Lab 2 by Imanbay Amina

1. DDL is used to define data structures (basically attributes), whilst DML is used to manipulate data itself (basically tuples).

A) create, alter, drop
B) select, insert, update, delete

2.

```
create table customers(
id int not null,
full_name varchar(50) not null,
timestamp timestamp not null,
delivery_adress 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 int not null,
customer_id int,
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 int not null,
product_id varchar not null,
quantity int not null check (quantity>0),
primary key(order_code, product_id),
foreign key (order_code) references orders,
foreign key (product_id) references products);
```

3.

A)

```
create table students(
id int not null,
full_name varchar(50) not null,
```

```
age int not null,
birth_date date not null,
gender char(1) not null,
average_grade double precision not null,
info_student text,
need_dormitory char(1) not null,
add_info text
primary key (id));
```

B)

```
create table instructors(
id int not null,
full_name varchar(50) not null,
work_exp text,
remote_lessons char(1) not null,
primary key (id) );

create table languages(
instructor_id int not null,
language_name varchar not null,
primary key(instructor_id, language_name),
foreign key (instructor_id) references instructors);
```

C)

```
create table lesson_participants(
lesson varchar not null,
instructor_id int not null,
room_num int not null,
primary key(lesson,instructor_id),
foreign key (instructor_id) references instructors);

create table studying_students(
student_id int not null,
lesson varchar not null,
instructor_id int not null,
primary key(lesson, student_id),
foreign key(lesson,instructor_id) references lesson_participants,
foreign key(student_id) references students);
```

4.

```
insert into products values ( "7724", "nutmix", "mix of chocolate and nuts",
"1420");

update products set price = "1580" where id="7724";
```

```
delete from products where name="nutmix";
```