States and Transitions

Concurrency

Exceptions

Priority Constraints

Real-Time Constraints

High-Level State View – Exploded
High-Level State View – Imploded

High-Level Transition View – Imploded

High-Level Transition View – Exploded

High-Level Transition Exit

High-Level Transition with Entry and Exit States

Behavior Generalization/Specialization
Chapter 4 - Basic Interaction

Alerter Reservation Clerk → notification (Guest Name) → Proprietor

Chapter 4 - Input/Output Interactions

Reservation Clerk → (Please fill in the form.): Form → form filled (Form)

Chapter 4 - Two-Way Interaction

Reservation Clerk → report error (Error, Form) → (Form) → Person

Chapter 4 - Continuous Interaction

Reservation Clerk → (Time) → Clock

Chapter 4 - Broadcast Interaction

Proprietor → (Special Deal) → List of Repeat Guests

Chapter 4 - TO Clause

Proprietor → ("Your requested repair has been completed") TO: Guest in Room 1
Interaction Sequence

Reservation Clerk

new reservation

("Fill in Form", Form)

form filled (Form)

("Your reservation has been made.")

Person

Active Object Interaction

Reservation Clerk

@ form filled

make reservation

Person

@ new reservation

request filled-in form

Waiting

for Form

>= 5 minutes

give waiting message

@ cancel

Ready

report error

provide partially filled-in form

Error

Detected

form not OK

[ < 5 minutes ]

[ < 2 seconds ]

("Fill in Form", Form)

Database Update Interactions

Guest

Address

Name

GuestNr

1

has

1

1

has

1:* 

1

has

1:*

get Name and Address

(GuestNr) -> (Name, Address)

change Address

(GuestNr, Address)

add

(GuestNr, Name, Address)

remove (GuestNr)

High-Level Interactions

Reservation Clerk

GuestProprietor

("Your requested repair has been completed.")

TO: Guest in Room 1

tell Guest ("Repair done", Room#) ("The repair you requested is done.")

("Your requested repair has been completed.")

TO: Guest in Room 1

TO: Guest in Room 1

Real-Time Interactions

Proprietor

[ < 30 minutes ]

Guest

("Your requested repair has been completed")

TO: Guest in Room 1