

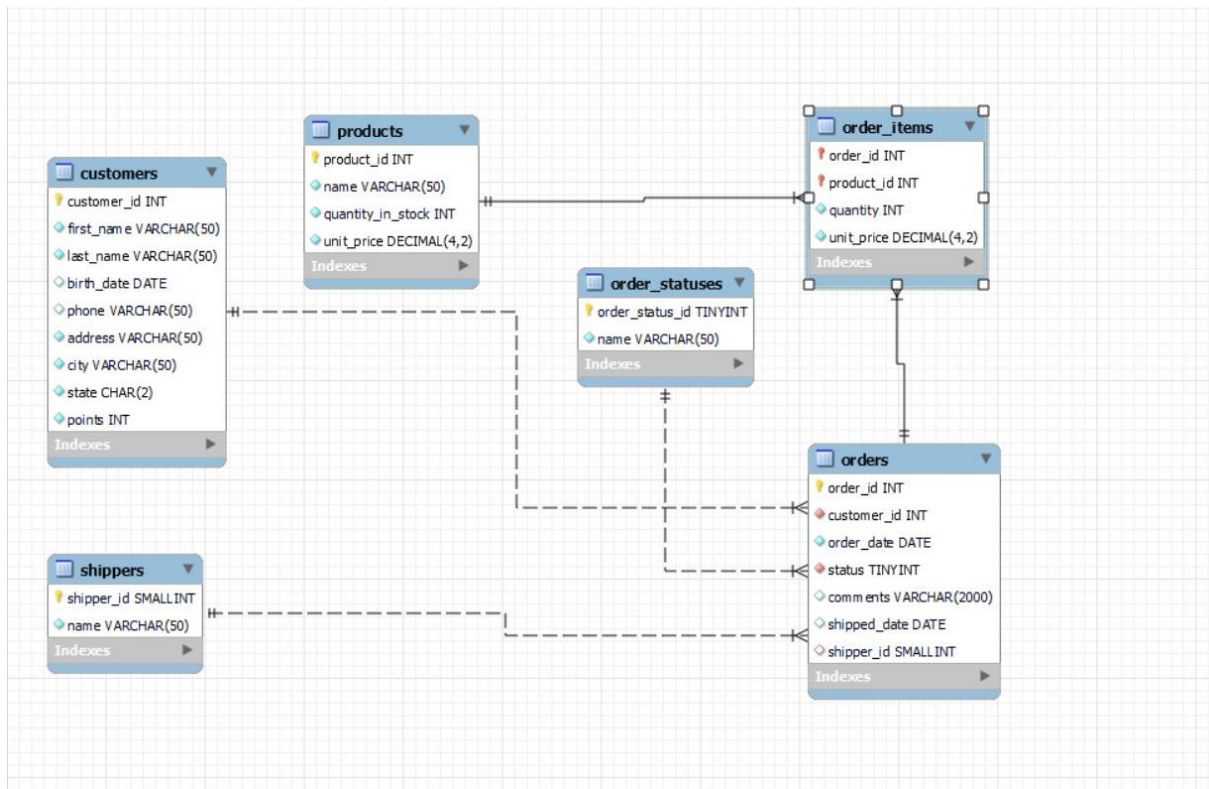
1.Introduction

In Retail Store different different products are purchase from dealer and sale to the customer Such product as' Stationeries Grocery product Cosmetics etc In this every customer have their different different requirement Suppose we have to maintain the sales record properly then retail store requires a good system which are keep the customer record Bill Number record Bill date record grand total.

various types of Grocery products its cost price are such kind of record these records are used at the time of Sales of product to the customers when Customer paid their payment then keep the record of payment and update the records. If we want to record of customer as their product wise then it was tedious job

In every product many customers take their purchase . If we have to maintain the customer billing records properly then store requires a good system which is kept the billing records of customer.

