

1. DDL is a declarative method, and DML is an imperative method.

Important DDL commands are: 1) CREATE, 2) DROP, 3) ALTER

Important DML commands are: 1) INSERT, 2) DELETE, 3) UPDATE, 4) SELECT.

The DDL defines a table column. DML adds or updates a row of tables. However, unlike DDL, DML can be used to insert, delete, restore and modify data, and not just to specify them. DDL and DML are two types of database languages. They are called sublanguages, because they have fewer features than full-fledged programming languages. Both belong to the family of syntax elements that are mainly used in relation to databases. Both use operators and commands of the Structured Query Language (SQL), which are used to extract and process data in a relational database.

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 products
(
    id            varchar primary key,
    name          varchar unique not null,
    description   text,
    price         double precision not null check (price > 0)
);

create table orders
(
    code          integer primary key,
    customer_id   integer,
    total_sum     double precision not null check (total_sum > 0),
    is_paid       boolean not null,
    foreign key (customer_id) references customers
);

create table order_items
(
    order_code    integer unique,
    product_id    varchar unique,
    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 primary key,
    age                integer not null check(age > 0),
    birth_date         date not null,
    gender             varchar not null,
    average_grade      double precision not null,
    information text not null,
    need_dorm          boolean not null,
    additional_info    text
);

insert into students values ('Aray Temirkhan', 18, '29-09-2003',
'female', 4.00, 'she loves to walk in the rain', false);

create table instructor
(
    full_name          varchar primary key,
    speaking_languages varchar not null,
    work_experience     integer not null,
    possibility_of_having_remote_lessons boolean not null
);

insert into instructor values ('Amira', 'rus, eng', 16, false);
insert into instructor values ('Miras', 'rus, eng, kz', 21,
true);

create table lessons
(
    lesson_name        varchar,
    full_name          varchar,
    room_number        integer not null check (room_number > 0
and room_number < 315),
    primary key (lesson_name, full_name),
);

insert into lessons values ('calculus', 'Marat N', 214);
insert into lessons values ('databases', 'Aibek K', 145);
```

4.

```
insert into customers(full_name, timestamp, delivery_address)
values('Aray Temirkhan', '2021-09-23 12:22:35', 'mkrn.Kairat
177');
update customers set delivery_address = 'mkrn.Kairat 217' where
id = 2;
delete from customers where id = 2;
```

