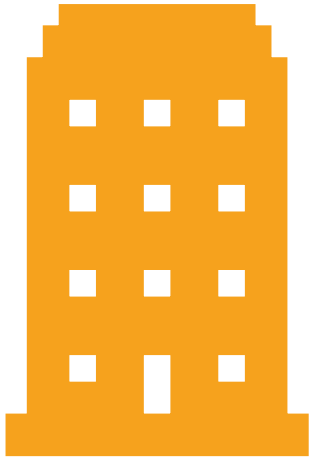


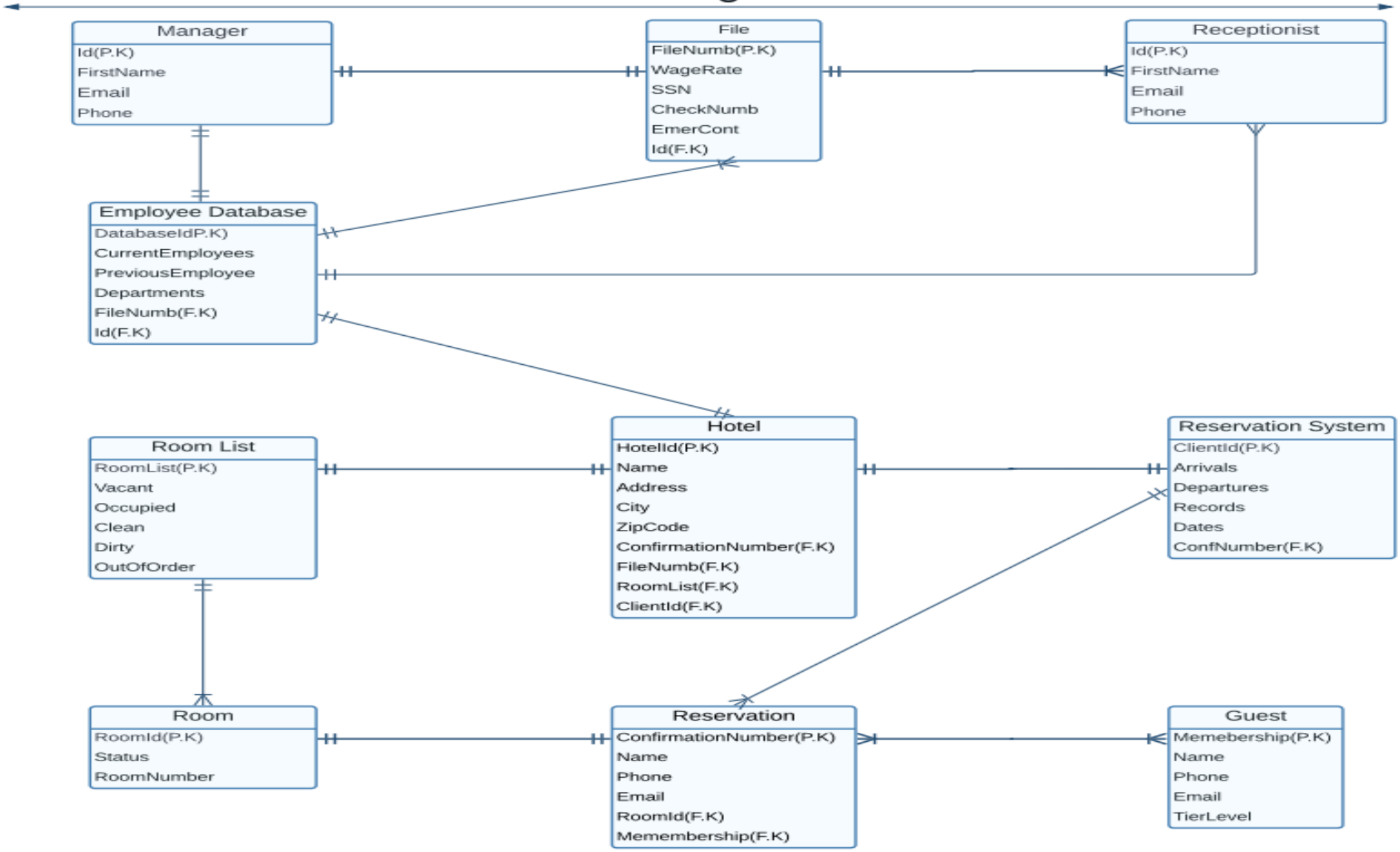
HOTEL OPERATION SYSTEM

By: Diego Ceniceros, Simileoluwa Odunuga

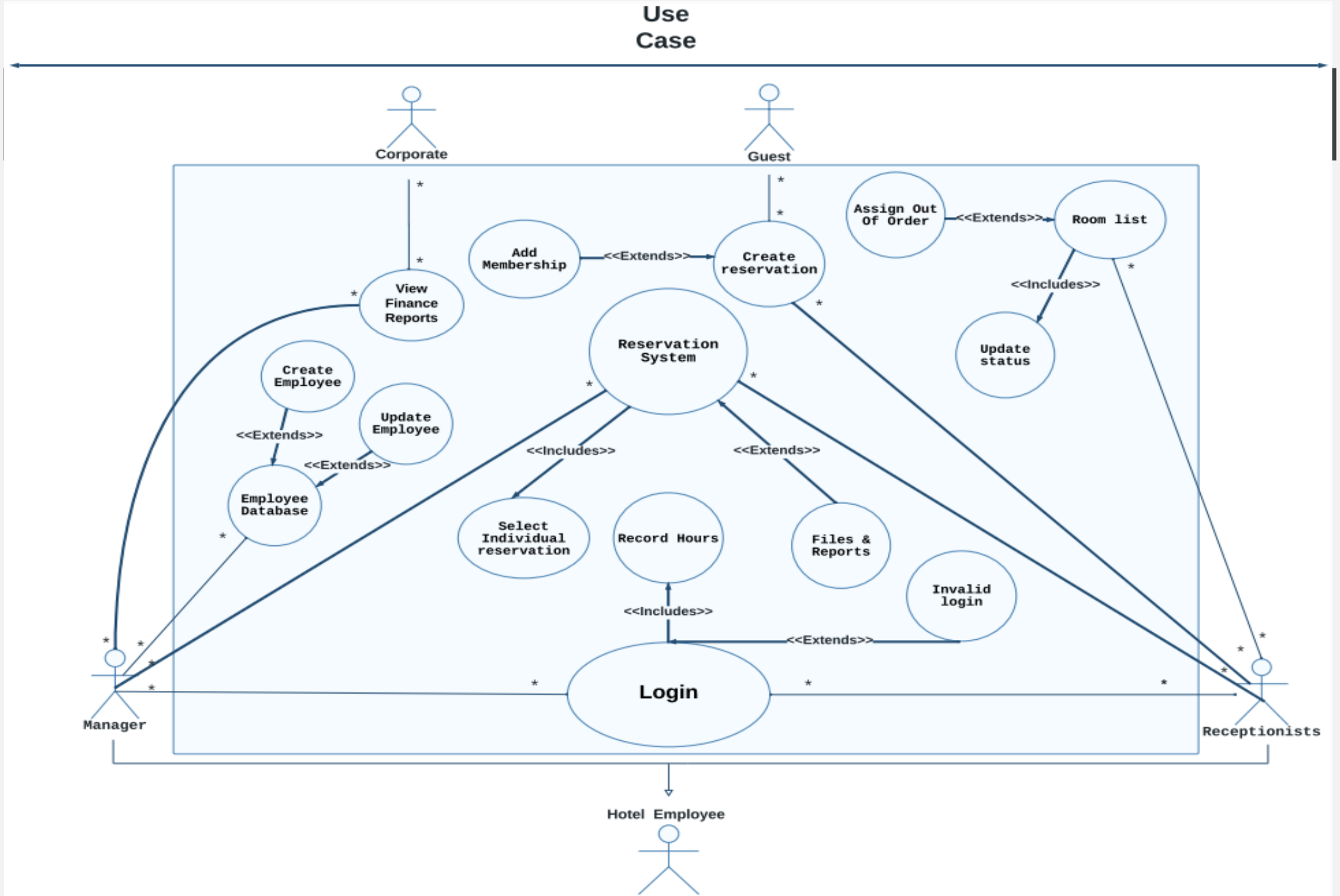
INTRODUCTION

- The following are a series of Unified Modeling Language structural diagrams to explain various processes and networks of a hotel. The diagrams take influence from the OnQ system used in various Hilton Hotels which include booking and reservation specific interactions used daily to conduct business. These images consist of Entity Relationship Diagram, Use Case, Class diagram, Context diagram, Level 0 DFD, Reservation, Login, Room List Statecharts with the accompaniment of a check in and room list sequence diagrams.

