**LAB1**

**Entities and Attributes:**

**1. Airport**

* airport\_id (PK, INT)
* airport\_name (VARCHAR)
* country (VARCHAR)
* state (VARCHAR)
* city (VARCHAR)
* created\_at (TIMESTAMP)
* updated\_at (TIMESTAMP)

**2. Airline**

* airline\_id (PK, INT)
* airline\_code (VARCHAR)
* name (VARCHAR)
* country (VARCHAR)
* created\_at (TIMESTAMP)
* updated\_at (TIMESTAMP)

**3. Flight**

* flight\_id (PK, INT)
* departing\_gate (VARCHAR)
* arriving\_gate (VARCHAR)
* airline\_id (FK → Airline, INT)
* departure\_airport\_id (FK → Airport, INT)
* arrival\_airport\_id (FK → Airport, INT)
* scheduled\_departure\_time (TIMESTAMP)
* scheduled\_arrival\_time (TIMESTAMP)
* actual\_departure\_time (TIMESTAMP)
* actual\_arrival\_time (TIMESTAMP)
* created\_at (TIMESTAMP)
* updated\_at (TIMESTAMP)

**4. Passenger**

* passenger\_id (PK, INT)
* first\_name (VARCHAR)
* last\_name (VARCHAR)
* gender (VARCHAR)
* date\_of\_birth (DATE)
* country\_of\_citizenship (VARCHAR)
* country\_of\_residence (VARCHAR)
* passport\_number (VARCHAR, UNIQUE)
* created\_at (TIMESTAMP)
* updated\_at (TIMESTAMP)

**5. Booking**

* booking\_id (PK, INT)
* flight\_id (FK → Flight, INT)
* passenger\_id (FK → Passenger, INT)
* status (VARCHAR)
* booking\_platform (VARCHAR)
* ticket\_price (DECIMAL (10,2))
* created\_at (TIMESTAMP)
* updated\_at (TIMESTAMP)

**6. BookingChange**

* booking\_change\_id (PK, INT)
* booking\_id (FK → Booking, INT)
* change\_details (TEXT)
* created\_at (TIMESTAMP)
* updated\_at (TIMESTAMP)

**7. BoardingPass**

* boarding\_pass\_id (PK, INT)
* booking\_id (FK → Booking, INT)
* seat (VARCHAR)
* boarding\_time (TIMESTAMP)
* created\_at (TIMESTAMP)
* updated\_at (TIMESTAMP)

**8. Baggage**

* baggage\_id (PK, INT)
* booking\_id (FK → Booking, INT)
* weight\_kg (DECIMAL (5,2))
* created\_at (TIMESTAMP)
* updated\_at (TIMESTAMP)

**9. BaggageCheck**

* baggage\_check\_id (PK, INT)
* baggage\_id (FK → Baggage, INT)
* passenger\_id (FK → Passenger, INT)
* check\_results (VARCHAR)
* created\_at (TIMESTAMP)
* updated\_at (TIMESTAMP)

**10. SecurityCheck**

* security\_check\_id (PK, INT)
* passenger\_id (FK → Passenger, INT)
* check\_results (VARCHAR)
* created\_at (TIMESTAMP)
* updated\_at (TIMESTAMP)

**Relationships:**

1. **Airport – Flight**
   * Airport.airport\_id → Flight.departure\_airport\_id
   * Airport.airport\_id → Flight.arrival\_airport\_id
   * (**1:N**)
2. **Airline – Flight**
   * Airline.airline\_id → Flight.airline\_id
   * (**1:N**)
3. **Flight – Booking**
   * Flight.flight\_id → Booking.flight\_id
   * (**1:N**)
4. **Passenger – Booking**
   * Passenger.passenger\_id → Booking.passenger\_id
   * (**1:N**)
5. **Booking – BookingChange**
   * Booking.booking\_id → BookingChange.booking\_id
   * (**1:N**)
6. **Booking – BoardingPass**
   * Booking.booking\_id → BoardingPass.booking\_id
   * (**1:1**)
7. **Booking – Baggage**
   * Booking.booking\_id → Baggage.booking\_id
   * (**1:N**)
8. **Baggage – BaggageCheck**
   * Baggage.baggage\_id → BaggageCheck.baggage\_id
   * (**1:N**)
9. **Passenger – BaggageCheck**
   * Passenger.passenger\_id → BaggageCheck.passenger\_id
   * (**1:N**)
10. **Passenger – SecurityCheck**

* Passenger.passenger\_id → SecurityCheck.passenger\_id
* (**1:N**)

