



Entities

Airport – Stores data about airports (id, name, country, state, city). One airport can serve as the departure or arrival point for many flights (1→M Flight).

Airline – Stores information about airlines (code, name, country). One airline operates many flights (1→M Flight).

Flight – Contains details of scheduled and actual flights (times, gates). Each flight is linked to one airline and two airports (departure and arrival). One flight can have many bookings (1→M Booking).

Passenger – Stores passenger information (first name, last name, gender, date of birth, citizenship, residence, passport number). One passenger can have many bookings (1→M Booking) and multiple security checks (1→M SecurityCheck).

Booking – Contains booking details (flight, passenger, status, platform, ticket price, timestamps). A booking may have a history of changes (1→M BookingChange), baggage (1→M Baggage), and at most one boarding pass (0..1 BoardingPass, one-to-one).

BookingChange – Records the history of changes to a booking (time, user, old and new values). Each change belongs to exactly one booking (M→1 Booking).

BoardingPass – Represents a boarding pass (seat, boarding time, timestamps). Each booking can have at most one boarding pass (1↔1 Booking). A boarding pass cannot exist without a booking.

Baggage – Stores details about registered baggage (weight, timestamps). Each baggage item belongs to one booking (M→1 Booking). One booking may include multiple baggage items (1→M Baggage).

BaggageCheck – Records results of baggage checks (result, timestamps). Each baggage item can have multiple checks (1→M BaggageCheck).

SecurityCheck – Contains results of passenger security checks (result, timestamps). Each passenger may have multiple checks (1→M SecurityCheck).

Legend

Rectangle – Entity (table)

Underlined attribute – Primary Key (PK)

int FK – Foreign Key (FK)

three lines – Many

Single line – One

Circle – Optional (0..N or 0..1)

Straight line without circle – Mandatory (≥1).