Laboratory work 2.

Task 1.

DDL is a computer language used to create and modify the structure of database objects in a database.

DDL commands:

- CREATE - to create a new table or database.
- DROP - to drop a table or database.
- RENAME - to rename a table.
- ALTER - for alteration. (add/drop constraint, add/drop column, set/drop default, e.c.).

DML is a computer language used to interact with a database by deleting, inserting, retrieving, or updating data in the database.

DML commands:

- INSERT - to insert a new row.
- UPDATE - to update an existing row.
- DELETE - to delete a row.
- MERGE - for merging two rows or two tables.

Task 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,
    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 not null,
    description text,
    price double precision not null check ( price > 0 )
);


create table order_items(
    order_code integer references orders,
    product id varchar references products,
    quantity integer not null check ( quantity > 0 ),
    primary key ( order_code, product_id )
)
```

Task 3.

a)

```
create table students(
    full_name text primary key ,
    age integer not null,
    birth_day date not null,
    gender varchar not null,
    average_grade numeric(3,2) not null,
    inf_about_yourself text not null,
    dormitory boolean not null,
    add_inf text
);
```

b)

```
create table instructor(
    full_name text primary key,
    speaking_lang varchar not null,
    work_experience integer not null check ( work_experience>0 ),
    remote_lesson boolean not null
);
```

c)

```
create table lesson_participants(
    lesson title varchar(20) primary key,
    teaching_instructor text not null references instructor,
    studing_student text not null references students,
```

```
    room_number integer not null check ( room_number>0 )
);
```

Task 4.

```
insert into products(id, name, description, price) values
('2swd54','apple','swdwdwdwqwdqwd',420);
insert into products values ('4dwq55','orange','ewdwedwdw',650);
insert into products values ('5wew55','banana',null,650);

update products set name='apple_update' where name='apple';
update products set description='no info' where description is null;

delete from products where description='no info';
delete from products where price>600;
```