Database HW #2 - 20195003 고강빈

Step 1

1) Entity 설정
Customer, Seller, Product, Ordered, Storage

2) Functional Requirements
- 고객의 과거 주문 내역 확인 (주문일자, 주문품목, 물품가격 등)
select * from Ordered where customer_id = '~~';

- 어떤 상품을 몇 개 출고해야 하는지 확인
select count from Ordered where prod_id = '~~';

- 특정 범위 내 가격을 가지는 물품 리스트 확인
select prod_id, name, price from Product where price between 'min' and 'max';

- 특정 브랜드 상품 확인
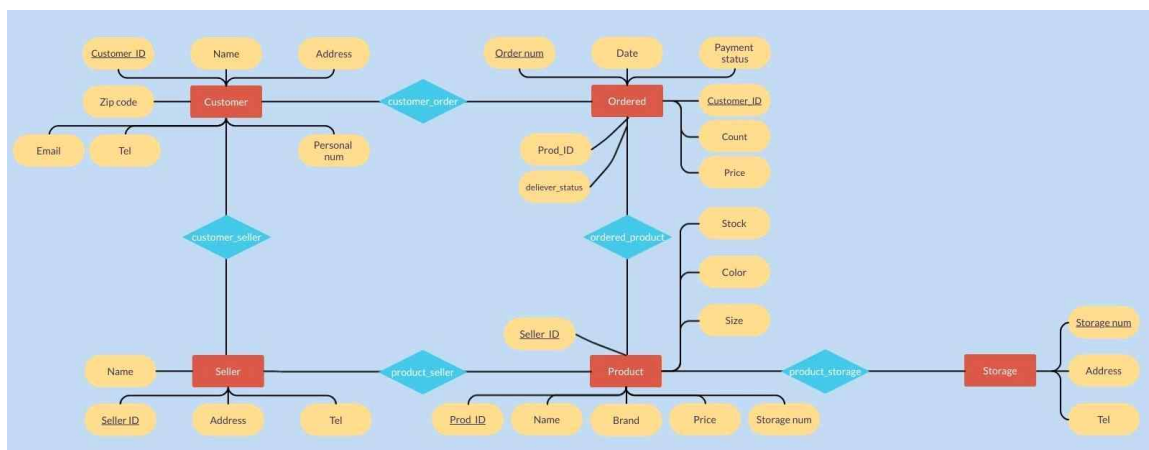select prod_id, name, brand from Product where brand = '~~';

- 요금 지불이 완료된 주문내역 확인
select * from Ordered where payment_status = 'Y';

- 주문내역의 총 지불금액 계산
select count*price as tot_price from Ordered where order_num = '~~';

Step 2

Step 3

1) Entity별 Table의 Realtional Schema

1. Customer =
(<u>customer_id</u>, name, address, tel, email, personal_num, zip_code)

2. Seller =
(<u>seller_id</u>, name, address, tel)

3. Product =
(<u>prod_id</u>, name, brand, size, color, stock, price, <u>storage_num</u>, <u>seller_id</u>)

4. Ordered =
(<u>order_num</u>, date, prod_id, count, price, payment_status, <u>customer id</u>, deliver_status)

5. Storage =
(<u>storage_num</u>, address, tel)

2) CREATE TABLE

```
create table Customer(
    customer_id      char(5) not null,
    name             varchar(20),
    address          varchar(20),
    tel              char(11),
    email            varchar(30),
    personal_num     char(13) not null,
    zip_code         char(5),
    primary key(customer_id)
);

create table Seller(
    seller_id        char(5) not null,
    name             varchar(20),
    address          varchar(20),
    tel              char(11),
    primary key(seller_id)
);
```

```
create table Storage(
    storage_num      char(5) not null,
    address          varcher(20),
    tel              char(11),
    primary key(storage_num)
);

create table Product(
    prod_id          char(5) not null,
    name             varchar(20),
    brand            varchar(20),
    size             varchar(5),
    color            varchar(10),
    stock            numeric(7,0),
    price            numeric(6,0),
    storage_num      char(5) not null,
    seller_id        char(5) not null,
    primary key(prod_id),
    foreign key(storage_num) references Storage,
    foreign key(seller_id) references Seller
);
create table Ordered(
    order_num        char(5) not null,
    date             char(6),
    prod_id          char(5) not null,
    count            numeric(3,0) not null,
    price            numeric(6,0),
    payment_status   char(1),
    customer_id      char(5) not null,
    delever_status   char(1),
    primary key(order_num),
    foreign key(customer_id) references Customer,
    foreign key(price) references Product
);
```

