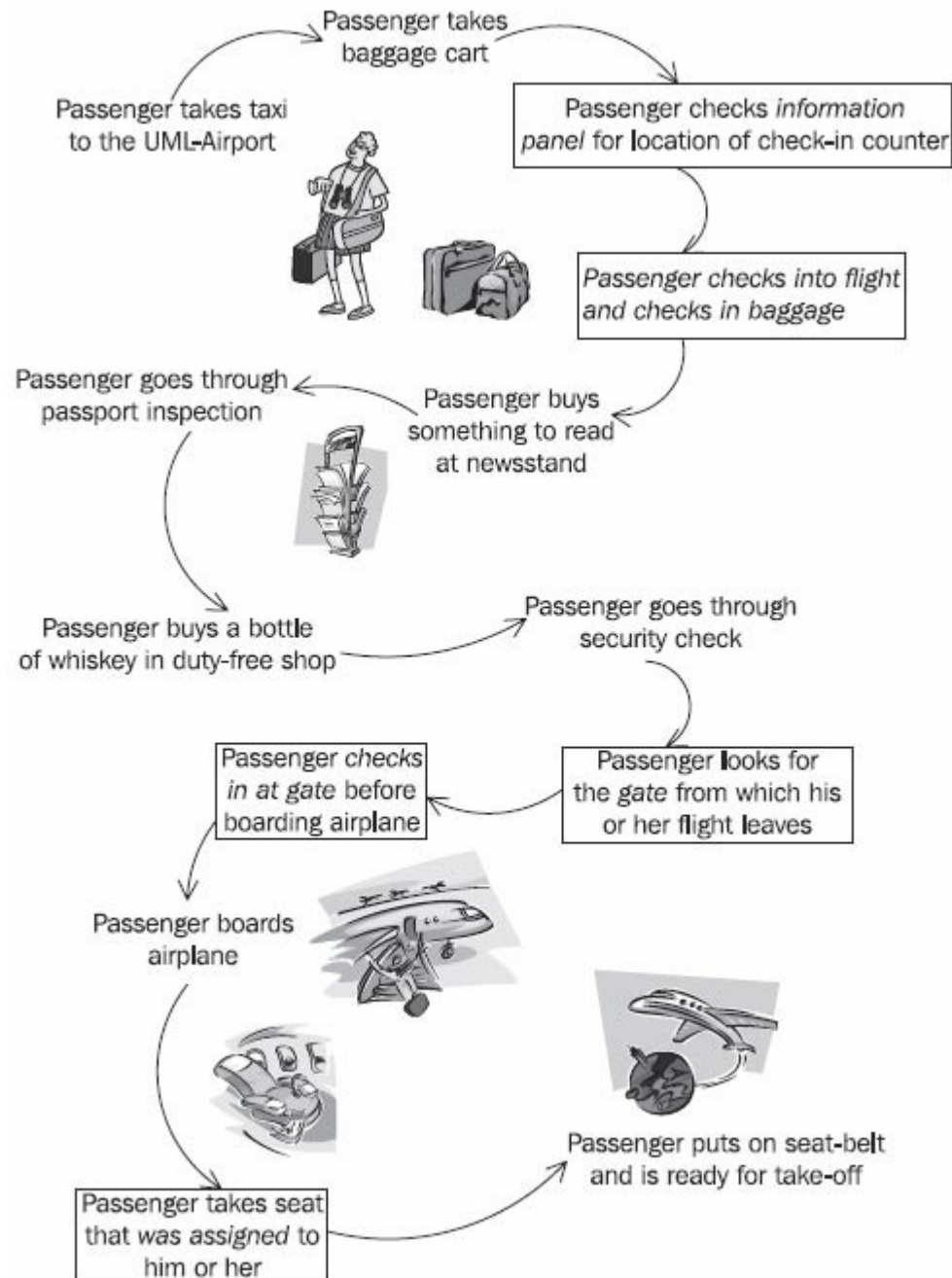


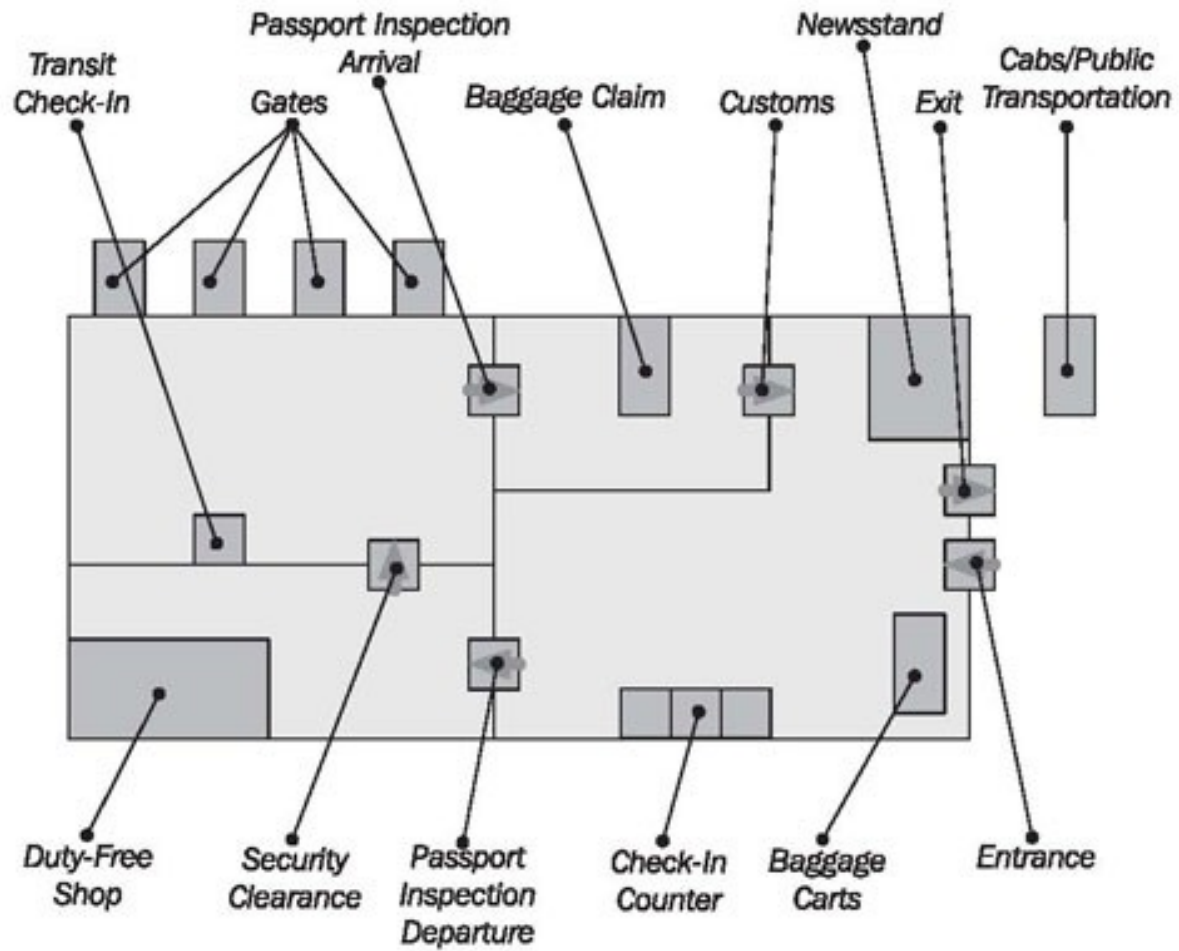
Case study: Airport

Passengers *chek-in* and *boarding*.

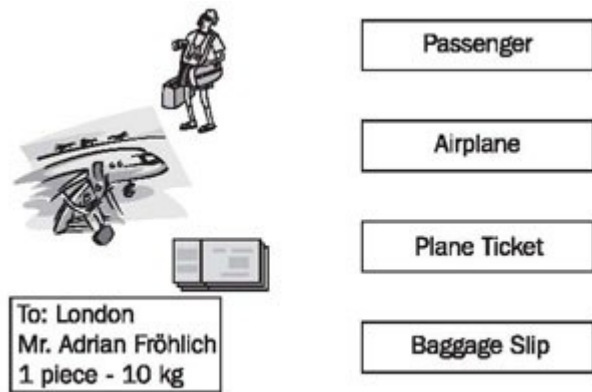
Exceptions:

- The passenger only has carry-on luggage.
- The passenger doesn't buy anything at the newsstand.
- The passenger is running late and now has to check in as quickly as possible.
- The passenger loses his or her boarding pass.
- The passenger arrived by plane and merely has to change planes, meaning that he or she doesn't leave the transit area.
- ...

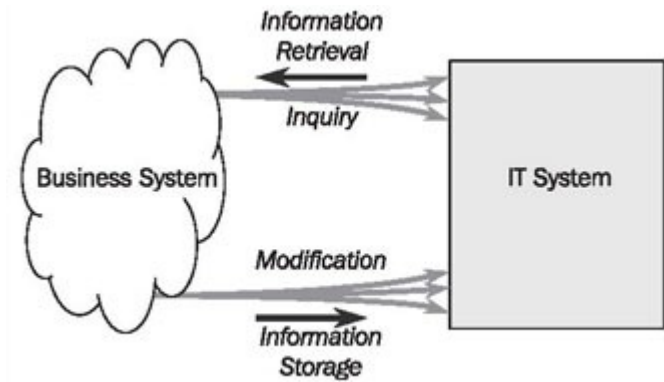




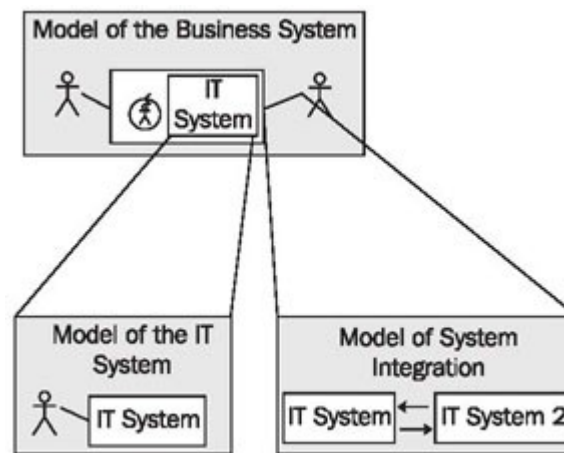
Information System and IT System



Objects in real world and in Information system

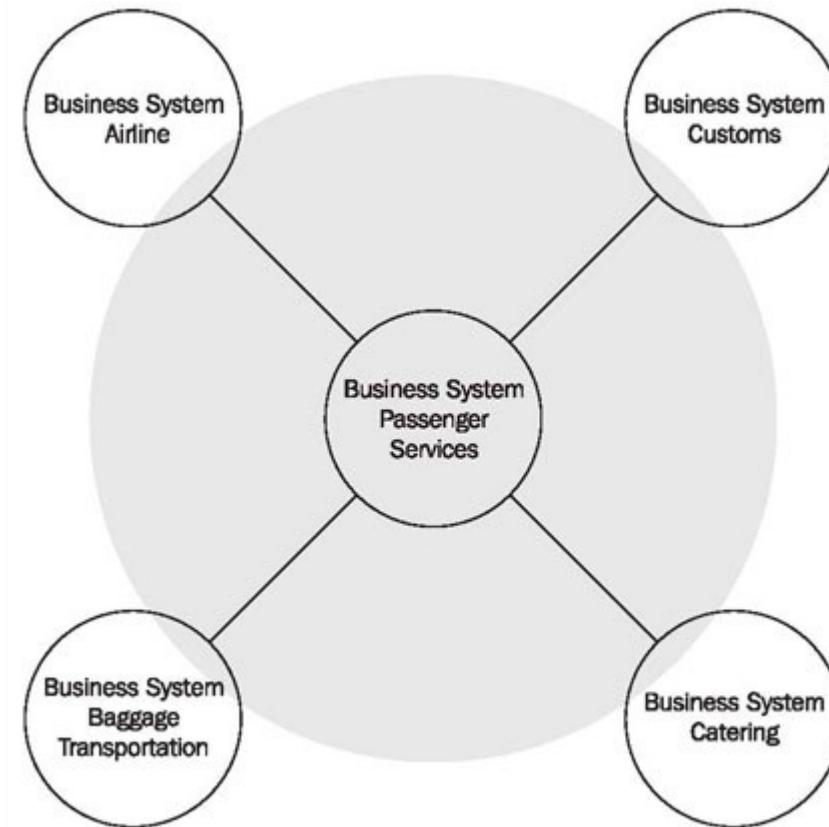


IT System



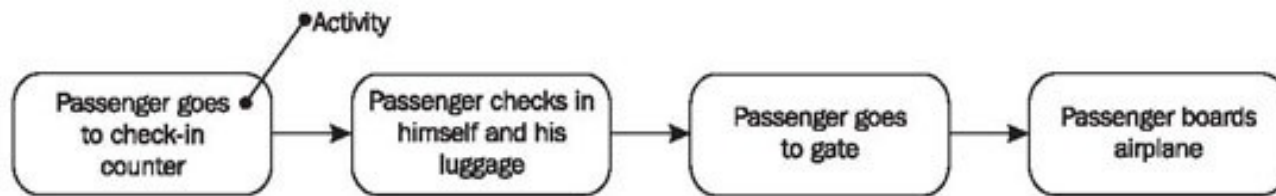
Models of the case study

Business System Passenger Services



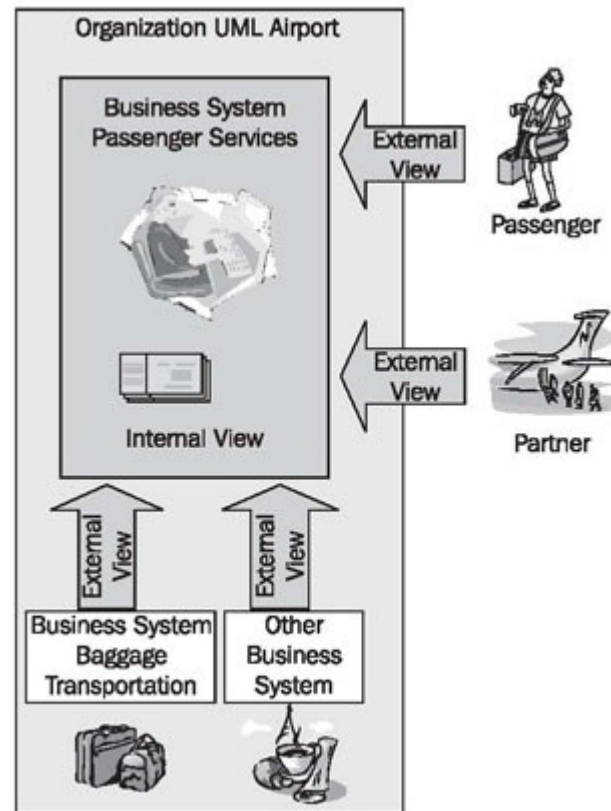
System boundary during analysis
of the business system

