LAB 2

-- 1. Create Tables

CREATE TABLE Airline\_info (

    airline\_id INT PRIMARY KEY,

    airline\_code VARCHAR(30) NOT NULL,

    airline\_name VARCHAR(50) NOT NULL,

    airline\_country VARCHAR(50) NOT NULL,

    created\_at TIMESTAMP NOT NULL,

    updated\_at TIMESTAMP NOT NULL,

    info VARCHAR(50) NOT NULL

);

CREATE TABLE Airport (

    airport\_id INT PRIMARY KEY,

    airport\_name VARCHAR(50) NOT NULL,

    country VARCHAR(50) NOT NULL,

    state VARCHAR(50) NOT NULL,

    city VARCHAR(50) NOT NULL,

    created\_at TIMESTAMP NOT NULL,

    updated\_at TIMESTAMP NOT NULL

);

CREATE TABLE Passengers (

    passenger\_id INT PRIMARY KEY,

    first\_name VARCHAR(50) NOT NULL,

    last\_name VARCHAR(50) NOT NULL,

    date\_of\_birth DATE NOT NULL,

    gender VARCHAR(50) NOT NULL,

    country\_of\_citizenship VARCHAR(50) NOT NULL,

    country\_of\_residence VARCHAR(50) NOT NULL,

    passport\_number VARCHAR(20) NOT NULL,

    created\_at TIMESTAMP NOT NULL,

    updated\_at TIMESTAMP NOT NULL

);

CREATE TABLE Booking (

    booking\_id INT PRIMARY KEY,

    flight\_id INT NOT NULL,

    passenger\_id INT NOT NULL,

    booking\_platform VARCHAR(50) NOT NULL,

    created\_at TIMESTAMP NOT NULL,

    updated\_at TIMESTAMP NOT NULL,

    status VARCHAR(50) NOT NULL,

    price DECIMAL(7,2) NOT NULL

);

CREATE TABLE Flights (

    flight\_id INT PRIMARY KEY,

    sch\_departure\_time TIMESTAMP NOT NULL,

    sch\_arrival\_time TIMESTAMP NOT NULL,

    departing\_airport\_id INT NOT NULL,

    arriving\_airport\_id INT NOT NULL,

    departing\_gate VARCHAR(50) NOT NULL,

    arriving\_gate VARCHAR(50) NOT NULL,

    airline\_id INT NOT NULL,

    act\_departure\_time TIMESTAMP NOT NULL,

    act\_arrival\_time TIMESTAMP NOT NULL,

    created\_at TIMESTAMP NOT NULL,

    updated\_at TIMESTAMP NOT NULL

);

CREATE TABLE Baggage\_check (

    baggage\_check\_id INT PRIMARY KEY,

    check\_result VARCHAR(50) NOT NULL,

    created\_at TIMESTAMP NOT NULL,

    updated\_at TIMESTAMP NOT NULL,

    booking\_id INT NOT NULL,

    passenger\_id INT NOT NULL

);

CREATE TABLE Baggage (

    baggage\_id INT PRIMARY KEY,

    weight\_in\_kg DECIMAL(4,2) NOT NULL,

    created\_at TIMESTAMP NOT NULL,

    updated\_at TIMESTAMP NOT NULL,

    booking\_id INT NOT NULL

);

CREATE TABLE Boarding\_pass (

    boarding\_pass\_id INT PRIMARY KEY,

    booking\_id INT NOT NULL,

    seat VARCHAR(50) NOT NULL,

    boarding\_time TIMESTAMP NOT NULL,

    created\_at TIMESTAMP NOT NULL,

    updated\_at TIMESTAMP NOT NULL

);

CREATE TABLE Booking\_flight (

    booking\_flight\_id INT PRIMARY KEY,

    booking\_id INT NOT NULL,

    flight\_id INT NOT NULL,

    created\_at TIMESTAMP NOT NULL,

    updated\_at TIMESTAMP NOT NULL

);