Step 4

```
%%sql
insert into Customer values('38293', 'Alice', 'New York', '01012345678', 'qwer@naver.com', '9909092017213', '61005');
insert into Customer values('93886', 'Brian', 'Washington', '01023456789', 'wert@google.com', '8808081010102', '13579');
insert into Customer values('48026', 'Chris', 'LA', '01034567890', 'erty@naver.com', '770707102345','61005');
insert into Customer values('73829', 'Diana', 'Boston', '01045678901', 'rtyu@google.com','000101201234','93725');
```

```
* sqlite:///shopingmall.db
1 rows affected.
1 rows affected.
1 rows affected.
1 rows affected.

[]
```

```
%sql select * from customer;
```

```
* sqlite:///shopingmall.db
Done.
```

customer_id	name	address	tel	email	personal_num	zip_code
38293	Alice	New York	01012345678	qwer@naver.com	9909092017213	61005
93886	Brian	Washington	01023456789	wert@google.com	8808081010102	13579
48026	Chris	LA	01034567890	erty@naver.com	770707102345	61005
73829	Diana	Boston	01045678901	rtyu@google.com	000101201234	93725

```
%%sql
insert into Seller values('12345','Apeach Mart', 'San Francisco', '41512345678');
insert into Seller values('13579','Bare Bear Bros', 'Otawa', '61323456789');
insert into Seller values('24680','Choonsik Shop', 'Seoul', '0234567890');
```

```
* sqlite:///shopingmall.db
1 rows affected.
1 rows affected.
1 rows affected.

[]
```

```
%sql select * from seller;
```

```
* sqlite:///shopingmall.db
Done.
```

seller_id	name	address	tel
12345	Apeach Mart	San Francisco	41512345678
13579	Bare Bear Bros	Otawa	61323456789
24680	Choonsik Shop	Seoul	0234567890

```
%%sql
insert into Storage values('11111','Seoul','0234567890');
insert into Storage values('22222','San Francisco','41512345678');
insert into Storage values('33333','Otawa','61323456789');
```

```
* sqlite:///shopingmall.db
1 rows affected.
1 rows affected.
1 rows affected.

[]
```

```
%sql select * from storage;
```

```
* sqlite:///shopingmall.db
Done.
```

storage_num	address	tel
11111	Seoul	0234567890
22222	San Francisco	41512345678
33333	Otawa	61323456789

```
%%sql
insert into Product values('01010','Anonymous mask','Anonymous','L','White','10000','12000','22222','13579');
insert into Product values('02121','Buster','Ghost','XL','Black','1000','120000','33333','12345');
insert into Product values('10132','Canon Shooter','Fortress','3XL','Blue','3000','300000','11111','12345');
insert into Product values('23513','Dancing Cam',"Let's Dance",'S','White','100000','21000','22222','24680');
```

 * sqlite:///shopingmall.db
1 rows affected.
1 rows affected.
1 rows affected.
1 rows affected.

[]

```
%sql select * from product;
```

 * sqlite:///shopingmall.db
Done.

prod_id	name	brand	size	color	stock	price	storage_num	seller_id
01010	Anonymous mask	Anonymous	L	White	10000	12000	22222	13579
02121	Buster	Ghost	XL	Black	1000	120000	33333	12345
10132	Canon Shooter	Fortress	3XL	Blue	3000	300000	11111	12345
23513	Dancing Cam	Let's Dance	S	White	100000	21000	22222	24680

```
%%sql
insert into Ordered values('505012','210501', '02121', '1','120000','Y','93886','Y');
insert into Ordered values('505010','210425', '10132', '1','300000','N','93886','N');
insert into Ordered values('505014','210504', '01010', '5','12000','Y','48026','N');
insert into Ordered values('505017','210505', '23513', '2','21000','Y','73829','Y');
```

 * sqlite:///shopingmall.db
1 rows affected.
1 rows affected.
1 rows affected.
1 rows affected.

