenshot memperlihatkan juga bagian jumlah rows.

QUERY:

```

UPDATE orders
SET status = 'Shipped'
WHERE customerNumber IN
(SELECT customerNumber
FROM orders
WHERE customerNumber IN
(SELECT c.customerNumber

```

```

FROM customers c
NATURAL INNER JOIN payments p
WHERE c.country = 'France'
AND p.amount > 45000
GROUP BY p.customerNumber
HAVING COUNT(p.customerNumber) > 1))
AND status = 'In Process'

```

SCREENSHOT:

Sebelum

```

MariaDB [prak1]> select orderNumber, customerNumber, status from orders where customerNumber = 119;
+-----+-----+-----+
| orderNumber | customerNumber | status |
+-----+-----+-----+
| 10275 | 119 | Shipped |
| 10315 | 119 | Shipped |
| 10375 | 119 | Shipped |
| 10425 | 119 | In Process |
+-----+-----+-----+
4 rows in set (0.001 sec)

```

Sesudah

```

MariaDB [prak1]> select orderNumber, customerNumber, status from orders where customerNumber = 119;
+-----+-----+-----+
| orderNumber | customerNumber | status |
+-----+-----+-----+
| 10275 | 119 | Shipped |
| 10315 | 119 | Shipped |
| 10375 | 119 | Shipped |
| 10425 | 119 | Shipped |
+-----+-----+-----+
4 rows in set (0.001 sec)

```

4. Perusahaan menerima entri produk baru dari vendor Warga Basdat Collectibles berupa miniatur motor Honda Beat. Buatlah entri baru di produk dengan informasi sebagai berikut:

- A. productCode : S135_182
- B. productName : 2007 Honda Beat
- C. productLine : Motorcycles
- D. productScale : 1:18
- E. productVendor : Warga Basdat Collectibles
- F. productDescription : (isi dibebaskan)
- G. quantityInStock : 25
- H. buyPrice : 23.23
- I. MSRP : 50.50

Buktikan dengan screenshot sebelum dan sesudah dilakukan perubahan. Jika men-screenshot keseluruhan tabel dirasa terlalu panjang, bisa dengan membuktikan bahwa entri dengan data tersebut dari sebelumnya tidak ada menjadi ada menggunakan SELECT WHERE.

QUERY:

```

insert into products (productCode, productName, productLine, productScale,
productVendor, productDescription, quantityInStock, buyPrice, MSRP) values

```

```
('S135_182', '2007 Honda Beat', 'Motorcycles', '1:18', 'Warga Basdat Collectibles', 'Miniaturn Honda Beat', 25, 23.23, 50.50);
```

SCREENSHOT:

```
MariaDB [prak2]> select * from products where productName = '2007 Honda Beat';
Empty set (0.001 sec)

MariaDB [prak2]> insert into products (productCode, productName, productLine, productScale, productVendor, productDescription, quantityInStock, buyPrice, MSRP) values
→ ('S135_182', '2007 Honda Beat', 'Motorcycles', '1:18', 'Warga Basdat Collectibles', 'Miniaturn Honda Beat', 25, 23.23, 50.50);
Query OK, 1 row affected (0.004 sec)

MariaDB [prak2]> select * from products where productName = '2007 Honda Beat';
+-----+-----+-----+-----+-----+-----+-----+-----+
| productCode | productName | productLine | productScale | productVendor | productDescription | quantityInStock | buyPrice | MSRP |
+-----+-----+-----+-----+-----+-----+-----+-----+
| S135_182   | 2007 Honda Beat | Motorcycles | 1:18         | Warga Basdat Collectibles | Miniaturn Honda Beat | 25              | 23.23    | 50.50 |
+-----+-----+-----+-----+-----+-----+-----+-----+
1 row in set (0.000 sec)

MariaDB [prak2]> |
```

5. Untuk memperingati hari jadi yang ke-100 tahun, perusahaan ingin memberikan *membership* kepada para pelanggan. Tingkatan *member* ditentukan oleh total nominal yang telah dikeluarkan untuk melakukan pemesanan dengan ketentuan sebagai berikut.
- Total > 500000, **Platinum**
 - Total > 100000, **Gold**
 - Total > 50000, **Silver**
 - Selain itu, **Bronze**

Tambahkan kolom "member" di tabel *customers* dengan tipe data varchar(10) dan nilai default NULL. Kemudian isi nilainya sesuai dengan ketentuan di atas. Sebagai bukti, buatlah *query* untuk menampilkan setiap level *membership* dan jumlah pelanggan yang mendapatkan level tersebut!

