

Sigma Airlines Requirement Document:

Sigma Airlines consists of 50 airplanes. We want to know the model of each airplane, if the airplane is active or not, and a service history for the plane. Each plane has a number of seats of different types (4 types currently), and we continue to add new seat types over time to accommodate our passengers more accurately according to their preferences.

Customers buy tickets for a certain seat type on the flight. We record their time of purchase and determine the price of the ticket based on the seat type, current # of passengers on the flight, the day of the week, day of the year, and the total miles the flight will travel.

Customers can create an account to store their credit card info if they'd like and to collect rewards for their continued service. Even if the customer does not have an account, we add their name and birth date to our records.

We have 40 pilots and 100 air traffic controllers employed, among other staff roles. Staff are assigned to shifts that are directly tied to specific flights. Staff can be assigned to consecutive shifts on different flights before they're done working for the day. Employee salary is primarily based on job title and years with the company. We want to retain info on employees which no longer work for us.

The airlines currently fly between a list of 100 airports across the world. Each flight may have only 1 stop or could have many stops before reaching the final destination, and we want to know which airport each stop was at and when. One thing we especially want to track is how on-time these flights are according to schedule, so we'd like to know when the plane was supposed to land and leave, and when it did land and leave.

Regulations require that we report flight diagnostics every 5 minutes to monitor the fuel level, elevation, speed, and overall condition of the flight.