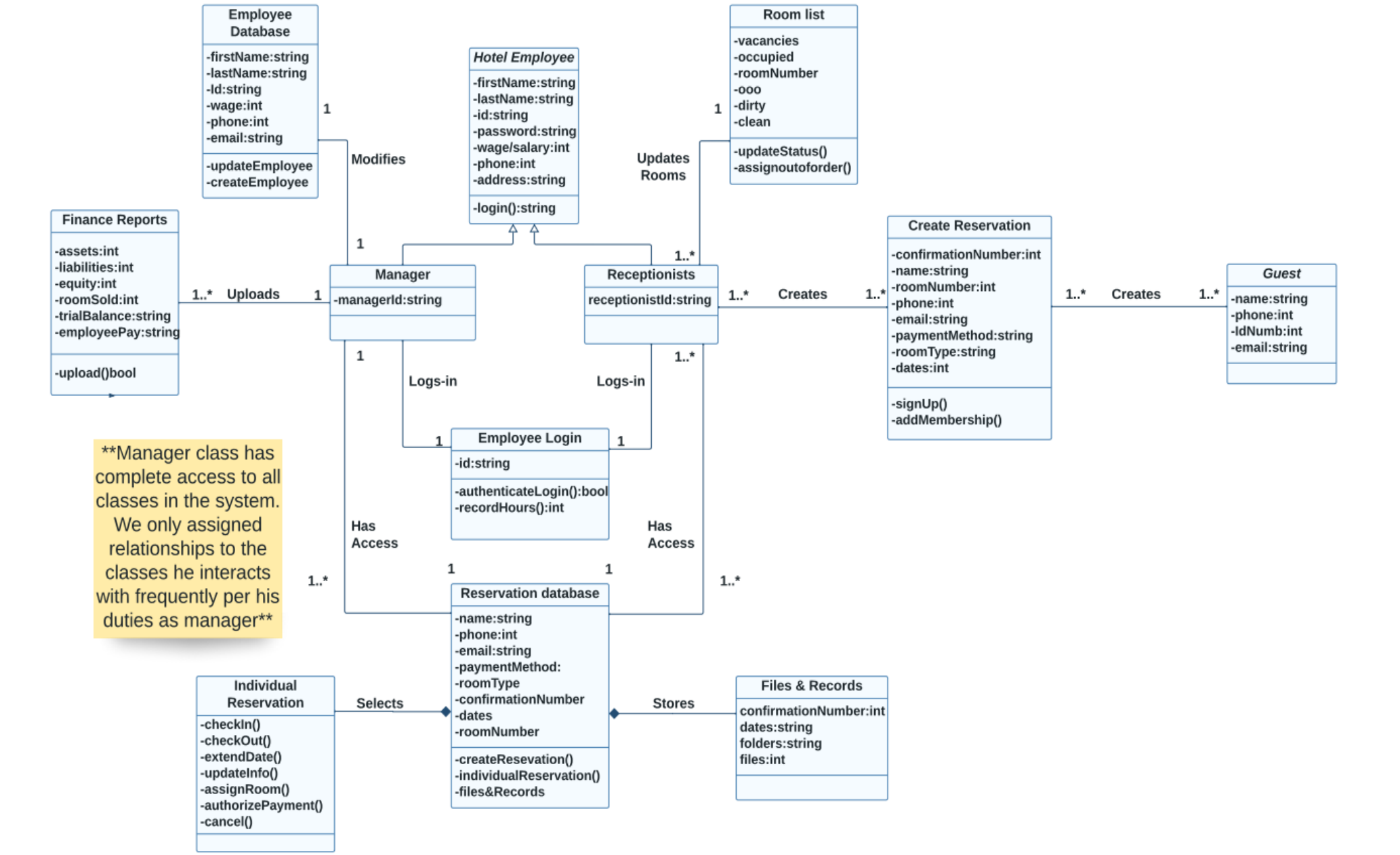
Entity Relationship Diagram



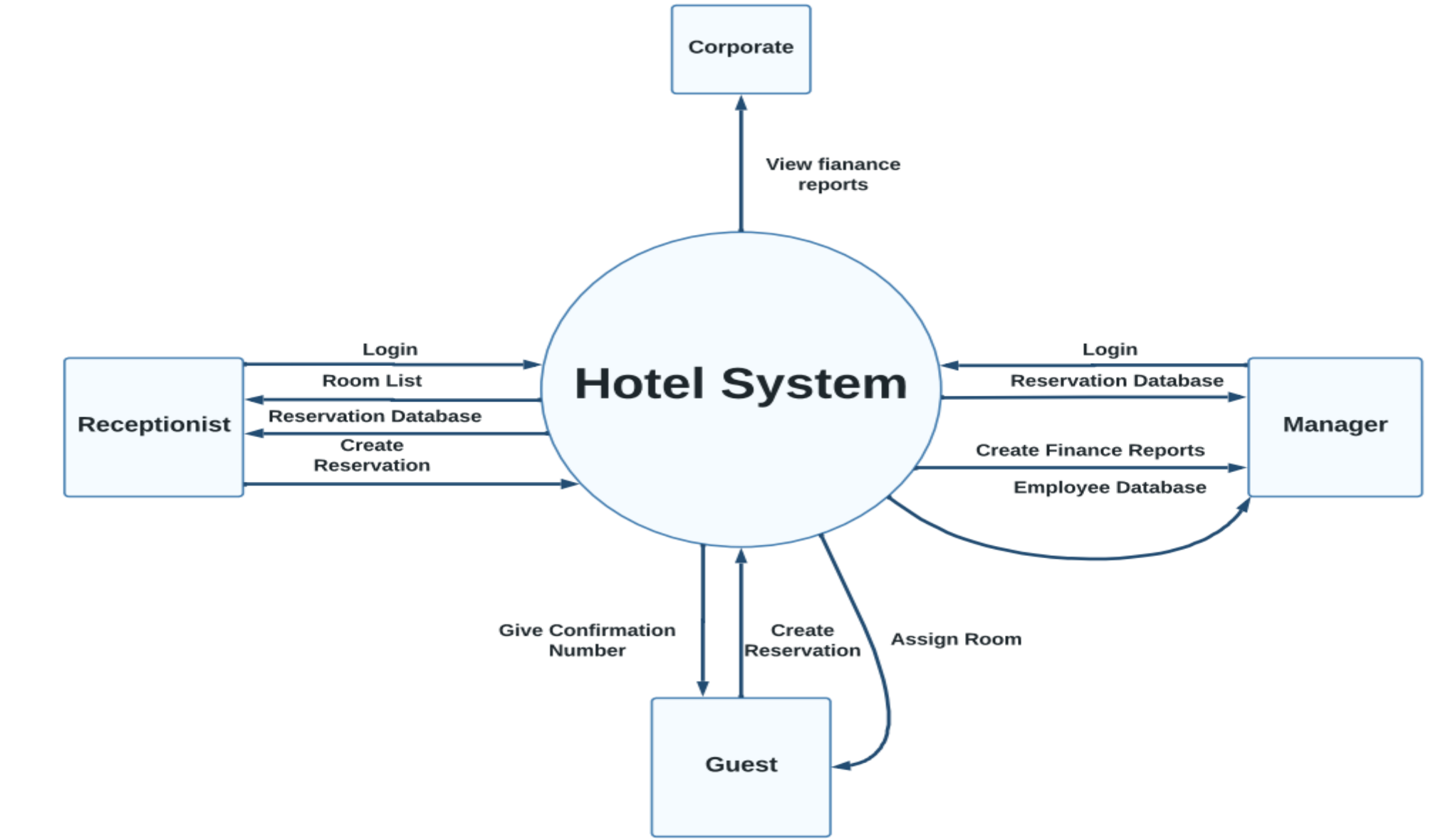
Use Case


Corporate
Guest
Assign Out Of Order
<<Extends>>
Room list
Add Membership
<<Extends>>
Create reservation
<<Includes>>
View Finance Reports
Reservation System
Update status
Create Employee
Update Employee
<<Extends>>
<<Extends>>
<<Includes>>
<<Extends>>
Employee Database
Select Individual reservation
Record Hours
Files & Reports
Invalid login
<<Includes>>
<<Extends>>
Login
Manager
Receptionists
Hotel Employee

