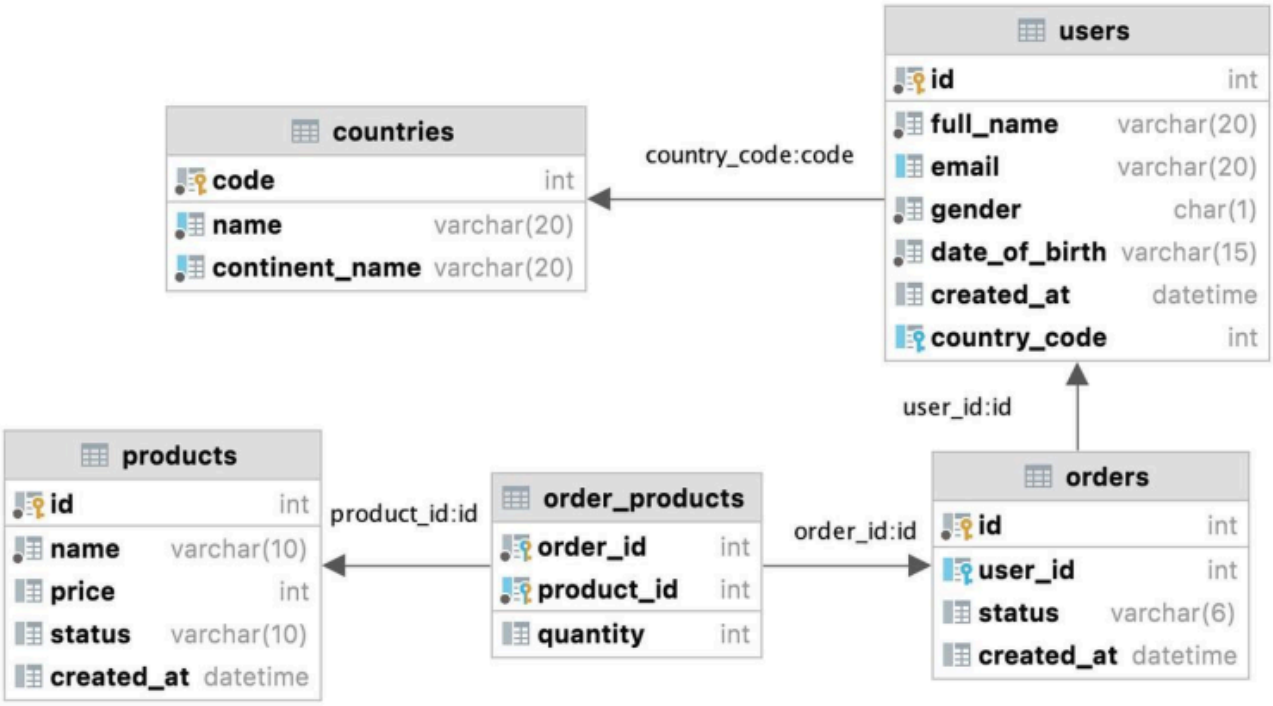
Introduction to Database



in this exercise i will perform some CRUD operations using SQL (Structured Query Language)

First, let's create a database called 'store':

```
create database store;
```

After we create the database we will use it using `use <database Name>` :

```
use store;
```

Now, we will create the tables:

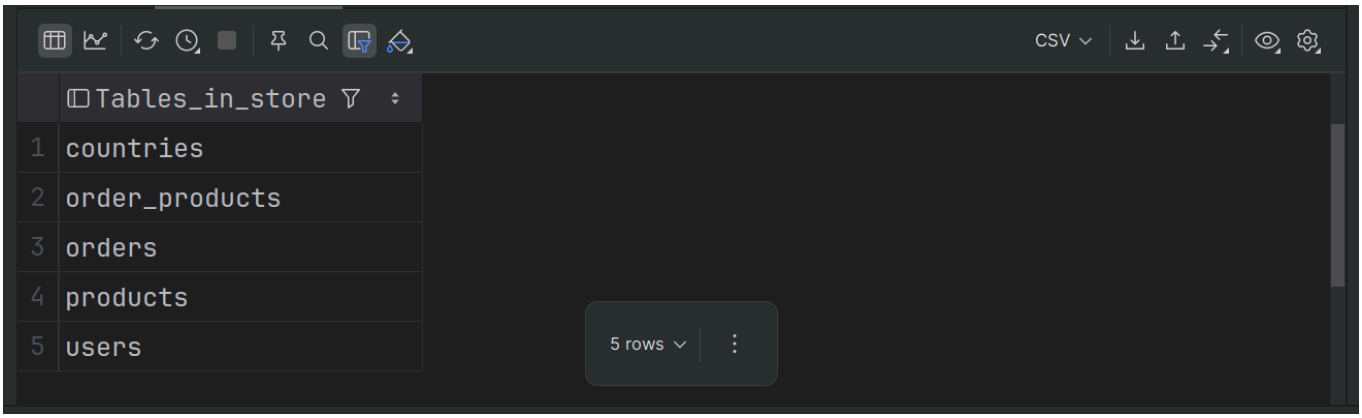
```
create table countries(
    code int primary key,
    name varchar(20) unique,
    continent_name varchar(20) not null
);

create table users(
    id int primary key,
```

```
    full_name varchar(20),
    email varchar(20) unique,
    gender char(1) check (gender IN ('M', 'F')),
    date_of_birth varchar(15),
    created_at datetime,
    country_code int references countries(code)
);

create table orders(
    id int primary key,
    user_id int references users(id),
    status varchar(6) check(status in ('start','finish')),
    created_at datetime
);

#create table products
create table products(
    id int primary key ,
    name varchar(10) not null,
    price float default 0,
    status varchar(10) check ( status in ('valid','expired')),
    created_at datetime
);

#create table order_products
create table order_products(
    order_id int references orders(id),
    product_id int references products(id),
    quantity int default 0
);
```

to show tables:

```
show tables;
```

tables:



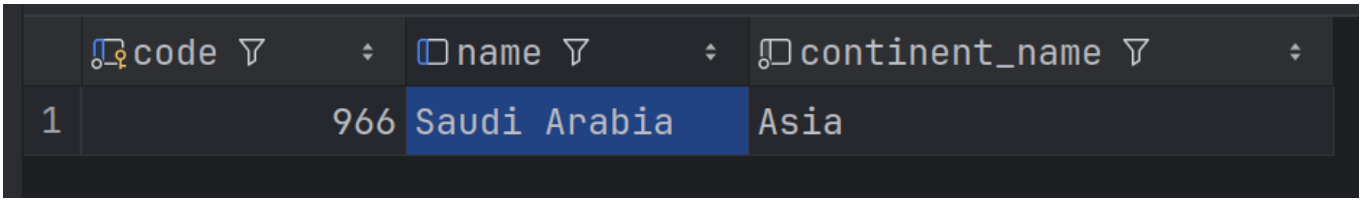
now lets insert some data using `INSERT INTO`:

```
-- 1. Add new row to countries table
INSERT INTO countries (code, name, continent_name)
VALUES (966, 'Saudi Arabia', 'Asia');

-- 2. Add new row to users table
INSERT INTO users (id, full_name, email, gender, date_of_birth, created_at,
country_code)
VALUES (1, 'Mohammed Al-Ahmad', 'mohammed@email.sa', 'M', '1995-08-20',
'2025-07-30 10:30:00', 966);

-- 3. Add new row to orders table
INSERT INTO orders (id, user_id, status, created_at)
VALUES (1, 1, 'start', '2025-07-30 10:35:00');

-- 4. Add new row to products table
INSERT INTO products (id, name, price, status, created_at)
VALUES (1, 'Dates', 45.99, 'valid', '2025-07-30 09:00:00'),
       (2, 'Oud', 299.99, 'valid', '2025-07-30 09:00:00'),
       (3, 'Coffee Set', 159.99, 'valid', '2025-07-30 09:00:00');

-- 5. Add new row to order_products table
INSERT INTO order_products (order_id, product_id, quantity)
VALUES (1, 1, 3),
       (1, 2, 1),
       (1, 3, 2);
```

after that lets update data using `Update`:

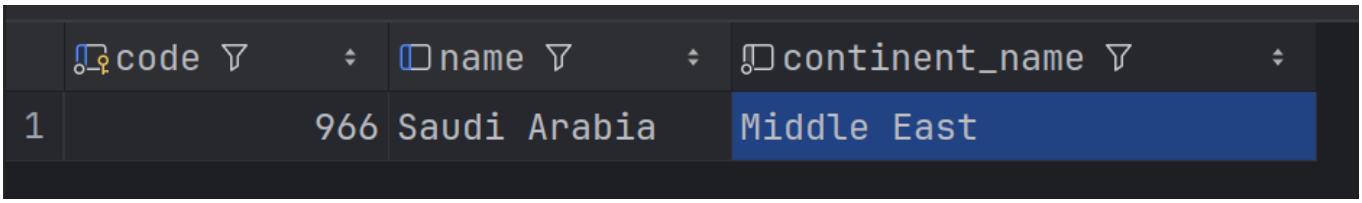
```
UPDATE countries SET continent_name = 'Middle East' WHERE code = 966;
```

country before updating:



	code	name	continent_name
1	966	Saudi Arabia	Asia

country after updating:

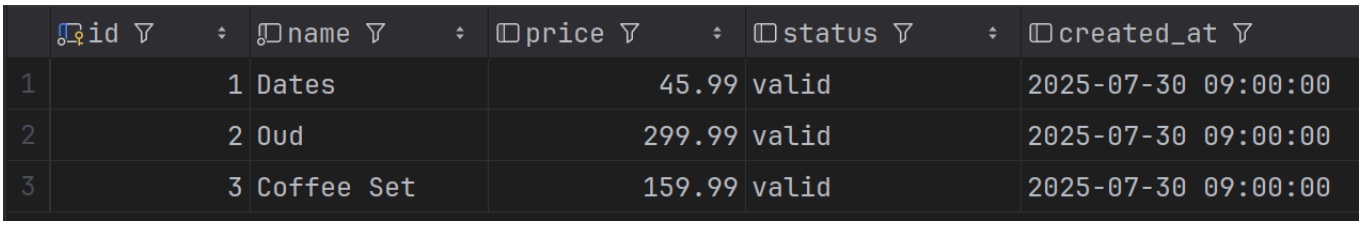


	code	name	continent_name
1	966	Saudi Arabia	Middle East

finally we will perform some deletion using `DELETE` :

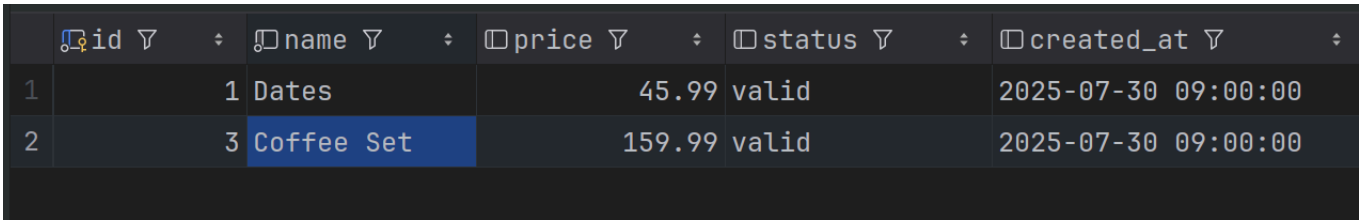
```sql
DELETE FROM products WHERE id = 2;
```

product table before deletion:



	id	name	price	status	created_at
1	1	Dates	45.99	valid	2025-07-30 09:00:00
2	2	Oud	299.99	valid	2025-07-30 09:00:00
3	3	Coffee Set	159.99	valid	2025-07-30 09:00:00

product table after deletion:



	id	name	price	status	created_at
1	1	Dates	45.99	valid	2025-07-30 09:00:00
2	3	Coffee Set	159.99	valid	2025-07-30 09:00:00