2. ER Diagram.



3.Database Design

Database: Retail store database

Tables:

- a) Customers**
- b) Order_item_notes**
- c) Order_item**
- d) Order_statuses**
- e) Orders**
- f) Products**
- g) Shippers**

4. Creating Table

a) Customers

```
MySQL localhost:33060+ ssl sql_store SQL > CREATE TABLE `customers` (  
-> `customer_id` int(11) NOT NULL AUTO_INCREMENT,  
-> `first_name` varchar(50) NOT NULL,  
-> `last_name` varchar(50) NOT NULL,  
-> `birth_date` date DEFAULT NULL,  
-> `phone` varchar(50) DEFAULT NULL,  
-> `address` varchar(50) NOT NULL,  
-> `city` varchar(50) NOT NULL,  
-> `state` char(2) NOT NULL,  
-> `points` int(11) NOT NULL DEFAULT '0',  
-> PRIMARY KEY (`customer_id`)  
-> );  
Query OK, 0 rows affected, 2 warnings (0.0173 sec)
```

b) order_item_notes

```
MySQL localhost:33060+ ssl sql_store SQL > CREATE TABLE `sql_store`.`order_item_notes` (  
-> `note_id` INT NOT NULL,  
-> `order_id` INT NOT NULL,  
-> `product_id` INT NOT NULL,  
-> `note` VARCHAR(255) NOT NULL,  
-> PRIMARY KEY (`note_id`));  
Query OK, 0 rows affected (0.0177 sec)
```

c) order_item

```
MySQL localhost:33060+ ssl sql_store SQL > CREATE TABLE `order_items` (  
`order_id` int(11) NOT NULL AUTO_INCREMENT, `product_id` int(11) NOT NULL,  
`quantity` int(11) NOT NULL, `unit_price` decimal(4,2) NOT NULL, PRIMARY KEY (`order_id`,`product_id`), KEY `fk_order_items_products_idx` (`product_id`),  
CONSTRAINT `fk_order_items_orders` FOREIGN KEY (`order_id`) REFERENCES `orders` (`order_id`) ON UPDATE CASCADE, CONSTRAINT `fk_order_items_products`  
FOREIGN KEY (`product_id`) REFERENCES `products` (`product_id`) ON UPDATE CASCADE );  
Query OK, 0 rows affected, 3 warnings (0.0268 sec)
```

d) order_statuses

```
MySQL localhost:33060+ ssl sql_store SQL > CREATE TABLE `order_statuses` (
-> `order_status_id` tinyint(4) NOT NULL,
-> `name` varchar(50) NOT NULL,
-> PRIMARY KEY (`order_status_id`)
-> );
Query OK, 0 rows affected, 1 warning (0.0158 sec)
```

e) Orders

```
MySQL localhost:33060+ ssl sql_store SQL > CREATE TABLE `orders` ( `order_id` int(11) NOT NULL AUTO_INCREMENT, `customer_id` int(11) NOT NULL, `order_date` date NOT NULL, `status` tinyint(4) NOT NULL DEFAULT '1', `comments` varchar(2000) DEFAULT NULL, `shipped_date` date DEFAULT NULL, `shipper_id` smallint(6) DEFAULT NULL, PRIMARY KEY (`order_id`), KEY `fk_orders_customers_idx` (`customer_id`), KEY `fk_orders_shippers_idx` (`shipper_id`), KEY `fk_orders_order_statuses_idx` (`status`), CONSTRAINT `fk_orders_customers` FOREIGN KEY (`customer_id`) REFERENCES `customers` (`customer_id`) ON UPDATE CASCADE, CONSTRAINT `fk_orders_order_statuses` FOREIGN KEY (`status`) REFERENCES `order_statuses` (`order_status_id`) ON UPDATE CASCADE, CONSTRAINT `fk_orders_shippers` FOREIGN KEY (`shipper_id`) REFERENCES `shippers` (`shipper_id`) ON UPDATE CASCADE );
Query OK, 0 rows affected, 4 warnings (0.0952 sec)
```

F) product

```
MySQL localhost:33060+ ssl sql_store SQL > CREATE TABLE `products` (
-> `product_id` int(11) NOT NULL AUTO_INCREMENT,
-> `name` varchar(50) NOT NULL,
-> `quantity_in_stock` int(11) NOT NULL,
-> `unit_price` decimal(4,2) NOT NULL,
-> PRIMARY KEY (`product_id`)
-> );
Query OK, 0 rows affected, 2 warnings (0.0167 sec)
```

G) Shippers

```
MySQL localhost:33060+ ssl sql_store SQL > CREATE TABLE `shippers` (
-> `shipper_id` smallint(6) NOT NULL AUTO_INCREMENT,
-> `name` varchar(50) NOT NULL,
-> PRIMARY KEY (`shipper_id`)
-> ) ENGINE=InnoDB AUTO_INCREMENT=6 DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci;
Query OK, 0 rows affected, 1 warning (0.0181 sec)
```

