1. DML and DDL

DML: SELECT, INSERT, UPDATE, DELETE DDL: CREATE, ALTER, DROP

```
--DML examples;
select * from customers;
insert into customers(id, full_name) values(1, 'Erzhan');
update customers set full_name='Kanat' where full_name='Erzan';
delete from customers where full_name='Kanat';
```

```
--DDL examples;
create table customers(
    id int unique ,
    full_name varchar(50) not null,
    timestamp timestamp not null,
    delivery_address text not null ,
    primary key (id)
);
drop table customers;
alter table customers drop column email;
alter table customers add column email;
```

2.

```
create table customers(
    id int,
    full_name varchar(50) not null,
    timestamp timestamp not null,
    delivery_address text not null ,
    primary key (id)
);
create table products(
    id varchar(40),
    name varchar(40) unique not null,
    description text,
    price double precision not null check ( price > 0 ),
    primary key (id)
);
create table orders(
```

```
    code int,
    customer_id int references customers(id),
    total_sum double precision not null check ( total_sum > 0 ),
    is_paid bool not null,
    primary key (code)
);

create table order_items(
    order_code int references orders(code),
    product_id varchar references products(id),
    quantity int not null check ( quantity > 0 ),
    primary key (order_code,product_id)
);


insert into customers(id, full_name, timestamp, delivery_address) VALUES (1, 'Arman', '200
8-01-01 00:00:01', 'Kazybek street, 175');
insert into customers(id, full_name, timestamp, delivery_address) VALUES (2, 'Abubakir', '200
8-02-04 00:40:01', 'Kazybek street, 180');
insert into orders(code, customer_id, total_sum, is_paid) values (2, 2, 50.5, true);
insert into products(id, name, description, price) values (1, 'apple', 'delicious', 81.9);
insert into order_items(order_code, product_id, quantity) VALUES (2, 1, 1000);

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

3.

```
create table students(
    full_name varchar(50) ,
    age int check(age > 0),
    birthdate date not null,
    gender varchar(10) not null,
    average_grade double precision check (average_grade >= 0),
    information text,
    dormitory boolean not null,
    additional_info text,
    primary key (full_name)
);

create table instructor(
    full_name varchar(50),
    language varchar(20) not null,
    experience int check ( experience >=0 ),
    remote_possibility boolean not null,
    primary key (full_name)
);

create table participants(
```

```
    lesson_title varchar(100) not null,
    instructor varchar(50) not null references instructor(full_name),
    student varchar(50) not null references students(full_name),
    room_number int check ( room_number > 0)
);


insert into students(full_name, age, birthdate, gender, average_grade, dormitory, addition
al_info) VALUES ('Arman S.', 18,  '1992-01-09', 'Snake', 4.32, true, 'No matter');

select * from students;
insert into instructor(full_name, language, experience, remote_possibility) values ('Kanat
K.', 'english', 100, false);
select * from instructor;

insert into participants(lesson_title, instructor, student, room_number) values('Databas
e', 'Kanat K.', 'Arman S.', 312);
select * from participants;
delete from participants where instructor='Kanat K.';


update instructor set language='russian' where language='english';
```

4.

```
insert into products(id, name, description, price) values (1, 'apple', 'delicious', 81.9);
update customers set id=4 where id=5;
delete from customers where full_name='Kanat';
```