Business Processes

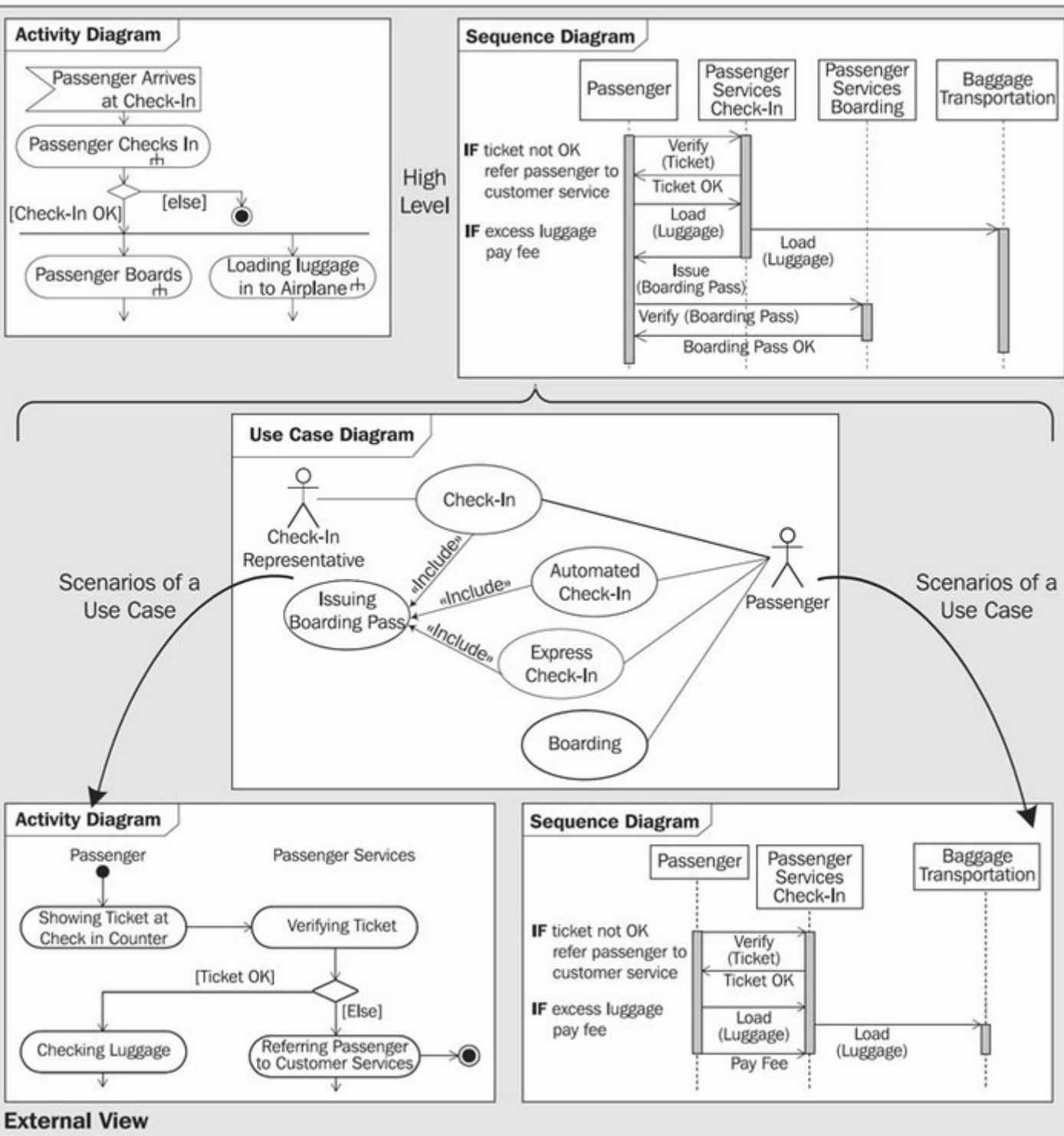


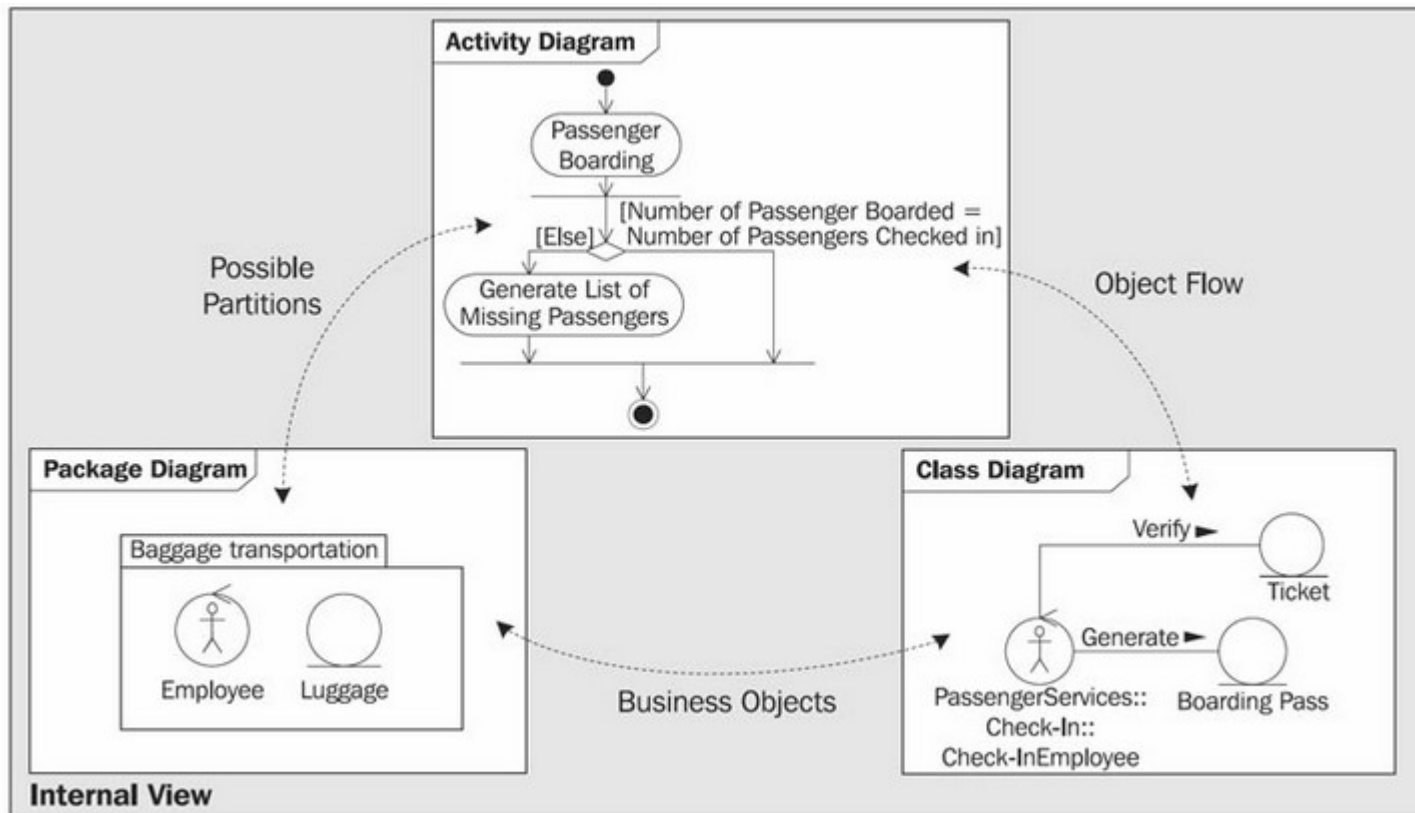
Activity of the business process
"Passenger Services" (simplified)

One Model - Two Views

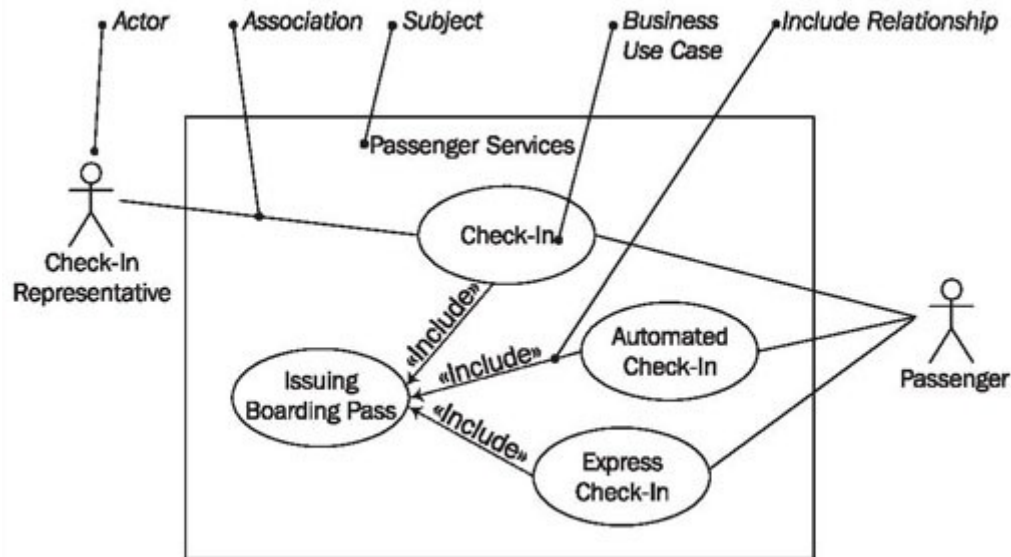


External and internal view of the business system

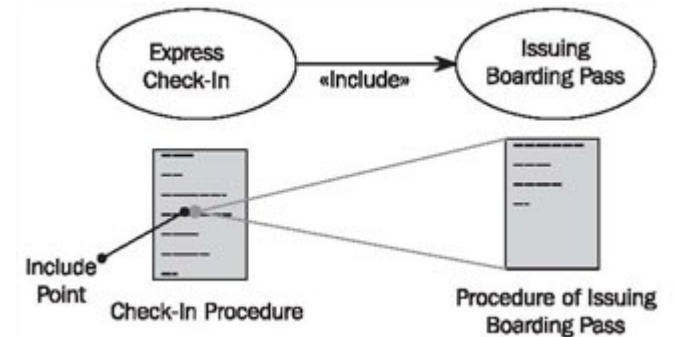




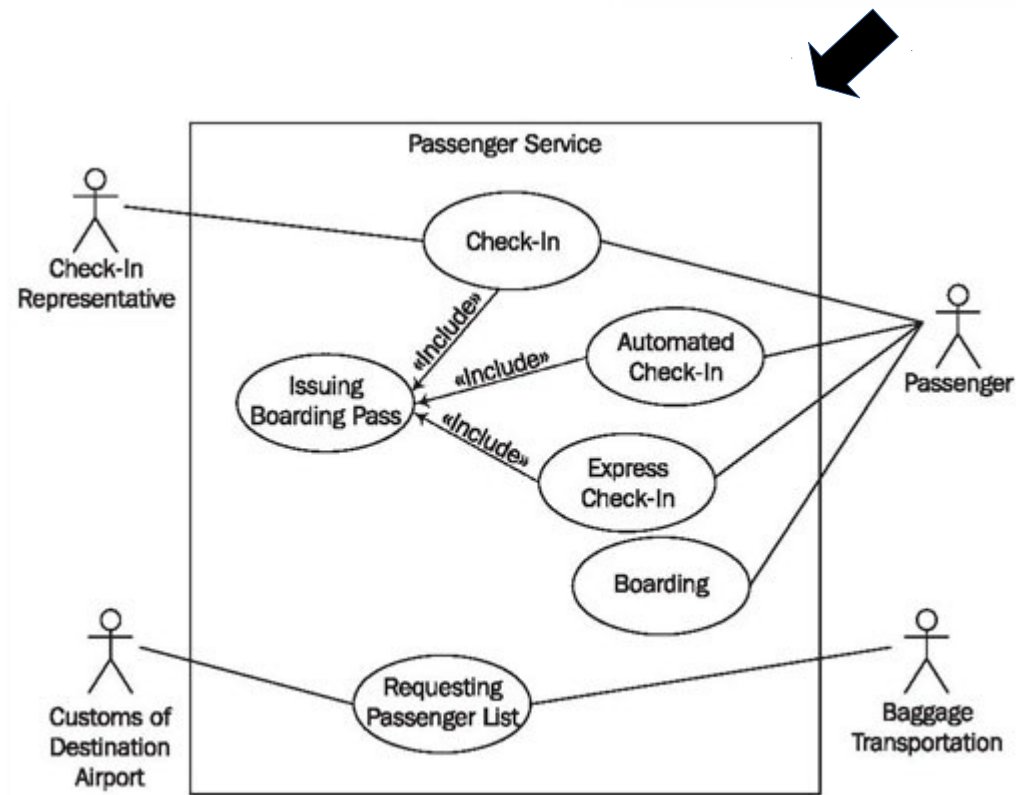
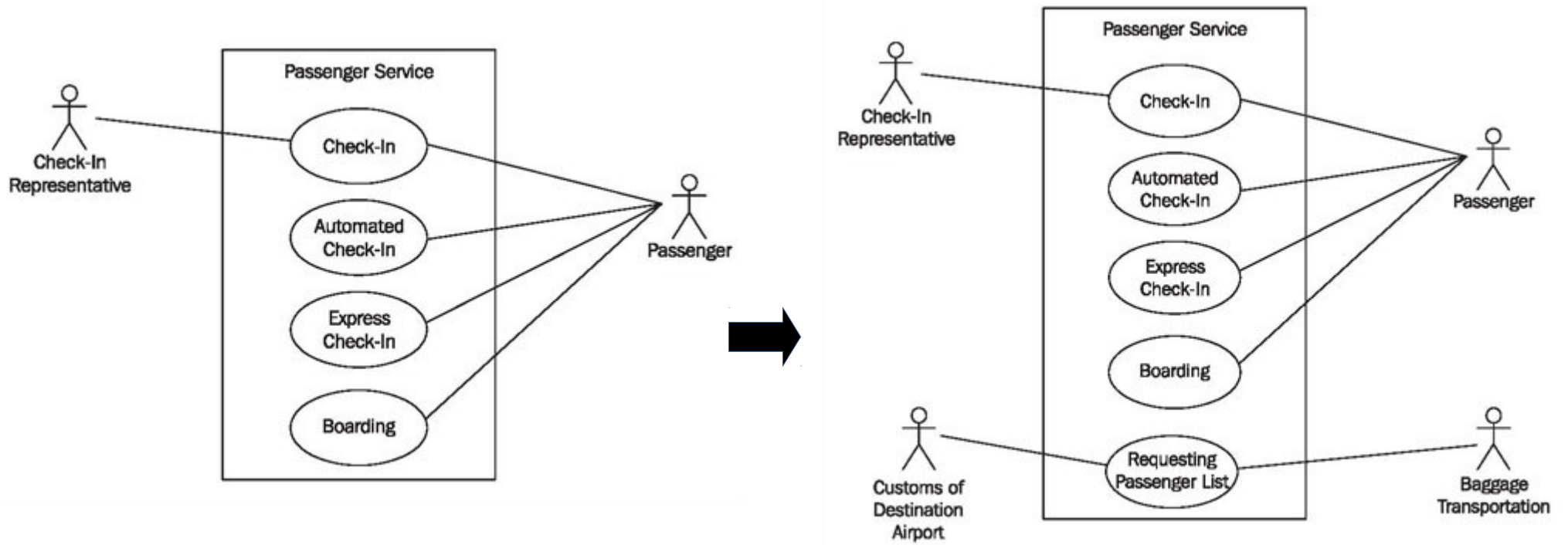
Use Case Diagrams