5. Tables in database

```
MySQL localhost:33060+ ssl sql_store SQL > show tables;
```

Tables_in_sql_store
customers
order_item_notes
order_items
order_statuses
orders
products
shippers

7 rows in set (0.0032 sec)

6. Data Definition Language (DDL)

a) Creating Tables:

1) Customers

```
MySQL localhost:33060+ ssl sql_store SQL > desc customers;
```

Field	Type	Null	Key	Default	Extra
customer_id	int	NO	PRI	NULL	auto_increment
first_name	varchar(50)	NO		NULL	
last_name	varchar(50)	NO		NULL	
birth_date	date	YES		NULL	
phone	varchar(50)	YES		NULL	
address	varchar(50)	NO		NULL	
city	varchar(50)	NO		NULL	
state	char(2)	NO		NULL	
points	int	NO		0	

9 rows in set (0.0055 sec)

2) Order_item_notes

```
MySQL localhost:33060+ ssl sql_store SQL > desc order_item_notes;
+-----+-----+-----+-----+-----+-----+
| Field      | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| note_id    | int           | NO   | PRI | NULL    |       |
| order_Id   | int           | NO   |     | NULL    |       |
| product_id | int           | NO   |     | NULL    |       |
| note       | varchar(255)  | NO   |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.0030 sec)
```

3) Order_item

```
MySQL localhost:33060+ ssl sql_store SQL > desc order_items;
+-----+-----+-----+-----+-----+-----+
| Field      | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| order_id   | int           | NO   | PRI | NULL    | auto_increment |
| product_id | int           | NO   | PRI | NULL    |       |
| quantity   | int           | NO   |     | NULL    |       |
| unit_price | decimal(4,2)  | NO   |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.0032 sec)
```

4) order_statuses

```
MySQL localhost:33060+ ssl sql_store SQL > desc order_statuses;
+-----+-----+-----+-----+-----+-----+
| Field          | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| order_status_id | tinyint       | NO   | PRI | NULL    |       |
| name           | varchar(50)   | NO   |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.0034 sec)
```

5) Orders

```
MySQL localhost:33060+ ssl sql_store SQL > desc orders;
```

Field	Type	Null	Key	Default	Extra
order_id	int	NO	PRI	NULL	auto_increment
customer_id	int	NO	MUL	NULL	
order_date	date	NO		NULL	
status	tinyint	NO	MUL	1	
comments	varchar(2000)	YES		NULL	
shipped_date	date	YES		NULL	
shipper_id	smallint	YES	MUL	NULL	

7 rows in set (0.0033 sec)

6) products

```
MySQL localhost:33060+ ssl sql_store SQL > desc products;
```

Field	Type	Null	Key	Default	Extra
product_id	int	NO	PRI	NULL	auto_increment
name	varchar(50)	NO		NULL	
quantity_in_stock	int	NO		NULL	
unit_price	decimal(4,2)	NO		NULL	

4 rows in set (0.0024 sec)

7) shippers

```
MySQL localhost:33060+ ssl sql_store SQL > desc shippers;
```

Field	Type	Null	Key	Default	Extra
shipper_id	smallint	NO	PRI	NULL	auto_increment
name	varchar(50)	NO		NULL	

2 rows in set (0.0022 sec)

b. Alter Table

1) Alter table add column

```
MySQL localhost:33060+ ssl sql_store SQL > alter table customers add column city varchar(50);
Query OK, 0 rows affected (0.0203 sec)

Records: 0 Duplicates: 0 Warnings: 0
```

2) Alter table modify column

```
MySQL localhost:33060+ ssl sql_store SQL > alter table customers modify first_name varchar(20);
Query OK, 0 rows affected (0.0580 sec)

Records: 0 Duplicates: 0 Warnings: 0
```

3) Alter Table rename column

```
MySQL localhost:33060+ ssl sql_store SQL > alter table customers rename column phone to mobile;
Query OK, 0 rows affected (0.0433 sec)

Records: 0 Duplicates: 0 Warnings: 0
```

4) Alter table drop column

```
MySQL localhost:33060+ ssl sql_store SQL > alter table customers drop column city;
Query OK, 0 rows affected (0.0191 sec)

Records: 0 Duplicates: 0 Warnings: 0
```

c) Rename table

```
MySQL localhost:33060+ ssl sql_store SQL > alter table customers rename store_customer;
Query OK, 0 rows affected (0.0927 sec)
```

d) Truncate table

```
MySQL localhost:33060+ ssl sql_store SQL > truncate order_items;
Query OK, 0 rows affected (0.0260 sec)
```

