Assignments 4 report

Flights, boardings, seats and plane tables are pregenerate.

We let book_ref to be the PK and have one - many to the table be cause one book_ref can have 2 tickets for transit flight or roundtrip flight. So that we can use book_ref to trace back all the ticket info so we can delete it if client is late or cancel. Furthermore, by using one - one relation with reservation booking table and payment table. I can certainly cancel the tickets for both of the flights and refund right amount of money for the client.

We would use wait_list and wait_list_info and ticket_flights_wait and ticket_boarding_wait tables store value for the ticket which want to book a fully booked site. So that we can store the info. When we mange flights, by delete a flights the JavaScript can copy the info from these table to input into the ticket table, ticket_flight, ticket_boarding tables so that we can display it on the management UI and keep the record of all the ticket and bookings for a certain flights.

Fare_price got a separate table so that the core database would use less space as it only using 2 key. And from using inner join I can get the price for each seat.

Ticket flights is the table to hand many - many relations and to have a correct BCNF, 3NF so we have splits it into 2 one - many relations from flights table, fare conditions table and 1 one – one relation from boarding table.

Flights table would take one – many relation from aircrafts table and airport tables and give one to many relation boarding, arrival , wait_list, client_flights table

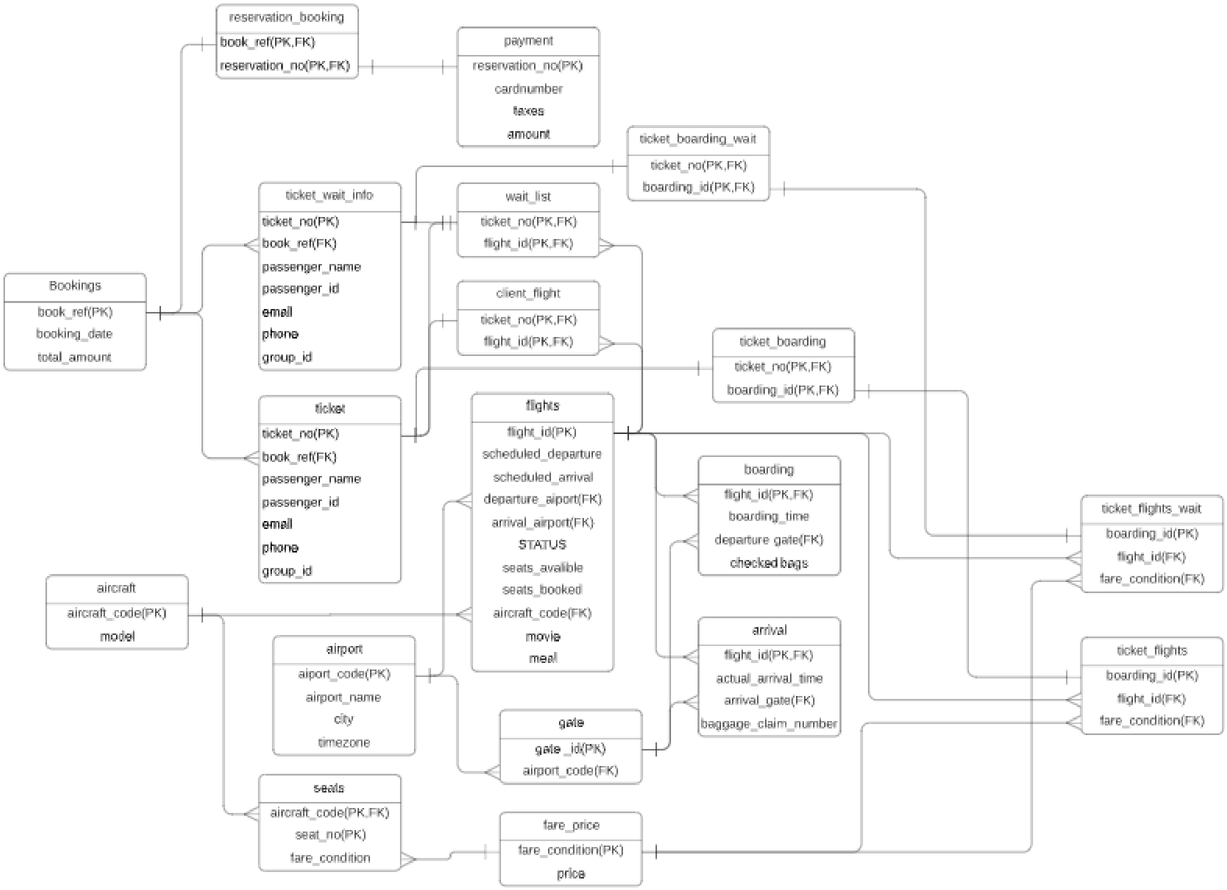
There is one – one relations between ticket, ticket_boarding and client_flights tables to show it on the display for user and management UI

All the composite key are (aircraft_code,seat_no) in seats ,(client_flight,flight_id)in wait list, (ticket_no, boariding_id) in ticket boarding, etc.

From the diagram below we can see the more details relations

Airline ERModel

Bach Hoang | December 9, 2020


reservation_booking
book_ref(PK,FK)
reservation_no(PK,FK)
payment
reservation_no(PK)
cardnumber
taxes
amount
ticket_boarding_wait
ticket_no(PK,FK)
boarding_id(PK,FK)
ticket_wait_info
ticket_no(PK)
book_ref(FK)
passenger_name
passenger_id
email
phone
group_id
wait_list
ticket_no(PK,FK)
flight_id(PK,FK)
Bookings
book_ref(PK)
booking_date
total_amount
client_flight
ticket_no(PK,FK)
flight_id(PK,FK)
ticket_boarding
ticket_no(PK,FK)
boarding_id(PK,FK)
ticket
ticket_no(PK)
book_ref(FK)
passenger_name
passenger_id
email
phone
group_id
flights
flight_id(PK)
scheduled_departure
scheduled_arrival
departure_aiport(FK)
arrival_airport(FK)
STATUS
seats_avalible
seats_booked
aircraft_code(FK)
movie
meal
boarding
flight_id(PK,FK)
boarding_time
departure gate(FK)
checked bags
ticket_flights_wait
boarding_id(PK)
flight_id(FK)
fare_condition(FK)
aircraft
aircraft_code(PK)
model
arrival
flight_id(PK,FK)
actual_arrival_time
arrival_gate(FK)
baggage_claim_number
ticket_flights
boarding_id(PK)
flight_id(FK)
fare_condition(FK)
airport
aiport_code(PK)
airport_name
city
timezone
gate
gate _id(PK)
airport_code(FK)
seats
aircraft_code(PK,FK)
seat_no(PK)
fare_condition
fare_price
fare_condition(PK)
price