



SQL Used

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CREATE TABLE airline (
airline_id INT NOT NULL,
airline_code VARCHAR(30) NOT NULL,
airline_name VARCHAR(50) NOT NULL,
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airline country VARCHAR(50) NOT NULL,
  created_at TIMESTAMP NOT NULL,
  updated at TIMESTAMP NOT NULL,
  info VARCHAR(50) NOT NULL
);
CREATE TABLE airport (
  airport id INT NOT NULL,
  airport name VARCHAR(50) NOT NULL,
  country VARCHAR(50) NOT NULL,
  state VARCHAR(50) NOT NULL,
  city VARCHAR(50) NOT NULL,
  created at TIMESTAMP NOT NULL,
  updated_at TIMESTAMP NOT NULL
);
CREATE TABLE passengers (
  passenger id INT NOT NULL,
  first_name VARCHAR(50) NOT NULL,
  last name VARCHAR(50) NOT NULL,
  date of birth DATE NOT NULL,
  gender VARCHAR(50) NOT NULL,
  country of citizenship VARCHAR(50) NOT NULL,
  country of residence VARCHAR(50) NOT NULL,
  passport_number VARCHAR(20) NOT NULL,
  created at TIMESTAMP NOT NULL,
  updated_at TIMESTAMP NOT NULL
);
CREATE TABLE flights (
  flight id INT NOT NULL,
  sch departure time TIMESTAMP NOT NULL,
  sch arrival time TIMESTAMP NOT NULL,
  departing airport id INT NOT NULL,
  arriving_airport_id INT NOT NULL,
  departing gate VARCHAR(50) NOT NULL,
  arriving_gate VARCHAR(50) NOT NULL,
  airline id INT NOT NULL,
  act_departure_time TIMESTAMP NOT NULL,
  act_arrival_time TIMESTAMP NOT NULL,
  created at TIMESTAMP NOT NULL,
  updated_at TIMESTAMP NOT NULL
);
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CREATE TABLE booking (
  booking_id INT NOT NULL,
  flight id INT NOT NULL,
  passenger id INT NOT NULL,
  booking platform VARCHAR(50) NOT NULL,
  created_at TIMESTAMP NOT NULL,
  updated at TIMESTAMP NOT NULL,
  status VARCHAR(50) NOT NULL,
  price DECIMAL(7,2) NOT NULL
);
CREATE TABLE baggage_check (
  baggage check id INT NOT NULL,
  check_result VARCHAR(50) NOT NULL,
  created_at TIMESTAMP NOT NULL,
  updated_at TIMESTAMP NOT NULL,
  booking_id INT NOT NULL,
  passenger id INT NOT NULL
);
CREATE TABLE baggage (
  baggage_id INT NOT NULL,
  weight in kg DECIMAL(4,2) NOT NULL,
  created at TIMESTAMP NOT NULL,
  updated_at TIMESTAMP NOT NULL,
  booking id INT NOT NULL
);
CREATE TABLE boarding pass (
  boarding_pass_id INT NOT NULL,
  booking id INT NOT NULL,
  seat VARCHAR(50) NOT NULL,
  boarding_time TIMESTAMP NOT NULL,
  created at TIMESTAMP NOT NULL,
  updated at TIMESTAMP NOT NULL
);
CREATE TABLE booking flight (
  booking_flight_id INT NOT NULL,
  booking_id INT NOT NULL,
  flight id INT NOT NULL,
  created_at TIMESTAMP NOT NULL,
  updated at TIMESTAMP NOT NULL
);
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CREATE TABLE security_check (
  security check id INT NOT NULL,
  check result VARCHAR(20) NOT NULL,
  created at TIMESTAMP NOT NULL,
  updated at TIMESTAMP NOT NULL,
  passenger id INT NOT NULL
);
-- Primary Keys
ALTER TABLE airline ADD CONSTRAINT pk airline PRIMARY KEY (airline id);
ALTER TABLE airport ADD CONSTRAINT pk airport PRIMARY KEY (airport id);
ALTER TABLE passengers ADD CONSTRAINT pk passengers PRIMARY KEY (passenger id);
ALTER TABLE flights ADD CONSTRAINT pk flights PRIMARY KEY (flight id);
ALTER TABLE booking ADD CONSTRAINT pk booking PRIMARY KEY (booking id);
ALTER TABLE baggage_check ADD CONSTRAINT pk_baggage_check PRIMARY KEY
(baggage check id);