CREATE TABLE Security\_check (

    security\_check\_id INT PRIMARY KEY,

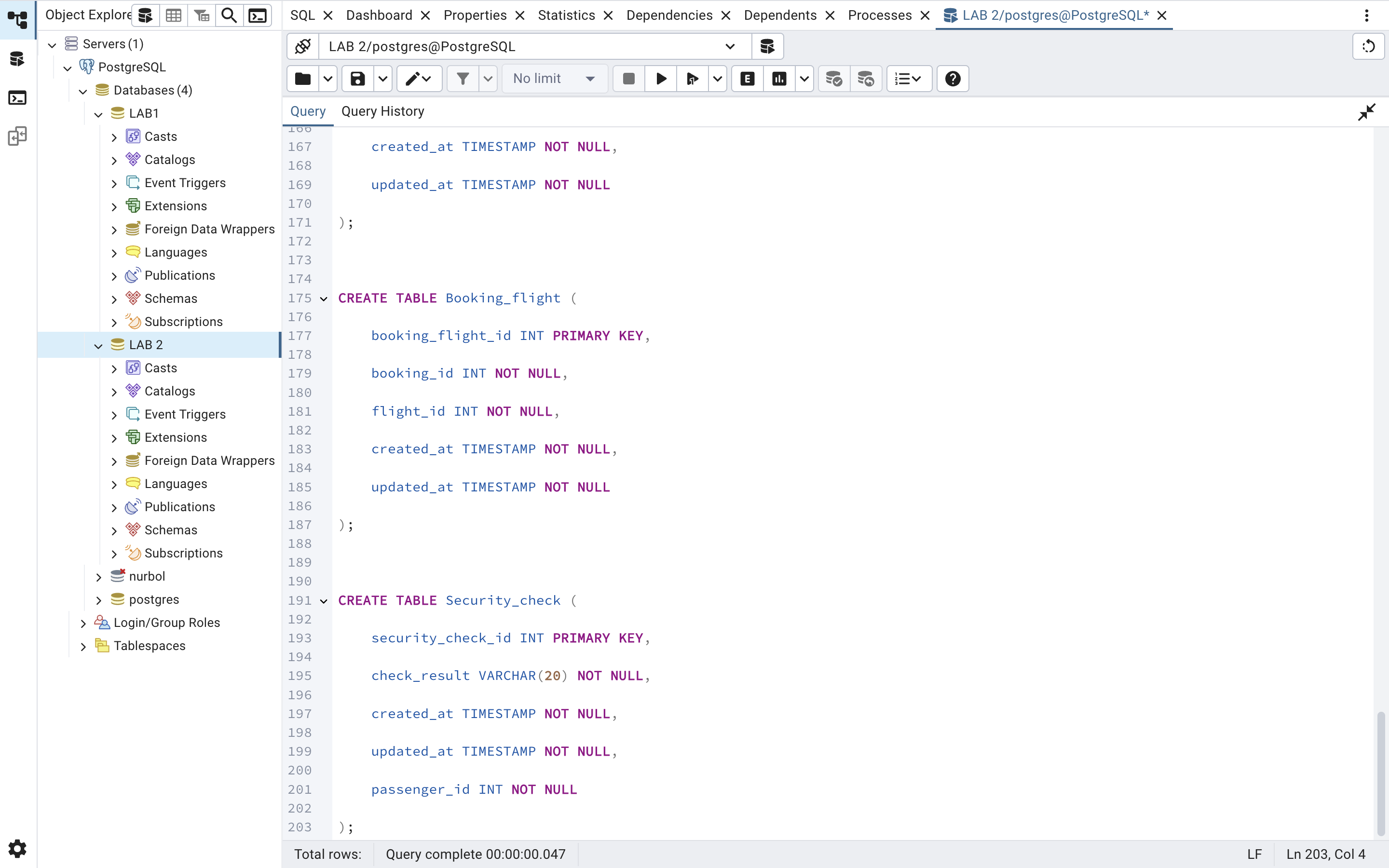
    check\_result VARCHAR(20) NOT NULL,

    created\_at TIMESTAMP NOT NULL,

    updated\_at TIMESTAMP NOT NULL,

    passenger\_id INT NOT NULL

);



-- 5. Rename airline\_info to airline

ALTER TABLE Airline\_info RENAME TO Airline;

-- 6. Rename column price → ticket\_price

ALTER TABLE Booking RENAME COLUMN price TO ticket\_price;

-- 7. Change data type departing\_gate to text

ALTER TABLE Flights ALTER COLUMN departing\_gate TYPE TEXT;

-- 8. Drop column info

ALTER TABLE Airline DROP COLUMN info;

Изображение выглядит как текст, снимок экрана

Автоматически созданное описание

Изображение выглядит как снимок экрана, текст, программное обеспечение, Значок на компьютере

Автоматически созданное описание

-- 9. Relationships

ALTER TABLE Security\_check

    ADD CONSTRAINT fk\_passenger\_sec FOREIGN KEY (passenger\_id) REFERENCES Passengers(passenger\_id);

ALTER TABLE Booking

    ADD CONSTRAINT fk\_passenger\_booking FOREIGN KEY (passenger\_id) REFERENCES Passengers(passenger\_id);

ALTER TABLE Baggage\_check

    ADD CONSTRAINT fk\_passenger\_baggage FOREIGN KEY (passenger\_id) REFERENCES Passengers(passenger\_id),

    ADD CONSTRAINT fk\_booking\_baggage FOREIGN KEY (booking\_id) REFERENCES Booking(booking\_id);

ALTER TABLE Baggage

    ADD CONSTRAINT fk\_booking\_bagg FOREIGN KEY (booking\_id) REFERENCES Booking(booking\_id);

ALTER TABLE Boarding\_pass

    ADD CONSTRAINT fk\_booking\_boarding FOREIGN KEY (booking\_id) REFERENCES Booking(booking\_id);

ALTER TABLE Booking\_flight

    ADD CONSTRAINT fk\_booking\_flight FOREIGN KEY (booking\_id) REFERENCES Booking(booking\_id),

