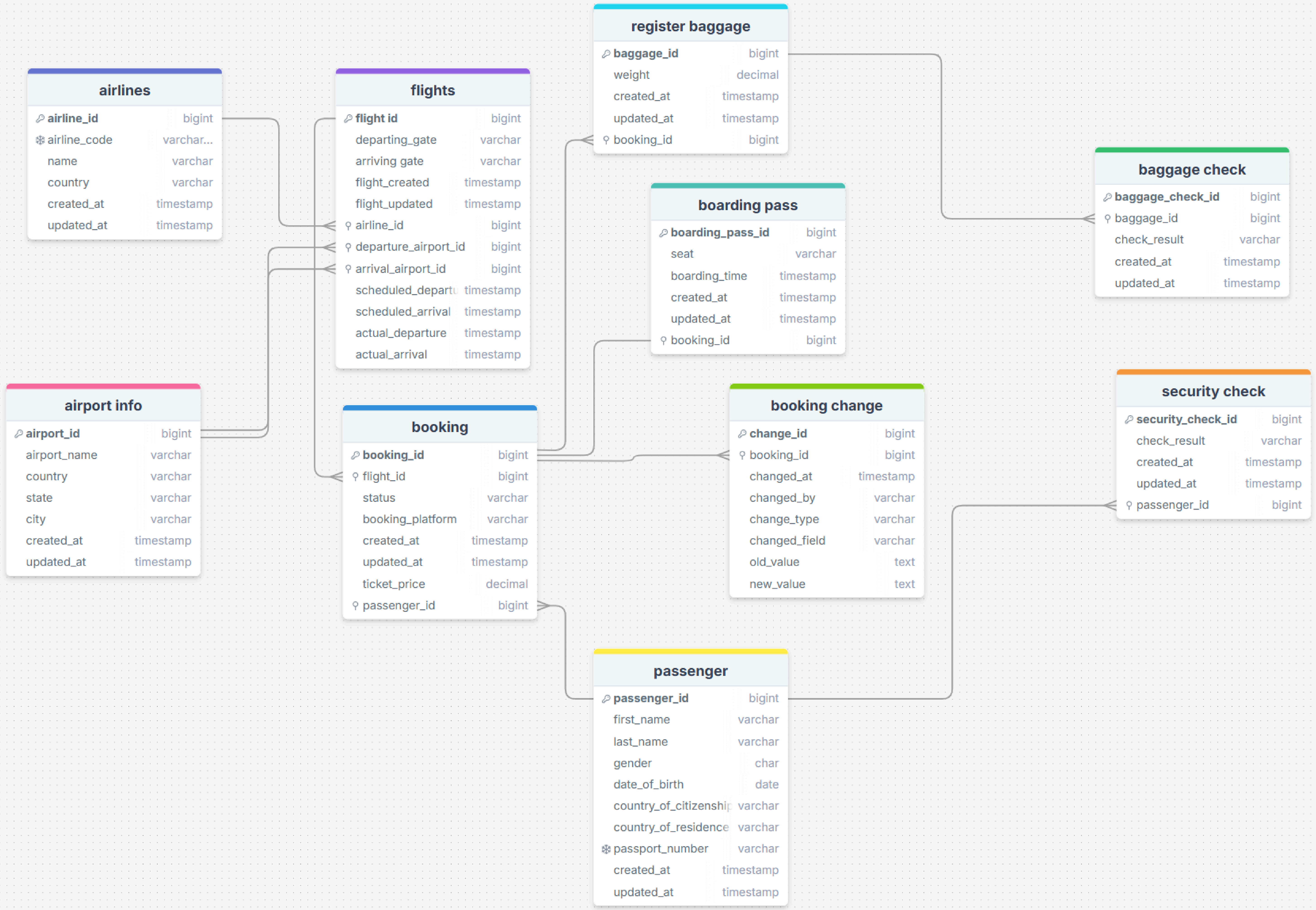
lab #1

Toktarova Amina



airlines

airline_id	bigint
airline_code	varchar...
name	varchar
country	varchar
created_at	timestamp
updated_at	timestamp

flights

flight id	bigint
departing_gate	varchar
arriving gate	varchar
flight_created	timestamp
flight_updated	timestamp
airline_id	bigint
departure_airport_id	bigint
arrival_airport_id	bigint
scheduled_departu	timestamp
scheduled_arrival	timestamp
actual_departure	timestamp
actual_arrival	timestamp

