

# Database\_Lab1

## Entities or Tables

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

## Attributes

### Airport:

- airport\_id (PK)
- airport\_name
- country\_id
- state, city
- created\_at, updated\_at

### Airline:

- airline\_id (PK)
- airline\_code
- airline\_name
- country\_id
- 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).