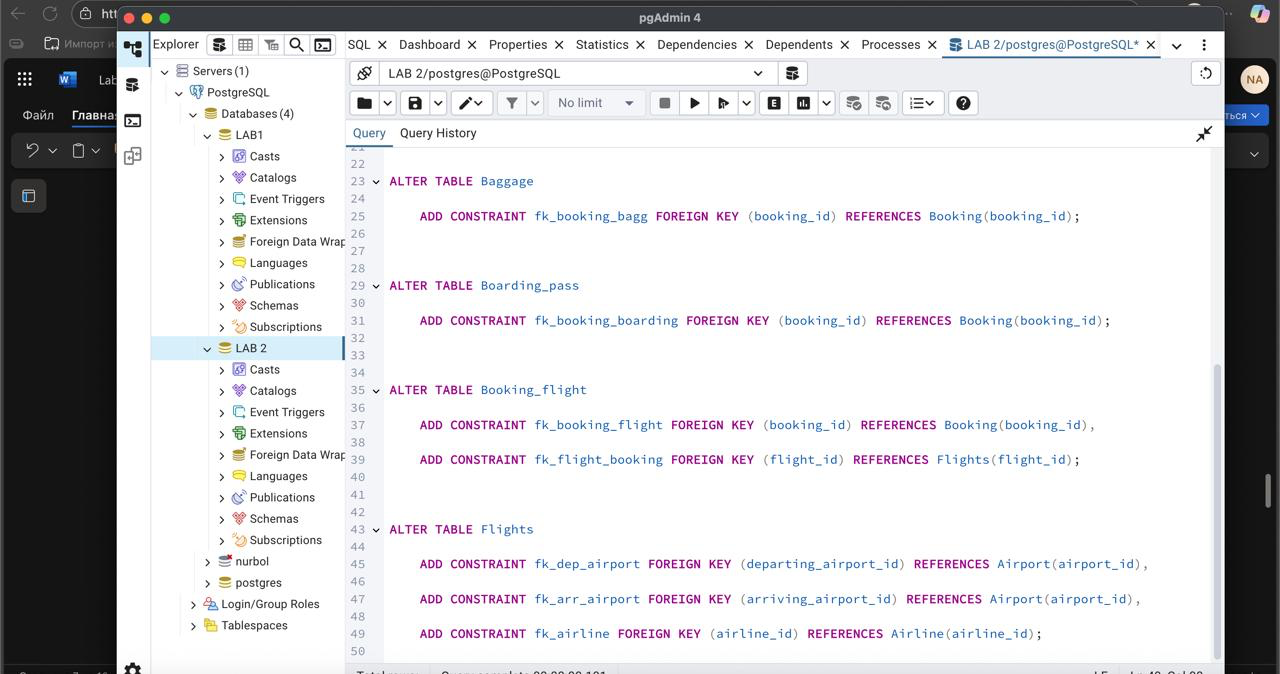
    ADD CONSTRAINT fk\_flight\_booking FOREIGN KEY (flight\_id) REFERENCES Flights(flight\_id);

ALTER TABLE Flights

    ADD CONSTRAINT fk\_dep\_airport FOREIGN KEY (departing\_airport\_id) REFERENCES Airport(airport\_id),

    ADD CONSTRAINT fk\_arr\_airport FOREIGN KEY (arriving\_airport\_id) REFERENCES Airport(airport\_id),

    ADD CONSTRAINT fk\_airline FOREIGN KEY (airline\_id) REFERENCES Airline(airline\_id);



DML

-- 1. Insert 200 random rows into Airport (example for PostgreSQL)

INSERT INTO Airport (airport\_id, airport\_name, country, state, city, created\_at, updated\_at)

SELECT g, 'Airport\_' || g, 'Country\_' || (g%10), 'State\_' || (g%5), 'City\_' || (g%20),

       NOW(), NOW()

FROM generate\_series(1,200) g;

-- 2. Add new airline

INSERT INTO Airline (airline\_id, airline\_code, airline\_name, airline\_country, created\_at, updated\_at)

VALUES (1, 'KZ001', 'KazAir', 'Kazakhstan', NOW(), NOW());

-- 3. Update country

UPDATE Airline SET airline\_country = 'Turkey' WHERE airline\_name = 'KazAir';

-- 4. Insert 3 airlines at once

INSERT INTO Airline (airline\_id, airline\_code, airline\_name, airline\_country, created\_at, updated\_at) VALUES

(2, 'FR001', 'AirEasy', 'France', NOW(), NOW()),

(3, 'BR001', 'FlyHigh', 'Brazil', NOW(), NOW()),

(4, 'PL001', 'FlyFly', 'Poland', NOW(), NOW());

-- 5. Delete flights arriving in 2024

DELETE FROM Flights WHERE EXTRACT(YEAR FROM sch\_arrival\_time) = 2024;

-- 6. Increase ticket price by 15%

UPDATE Booking SET ticket\_price = ticket\_price \* 1.15;

-- 7. Delete tickets cheaper than 10000

DELETE FROM Booking WHERE ticket\_price < 10000;