7. Data Manipulation Language (DML)

a. Insert into table

```
MySQL localhost:33060+ ssl sql_store SQL > INSERT INTO store_customer VALUES (1,'Babara','MacCaffrey','1986-03-28','781-932-9754','0 Sage Terrace','MA',2273);
Query OK, 1 row affected (0.0103 sec)
```

b. Update into table

```
MySQL localhost:33060+ ssl sql_store SQL > update store_customer set customer_id=2 where first_name='babara';
Query OK, 1 row affected (0.0111 sec)

Rows matched: 1 Changed: 1 Warnings: 0
```

c. Delete into table

```
MySQL localhost:33060+ ssl sql_store SQL > delete from store_customer where customer_id=2;
Query OK, 1 row affected (0.0053 sec)
```

8.Data Query language (DQL)

a. Select query

```
MySQL localhost:33060+ ssl store SQL > select * from customers;
```

customer_id	first_name	last_name	birth_date	phone	address	city	state	points
1	Babara	MacCaffrey	1986-03-28	781-932-9754	0 Sage Terrace	Waltham	MA	2273
2	Ines	Brushfield	1986-04-13	804-427-9456	14187 Commercial Trail	Hampton	VA	947
3	Freddi	Boagey	1985-02-07	719-724-7869	251 Springs Junction	Colorado Springs	CO	2967
4	Ambur	Roseburgh	1974-04-14	407-231-8017	30 Arapahoe Terrace	Orlando	FL	457
5	Clemmie	Betchley	1973-11-07	NULL	5 Spohn Circle	Arlington	TX	3675
6	Elka	Twiddell	1991-09-04	312-480-8498	7 Manley Drive	Chicago	IL	3073
7	Ilene	Dowson	1964-08-30	615-641-4759	50 Lillian Crossing	Nashville	TN	1672
8	Thacher	Naseby	1993-07-17	941-527-3977	538 Mosinee Center	Sarasota	FL	205
9	Romola	Rumgay	1992-05-23	559-181-3744	3520 Ohio Trail	Visalia	CA	1486
10	Levy	Mynett	1969-10-13	404-246-3370	68 Lawn Avenue	Atlanta	GA	796

```
10 rows in set (0.0022 sec)
```

b. Order by query asc

```
MySQL localhost:33060+ ssl store SQL > select * from customers order by city;
```

customer_id	first_name	last_name	birth_date	phone	address	city	state	points
5	Clemmie	Betchley	1973-11-07	NULL	5 Spohn Circle	Arlington	TX	3675
10	Levy	Mynett	1969-10-13	404-246-3370	68 Lawn Avenue	Atlanta	GA	796
6	Elka	Twiddell	1991-09-04	312-480-8498	7 Manley Drive	Chicago	IL	3073
3	Freddi	Boagey	1985-02-07	719-724-7869	251 Springs Junction	Colorado Springs	CO	2967
2	Ines	Brushfield	1986-04-13	804-427-9456	14187 Commercial Trail	Hampton	VA	947
7	Ilene	Dowson	1964-08-30	615-641-4759	50 Lillian Crossing	Nashville	TN	1672
4	Ambur	Roseburgh	1974-04-14	407-231-8017	30 Arapahoe Terrace	Orlando	FL	457
8	Thacher	Naseby	1993-07-17	941-527-3977	538 Mosinee Center	Sarasota	FL	205
9	Romola	Rumgay	1992-05-23	559-181-3744	3520 Ohio Trail	Visalia	CA	1486
1	Babara	MacCaffrey	1986-03-28	781-932-9754	0 Sage Terrace	Waltham	MA	2273

10 rows in set (0.0041 sec)