register baggage

baggage_id	bigint
weight	decimal
created_at	timestamp
updated_at	timestamp
booking_id	bigint

boarding pass

boarding_pass_id	bigint
seat	varchar
boarding_time	timestamp
created_at	timestamp
updated_at	timestamp
booking_id	bigint

baggage check

baggage_check_id	bigint
baggage_id	bigint
check_result	varchar
created_at	timestamp
updated_at	timestamp

airport info

airport_id	bigint
airport_name	varchar
country	varchar
state	varchar
city	varchar
created_at	timestamp
updated_at	timestamp

booking

booking_id	bigint
flight_id	bigint
status	varchar
booking_platform	varchar
created_at	timestamp
updated_at	timestamp
ticket_price	decimal
passenger_id	bigint

booking change

change_id	bigint
booking_id	bigint
changed_at	timestamp
changed_by	varchar
change_type	varchar
changed_field	varchar
old_value	text
new_value	text

security check

security_check_id	bigint
check_result	varchar
created_at	timestamp
updated_at	timestamp
passenger_id	bigint

passenger

passenger_id	bigint
first_name	varchar
last_name	varchar
gender	char
date_of_birth	date
country_of_citizenshi	varchar
country_of_residence	varchar
passport_number	varchar
created_at	timestamp
updated_at	timestamp

Entities:

- airlines
- airport info
- flights
- booking
- register baggage
- boarding pass
- booking change
- passenger
- baggage check
- security check

Required attributes for each entitie:

Airport info: airport_id*(PK)*, airport_name, country, state, city, created_at, updated_at
Airlines: airline_id*(PK)*, airline_code*(U)*, name, country, created_at, updated_at
Flights: flight_id*(PK)*, departing_gate, arriving_gate, flight_created, flight_updated, airline_id*(FK)*, departure_airport_id*(FK)*, arrival_airport_id*(FK)*, scheduled_departure, scheduled_arrival, actual_departure, actual_arrival
Booking: booking_id*(PK)*, flight_id*(FK)*, status, booking_platform, created_at, updated_at, ticket_price, passenger_id*(FK)*
Passenger: passenger_id*(PK)*, first_name, last_name, gender, date_of_birth, country_of_citizenship, country_of_residence, passport_number*(U)*, created_at, updated_at
Register baggage: baggage_id*(PK)*, weight, created_at, updated_at, booking_id*(FK)*
Baggage check: baggage_check_id*(PK)*, check_result, created_at, updated_at, baggage_id*(FK)*
Boarding pass: boarding_pass_id*(PK)*, seat, boarding_time, created_at, updated_at, booking_id*(FK)*
Booking change: change_id*(PK)*, booking_id*(FK)*, changed_by, change_type, changed_field, old_value, new_value, changed_at
Security check: security_check_id*(PK)*, check_result, created_at, updated_at, passenger_id*(FK)*

Relations

1) airlines → flights: One-to-Many (airlines:1 → flights:N)
Why: One airline operates many flights; each flight belongs to exactly one airline.

2) airport_info (DEPARTURE) → flights: One-to-Many (airport:1 → flights:N)
Why: One airport can be the departure point for many flights; a flight has exactly one departure airport.

3) airport_info (ARRIVAL) → flights: One-to-Many (airport:1 → flights:N)
Why: One airport receives many flights; a flight has exactly one arrival airport.

4) flights → booking: One-to-Many (flight:1 → booking:N)
Why: A single flight has many independent bookings; each booking is for one specific flight.

5) passenger → booking: One-to-Many (passenger:1 → booking:N)
Why: One passenger can place many bookings over time; each booking belongs to one passenger.

6) booking → booking_change: One-to-Many (booking:1 → change log:N)
Why: A booking can be modified many times; each change entry documents one modification of a single booking.

7) booking → boarding_pass: One-to-One (booking:1 → pass:1)
Why: By business rule, one booking corresponds to exactly one boarding pass (for this model). The UNIQUE on booking_id enforces 1:1.

8) booking → register_baggage: One-to-Many (booking:1 → baggage:N)
Why: One booking can include multiple baggage items; each baggage item is tied to one booking.

9) register_baggage → baggage_check: One-to-Many (baggage:1 → checks:N)
Why: The same bag may pass multiple inspections (initial, secondary, manual); each inspection refers to exactly one bag.

10) passenger → security_check: One-to-Many (passenger:1 → security_checks:N)
Why: A passenger can undergo multiple security screenings (different trips / times); each screening log is for one passenger.