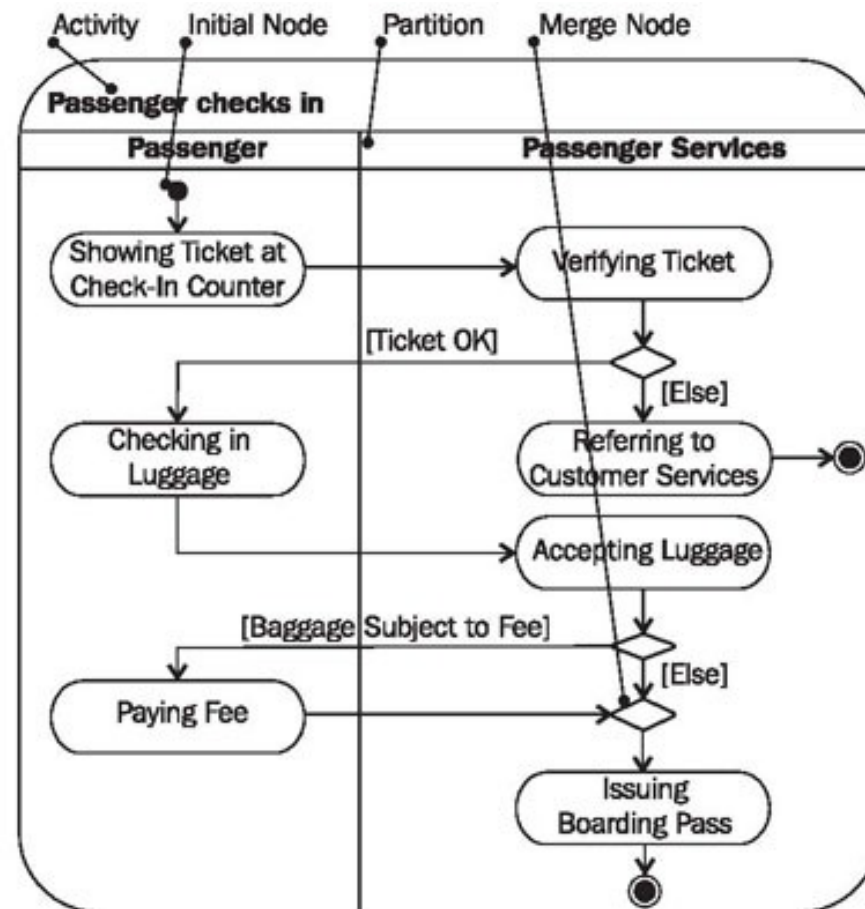
The elements of the use case diagram



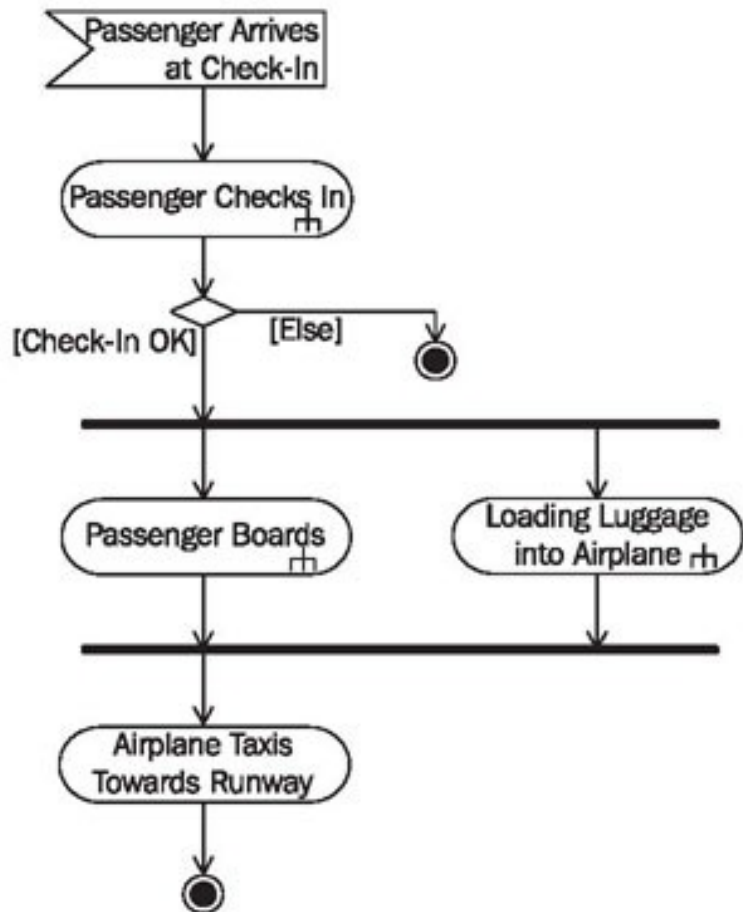
The include relationship between use cases



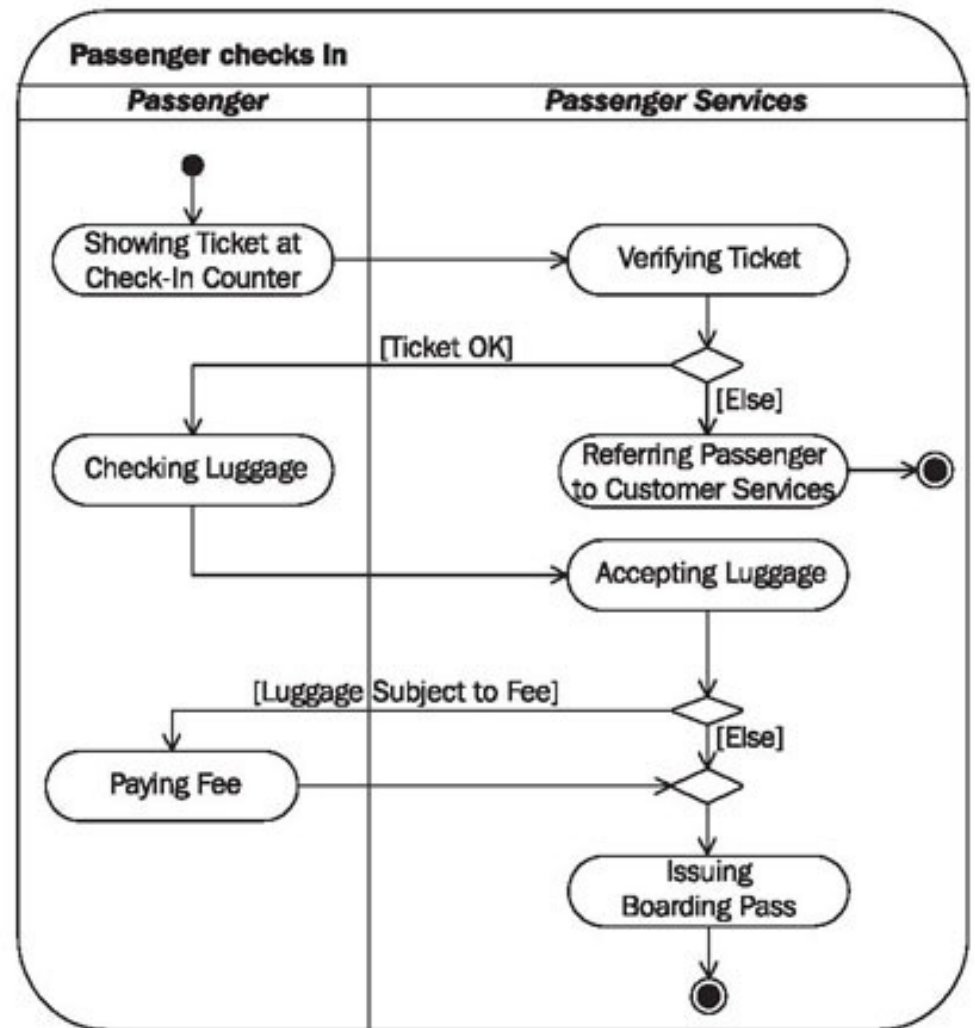
Activity Diagrams



Activity diagram of the activity
"Passenger checks in"

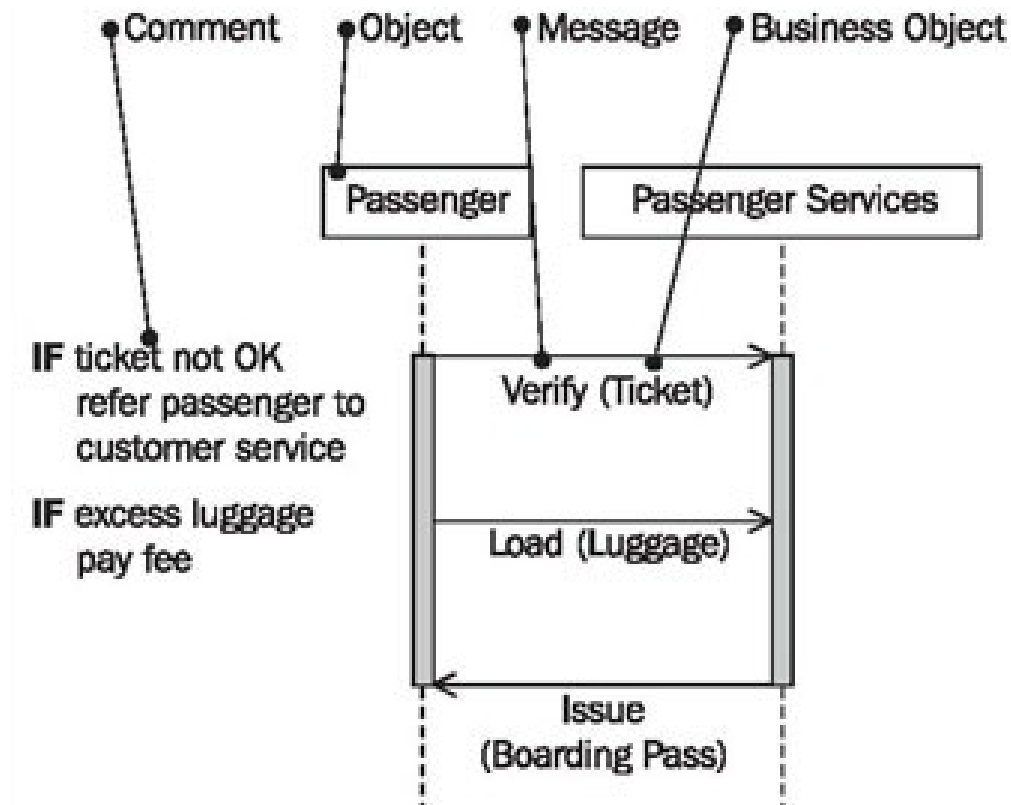


Activity diagram "Passenger Services" with a low level of detail ("High Level")

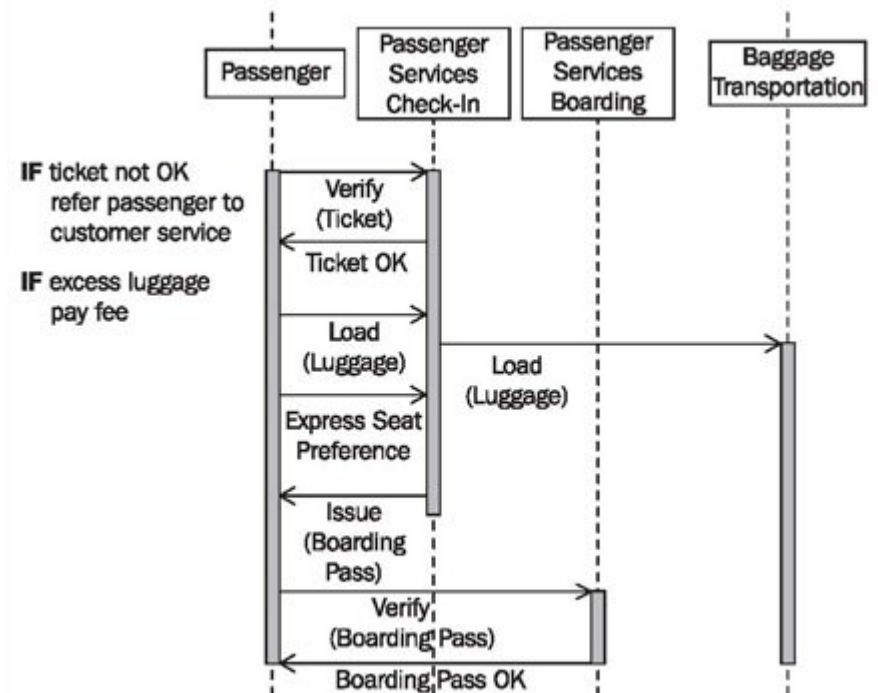
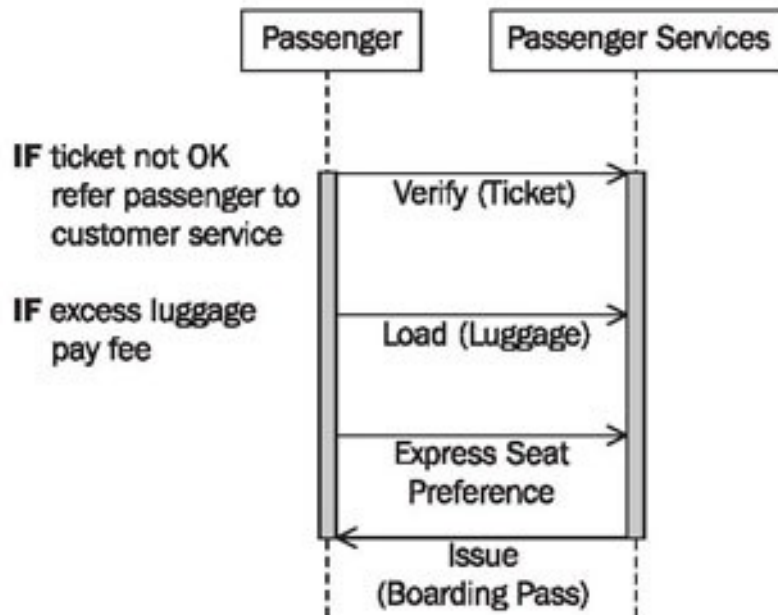
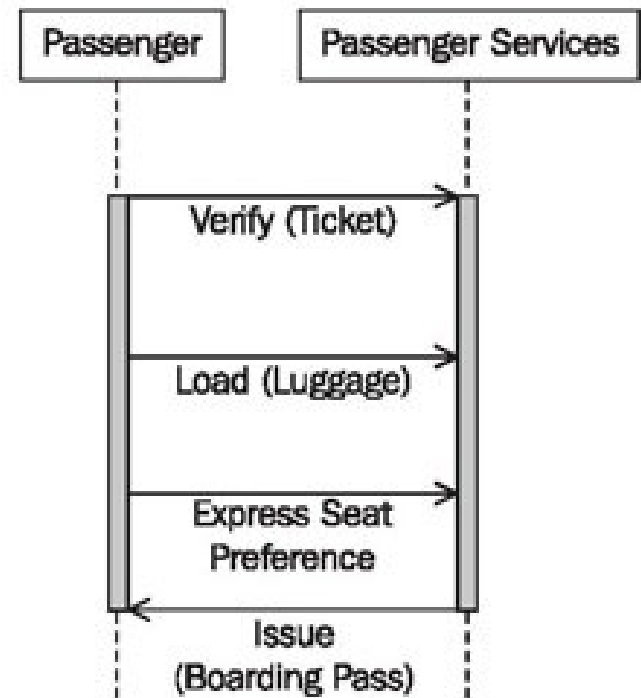
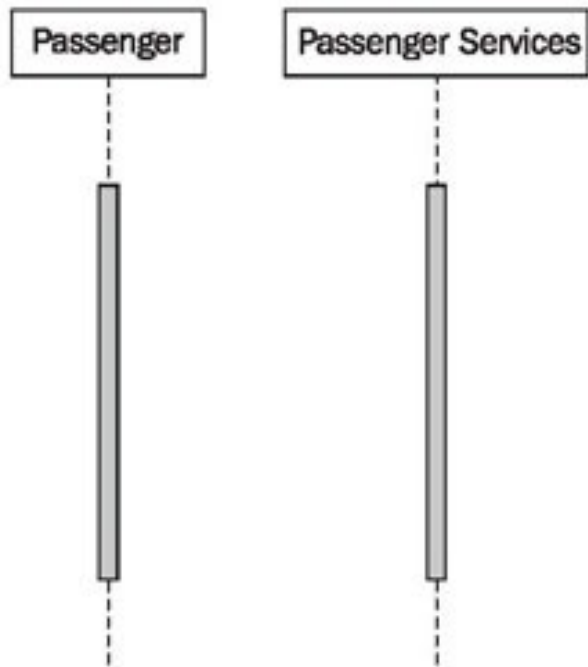