Catatan:

- Nominal pemesanan merupakan perkalian antara harga satuan dan kuantitas pemesanan
- Untuk pelanggan yang tidak pernah melakukan pemesanan, total nominalnya adalah 0. Untuk menangani nilai NULL, gunakan fungsi COALESCE()

QUERY:

```
alter table customers add column member varchar(10) default null;

update customers c1,
(select c2.customerNumber, coalesce(sum(priceEach * quantityOrdered), 0) as
total
from
    customers c2 left join orders o on c2.customerNumber = o.customerNumber
    left join orderdetails od on o.orderNumber = od.orderNumber
group by c2.customerNumber)
as temp
set member =
case
    when total > 500000 then "Platinum"
    when total > 100000 then "Gold"
    when total > 50000 then "Silver"
    else "Bronze"
end
```

```
where c1.customerNumber = temp.customerNumber;  
  
select member, count(*) from customers group by member;
```

SCREENSHOT:

```
MariaDB [prak1]> select member, count(*) from customers group by member;  
+-----+-----+  
| member | count(*) |  
+-----+-----+  
| Bronze |        40 |  
| Gold   |        30 |  
| Platinum |         2 |  
| Silver |        50 |  
+-----+-----+  
4 rows in set (0.001 sec)
```

6. Perusahaan memutuskan untuk menghapus data order untuk order yang dipesan oleh customer dari kota "Auckland" dan dikirim sebelum tahun 2005

Clue:

- Gunakan temporary table [mariadb documentation](#)
- sebelum menghapus data orders, hapus data orderDetails untuk order-order yang akan dihapus

Buktikan dengan screenshot eksekusi query yang memuat **nomor order**, **kode produk**, dan **tanggal pengiriman** untuk orders yang dipesan oleh customer dari kota "Auckland" sebelum dan sesudah dilakukan perubahan.

QUERY:

```
CREATE TEMPORARY TABLE orderFromAucklandCustomersBefore2005 AS (  
SELECT orderNumber  
FROM orders NATURAL JOIN customers  
WHERE city = "Auckland"  
AND YEAR(shippedDate) < 2005);  
  
DELETE FROM orderDetails WHERE orderNumber IN (SELECT orderNumber FROM  
orderFromAucklandCustomersBefore2005);  
  
DELETE FROM orders WHERE orderNumber IN (SELECT orderNumber FROM  
orderFromAucklandCustomersBefore2005);
```

SCREENSHOT:

Sebelum

=> where city = 'Muskogee';