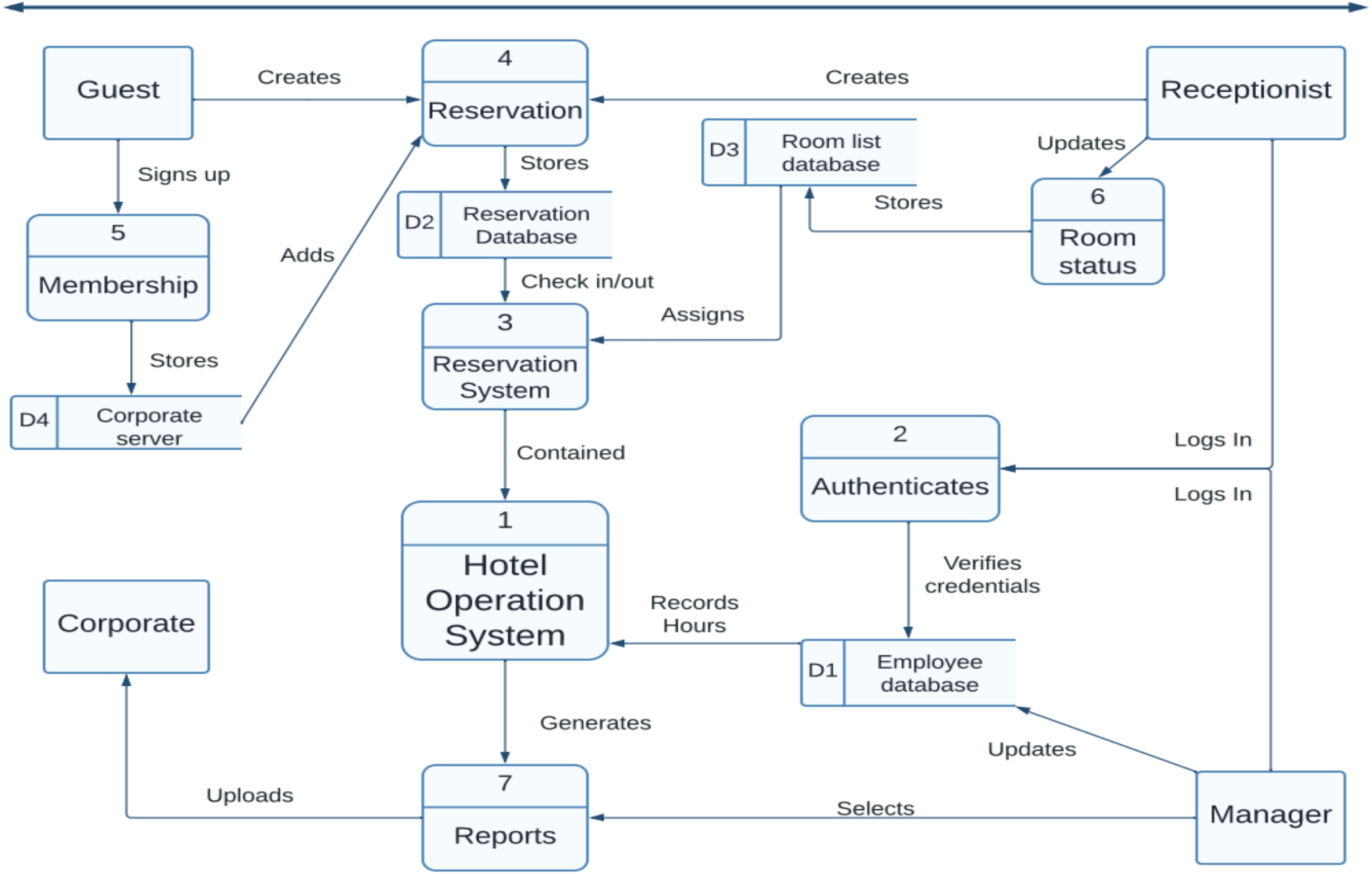
Class Diagram



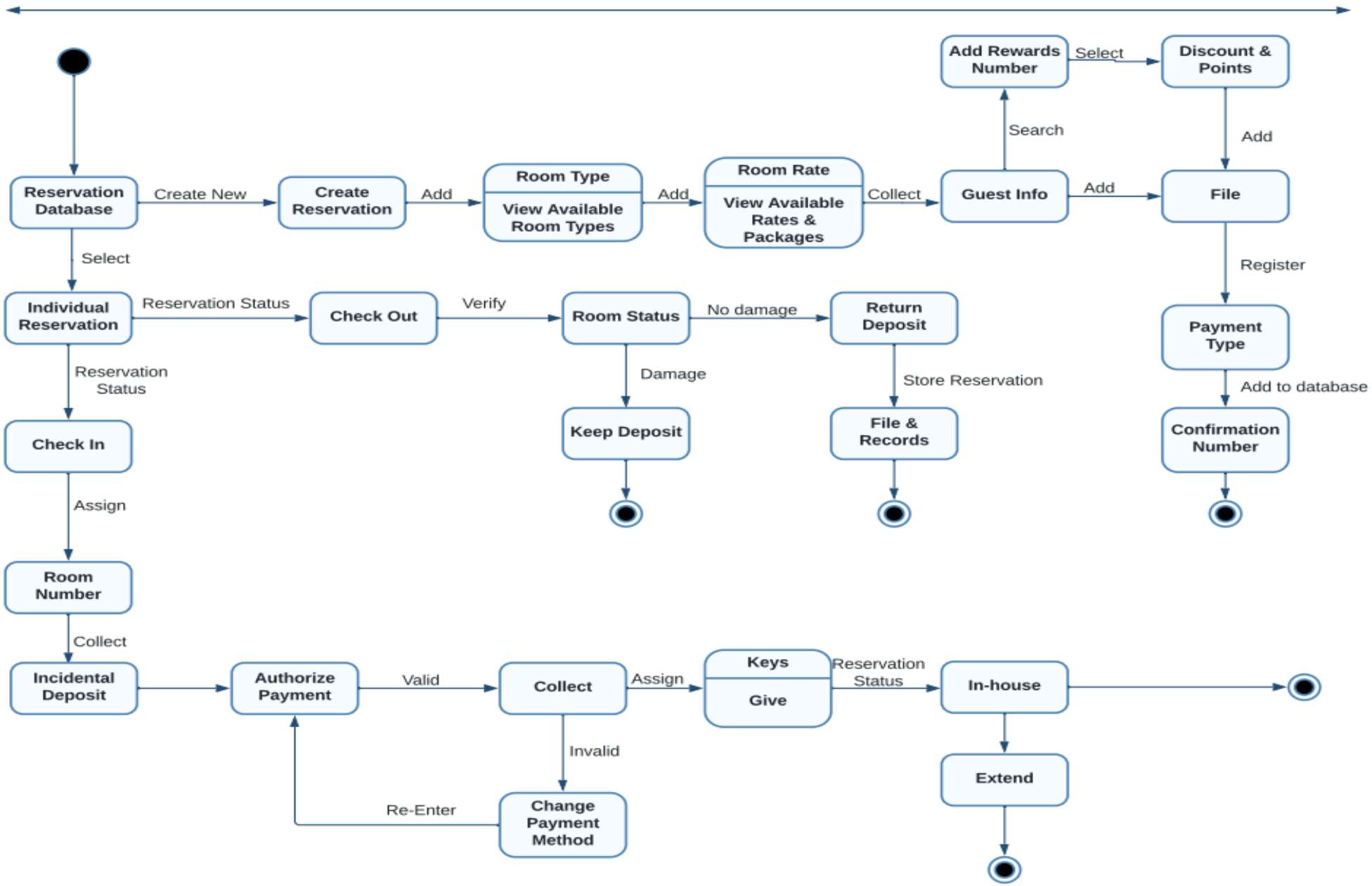
Context Diagram



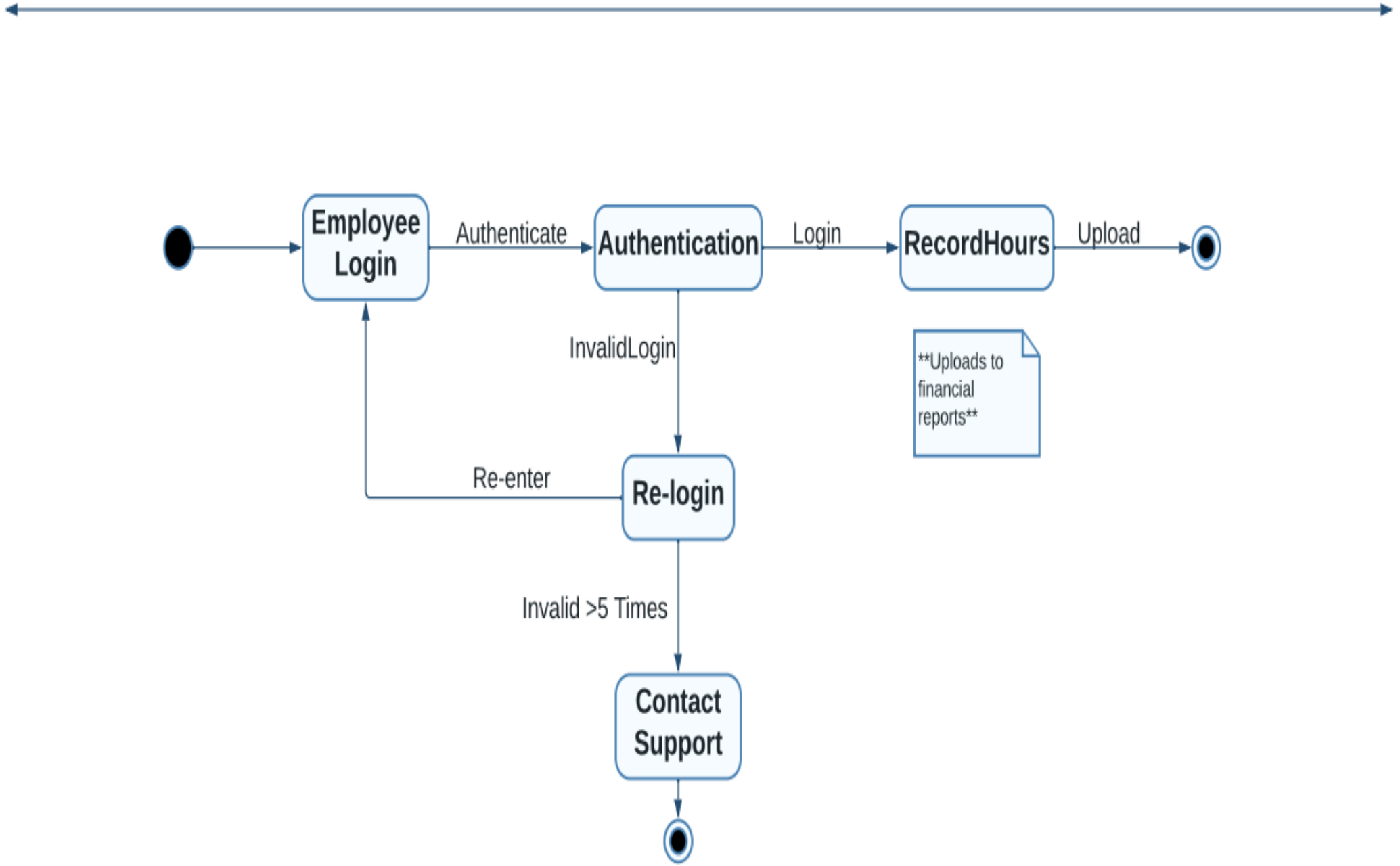
Lvel 0 DFD


Guest
Creates
4
Reservation
Creates
Receptionist
Signs up
Stores
D3
Room list database
Updates
5
Membership
D2
Reservation Database
Stores
6
Room status
Adds
Check in/out
Assigns
3
Reservation System
Stores
D4
Corporate server
Contained
2
Authenticates
Logs In
Logs In
1
Hotel Operation System
Verifies credentials
Corporate
Records Hours
D1
Employee database
Generates
Updates
Uploads
7
Reports
Selects
Manager