C. order by query desc

```
MySQL localhost:33060+ ssl store SQL > select * from customers order by city desc;
```

customer_id	first_name	last_name	birth_date	phone	address	city	state	points
1	Babara	MacCaffrey	1986-03-28	781-932-9754	0 Sage Terrace	Waltham	MA	2273
9	Romola	Rumgay	1992-05-23	559-181-3744	3520 Ohio Trail	Visalia	CA	1486
8	Thacher	Naseby	1993-07-17	941-527-3977	538 Mosinee Center	Sarasota	FL	205
4	Ambur	Roseburgh	1974-04-14	407-231-8017	30 Arapahoe Terrace	Orlando	FL	457
7	Ilene	Dowson	1964-08-30	615-641-4759	50 Lillian Crossing	Nashville	TN	1672
2	Ines	Brushfield	1986-04-13	804-427-9456	14187 Commercial Trail	Hampton	VA	947
3	Freddi	Boagey	1985-02-07	719-724-7869	251 Springs Junction	Colorado Springs	CO	2967
6	Elka	Twiddell	1991-09-04	312-480-8498	7 Manley Drive	Chicago	IL	3073
10	Levy	Mynett	1969-10-13	404-246-3370	68 Lawn Avenue	Atlanta	GA	796
5	Clemmie	Betchley	1973-11-07	NULL	5 Spohn Circle	Arlington	TX	3675

10 rows in set (0.0017 sec)

d. Limit query

```
MySQL localhost:33060+ ssl store SQL > select * from customers limit 5;
```

customer_id	first_name	last_name	birth_date	phone	address	city	state	points
1	Babara	MacCaffrey	1986-03-28	781-932-9754	0 Sage Terrace	Waltham	MA	2273
2	Ines	Brushfield	1986-04-13	804-427-9456	14187 Commercial Trail	Hampton	VA	947
3	Freddi	Boagey	1985-02-07	719-724-7869	251 Springs Junction	Colorado Springs	CO	2967
4	Ambur	Roseburgh	1974-04-14	407-231-8017	30 Arapahoe Terrace	Orlando	FL	457
5	Clemmie	Betchley	1973-11-07	NULL	5 Spohn Circle	Arlington	TX	3675

5 rows in set (0.0013 sec)

e. select query with specific column

```
MySQL localhost:33060+ ssl store SQL > select first_name,last_name from customers ;
```

first_name	last_name
Babara	MacCaffrey
Ines	Brushfield
Freddi	Boagey
Ambur	Roseburgh
Clemmie	Betchley
Elka	Twiddell
Ilene	Dowson
Thacher	Naseby
Romola	Rumgay
Levy	Mynett

```
10 rows in set (0.0016 sec)
```

f.select query with column name change

```
MySQL localhost:33060+ ssl store SQL > select first_name as forename,last_name as surname from customers;
```

forename	surname
Babara	MacCaffrey
Ines	Brushfield
Freddi	Boagey
Ambur	Roseburgh
Clemmie	Betchley
Elka	Twiddell
Ilene	Dowson
Thacher	Naseby
Romola	Rumgay
Levy	Mynett

```
10 rows in set (0.0013 sec)
```

g. Distinct query

```
MySQL localhost:33060+ ssl store SQL > select distinct city from customers;
```

city
Waltham
Hampton
Colorado Springs
Orlando
Arlington
Chicago
Nashville
Sarasota
Visalia
Atlanta

```
10 rows in set (0.0019 sec)
```

9. Using where clause

a. with comparison operator

```
MySQL localhost:33060+ ssl store SQL > select * from customers where city='waltham';
```

customer_id	first_name	last_name	birth_date	phone	address	city	state	points
1	Babara	MacCaffrey	1986-03-28	781-932-9754	0 Sage Terrace	Waltham	MA	2273

```
1 row in set (0.0014 sec)
```

10. using logical operator

a.using And operator

```
MySQL localhost:33060+ ssl store SQL > select * from customers where birth_date> '1990-01-01' and points>1000;
```

customer_id	first_name	last_name	birth_date	phone	address	city	state	points
6	Elka	Twiddell	1991-09-04	312-480-8498	7 Manley Drive	Chicago	IL	3073
9	Romola	Rumgay	1992-05-23	559-181-3744	3520 Ohio Trail	Visalia	CA	1486

```
2 rows in set (0.0037 sec)
```

b. Using or operator

```
MySQL localhost:33060+ ssl store SQL > select * from customers where birth_date> '1990-01-01' or points>1000;
```

customer_id	first_name	last_name	birth_date	phone	address	city	state	points
1	Babara	MacCaffrey	1986-03-28	781-932-9754	0 Sage Terrace	Waltham	MA	2273
3	Freddi	Boagey	1985-02-07	719-724-7869	251 Springs Junction	Colorado Springs	CO	2967
5	Clemmie	Betchley	1973-11-07	NULL	5 Spohn Circle	Arlington	TX	3675
6	Elka	Twiddell	1991-09-04	312-480-8498	7 Manley Drive	Chicago	IL	3073
7	Ilene	Dowson	1964-08-30	615-641-4759	50 Lillian Crossing	Nashville	TN	1672
8	Thacher	Naseby	1993-07-17	941-527-3977	538 Mosinee Center	Sarasota	FL	205
9	Romola	Rumgay	1992-05-23	559-181-3744	3520 Ohio Trail	Visalia	CA	1486

```
7 rows in set (0.0017 sec)
```

