1.

DDL – creating data and modifying the structure of objects in database.

DML – manipulating the data inside database

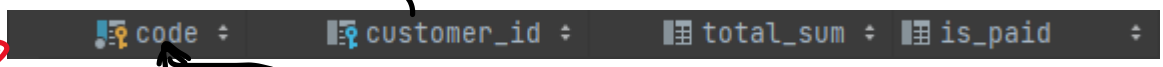
a) At least 3 DDL commands:
   rename
   CREATE
   Alter
   Drop
b) At least 4 DML commands:
   INSERT into
   DELETE from
   UPDATE table
   SELECT table

2.

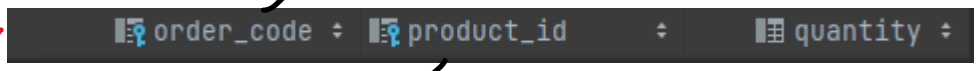
```
create table customers(
    id integer primary key,
    full_name varchar(50),
    timestamp timestamp with time zone,
    delivery_address text
);

create table products(
    id varchar primary key,
    name varchar,
    description text,
    price double precision
);

create table orders(
    code integer primary key,
    customer_id integer,
    total_sum double precision,
    is_paid boolean,
    foreign key (customer_id) references customers(id)
);

create table order_items(
    order_code integer,
    product_id varchar,
    quantity integer,
    foreign key (product_id) references products(id),
    foreign key (order_code) references orders(code)
);

select * from customers;
select * from orders;
select * from order_items;
select * from products;
```

Customers:

Orders:



Order_items:

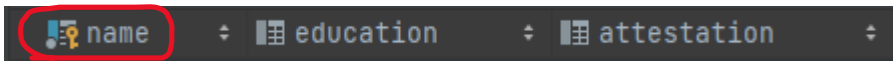


Products:

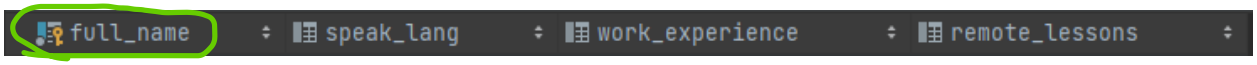
3.

```sql
create table info_student(
    name varchar primary key ,
    education text,
    attestation text
);

create table instuctors(
    full_name varchar primary key,
    speak_lang varchar(2),
    work_experience text,
    remote_lessons boolean
);

create table students(
    full_name varchar primary key ,
    age integer,
    birth_date date,
    gender varchar(6),
    average_grade smallint,
    information_about_yourself varchar,
    needed_dormitory boolean,
    foreign key (information_about_yourself) references info_student(name)
);

create table a_lesson_participants(
    lesson_title text,
    teaching_instructor varchar,
    studying_student varchar,
    room_number int,
    foreign key (teaching_instructor) references instuctors(full_name),
    foreign key (studying_student) references students(full_name)
);

select * from info_student;
select * from instuctors;
select * from students;
select * from a_lesson_participants;
```

Info_student (atomic):



Instructors:



Students:

A_lesson_participants:

4.

Insertion :

```
INSERT INTO products(id, name, description, price) values ('TV', 'LG',
'1960*1080', '59.99');
select * from
            products;
```

	id	name	description	price
1	TV	LG	1960*1080	59.99

Update:

```
Update products
set price = 69.99
where id = 'TV';
```

	id	name	description	price
1	TV	LG	1960*1080	69.99

Deletion:

```
INSERT INTO products(id, name, description, price) values ('car', 'McLaren',
'Спер пупер автомобиль', '99999.99');
select * from
            products;
```

	id	name	description	price
1	TV	LG	1960*1080	69.99
2	car	McLaren	Спер пупер автомоби…	99999.99

```
delete from products
where name = 'McLaren';
```

	id	name	description	price
1	TV	LG	1960*1080	69.99