

Laboratory work 2

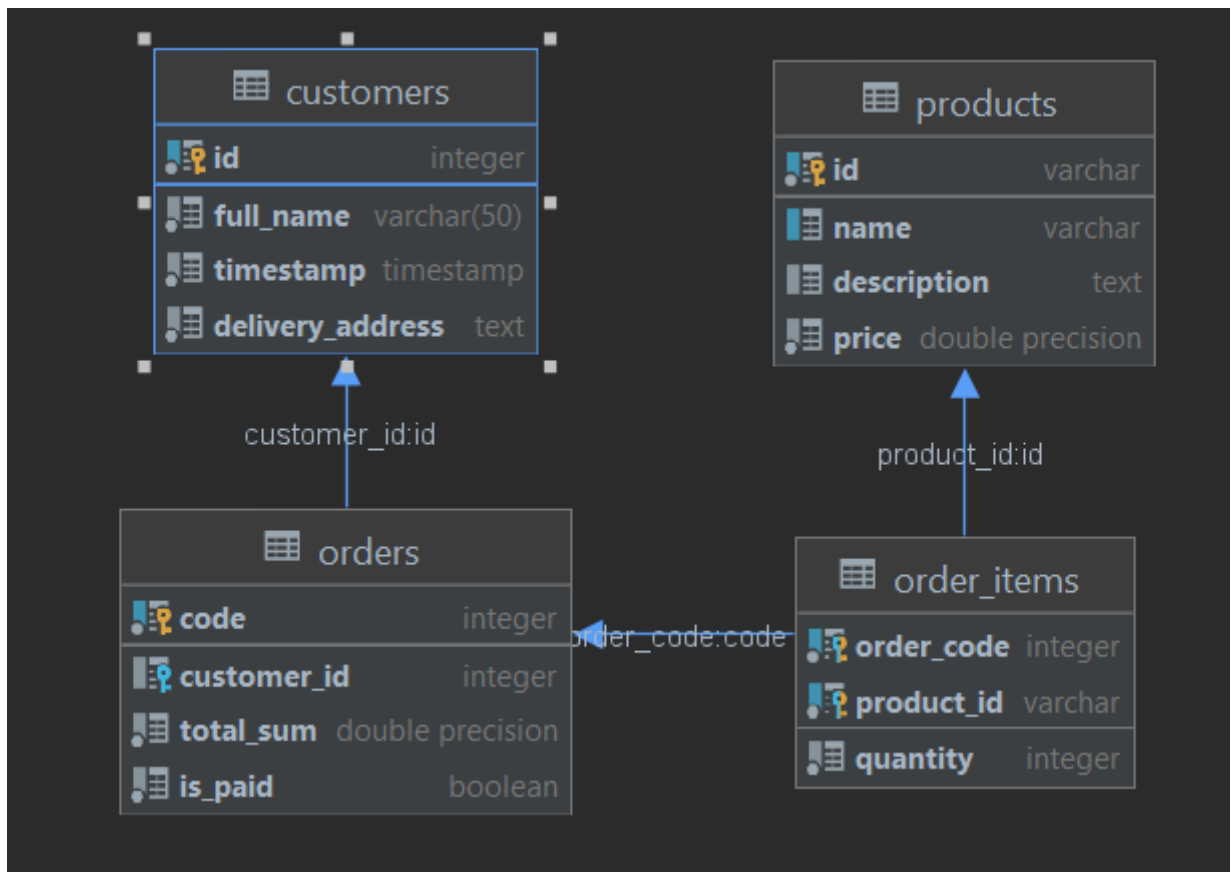
1. DDL is used to define structures and DML is used to manipulate data.

a. CREATE DATABASE name, DROP DATABASE name, ALTER TABLE name ADD COLUMN ____

b. INSERT INTO table VALUES (), INSERT INTO table VALUES () RETURNING *, UPDATE table SET cond. WHERE cond., DELETE FROM table WHERE cond.

