

Database_Lab1

Entities or Tables

- Airport
- Airline
- Flight
- Passenger
- Booking
- BookingChanges
- BoardingPass
- Baggage
- BaggageCheck
- Security

Attributes

Airport:

- airport_id (PK)
- airport_name
- country_id (FK)
- state, city
- created_at, updated_at

Airline:

- airline_id (PK)
- airline_code
- airline_name
- country_id (FK)
- created_at, updated_at

Flight:

- flight_id (PK)
- airline_id (FK)
- departure_airport_id (FK)
- arrival_airport_id (FK)
- departing_gate
- arriving_gate
- scheduled_departure
- actual_departure
- scheduled_arrival
- actual_arrival

- created_at, updated_at

Passenger:

- passenger_id (PK)
- first_name
- last_name
- gender
- date_of_birth
- country_citizenship
- country_residence
- passport_number
- created_at, updated_at

Booking:

- booking_id (PK)
- flight_id (FK)
- passenger_id (FK)
- status
- booking_platform
- ticket
- price
- created_at, updated_at

BookingChanges:

- change_id (PK)
- booking_id (FK)
- changed_at
- changed_by
- old_value
- new_value

BoardingPass:

- boarding_pass_id (PK)
- booking_id (FK)
- seat
- boarding_time
- created_at, updated_at

Baggage:

- baggage_id (PK)
- booking_id (FK)

- weight
- created_at, updated_at

BaggageCheck:

- baggage_check_id (PK)
- booking_id (FK)
- passenger_id (FK)
- results
- created_at, updated_at

SecurityCheck

- security_check_id (PK)
- passenger_id (FK)
- check_results
- created_at, updated_at

Relationships:

- **airports ↔ flights**

- flights.departure_airport_id → airports.airport_id
- flights.arrival_airport_id → airports.airport_id
- 1 → N

- **airlines ↔ flights**

- flights.airline_id → airlines.airline_id
- 1 → N

- **flights ↔ booking**

- booking.flight_id → flights.flight_id
- 1 → N

- **passenger ↔ booking**

- booking.passenger_id → passenger.passenger_id
- 1 → N

- **booking ↔ booking_change**

- booking_change.booking_id → booking.booking_id
- 1 → N

- **booking ↔ boarding_pass**

- $\text{boarding_pass.booking_id} \rightarrow \text{booking.booking_id}$
 $1 \rightarrow 1$

- **booking ↔ baggage**

- $\text{baggage.booking_id} \rightarrow \text{booking.booking_id}$
 $1 \rightarrow N$

- **baggage_check ↔ booking + passenger**

- $\text{baggage_check.booking_id} \rightarrow \text{booking.booking_id}$
- $\text{baggage_check.passenger_id} \rightarrow \text{passenger.passenger_id}$
 $1 \rightarrow N$

- **security_check ↔ passenger**

- $\text{security_check.passenger_id} \rightarrow \text{passenger.passenger_id}$
 $1 \rightarrow N$

- $1 \rightarrow N$ (one-to-many)
- $1 \rightarrow 1$ (one-to-one).

