Case I, a GDS

Jacob Trier Frederiksen Anders Kalhauge
Todorka Dimitrova

Fall 2019

1 The Sebastian GDS

A number of flight carriers have agreed to form a new Global Distribution System (GDS) called **Sebastian**. The GDS will provide online booking of flight seats for the involved carriers. Access to the GDS will be through a web service ment for third party solutions, and through a web application ment for employees in travel agencies.

1.1 Schedules

Schedules for the carriers will be all week schedules, meaning that the schedules will have the same departures and arrivals on the same destinations on every day in the week. Schedules has information about: departure airport and time, arrival airport and time, seat count, price in euros.

Carriers are identified by their two letter IATA carrier code[1]. Flights are identified by the carrier code followed by thre digits.

Airports are identified by their three letter IATA airport code[2]. Information about timezone should be stored for each airport.

1.2 Bookings

As a starting point, bookings will not include seat numbers, but they might do in the future.

A booking can involve one or more passengers, and it can be a one-way booking or a round-trip booking. A credit card number or frequent flyer number should be attached to the booking as e-ticket identification.

A passenger on a fligth is identified by a Passenger Name Record (PNR), a PNR is a unique combination of numbers from the English alphabet and numbers, there is always six alphanumeric characters and the first can't be a number. Passenger names must be given exactly as stated in the passport, but in capital letters.

1.3 The service

The following tasks should be handled by the service and desktop application.

[1] See http://en.wikipedia.org/wiki/Airline_codes-All
[2] See http://www.photius.com/wfb2001/airport_codes_alpha.html

- Show a time schedule between two airports on a given day. The schedule should besides departure and arrival times include information about the carrier and number of free seats on the flights.
- Make a booking for up to 9 persons on a one-way or round-trip from one airport to another on a given day. An error message should be returned if the seats are not available any more. Bookings are atomic, meaning that all passengers and all legs[3] should be either included or none of them should.
- See a booking, given a PNR from the booking.
- Cancel a booking, given a PNR from the booking.

[3]The flight from one airport to another is a leg, a round-trip has two legs