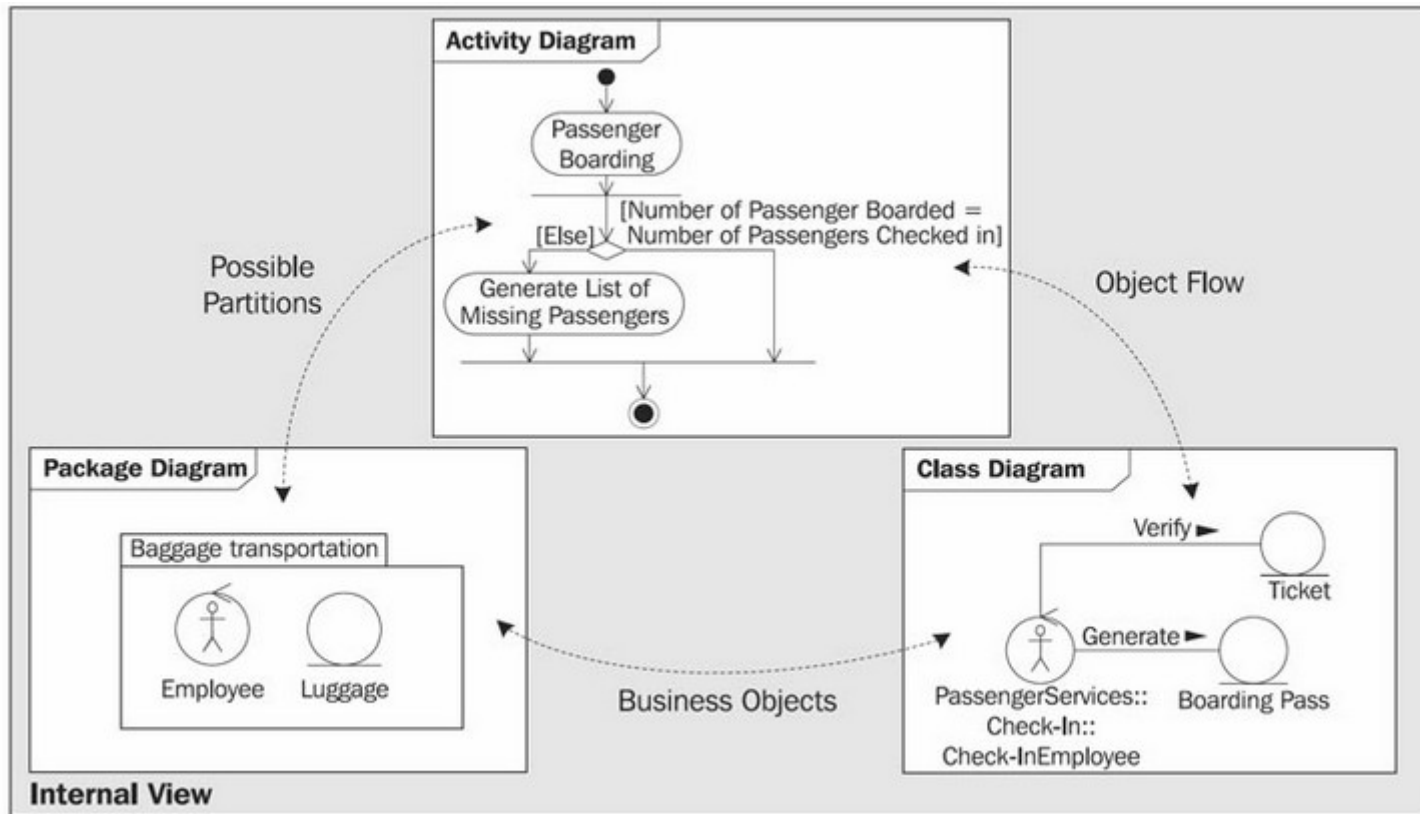
Activity diagram of the activity "Passenger checks in"

Sequence Diagrams

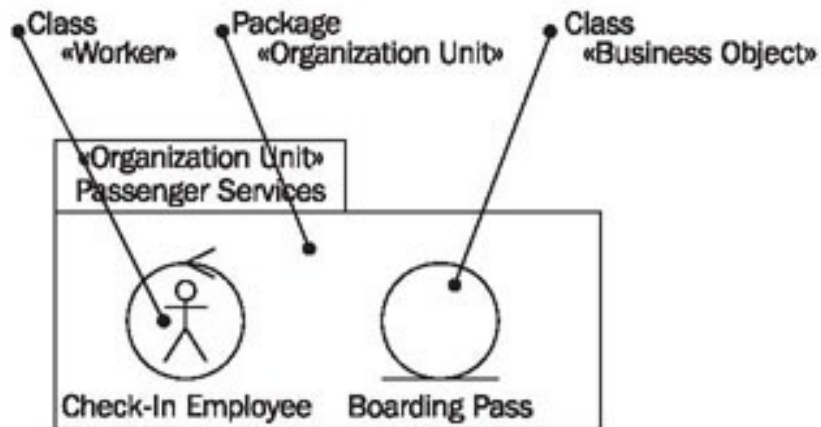


Sequence diagram "Passenger Check-In"

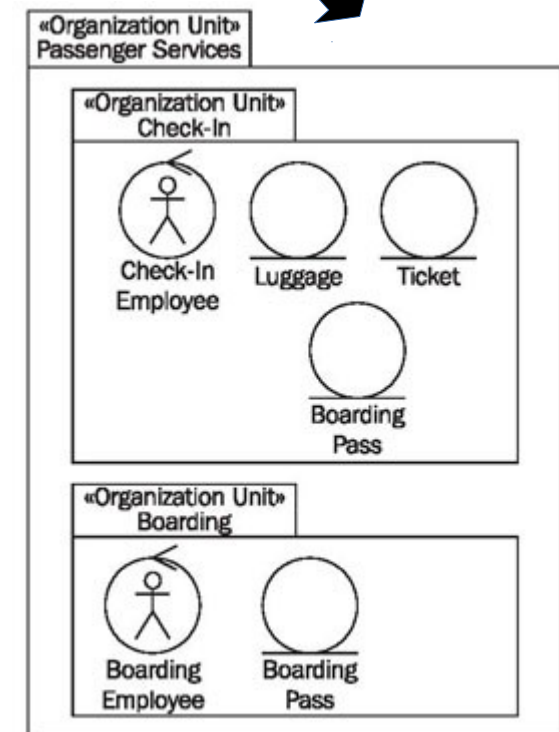
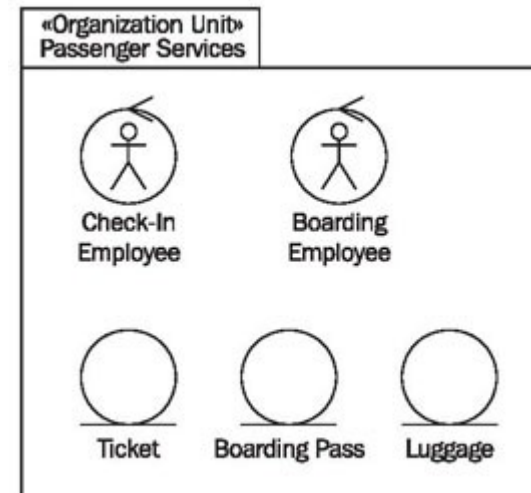




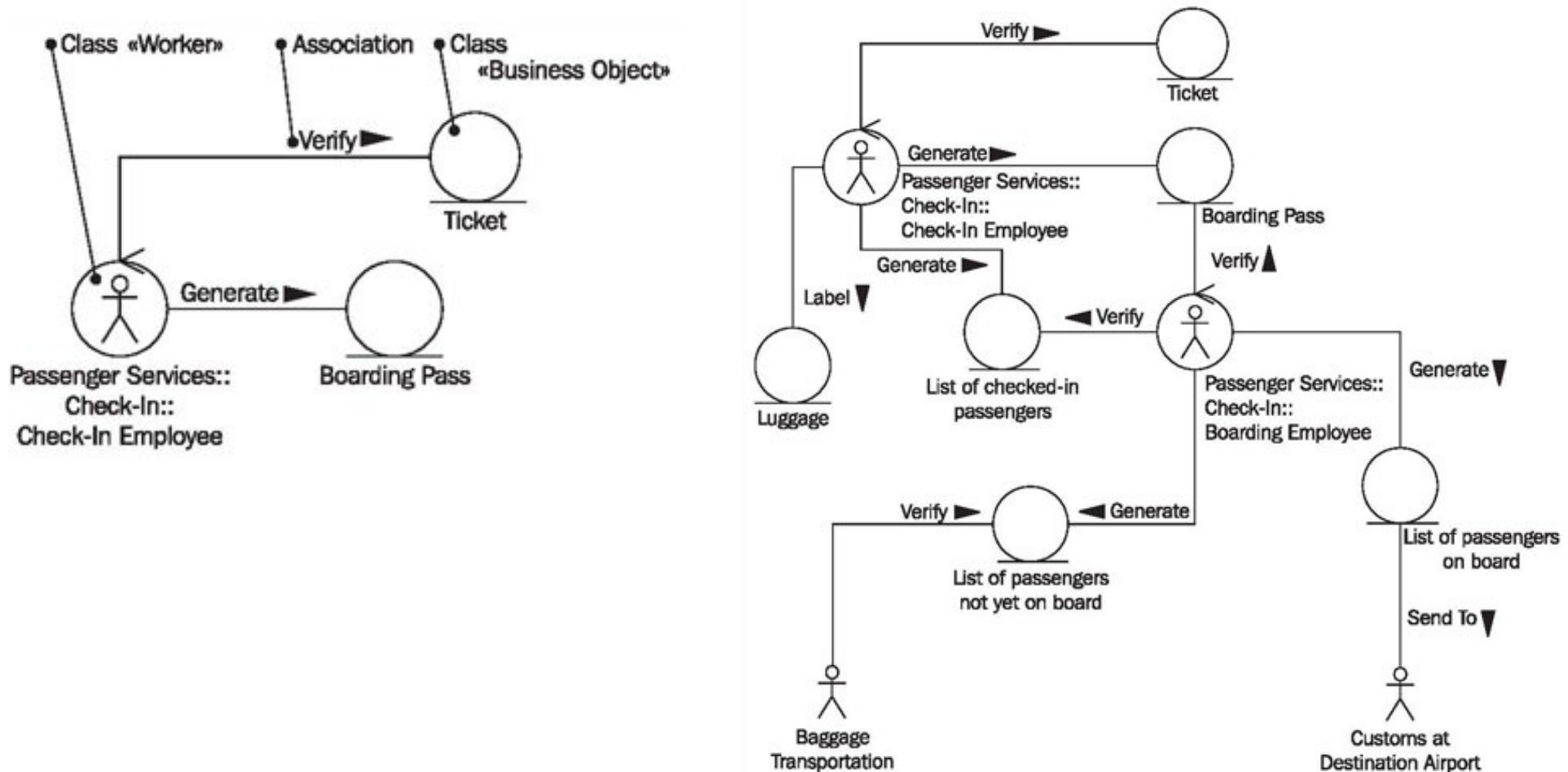
Package Diagram



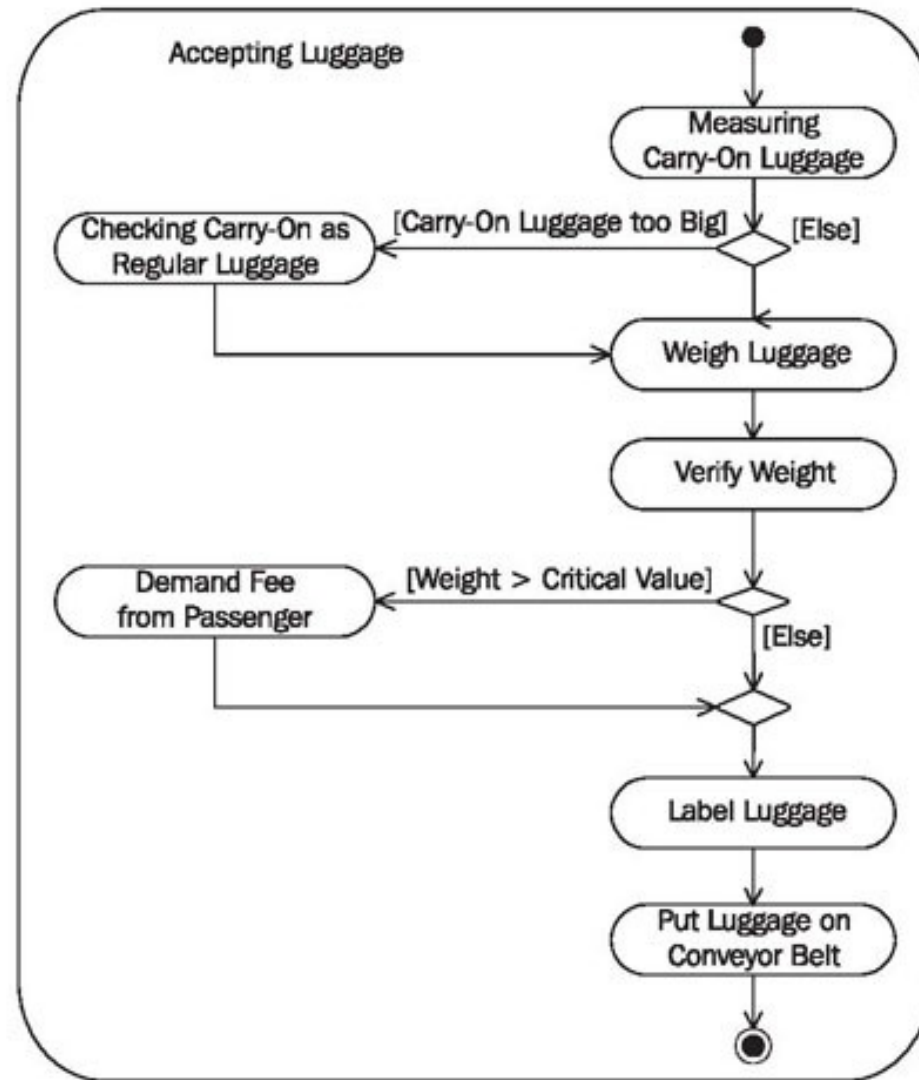
Package diagrams describe the organization units in the form of packages