orderidnumber	productCode	shippedDate
10132	S700_3167	2003-06-28
10254	S18_1749	2004-06-04
10254	S18_2248	2004-06-04
10254	S18_2325	2004-06-04
10254	S18_4409	2004-06-04
10254	S18_4933	2004-06-04
10254	S24_1046	2004-06-04
10254	S24_1628	2004-06-04
10254	S24_1937	2004-06-04
10254	S24_2766	2004-06-04
10254	S24_2887	2004-06-04
10254	S24_3191	2004-06-04
10254	S24_3432	2004-06-04
10254	S24_3969	2004-06-04
10354	S10_1678	2004-12-05
10354	S10_2816	2004-12-05
10354	S10_4698	2004-12-05
10354	S12_1099	2004-12-05
10354	S12_2823	2004-12-05
10354	S12_3380	2004-12-05
10354	S12_3990	2004-12-05
10354	S12_4675	2004-12-05
10354	S18_1889	2004-12-05
10354	S18_2625	2004-12-05
10354	S18_3278	2004-12-05
10354	S24_1578	2004-12-05
10354	S24_2000	2004-12-05
10393	S12_3148	2005-03-14
10393	S12_4473	2005-03-14
10393	S18_2238	2005-03-14
10393	S18_2319	2005-03-14
10393	S18_4600	2005-03-14
10393	S18_4668	2005-03-14
10393	S24_2300	2005-03-14
10393	S24_4258	2005-03-14
10393	S32_1268	2005-03-14
10393	S32_3522	2005-03-14
10393	S700_2824	2005-03-14
10404	S12_1099	2005-04-11
10404	S12_3380	2005-04-11
10404	S12_3990	2005-04-11
10404	S18_3278	2005-04-11
10404	S18_3482	2005-04-11
10404	S18_4721	2005-04-11
10404	S24_3371	2005-04-11
10404	S24_4620	2005-04-11
10202	S18_3782	2003-12-06
10202	S18_4721	2003-12-06
10202	S24_2360	2003-12-06
10202	S24_4620	2003-12-06
10202	S32_2206	2003-12-06
10202	S32_4485	2003-12-06
10202	S50_4713	2003-12-06
10260	S12_1108	NULL
10260	S12_3148	NULL
10260	S12_3891	NULL
10260	S18_3140	NULL
10260	S18_3259	NULL
10260	S18_4827	NULL
10260	S24_4048	NULL
10260	S32_3207	NULL
10260	S50_1514	NULL
10260	S700_1938	NULL
10410	S18_1342	2005-04-30
10410	S18_1367	2005-04-30
10410	S18_2795	2005-04-30
10410	S18_2949	2005-04-30
10410	S18_2957	2005-04-30
10410	S18_3136	2005-04-30
10410	S18_3320	2005-04-30
10410	S24_2822	2005-04-30
10410	S24_4258	2005-04-30
10138	S18_1749	2003-07-13
10138	S18_2248	2003-07-13
10138	S18_2325	2003-07-13
10138	S18_4409	2003-07-13
10138	S18_4933	2003-07-13
10138	S24_1046	2003-07-13
10138	S24_1937	2003-07-13
10138	S24_2822	2003-07-13
10138	S24_2766	2003-07-13
10138	S24_2887	2003-07-13
10138	S24_3191	2003-07-13
10138	S24_3432	2003-07-13
10138	S24_3969	2003-07-13
10179	S18_2581	2003-11-13
10179	S24_1785	2003-11-13

10393	S18_4319	2005-03-14
10393	S18_4600	2005-03-14
10393	S18_4668	2005-03-14
10393	S24_2300	2005-03-14
10393	S24_4258	2005-03-14
10393	S32_1268	2005-03-14
10393	S32_3522	2005-03-14
10393	S700_2824	2005-03-14
10404	S12_1099	2005-04-11
10404	S12_3380	2005-04-11
10404	S12_3990	2005-04-11
10404	S18_3278	2005-04-11
10404	S18_3482	2005-04-11
10404	S18_4721	2005-04-11
10404	S24_3371	2005-04-11
10404	S24_4620	2005-04-11
10202	S18_3782	2003-12-06
10202	S18_4721	2003-12-06
10202	S24_2360	2003-12-06
10202	S24_4620	2003-12-06
10202	S32_2206	2003-12-06
10202	S32_4485	2003-12-06
10202	S50_4713	2003-12-06
10260	S12_1108	NULL
10260	S12_3148	NULL
10260	S12_3891	NULL
10260	S18_3140	NULL
10260	S18_3259	NULL
10260	S18_4027	NULL
10260	S24_4048	NULL
10260	S32_3207	NULL
10260	S50_1514	NULL
10260	S700_1938	NULL
10410	S18_1342	2005-04-30
10410	S18_1367	2005-04-30
10410	S18_2795	2005-04-30
10410	S18_2949	2005-04-30
10410	S18_2957	2005-04-30
10410	S18_3136	2005-04-30
10410	S18_3320	2005-04-30
10410	S24_2022	2005-04-30
10410	S24_4258	2005-04-30
10138	S18_1749	2003-07-13
10138	S18_2248	2003-07-13
10138	S18_2325	2003-07-13
10138	S18_4409	2003-07-13
10138	S18_4933	2003-07-13
10138	S24_1046	2003-07-13
10138	S24_1937	2003-07-13
10138	S24_2022	2003-07-13
10138	S24_2766	2003-07-13
10138	S24_2887	2003-07-13
10138	S24_3191	2003-07-13
10138	S24_3432	2003-07-13
10138	S24_3969	2003-07-13
10179	S18_2581	2003-11-13
10179	S24_1785	2003-11-13
10179	S24_4278	2003-11-13
10179	S32_1374	2003-11-13
10179	S32_4289	2003-11-13
10179	S50_1341	2003-11-13
10179	S700_1601	2003-11-13
10179	S700_2834	2003-11-13
10179	S700_3167	2003-11-13
10360	S18_1662	2004-12-18
10360	S18_2581	2004-12-18
10360	S18_3029	2004-12-18
10360	S18_3140	2004-12-18
10360	S18_3259	2004-12-18
10360	S18_3856	2004-12-18
10360	S18_4522	2004-12-18
10360	S24_1785	2004-12-18
10360	S24_2011	2004-12-18
10360	S24_2041	2004-12-18
10360	S24_3151	2004-12-18
10360	S24_3816	2004-12-18
10360	S700_1138	2004-12-18
10360	S700_1938	2004-12-18
10360	S700_2610	2004-12-18
10360	S700_3505	2004-12-18
10360	S700_3962	2004-12-18
10360	S72_3212	2004-12-18
10399	S10_1678	2005-04-03
10399	S10_2016	2005-04-03
10399	S10_4698	2005-04-03
10399	S12_2023	2005-04-03
10399	S18_2625	2005-04-03
10399	S24_1578	2005-04-03
10399	S24_2000	2005-04-03
10399	S32_1374	2005-04-03

