

1 Problème

You have recently accept a new job in a compagny which works for a group of travel agencies. For your first project you must build an application bound to the reservation staff. You have met the employees of one agency and after a long discussion, you have noted several requirements:

- Two main types of travels are proposed to the clients : travel without service and travels with services.
 1. Without services signified : a reservation only for the flight.
 2. With services signified : possibility to reserve an hotel for several days or to rent a car

The table below shows the destinations and the departure cities which are proposed to the agency clients.

Departures	Destinations				
	Paris	Bordeaux	Canberra	Tokyo	Delhi
Hanoi	X	X	X	X	X
Ho chi minh city	X			X	X
Hue	X		X	X	
Hai phong		X	X		

To offer the maximum choice, the agency proposes transits to relay destinations from another one if it is not directly connected to the departure city.

For each destination, the agency has a pool of tickets with reduced price (20 % of the original price). When all these tickets are sold, the agency sells the transits at the normal price. If the client wants he can travel in first class with a 30% of majoration.

It exists two categories of services:

- Simple service: hotel and eventually car in only one place.
- Touring service: hotel and eventually car next a flight for another destination and hotel and car for this new destination. Of course this can only be reserved if the agency has links (and airfrane) between the different places.

For each destination, the agency proposes an hotel with standard service and a luxury one with a majoration of 20% of the standard price.

Note : For each flight, we have a list of possible dates, the hotel prices (and car prices) are given by day. So you must compute for each reservation the total price for all sservices.

1. Give the classes diagram that you propose for this application.
2. Give the collaboration diagram for the reservation of a simple travel without service.
3. Give the sequence diagram for the reservation of a touring travel with service.
4. Give the state diagram for a reservation of a touring travel with service.
5. Supplementary question : you want to organize some local tours for 2 or 3 days. You have to describe the program for each tour: places to visit and with or without lunch but always with hotel (1 or 2 nights). Give a new version of your diagrams to take into account this possibility.