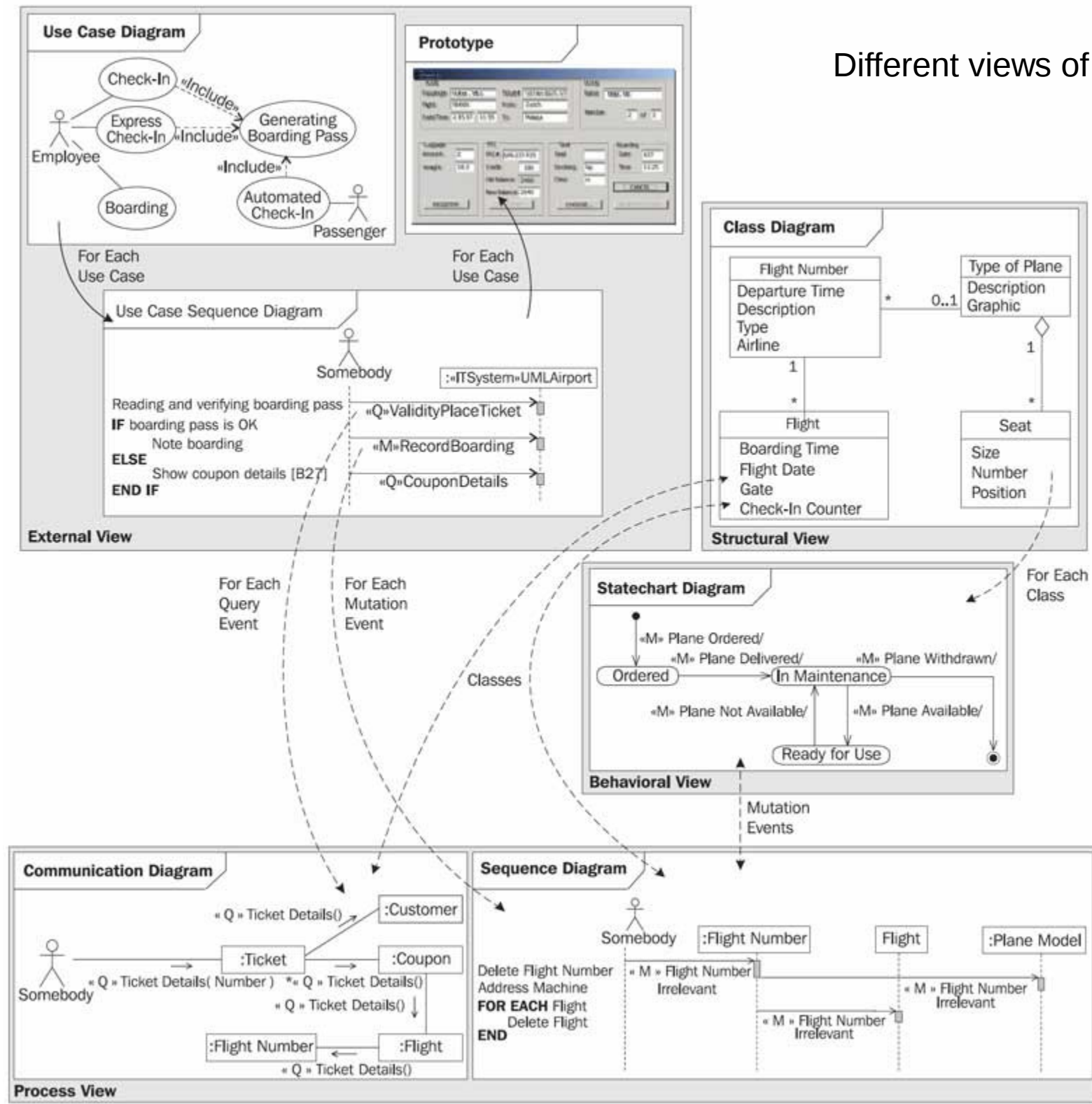
Class Diagram (Business System)



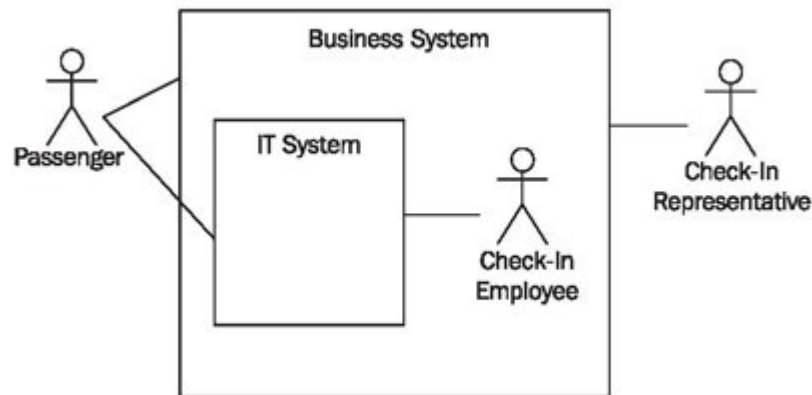
Activity Diagram



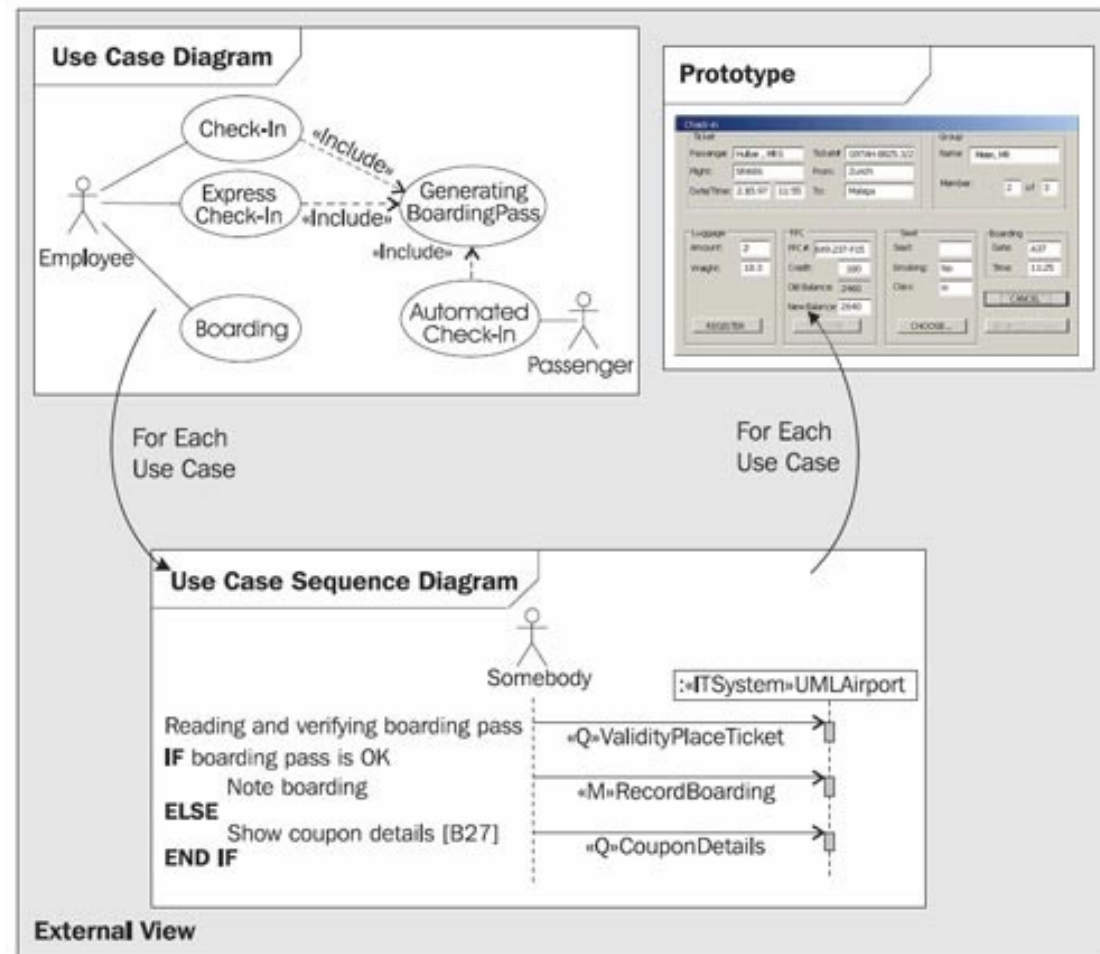
Different views of an IT system

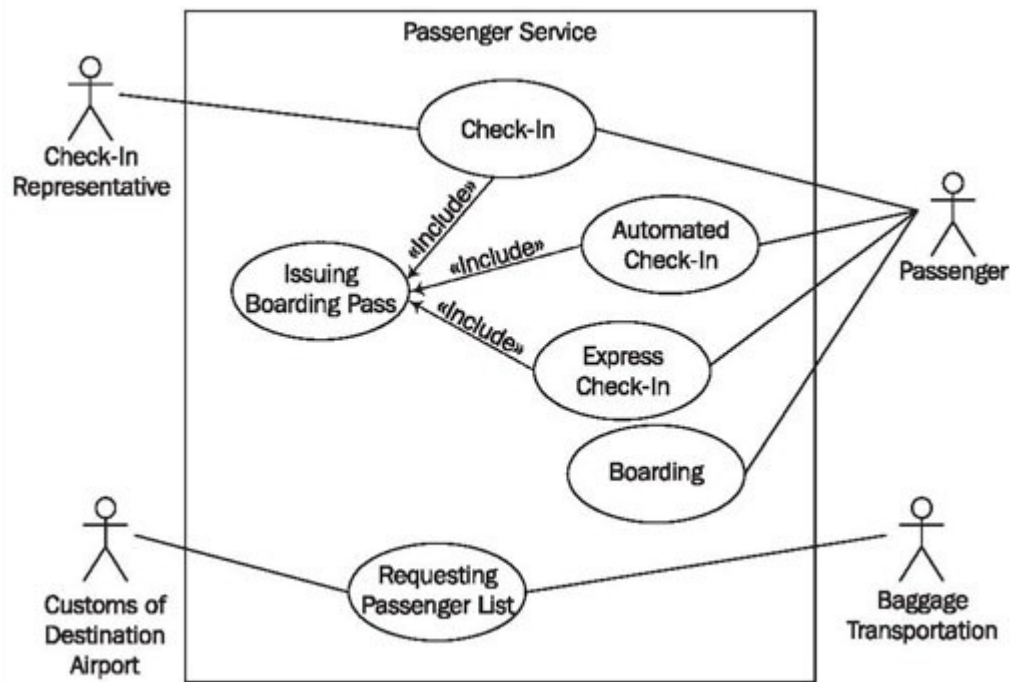


IT System: External View

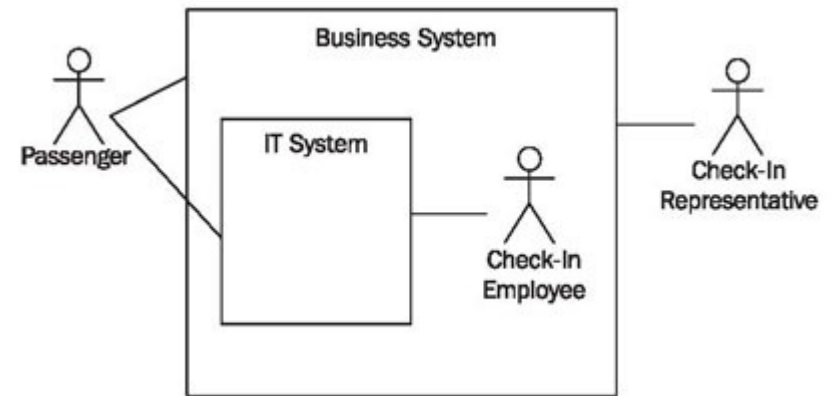


Actors of the business system
and IT system





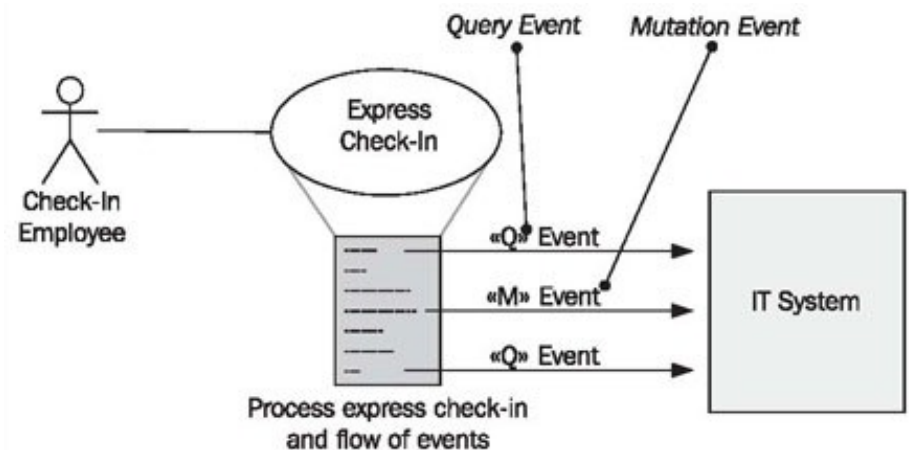
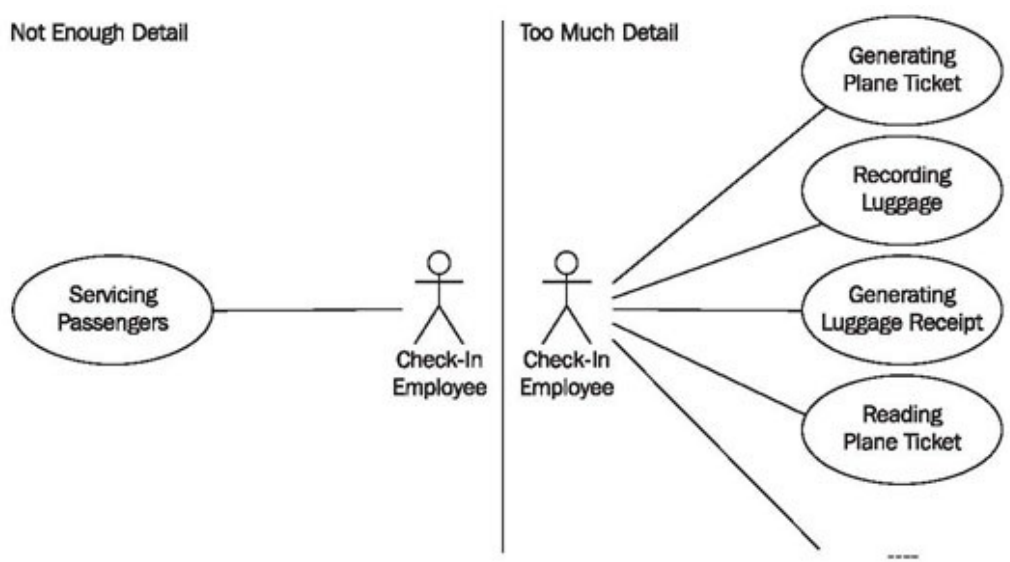
Use Case Diagram
Business System