120 rows in set (0.01 sec)

Sesudah

orderNumber	productCode	shippedDate
10393	S12_3148	2005-03-14
10393	S12_4473	2005-03-14
10393	S18_2238	2005-03-14
10393	S18_2319	2005-03-14
10393	S18_4600	2005-03-14
10393	S18_4668	2005-03-14
10393	S24_2300	2005-03-14
10393	S24_4258	2005-03-14
10393	S32_1268	2005-03-14
10393	S32_3522	2005-03-14
10393	S700_2824	2005-03-14
10404	S12_1099	2005-04-11
10404	S12_3380	2005-04-11
10404	S12_3990	2005-04-11
10404	S18_3278	2005-04-11
10404	S18_3482	2005-04-11
10404	S18_4721	2005-04-11
10404	S24_3371	2005-04-11
10404	S24_4620	2005-04-11
10260	S12_1108	NULL
10260	S12_3148	NULL
10260	S12_3891	NULL
10260	S18_3140	NULL
10260	S18_3259	NULL
10260	S18_4027	NULL
10260	S24_4048	NULL
10260	S32_3207	NULL
10260	S50_1514	NULL
10260	S700_1938	NULL
10410	S18_1342	2005-04-30
10410	S18_1367	2005-04-30
10410	S18_2795	2005-04-30
10410	S18_2949	2005-04-30
10410	S18_2957	2005-04-30
10410	S18_3136	2005-04-30
10410	S18_3320	2005-04-30
10410	S24_2022	2005-04-30
10410	S24_4258	2005-04-30
10399	S10_1678	2005-04-03
10399	S10_2016	2005-04-03
10399	S10_4698	2005-04-03
10399	S12_2823	2005-04-03
10399	S18_2625	2005-04-03
10399	S24_1578	2005-04-03
10399	S24_2000	2005-04-03
10399	S32_1374	2005-04-03

46 rows in set (0.01 sec)

7. Pada tabel products, terdapat beberapa produk yang sudah tidak diproduksi lagi sehingga jarang dilakukan *query* terhadap produk tersebut. Untuk meningkatkan, *performance* database, perusahaan berencana melakukan *horizontal splitting* pada tabel products. Secara singkat, *horizontal splitting* melakukan duplikasi tabel dan biasanya digunakan untuk memisahkan baris data yang jarang diakses dengan yang sering diakses. Oleh karena itu, buatlah tabel productsDiscontinue dengan atribut-atribut yang sama persis dengan tabel products. Hanya saja, nama kolom yang menjadi primary key diubah menjadi productDiscontinueCode. Kolom productDiscontinueCode juga menjadi *foreign key* yang menunjuk ke kolom productCode pada tabel products. Tampilkan juga *screenshot* hasil perintah [DESCRIBE](#) untuk tabel productsDiscontinue.

HINT: Gunakan perintah DESCRIBE untuk melihat tipe data dari atribut-atribut pada tabel products

PENTING: Set *collation* menjadi latin1_swedish_ci saat membuat tabel manufacture pada akhir *syntax* CREATE TABLE, seperti berikut ini:

CREATE TABLE productsDiscontinue (

....