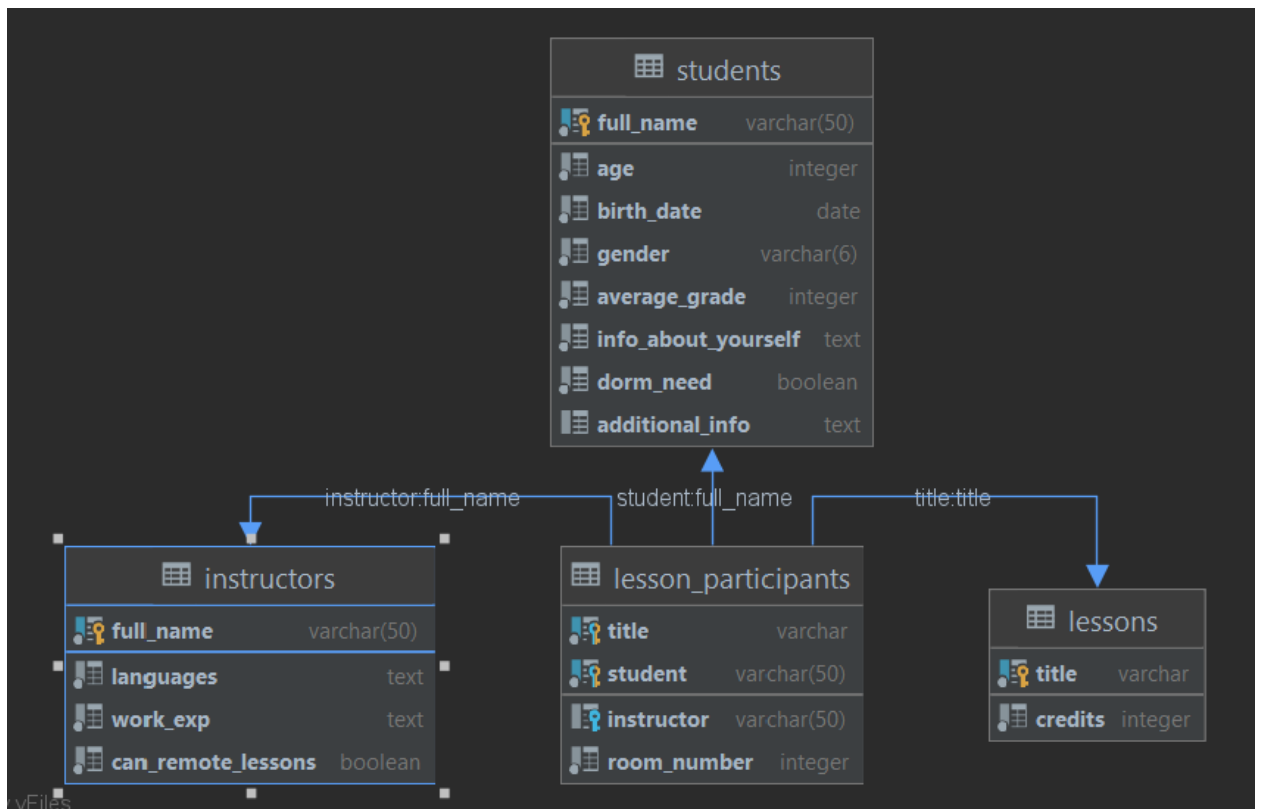
2.

```
CREATE TABLE customers (  
    id integer PRIMARY KEY,  
    full_name varchar(50) NOT NULL ,  
    timestamp timestamp NOT NULL ,  
    delivery_address text NOT NULL  
);  
CREATE TABLE orders (  
    code integer PRIMARY KEY,  
    customer_id integer REFERENCES customers (id),  
    total_sum double precision NOT NULL CHECK (total_sum > 0),  
    is_paid boolean NOT NULL  
);  
CREATE TABLE products (  
    id varchar PRIMARY KEY,  
    name varchar UNIQUE ,  
    description text,  
    price double precision NOT NULL CHECK (price > 0)  
);  
CREATE TABLE order_items (  
    order_code integer REFERENCES orders (code),  
    product_id varchar REFERENCES products (id),  
    quantity integer NOT NULL CHECK (quantity > 0),  
    PRIMARY KEY (order_code, product_id)  
);
```



3.

```
CREATE TABLE students (
  full_name varchar(50) PRIMARY KEY ,
  age integer NOT NULL ,
  birth_date date NOT NULL ,
  gender varchar(6) NOT NULL ,
  average_grade integer NOT NULL ,
  info_about_yourself text NOT NULL ,
  dorm_need boolean NOT NULL ,
  additional_info text
);
CREATE TABLE instructors (
  full_name varchar(50) PRIMARY KEY ,
  languages text NOT NULL ,
  work_exp text NOT NULL ,
  can_remote_lessons boolean NOT NULL
);
CREATE TABLE lessons (
  title varchar PRIMARY KEY,
  credits integer NOT NULL
);
CREATE TABLE lesson_participants
(
  title          varchar          NOT NULL,
  instructor     varchar(50) REFERENCES instructors (full_name),
  student        varchar(50) NOT NULL,
  room_number    integer          NOT NULL,
  PRIMARY KEY (title, student),
  FOREIGN KEY (title) REFERENCES lessons (title),
  FOREIGN KEY (student) REFERENCES students (full_name)
);
```



4.

```

INSERT INTO customers VALUES (1, 'Tastybay Erasy1', current_timestamp,
'Almaty, Qara Su');
INSERT INTO orders VALUES (10, 1, 100.00, True);
INSERT INTO products VALUES (100, 'Product1', 'It is indeed product1',
100.00);
INSERT INTO order_items VALUES (10, 100, 1);

UPDATE customers SET timestamp = current_timestamp WHERE id = 1;

DELETE FROM order_items WHERE order_code = 10;
  
```