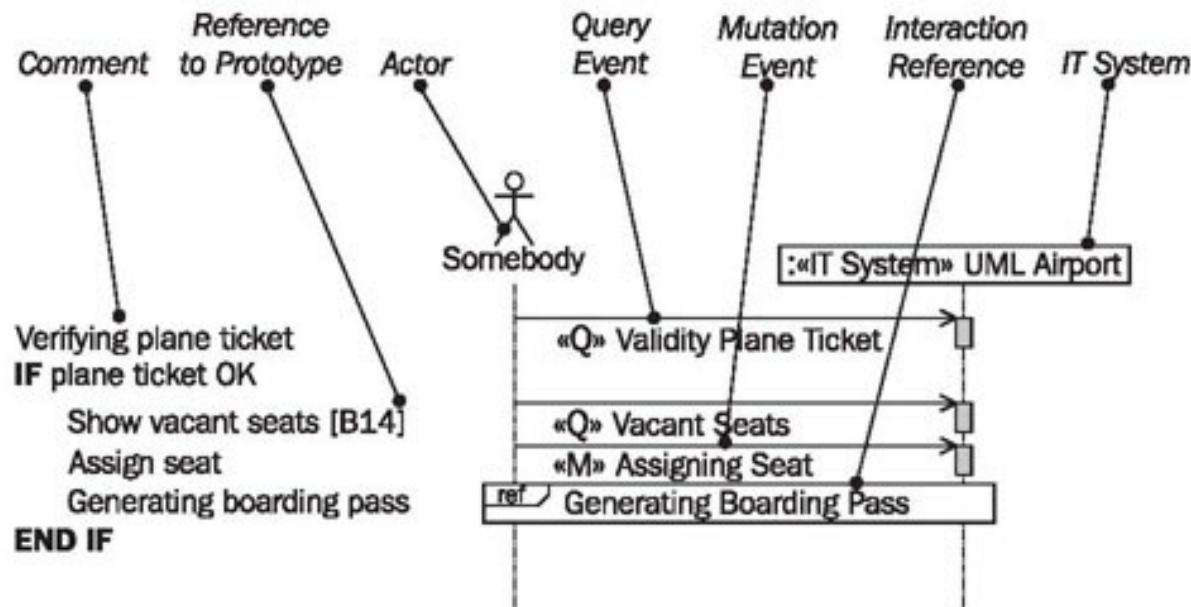
Actors of the business system
and IT system

Not Enough Detail

Too Much Detail



IT System: Use Case Sequence Diagram



Coupon-Details

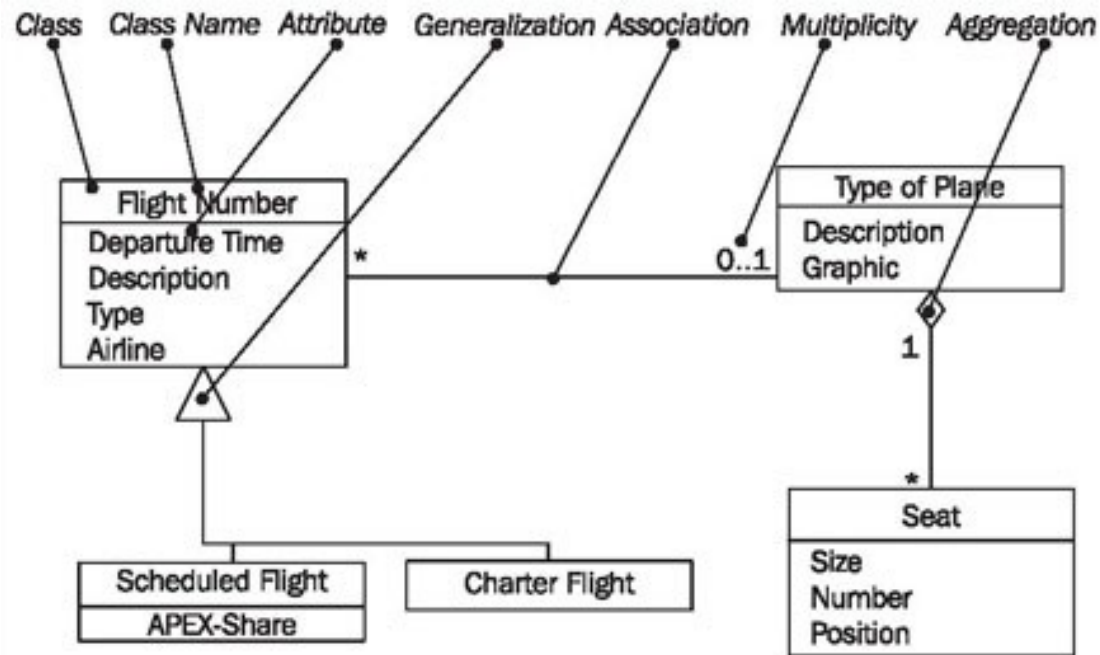
Ticket

Passenger	Huber , MRS	Ticket#	G97AH-8825.3/2	Seat:	17A	
Flight:	SR686	From:	Zurich	Smoking:	No	
Date/Time:	2.15.97	11:55	To:	Malaga	Class:	H

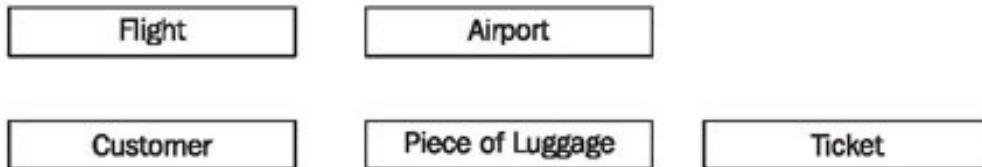
OK

Dialog window prototype

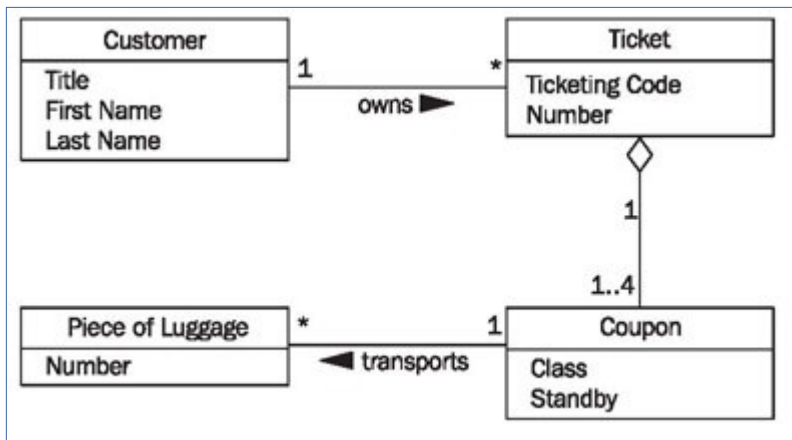
IT System: Class Diagram



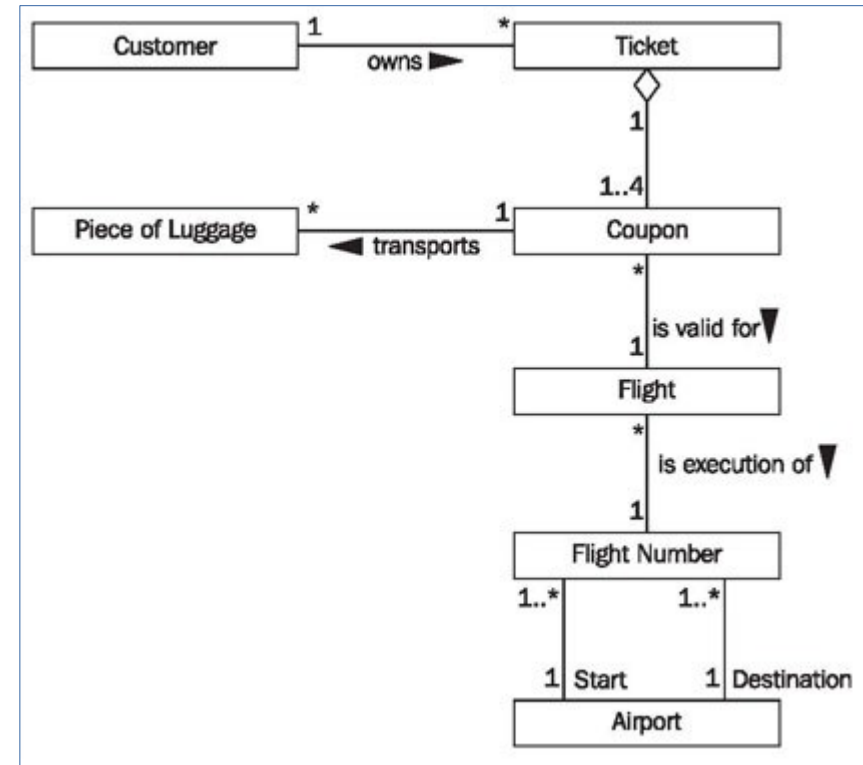
IT System: Class Diagram



Potential classes



Classes and Attributes

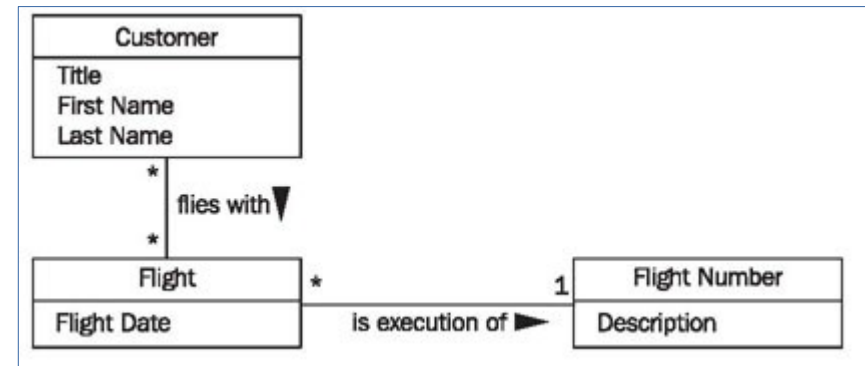


Class and Associations

IT System: Class Diagram

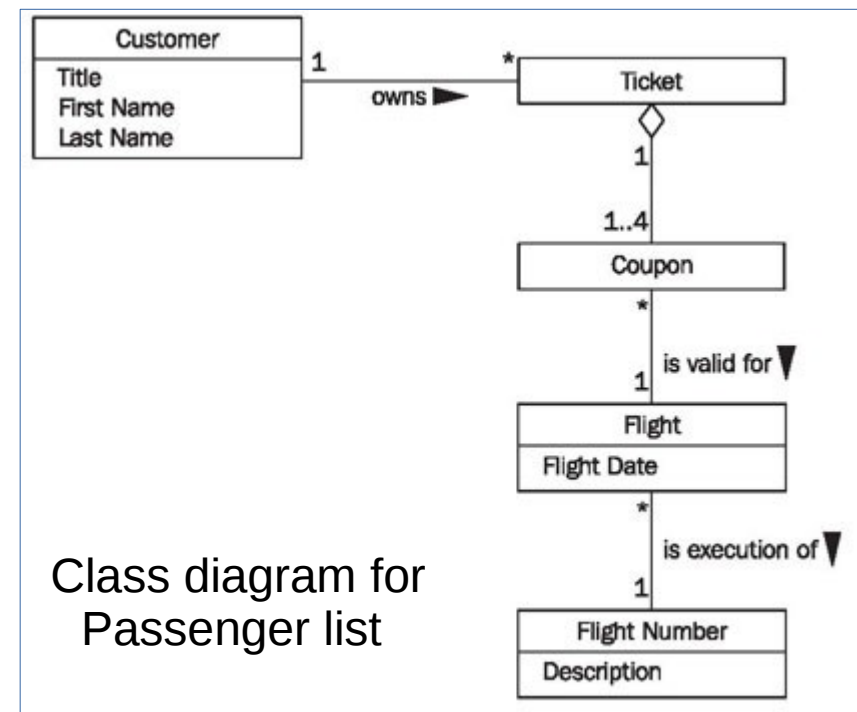
Requirements	Type	Use Case
Boarding Pass	Output	Generating Boarding Pass
Passenger List	Output	Complete Boarding
Ticket Details	Output	Check-In, Express Check-In
Customer Details	Output	Check-In, Express Check-In
Coupon	Input	Check-In, Express Check-In
...		

List Required Queries and Inputs



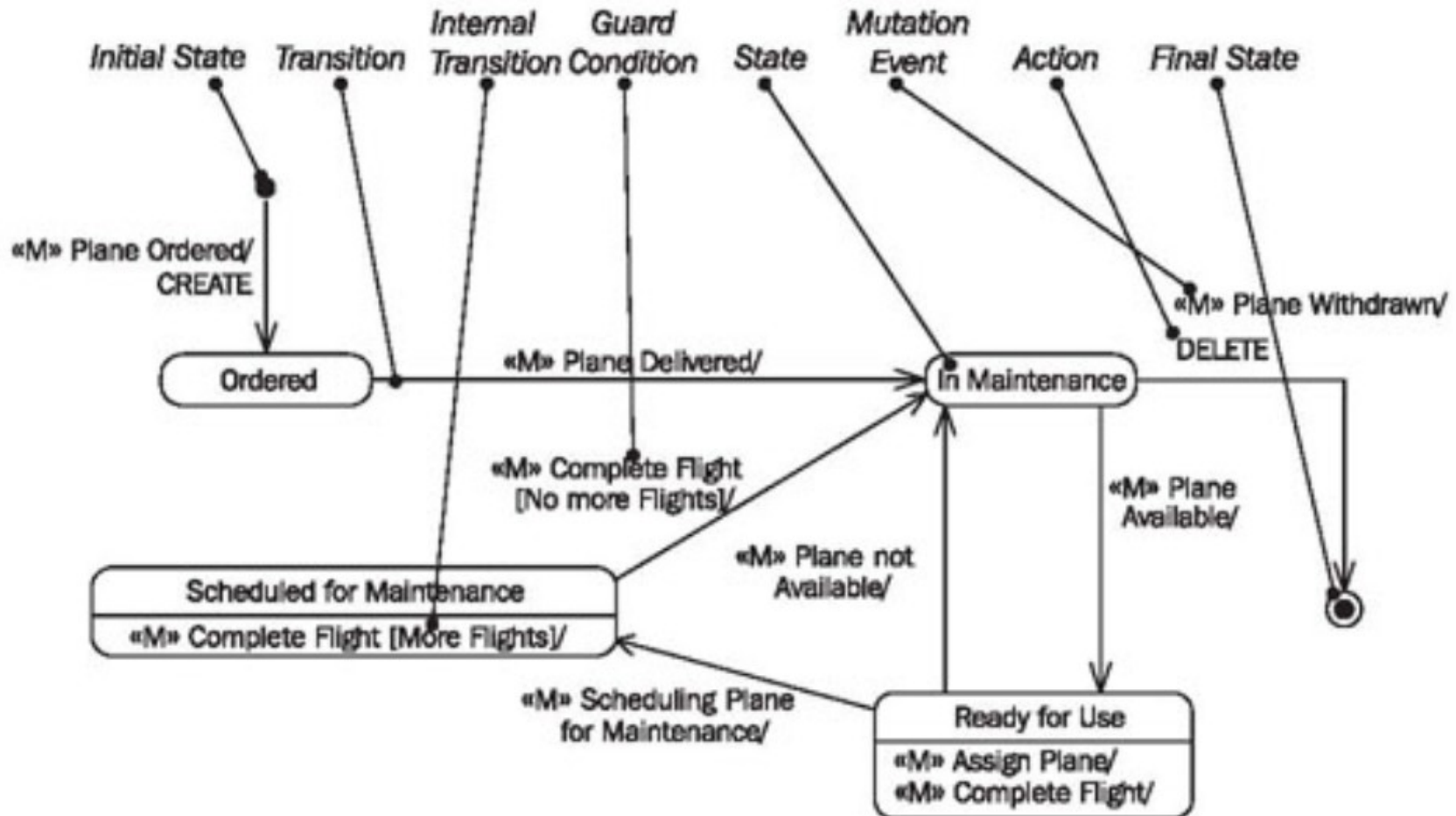
Passenger List for Flight LX317 of 4.9.2003, Stand 08:10 hr		
Mr	Shirodkar	Abhishek
Mr	Adams	Douglas
Ms	Sakpal	Shilpa
Mr	Baumann	Phillipe
Mr	Mohite	Nilesh
Mr	Cleese	John
Ms	Padmanabhan	Nanda
Mr	Jahagirdar	Niranjan
Ms	Chakrabarti	Paramita
Mr	Jarchow	Thomas
Mr	Karnal	Jone
Mr	Gubser	Rolf
Mr	Smith	Harry
Mr	Pande	Ashutosh
Mr	Milligan	Spike
Mr	Schacher	Mark
Mr	Kandalgaonkar	Dinesh
Side 1		