c. using between clause

```
MySQL localhost:33060+ ssl store SQL > select * from customers where points between 1000 and 3000;
```

customer_id	first_name	last_name	birth_date	phone	address	city	state	points
1	Babara	MacCaffrey	1986-03-28	781-932-9754	0 Sage Terrace	Waltham	MA	2273
3	Freddi	Boagey	1985-02-07	719-724-7869	251 Springs Junction	Colorado Springs	CO	2967
7	Ilene	Dowson	1964-08-30	615-641-4759	50 Lillian Crossing	Nashville	TN	1672
9	Romola	Rumgay	1992-05-23	559-181-3744	3520 Ohio Trail	Visalia	CA	1486

```
4 rows in set (0.0036 sec)
```

d. using in clause

```
MySQL localhost:33060+ ssl store SQL > select * from customers where state in('va','fl','ga');
```

customer_id	first_name	last_name	birth_date	phone	address	city	state	points
2	Ines	Brushfield	1986-04-13	804-427-9456	14187 Commercial Trail	Hampton	VA	947
4	Ambur	Roseburgh	1974-04-14	407-231-8017	30 Arapahoe Terrace	Orlando	FL	457
8	Thacher	Naseby	1993-07-17	941-527-3977	538 Mosinee Center	Sarasota	FL	205
10	Levy	Mynett	1969-10-13	404-246-3370	68 Lawn Avenue	Atlanta	GA	796

```
4 rows in set (0.0014 sec)
```

11. Aggregate function

a.count function

```
MySQL localhost:33060+ ssl store SQL > select count(order_id) from order_items;
```

count(order_id)
18

```
1 row in set (0.0047 sec)
```

b. Average function

```
MySQL localhost:33060+ ssl store SQL > select avg(unit_price) from order_items;
```

avg(unit_price)
6.386111

```
1 row in set (0.0018 sec)
```

c. sum function

```
MySQL localhost:33060+ ssl store SQL > select sum(unit_price) from order_items;
```

sum(unit_price)
114.95

```
1 row in set (0.0014 sec)
```

12. Group by clause

```
MySQL localhost:33060+ ssl store SQL > select sum(points),first_name from customers group by customer_id;
```

sum(points)	first_name
2273	Babara
947	Ines
2967	Freddi
457	Ambur
3675	Clemmie
3073	Elka
1672	Ilene
205	Thacher
1486	Romola
796	Levy

10 rows in set (0.0013 sec)

13. Like operator

```
MySQL localhost:33060+ ssl store SQL > select * from customers where last_name like '%b%';
```

customer_id	first_name	last_name	birth_date	phone	address	city	state	points
2	Ines	Brushfield	1986-04-13	804-427-9456	14187 Commercial Trail	Hampton	VA	947
3	Freddi	Boagey	1985-02-07	719-724-7869	251 Springs Junction	Colorado Springs	CO	2967
4	Ambur	Roseburgh	1974-04-14	407-231-8017	30 Arapahoe Terrace	Orlando	FL	457
5	Clemmie	Betchley	1973-11-07	NULL	5 Spohn Circle	Arlington	TX	3675
8	Thacher	Naseby	1993-07-17	941-527-3977	538 Mosinee Center	Sarasota	FL	205

5 rows in set (0.0019 sec)

```
MySQL localhost:33060+ ssl store SQL > select * from customers where last_name like '%y';
```

customer_id	first_name	last_name	birth_date	phone	address	city	state	points
1	Babara	MacCaffrey	1986-03-28	781-932-9754	0 Sage Terrace	Waltham	MA	2273
3	Freddi	Boagey	1985-02-07	719-724-7869	251 Springs Junction	Colorado Springs	CO	2967
5	Clemmie	Betchley	1973-11-07	NULL	5 Spohn Circle	Arlington	TX	3675
8	Thacher	Naseby	1993-07-17	941-527-3977	538 Mosinee Center	Sarasota	FL	205
9	Romola	Rumgay	1992-05-23	559-181-3744	3520 Ohio Trail	Visalia	CA	1486

