Airline Reservation System

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With a long history dating back to the 1900's, commercial airlines have been the go to option for worldwide transportation. However, as commercial flights became more mainstream, the infrastructure needed to adapt to accommodate the increasing number of flights being booked. This increase in demand for commercial airlines, outside of global phenomena, has been growing exponentially within the last 4 decades according to a study conducted by the International Energy Agency (Data & Statistics, n.d.). The scope of his project is to create a reliable and user-friendly database for easy tracking, reserving, editing, adding, and cancellation of flight reservations. Also, the database will be used by customers and administrators to track every step starting from the initial ticket purchase, to the seating accommodations, and the real time flight route to the final destination. Administrators might schedule none or many flights with the airline depending on the number of available flights. Flights would also sometimes have the same final destination as ones from different airlines. Those flights will have a unique ID on them for easy identification when searching the database. Once the flights have been scheduled by the administrators, the booking office then releases the flight tickets for purchase to customers. Customers will then be able to purchase one or multiple flight tickets for a flight. Because some customers might have the same first and last names, they will also be assigned a unique individual ID to prevent any potential confusion. Once the flight ticket(s) has been purchased by a customer, the flight ticket(s) will be reserved by the booking office for the customer. The booking office will then reserve a flight ticket on the specific aircraft for that flight. Once the flight ticket has finished the reservation process, customers will then be able to pick a seat on the aircraft. Because a customer can purchase one or many flight tickets under their unique ID, they can select one or many selects depending on the amount of flight tickets

they purchased. There are many seats on the aircraft, but each flight ticket has its own seat that is chosen by the customer prior to boarding the flight. As seats are selected by the customer, they will be updated on the database as "taken" so other customers cannot select the same seat for their flight ticket. Along with selecting a seat for their corresponding flight ticket, customers can enter zero or many luggage and/or carry-ons they plan to bring onto the flight. The database will update the information onto the flight ticket and will speed up the checking in process at the airport. Any additional luggage and/or carry-ons will incur additional charges that will be charged at a later date. Any time before the flight departs, customers can use the database to check the information of one or many of their ticket reservations. According to the Department of Transportation's policy, customers can make any changes to their flight tickets within 24 hours of their initial purchase (Mendel, 2022). Any changes to the flight ticket after the 24 hour grace period will incur additional charges even if the fare price is identical. Any and all changes will be updated on the database so customers and administrators can easily view them. In the rare chance that there is a delay or problem with a specific flight, administrators may have to modify zero or many of the flights. Similarly, to customer changes, the database will update the changes to the flight tickets and notify the customer(s) about the changes. No one wants to miss their flight and/or get stuck at the airport terminal because they were given the wrong information on their flight. With this database system, customers and flight administrators are given access to all the information they need through a reliable and user-friendly interface. The database is in part inspired by the webpage curated by American Airlines,

https://www.aa.com/i18n/index.jsp?locale=en_HK , who use a similar system to store and track their customers' reservations.

References

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