Passenger list



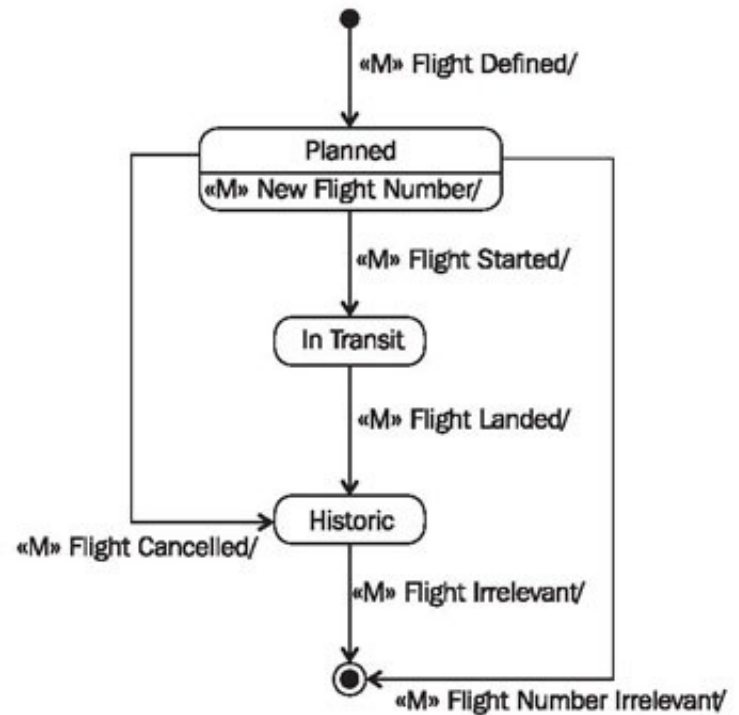
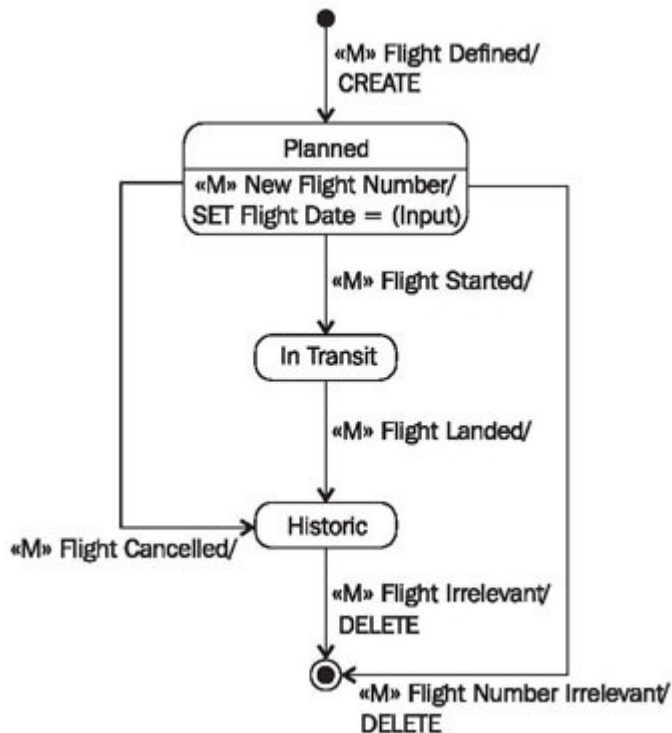
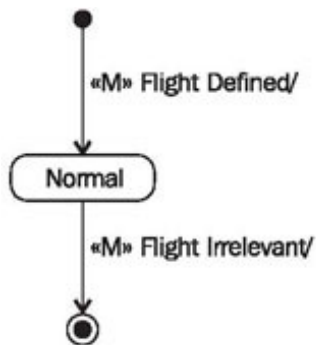
Class diagram for
Passenger list

IT System: Statechart Diagram



Statechart diagram for the frequent flyer card

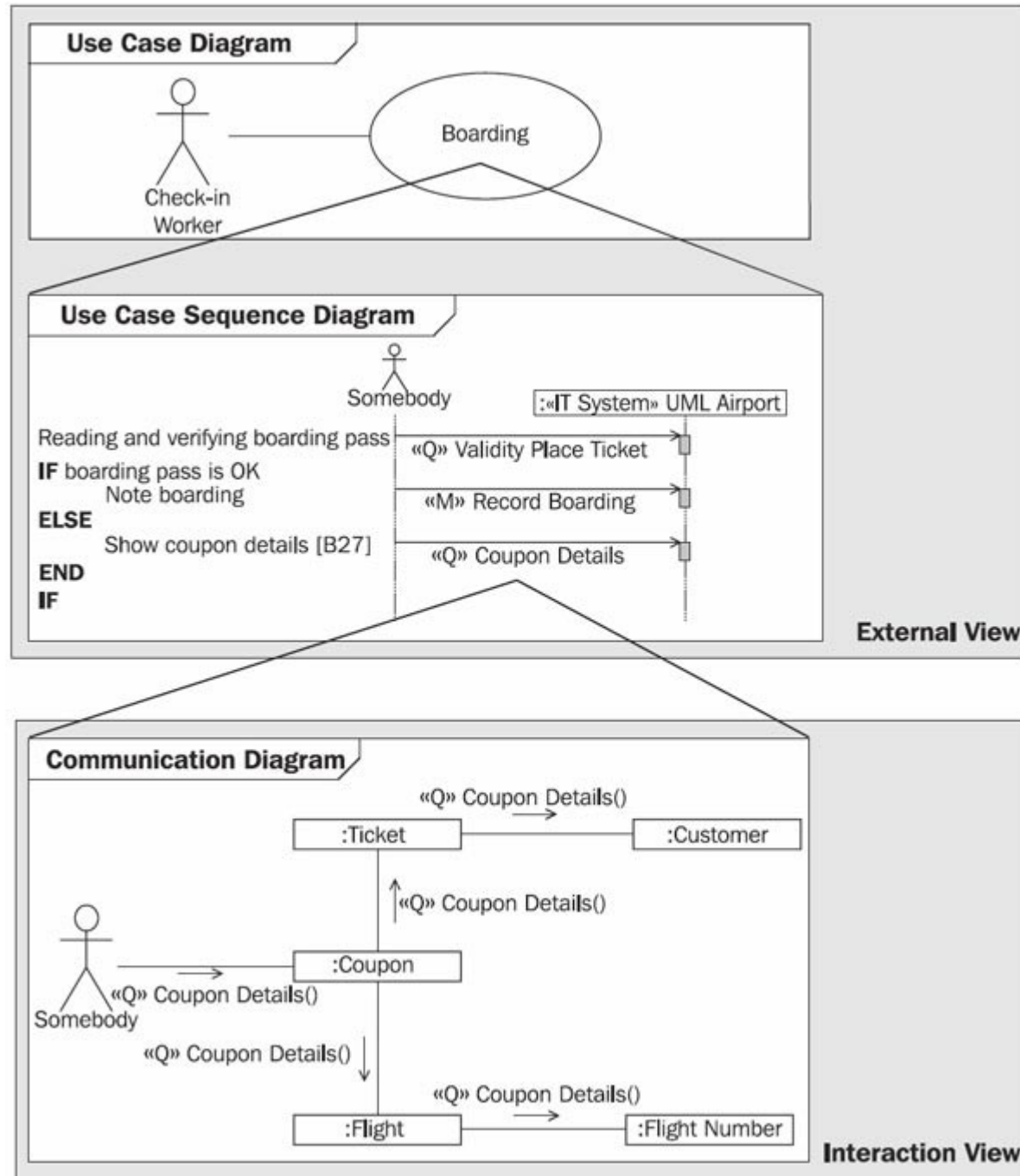
IT System: Statechart Diagram



Statechart diagram of the class "Flight"

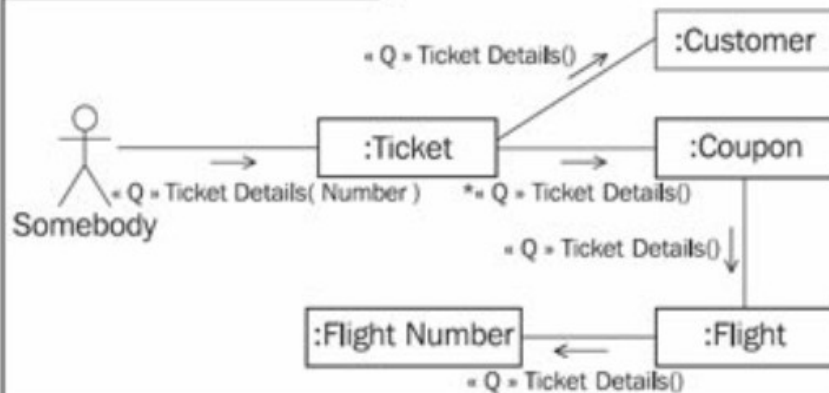
+ actions

IT System: Communication Diagram



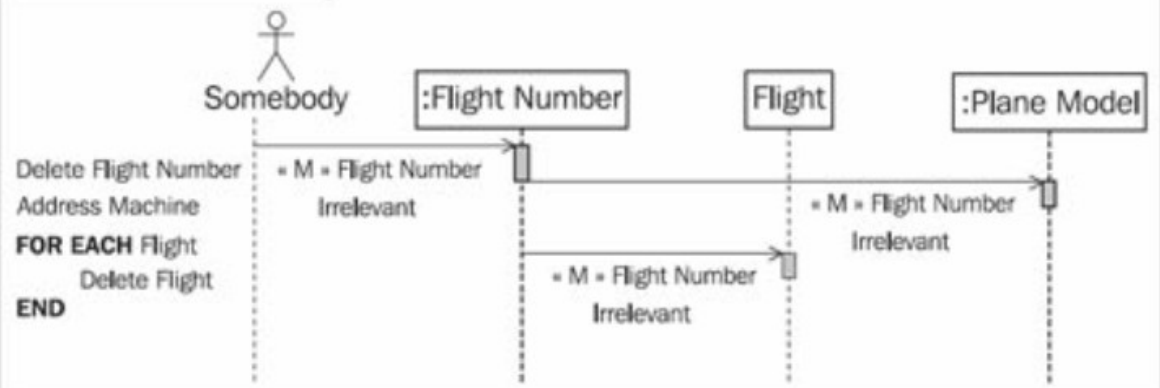
IT System: Communication Diagram

Communication Diagram

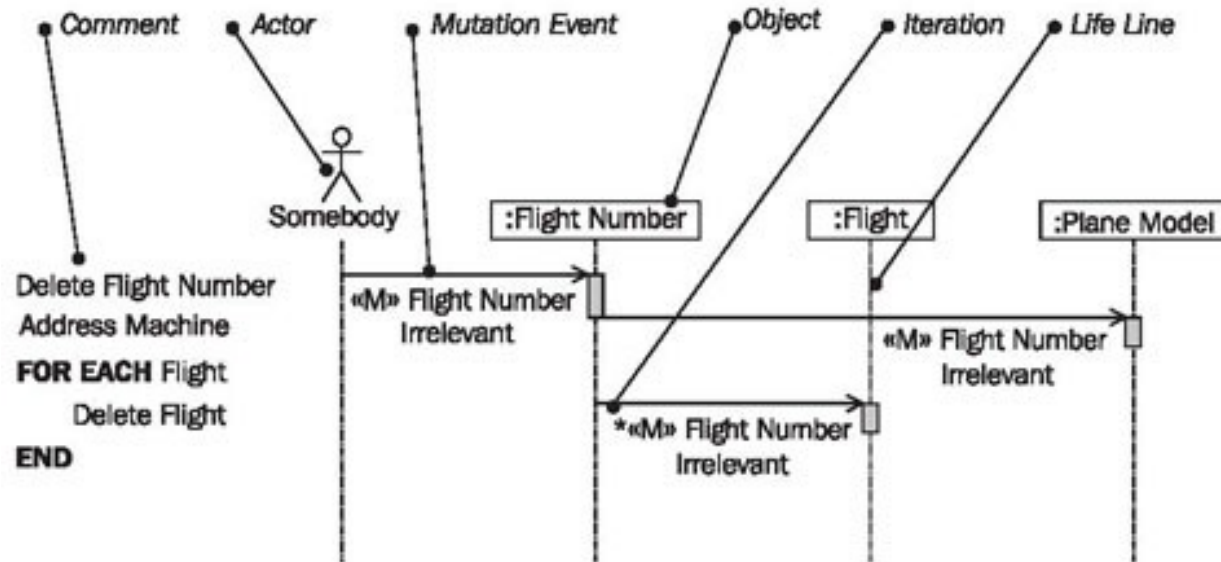


Process View

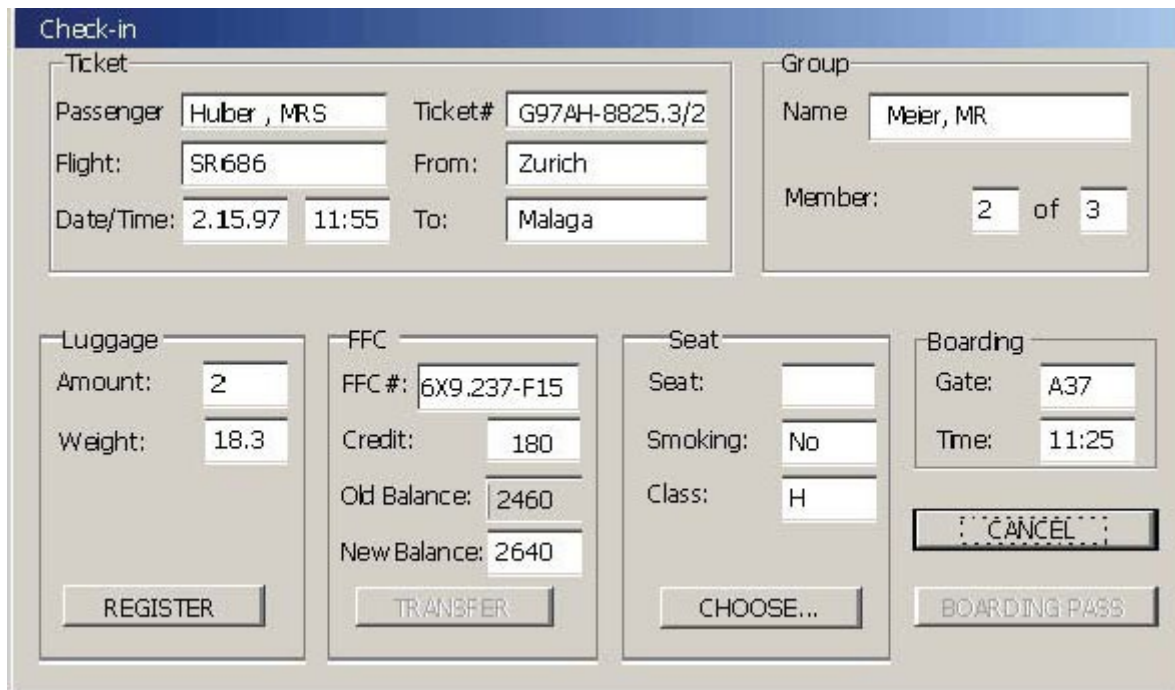
Sequence Diagram



IT System: Sequence Diagram



IT System: Communication Diagram



A screenshot of a check-in interface prototype. It features a title bar 'Check-in' and several input fields organized into sections. The 'Ticket' section includes fields for Passenger (Huber, MRS), Ticket# (G97AH-8825.3/2), Flight (SR686), From (Zurich), Date/Time (2.15.97 11:55), and To (Malaga). The 'Group' section includes Name (Meier, MR) and Member (2 of 3). The 'Luggage' section includes Amount (2) and Weight (18.3). The 'FFC' section includes FFC # (6X9.237-F15), Credit (180), Old Balance (2460), and New Balance (2640). The 'Seat' section includes Seat, Smoking (No), and Class (H). The 'Boarding' section includes Gate (A37) and Time (11:25). There are buttons for 'REGISTER', 'TRANSFER', 'CHOOSE...', 'CANCEL', and 'BOARDING PASS'.

