Laboratory work 2

1. • Data-definition language (DDL). The SQL DDL provides commands for defining relation schemas, deleting relations, and modifying relation schemas. All the command of DDL are auto-committed that means it permanently save all the changes in the database

   • Data-manipulation language (DML). The SQL DML provides the ability to query information from the database and to insert tuples into, delete tuples from, and modify tuples in the database. The command of DML is not auto-committed that means it can't permanently save all the changes in the database. They can be rollback.

   a) create table students
      (ID varchar(5),
      name varchar (20),
      faculty varchar (15),
      year numeric (12,2),
      primary key (ID);'

      alter table students drop year;

      alter table students add gpa numeric;

      drop table students;

   b) insert into students (id, name, faculty, gpa)
      values ('20BD030327', 'student 1', 'FIT', 3.9);

      delete from students
      where ID='20BD030327';

      select * from students;

      select name from students
      where faculty='FIT';

      update students
      set gpa='3.3'
      where name='student 1';

2. create table customers (
      id integer,
      full_name varchar(50) NOT NULL,
      timestamp timestamp NOT NULL,
      delivery_address text NOT NULL,
      primary key (id)
   );
   create table products (
      id varchar NOT NULL,
      name varchar NOT NULL,
      description text,
      price double precision NOT NULL check(price>0),
      primary key (id)
   );

```
create table orders (
    code integer NOT NULL,
    customer_id integer,
    total_sum double precision NOT NULL check(total_sum>0),
    is_paid boolean NOT NULL,
    primary key (code),
    foreign key (customer_id) references customers
);
create table order_items (
    order_code integer NOT NULL,
    product_id varchar NOT NULL,
    quantity integer NOT NULL check(quantity>0),
    primary key (order_code, product_id),
    foreign key (order_code) references orders,
    foreign key (product_id) references products
);
```

3.
```
create table students(
        full_name           varchar(50),
        age                 integer,
        birth_date          date,
        gender              varchar(15),
        av_grade            numeric,
        about_yourself      text,
        need_dorm           boolean,
        add_inf             text
);
create table instructors(
        full_name         varchar(50),
        speaking_lang     varchar(50),
        work_exp          text,
        remote_lessons    boolean
);
Create table attendance(
        title                varchar,
        teacher              varchar(50),
        studing_students     varchar,
        room_numb            integer
);
```

4.
```
insert into customers(id, full_name, timestamp, delivery_address)
values ('1', 'customer 1', current_timestamp, 'Novaya, 7');

insert into orders(code, customer_id, total_sum, is_paid)
values ('1', '1', 55, TRUE);

insert into products(id, name, description, price)
values('01', 'umbrella', 'standart black colored', 30);
```

```
insert into order_items ( order_code, product_id, quantity)
values ('1', '01', '10');

update customers
set full_name=’customer 2’
where id=1;

delete from order_items
where product_id='01';
```