[]

```
%sql select * from ordered;
```

 * sqlite:///shopingmall.db
Done.

order_num	date	prod_id	count	price	payment_status	customer_id	delever_status
505012	210501	02121	1	120000	Y	93886	Y
505010	210425	10132	1	300000	N	93886	N
505014	210504	01010	5	12000	Y	48026	N
505017	210505	23513	2	21000	Y	73829	Y

Step 5

```
%sql select * from Ordered where customer_id = '93886'
```

* sqlite:///shopingmall.db
Done.

order_num	date	prod_id	count	price	payment_status	customer_id	deliver_status
505012	210501	02121	1	120000	Y	93886	Y
505010	210425	10132	1	300000	N	93886	N

```
%sql select count from Ordered where prod_id = '01010'
```

* sqlite:///shopingmall.db
Done.

count
5

```
%sql select prod_id, name, price from Product where price between 20000 and 150000
```

* sqlite:///shopingmall.db
Done.

prod_id	name	price
02121	Buster	120000
23513	Dancing Cam	21000

```
%sql select prod_id, name, brand from Product where brand = 'Ghost'
```

* sqlite:///shopingmall.db
Done.

prod_id	name	brand
02121	Buster	Ghost

```
%sql select * from Ordered where payment_status = 'Y'
```

* sqlite:///shopingmall.db
Done.

order_num	date	prod_id	count	price	payment_status	customer_id	delever_status
505012	210501	02121	1	120000	Y	93886	Y
505014	210504	01010	5	12000	Y	48026	N
505017	210505	23513	2	21000	Y	73829	Y

```
%sql select count*price as tot_price from Ordered where order_num = '505014'
```

* sqlite:///shopingmall.db
Done.

tot_price
60000

Step 6

```java
1  import java.sql.Connection;
2  import java.sql.DriverManager;
3  import java.sql.SQLException;
4  import java.sql.Statement;
5  import java.sql.ResultSet;
6  import java.sql.ResultSetMetaData;
7  import java.sql.PreparedStatement;
8
9  public class Homework2_20195003 {
10
11     public static void main(String[] args) {
12         // TODO Auto-generated method stub
13         try {
14             Connection conn;
15             conn = DriverManager.getConnection("jdbc:sqlite:C:\\Users\\kgbko1117\\Desktop\\My Folder\\GitRepo\\Database_in_School\\HW2\\shopingmall.db");
16             System.out.println("Connection to SQLite has been established.");
17             Statement stmt = conn.createStatement();
18
19             ResultSet rs = stmt.executeQuery("select prod_id, name, price from Product where price between 20000 and 150000");
20             while (rs.next()) {
21                 System.out.println(rs.getString("prod_id") + " " + rs.getString("name") + " " + rs.getString("price"));
22             }
23
24             rs = stmt.executeQuery("select * from Ordered where payment_status = 'Y'");
25             while (rs.next()) {
26                 System.out.println(rs.getString(1)+" "+rs.getString(2)+" "+rs.getString(3)+" "+rs.getString(4)+" "+rs.getString(5)+" "+rs.getString(7));
27             }
28             //Show Except Status (payment_status, deliver_status)
29
30             stmt.close();
31             conn.close();
32         }
33         catch (SQLException e) {
34             System.out.println(e.getMessage());
35         }
36     }
37 }
38
```

Problems @ Javadoc Declaration Console ⊠ Data Source Explorer
<terminated> Homework2_20195003 [Java Application] C:\Users\kgbko1117\Desktop\eclipse-java-2021-03-R-win32-x86_64\eclipse\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_15.0.2.v20210201-0955\jre\bin\javaw.exe
Connection to SQLite has been established.
02121 Buster 120000
23513 Dancing Cam 21000
505012 210501 02121 1 120000 93886
505014 210504 01010 5 12000 48026
505017 210505 23513 2 21000 73829