5 rows in set (0.0020 sec)

```
MySQL localhost:33060+ ssl store SQL > select * from customers where last_name like '____y';
```

customer_id	first_name	last_name	birth_date	phone	address	city	state	points
3	Freddi	Boagey	1985-02-07	719-724-7869	251 Springs Junction	Colorado Springs	CO	2967
8	Thacher	Naseby	1993-07-17	941-527-3977	538 Mosinee Center	Sarasota	FL	205
9	Romola	Rumgay	1992-05-23	559-181-3744	3520 Ohio Trail	Visalia	CA	1486

3 rows in set (0.0015 sec)

14. Union

```
MySQL localhost:33060+ ssl store SQL > select first_name from customers union select name from shippers;
```

first_name
Babara
Ines
Freddi
Ambur
Clemmie
Elka
Ilene
Thacher
Romola
Levy
Hettinger LLC
Schinner-Predovic
Satterfield LLC
Mraz, Renner and Nolan
Waters, Mayert and Prohaska

15 rows in set (0.0059 sec)

```
MySQL localhost:33060+ ssl store SQL > select name as full_name from shippers union select first_name from customers;
```

full_name
Hettinger LLC
Schinner-Predovic
Satterfield LLC
Mraz, Renner and Nolan
Waters, Mayert and Prohaska
Babara
Ines
Freddi
Ambur
Clemmie
Elka
Ilene
Thacher
Romola
Levy

15 rows in set (0.0014 sec)

15. Joins

```
MySQL localhost:33060+ ssl store SQL > select * from orders join customers on orders.customer_id = customers.customer_id;
```

order_id	customer_id	order_date	status	comments	shipped_date	shipper_id	customer_id	first_name	last_name	birth_date	phone	address
city	state	points										
6	Elka	Twiddell	1991-09-04	312-480-8498	7 Manley Drive							
Chicago	IL	3073										
2	Ilene	Dowson	1964-08-30	615-641-4759	50 Lillian Crossing	Nashville	TN	1672				
7	Thacher	Naseby	1993-07-17	941-527-3977	538 Mosinee Center	Sarasota	FL	205				
3	Ines	Brushfield	1986-04-13	804-427-9456	14187 Commercial Trail	Hampton	VA	947				
8	Clemmie	Betchley	1973-11-07	NULL	5 Spohn Circle							
Arlington	TX	3675										
6	Levy	Mynett	1969-10-13	404-246-3370	68 Lawn Avenue							
10	Atlanta	GA	796									
7	Ines	Brushfield	1986-04-13	804-427-9456	14187 Commercial Trail	Hampton	VA	947				
2	Clemmie	Betchley	1973-11-07	NULL	5 Spohn Circle							
5	Arlington	TX	3675									
9	Levy	Mynett	1969-10-13	404-246-3370	68 Lawn Avenue							
10	Atlanta	GA	796									
6	Elka	Twiddell	1991-09-04	312-480-8498	7 Manley Drive							
Chicago	IL	3073										

10 rows in set (0.0027 sec)

16. Subquery

```
MySQL localhost:33060+ ssl store SQL > select * from orders where customer_id in ( select customer_id from customers where points>1000);
```

order_id	customer_id	order_date	status	comments	shipped_date	shipper_id
5	5	2017-08-25	2		2017-08-26	3
8	5	2018-06-08	1	Mauris enim leo, rhoncus sed, vestibulum sit amet, cursus id, turpis.	NULL	NULL
1	6	2019-01-30	1	NULL	NULL	NULL
10	6	2018-04-22	2	NULL	2018-04-23	2
2	7	2018-08-02	2	NULL	2018-08-03	4

5 rows in set (0.0014 sec)

17. views

```
MySQL localhost:33060+ ssl store SQL > create view store_detail as select customer_id,first_name,last_name from customers;
```

Query OK, 0 rows affected (0.0197 sec)

```
MySQL localhost:33060+ ssl store SQL > select * from store_detail;
```

customer_id	first_name	last_name
1	Babara	MacCaffrey
2	Ines	Brushfield
3	Freddi	Boagey
4	Ambur	Roseburgh
5	Clemmie	Betchley
6	Elka	Twiddell
7	Ilene	Dowson
8	Thacher	Naseby
9	Romola	Rumgay
10	Levy	Mynett

10 rows in set (0.0056 sec)