Check-in

Ticket

Passenger: Huber, MRS Ticket#: G97AH-8825.3/2

Flight: SR686 From: Zurich

Date/Time: 2.15.97 11:55 To: Malaga

Group

Name: Meier, MR

Member: 2 of 3

Luggage

Amount: 2

Weight: 18.3

FFC

FFC #: 6X9.237-F15

Credit: 180

Old Balance: 2460

New Balance: 2640

Seat

Seat:

Smoking: No

Class: H

Boarding

Gate: A37

Time: 11:25

REGISTER TRANSFER CHOOSE... CANCEL BOARDING PASS

Interface prototype from the passenger check-in system



A screenshot of a boarding pass. It includes the text 'ECONOMY' and 'Boarding Pass'. The passenger's name is GRAESSLE PATRIC MR. The flight is from ZURICH to HERAKLION. The carrier is EDW761, class is Y, and the date is 29MAY0745. The gate is B38, boarding time is 0715, seat is 12B, and smoking is NO. The passenger's weight is 34.

ECONOMY

Boarding Pass

Name: GRAESSLE PATRIC MR

From: ZURICH

To: HERAKLION

Carrier	Flight	Class	Date	Time
EDW761	Y		29MAY0745	

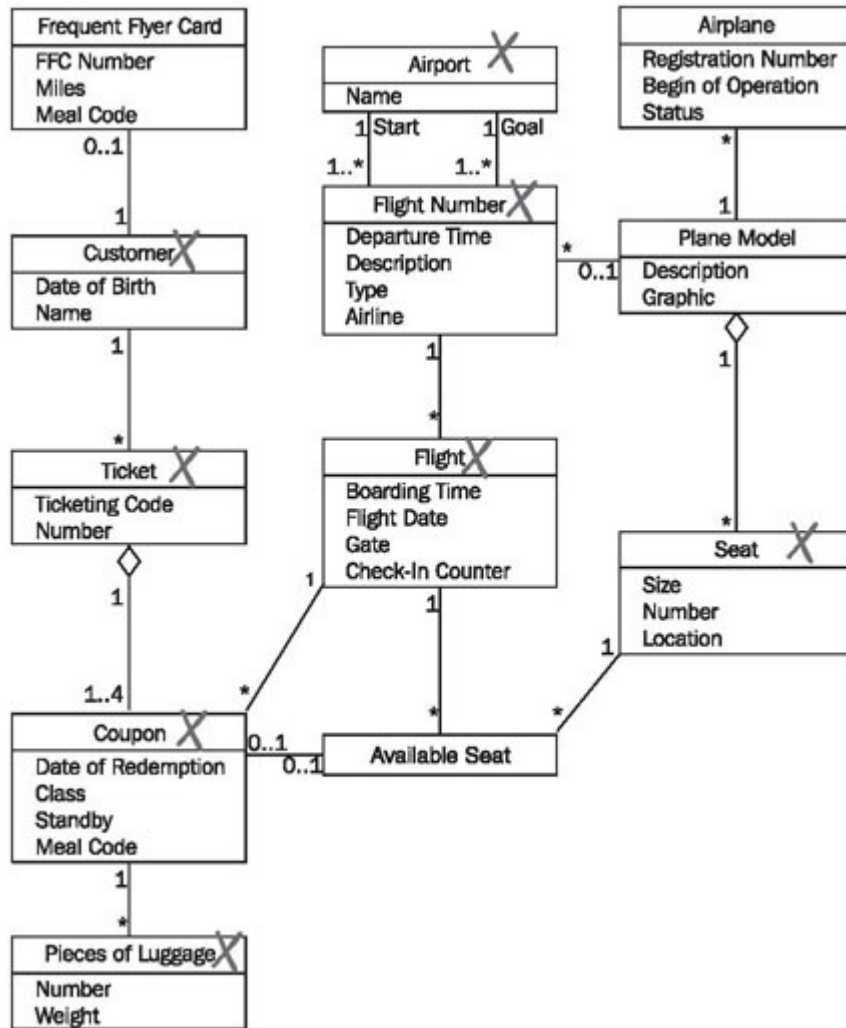
Gate	Boarding time	Seat	Smoking
B38	0715	12B	NO

Pcs Wt

2 34

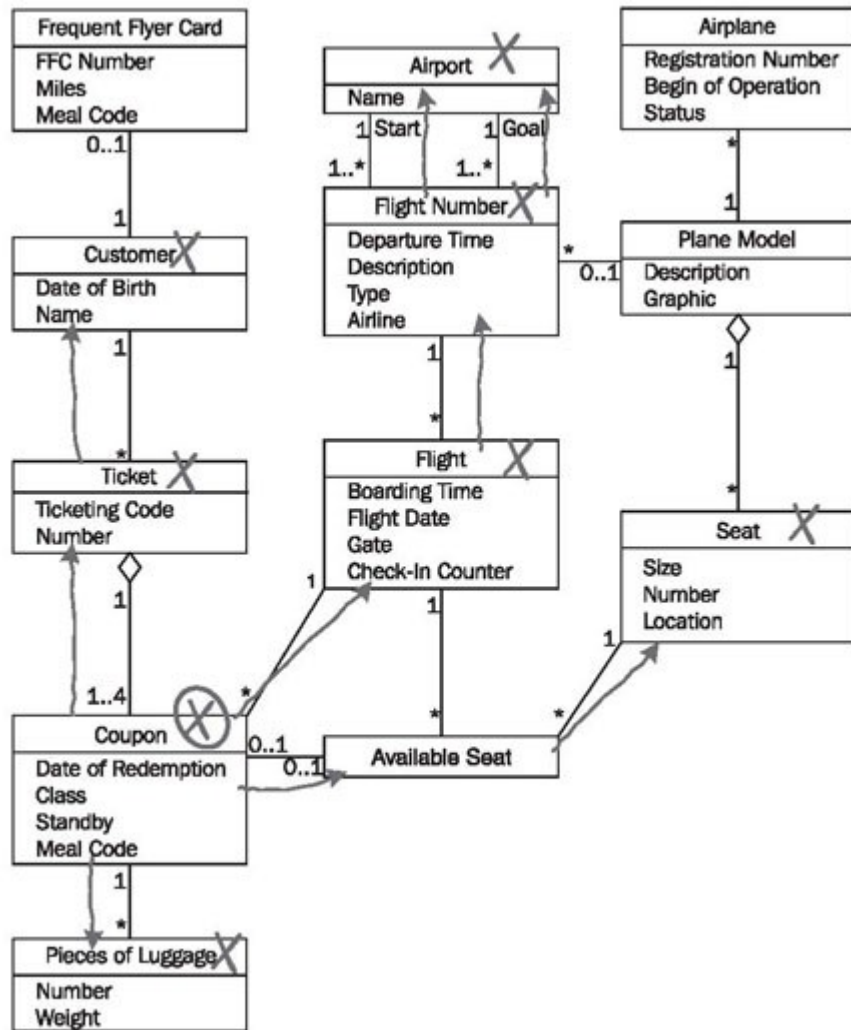
Part of a boarding pass

IT System: Communication Diagram



Part of a boarding pass

IT System: Communication Diagram

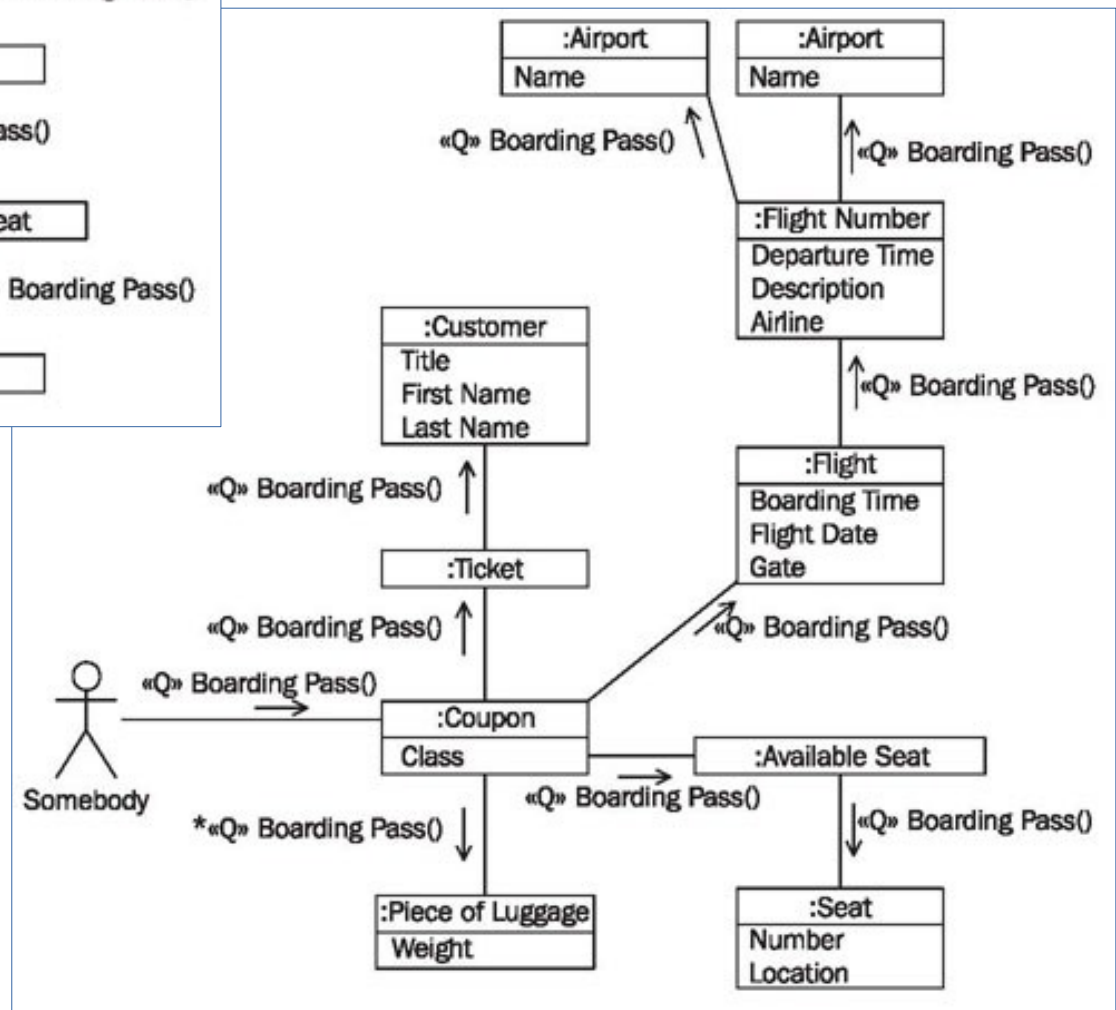
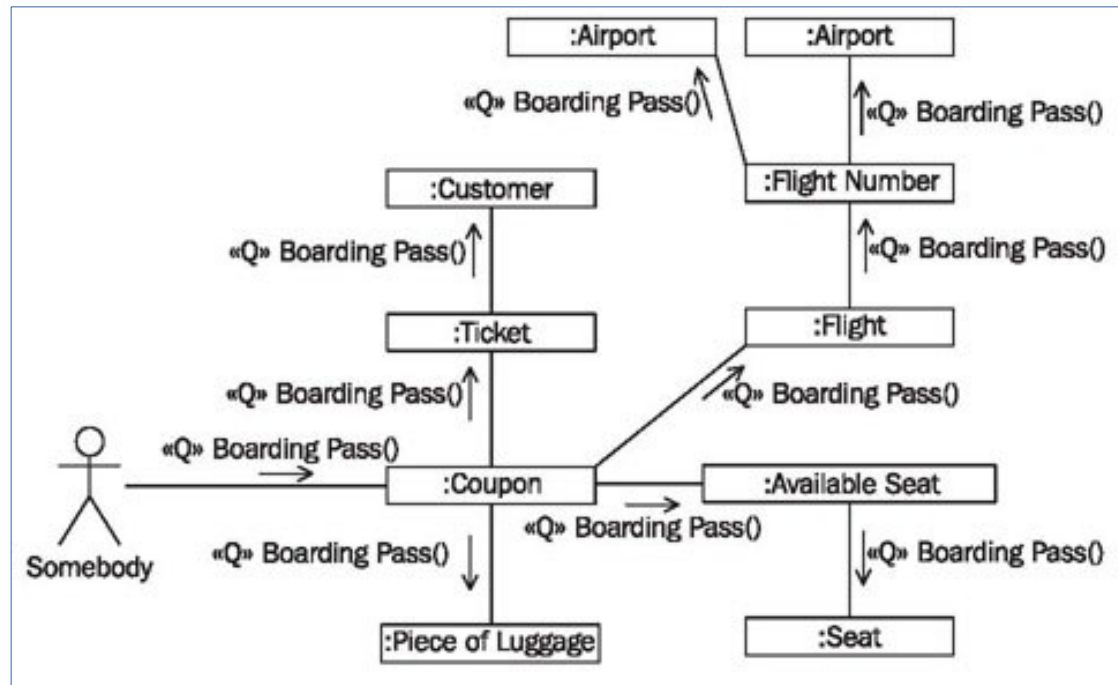


Event path



Part of a boarding pass

IT System: Communication Diagram



IT System: Sequence Diagram