ALTER TABLE baggage ADD CONSTRAINT pk baggage PRIMARY KEY (baggage id);
ALTER TABLE boarding pass ADD CONSTRAINT pk boarding pass PRIMARY KEY
(boarding pass id);
ALTER TABLE booking flight ADD CONSTRAINT pk booking flight PRIMARY KEY
(booking_flight_id);
ALTER TABLE security check ADD CONSTRAINT pk security check PRIMARY KEY
(security check id);
-- Foreign Key Relationships with DELETE CASCADE
ALTER TABLE security_check
ADD CONSTRAINT fk security check passenger
FOREIGN KEY (passenger id) REFERENCES passengers(passenger id) ON DELETE
CASCADE;
ALTER TABLE booking
ADD CONSTRAINT fk_booking_passenger
FOREIGN KEY (passenger id) REFERENCES passengers(passenger id) ON DELETE
CASCADE;
ALTER TABLE baggage_check
ADD CONSTRAINT fk baggage check passenger
FOREIGN KEY (passenger_id) REFERENCES passengers(passenger_id) ON DELETE
CASCADE;
ALTER TABLE baggage_check
ADD CONSTRAINT fk baggage check booking
FOREIGN KEY (booking id) REFERENCES booking (booking id) ON DELETE CASCADE;
```

ALTER TABLE baggage

ADD CONSTRAINT fk_baggage_booking

FOREIGN KEY (booking id) REFERENCES booking(booking id) ON DELETE CASCADE;

ALTER TABLE boarding pass

ADD CONSTRAINT fk boarding pass booking

FOREIGN KEY (booking id) REFERENCES booking (booking id) ON DELETE CASCADE;

ALTER TABLE booking_flight

ADD CONSTRAINT fk booking flight booking

FOREIGN KEY (booking id) REFERENCES booking (booking id) ON DELETE CASCADE;

ALTER TABLE booking_flight

ADD CONSTRAINT fk_booking_flight_flight

FOREIGN KEY (flight_id) REFERENCES flights(flight_id) ON DELETE CASCADE;

ALTER TABLE booking

ADD CONSTRAINT fk_booking_flight

FOREIGN KEY (flight id) REFERENCES flights(flight id) ON DELETE CASCADE;

ALTER TABLE flights

ADD CONSTRAINT fk_flights_departing_airport

FOREIGN KEY (departing_airport_id) REFERENCES airport(airport_id) ON DELETE CASCADE;

ALTER TABLE flights

ADD CONSTRAINT fk flights arriving airport

FOREIGN KEY (arriving airport id) REFERENCES airport(airport id) ON DELETE CASCADE;

ALTER TABLE flights

ADD CONSTRAINT fk flights airline

FOREIGN KEY (airline id) REFERENCES airline(airline id) ON DELETE CASCADE;

-- Add a new airline named "KazAir" based in "Kazakhstan" to the airline table INSERT INTO airline (airline_id, airline_code, airline_name, airline_country, created_at, updated_at)

VALUES (201, 'KZ', 'KazAir', 'Kazakhstan', NOW(), NOW());

-- Update the airline country "KazAir" to "Turkey"

UPDATE airline

SET airline_country = 'Turkey', updated_at = NOW()

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WHERE airline_name = 'KazAir';

-- Add three airlines at once: "AirEasy" in "France", "FlyHigh" in "Brazil" and "FlyFly" in "Poland"

INSERT INTO airline (airline_id, airline_code, airline_name, airline_country, created_at, updated_at, info)

VALUES

(202, 'AE', 'AirEasy', 'France', NOW(), NOW(), 'asdad'),

(203, 'FH', 'FlyHigh', 'Brazil', NOW(), NOW(), 'asdad');

-- Delete all flights whose arrival in 2024 year

DELETE FROM flights

WHERE EXTRACT(YEAR FROM sch_arrival_time) = 2024

OR EXTRACT(YEAR FROM act_arrival_time) = 2024;

-- Increase the price of all tickets in booking table for flights by 15%

UPDATE booking

SET ticket_price = ticket_price * 1.15,

updated_at = NOW();
```

-- Delete all tickets where price is less than 10000constraints

DELETE FROM booking WHERE ticket_price < 1000;