Bokeikhan Kazybek Databases Lab2

1. DML and DDL
DML: SELECT, IINSERT, UPDATE, DELETE
DDL: CREATE, ALTER, DROP
DDL (data definition language) describes database structure
DML (data manipulation language) works with data

a) CREATE DATABASE aa;
DROP DATABASE j_example;
CREATE TABLE bb(
Id integer, name VARCHAR(255);

);

ALTER TABLE bb ADD COLUMN firstname VARCHAR(255);

b) select * from bb;
INSERT INTO bb VALUES(200000, 'Kazybek', 'kazi');
DELETE FROM bb WHERE name='Kazybek';
UPDATE bb SET id = 15354312 WHERE name = 'Kazybek';

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(id),
  total_sum double precision NOT NULL CHECK (total_sum > 0),
  is_paid bool 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(code),
  product_id varchar references products(id),
```

```
 quantity integer NOT NULL CHECK ( quantity > 0 ),
 PRIMARY KEY (order_code, product_id)
);
create table students(
   full_name varchar PRIMARY KEY,
   birt_date date NOT NULL,
   age integer NOT NULL CHECK (age > 0),
   average_grade double precision NOT NULL CHECK (average_grade> 0),
   information text NOT NULL,
   need_dormitory boolean NOT NULL,
   additional_info text NOT NULL
);
create table instructors(
 full_name varchar PRIMARY KEY,
 speaking_language varchar NOT NULL,
 work_experience integer NOT NULL CHECK ( work_experience >= 0),
 remote_possibility boolean NOT NULL
);
create table lessen_participants(
 lesson_title varchar NOT NULL,
 instructor varchar(50) not null references instructors(full_name),
 student varchar(50) NOT NULL references students (full_name),
 room_number int NOT NULL CHECK (room_number > 0)
);
```

3. a)

```
create table students(
        full_name varchar PRIMARY KEY,
        birt_date date NOT NULL,
        age integer NOT NULL CHECK (age > 0),
        average_grade double precision NOT NULL CHECK ( average >= 0),
        information text NOT NULL,
        need_dormitory bolean NOT NULL,
        additional_info text NOT NULL
 );
```

b)

```
create table instructors(
        full_name varchar PRIMARY KEY,
        speaking_language varchar NOT NULL,
        work_experience integer NOT NULL CHECK ( work_experience >= 0),
        remote_possibility bolean NOT NULL
 );
```

c)

```
create table lesseon participants(
        lesson_title varchar NOT NULL,
        instructor varchar(50) not null references instructor (fullname),
        student varchar(50) NOT NULL references students (fullname),
        room_number int NOT NULL CHECK (room_number > 0)
 );
```

4.

```
INSERT INTO products(id, name, description, price) values (2,'pineapple','daddy', 1250);
UPDATE products SET name = 'durak' WHERE id = '2';
DELETE from products WHERE name = 'pineapple';
```