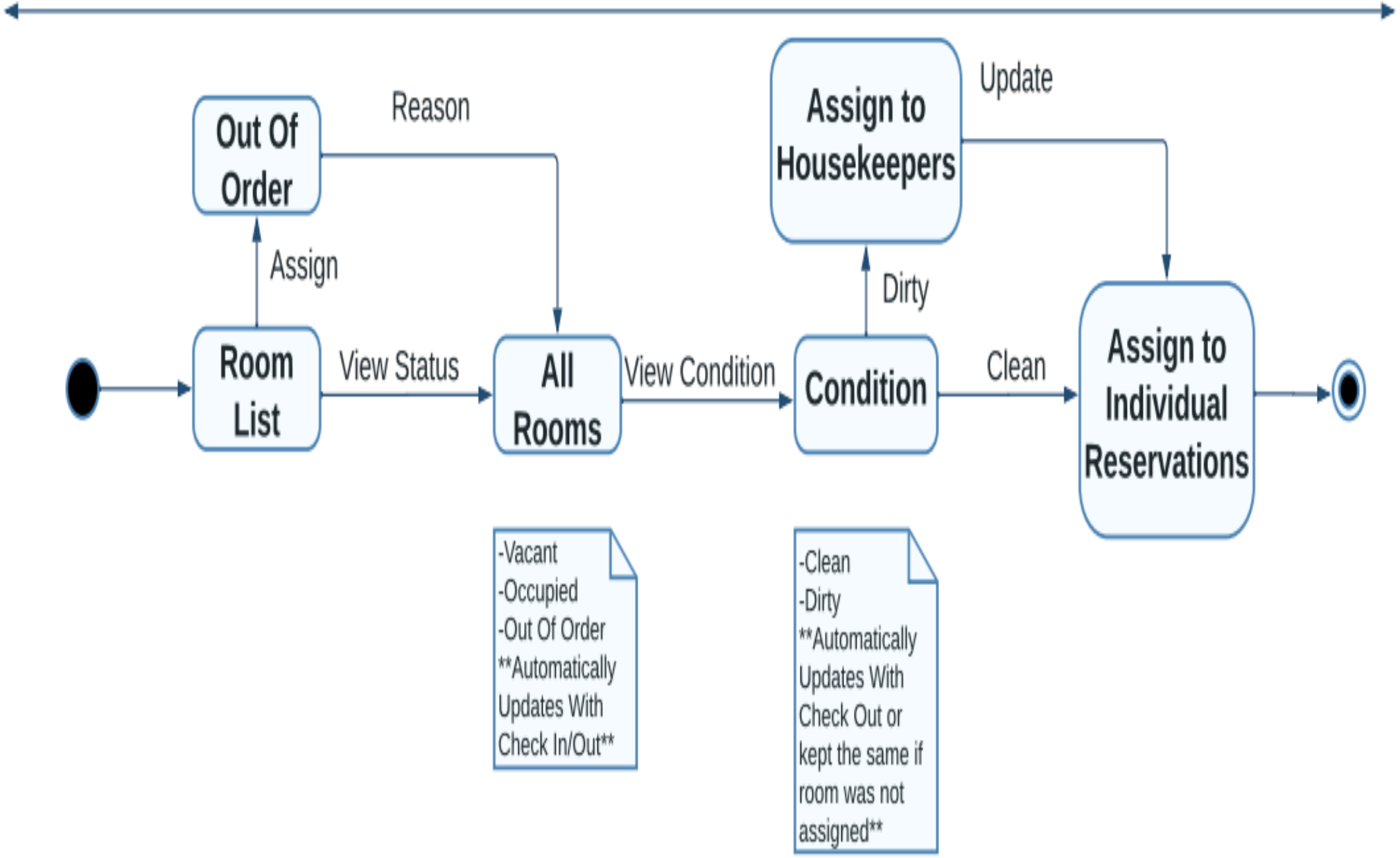
Reservation Statechart

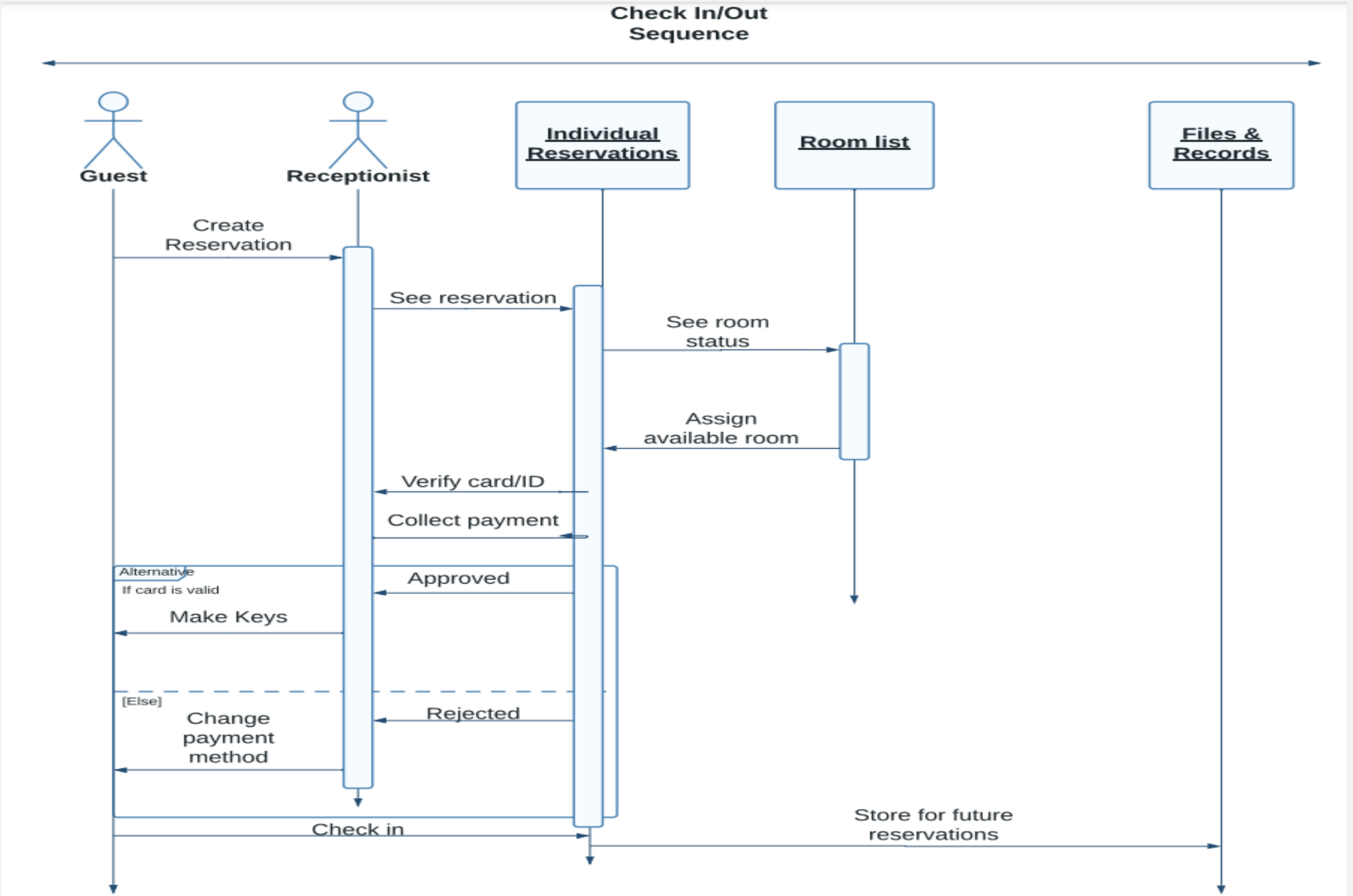


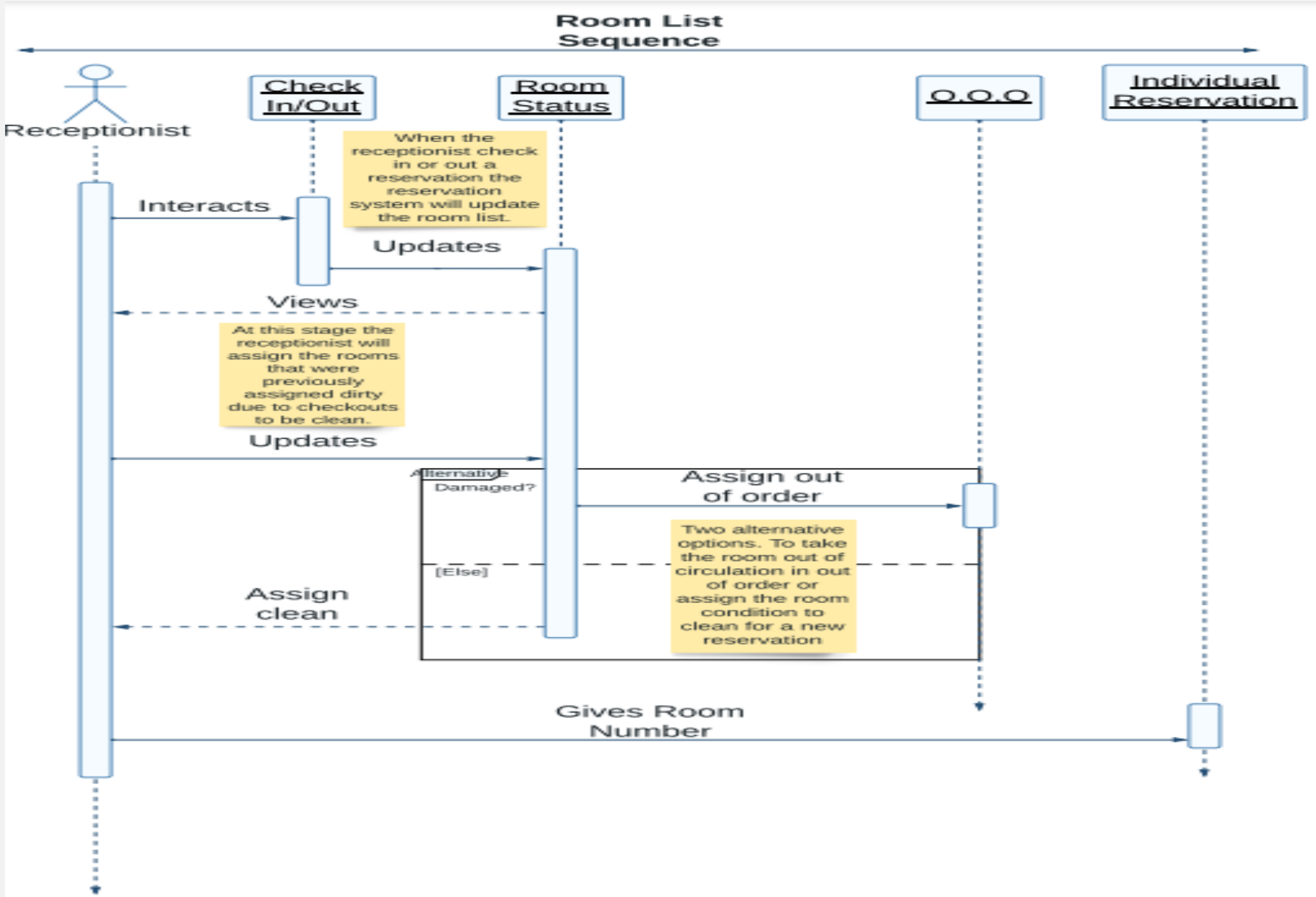
Login Statechart



Room List Statechart




Check In/Out Sequence
Guest
Receptionist
Individual Reservations
Room list
Files & Records
Create Reservation
See reservation
See room status
Assign available room
Verify card/ID
Collect payment
Alternative
If card is valid
Approved
Make Keys
[Else]
Rejected
Change payment method
Check in
Store for future reservations


Room List Sequence
Receptionist
Check In/Out
Room Status
O.O.O
Individual Reservation
When the receptionist check in or out a reservation the reservation system will update the room list.
Interacts
Updates
Views
At this stage the receptionist will assign the rooms that were previously assigned dirty due to checkouts to be clean.
Updates
Alternative
Damaged?
Assign out of order
Two alternative options. To take the room out of circulation in out of order or assign the room condition to clean for a new reservation
[Else]
Assign clean
Gives Room Number