) COLLATE=latin1_swedish_ci;

QUERY:

```
CREATE TABLE productsDiscontinue (
  productDiscontinueCode VARCHAR(15),
  productName VARCHAR(70),
  productLine VARCHAR(50),
  productScale VARCHAR(10),
  productVendor VARCHAR(50),
  productDescription TEXT,
  quantityInStock SMALLINT,
  buyPrice DECIMAL(10,2),
  MSRP DECIMAL(10,2),
  PRIMARY KEY(productDiscontinueCode),
  CONSTRAINT `fk_discontinue_product`
    FOREIGN KEY (productDiscontinueCode)
      REFERENCES products(productCode)
) COLLATE=latin1_swedish_ci;
```

SCREENSHOT:

```
mysql> CREATE TABLE productsDiscontinue (
-> productDiscontinueCode VARCHAR(15),
-> productName VARCHAR(70),
-> productLine VARCHAR(50),
-> productScale VARCHAR(10),
-> productVendor VARCHAR(50),
-> productDescription TEXT,
-> quantityInStock SMALLINT,
-> buyPrice DECIMAL(10,2),
-> MSRP DECIMAL(10,2),
-> PRIMARY KEY(productDiscontinueCode),
-> CONSTRAINT `fk_discontinue_product`
-> FOREIGN KEY (productDiscontinueCode)
-> REFERENCES products(productCode)
-> ) COLLATE=latin1_swedish_ci;
Query OK, 0 rows affected (0.03 sec)
```

Field	Type	Null	Key	Default	Extra
productDiscontinueCode	varchar(15)	NO	PRI	NULL	
productName	varchar(70)	YES		NULL	
productLine	varchar(50)	YES		NULL	
productScale	varchar(10)	YES		NULL	
productVendor	varchar(50)	YES		NULL	
productDescription	text	YES		NULL	
quantityInStock	smallint	YES		NULL	
buyPrice	decimal(10,2)	YES		NULL	
MSRP	decimal(10,2)	YES		NULL	

9 rows in set (0.00 sec)

8. Untuk mempermudah dalam pembuatan aplikasi web kantor pusat, aplikasi web kantor pusat akan mengakses database dari tiap kantor. Oleh karena itu, aplikasi web tersebut butuh informasi untuk melakukan koneksi ke database setiap kantor. Salah satu *approach* paling naif dan tidak aman yang dapat dilakukan adalah menyimpan *connection string* database setiap kantor pada tabel offices. Tambahkan kolom *connectionString* dengan tipe VARCHAR dan maksimal 255 karakter pada tabel kantor. Kolom *connectionString* tidak boleh NULL. Atur *default value* menjadi: 'Host=localhost:5432; Database=office; Username=postgres; Password=root'

Buktikan dengan screenshot [DESCRIBE](#) dari offices sebelum dan sesudah perubahan. (Clue: Gunakan [ALTER TABLE](#))

QUERY:

```
ALTER TABLE offices ADD COLUMN connectionString VARCHAR(255) NOT NULL
DEFAULT 'Host=localhost:5432; Database=office; Username=postgres;
Password=root';
```

SCREENSHOT:

Sebelum

Field	Type	Null	Key	Default	Extra
officeCode	varchar(10)	NO	PRI	NULL	
city	varchar(50)	NO		NULL	
phone	varchar(50)	NO		NULL	
addressLine1	varchar(50)	NO		NULL	
addressLine2	varchar(50)	YES		NULL	
state	varchar(50)	YES		NULL	
country	varchar(50)	NO		NULL	
postalCode	varchar(15)	NO		NULL	
territory	varchar(10)	NO		NULL	

9 rows in set (0.04 sec)

```
mysql> ALTER TABLE offices ADD COLUMN connectionString VARCHAR(255) NOT NULL
      -> DEFAULT 'Host=localhost:5432; Database=office; Username=postgres; Password=root';
Query OK, 0 rows affected (0.06 sec)
Records: 0 Duplicates: 0 Warnings: 0
```

Sesudah:

```
mysql> DESCRIBE offices;
```

Field	Type	Null	Key	Default	Extra
officeCode	varchar(10)	NO	PRI	NULL	
city	varchar(50)	NO		NULL	
phone	varchar(50)	NO		NULL	
addressLine1	varchar(50)	NO		NULL	
addressLine2	varchar(50)	YES		NULL	
state	varchar(50)	YES		NULL	
country	varchar(50)	NO		NULL	
postalCode	varchar(15)	NO		NULL	
territory	varchar(10)	NO		NULL	
connectionString	varchar(255)	NO		Host=localhost:5432; Database=office; Username=postgres; Password=root	

10 rows in set (0.00 sec)