

Databases
Laboratory work 1
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-- Task 1 --
-- DDL commands:
-- • CREATE TABLE
-- • DROP TABLE
-- DML commands:
-- • INSERT
-- • SELECT
-- • UPDATE
-- • DELETE

-- Task 2 --
CREATE DATABASE Shop
with
OWNER = postgres;

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,
    total_sum DOUBLE PRECISION not null CHECK (total_sum>0),
    is_paid BOOLEAN not null,
    FOREIGN KEY (customer_id )REFERENCES customers
);

CREATE TABLE products(
    ID VARCHAR,
    name VARCHAR UNIQUE not null ,
    description TEXT,
    price DOUBLE PRECISION not null CHECK (price>0)
);

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
);

-- Task 3 --
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 text NOT NULL CHECK,
    remote_possibility boolean NOT NULL
```

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);  
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),  
    FOREIGN KEY (instructor) references instructors,  
    foreign key (student) references instructors  
);  
  
-- task 4 --  
INSERT INTO customers(id, full_name, timestamp, delivery_address)  
VALUES (1, 'John Example', 2021-08-09, 'Makataeva, 25');  
UPDATE customers SET delivery_address = 'Seifulina, 135'  
WHERE id = 2;  
DELETE from customers  
WHERE full_name = 'John Example'
```