CSE251-Software Engineering

Hotel Management System

(The Best to The Best)

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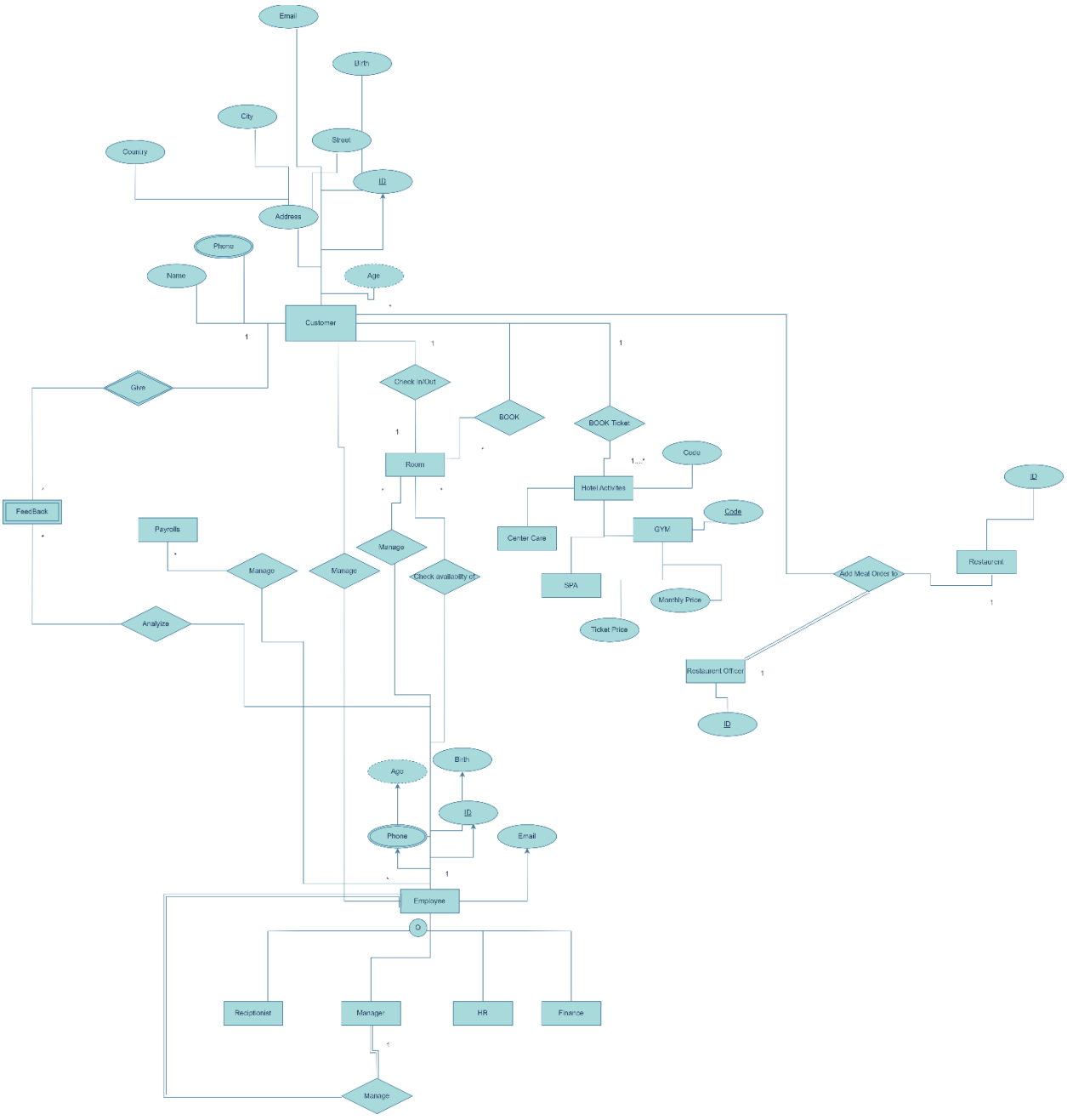
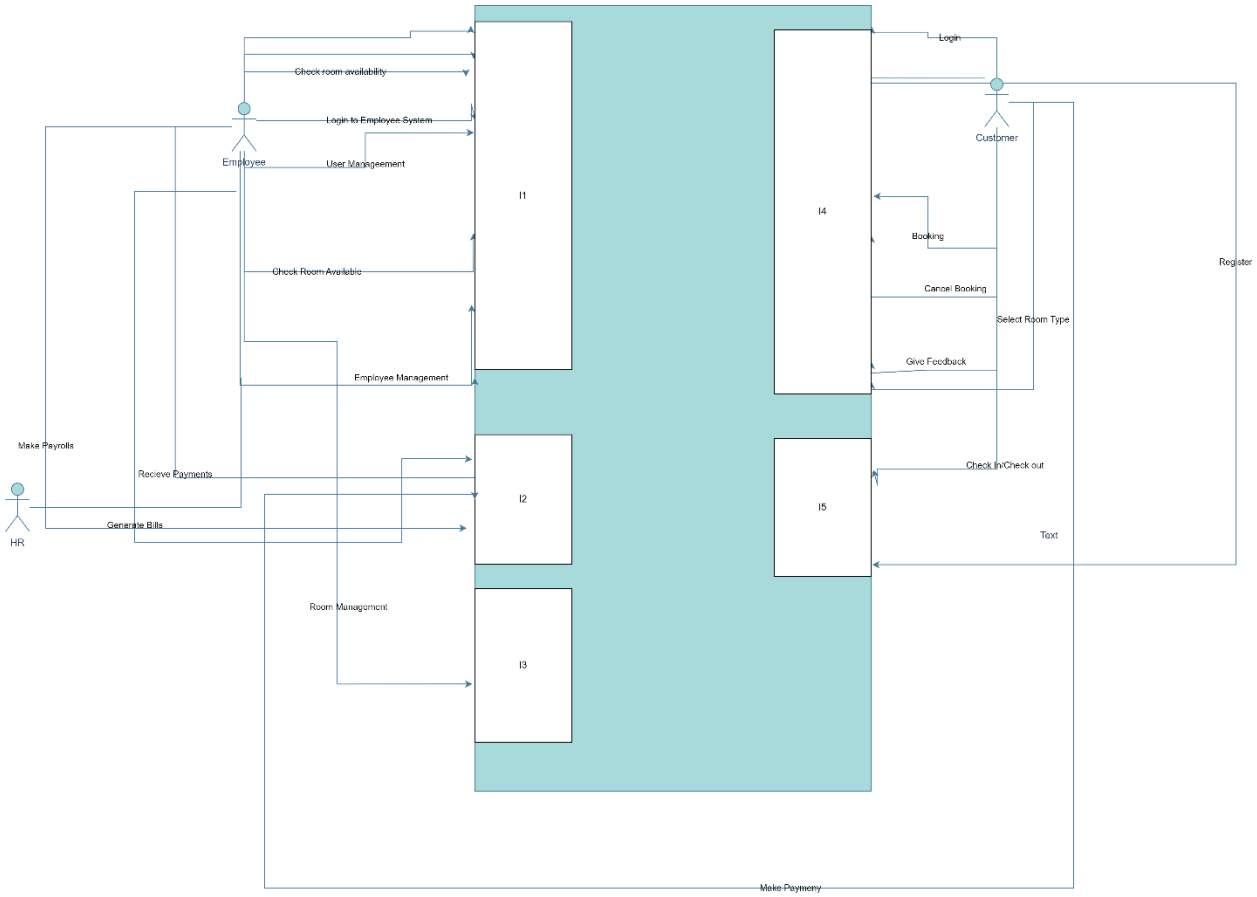
EERD

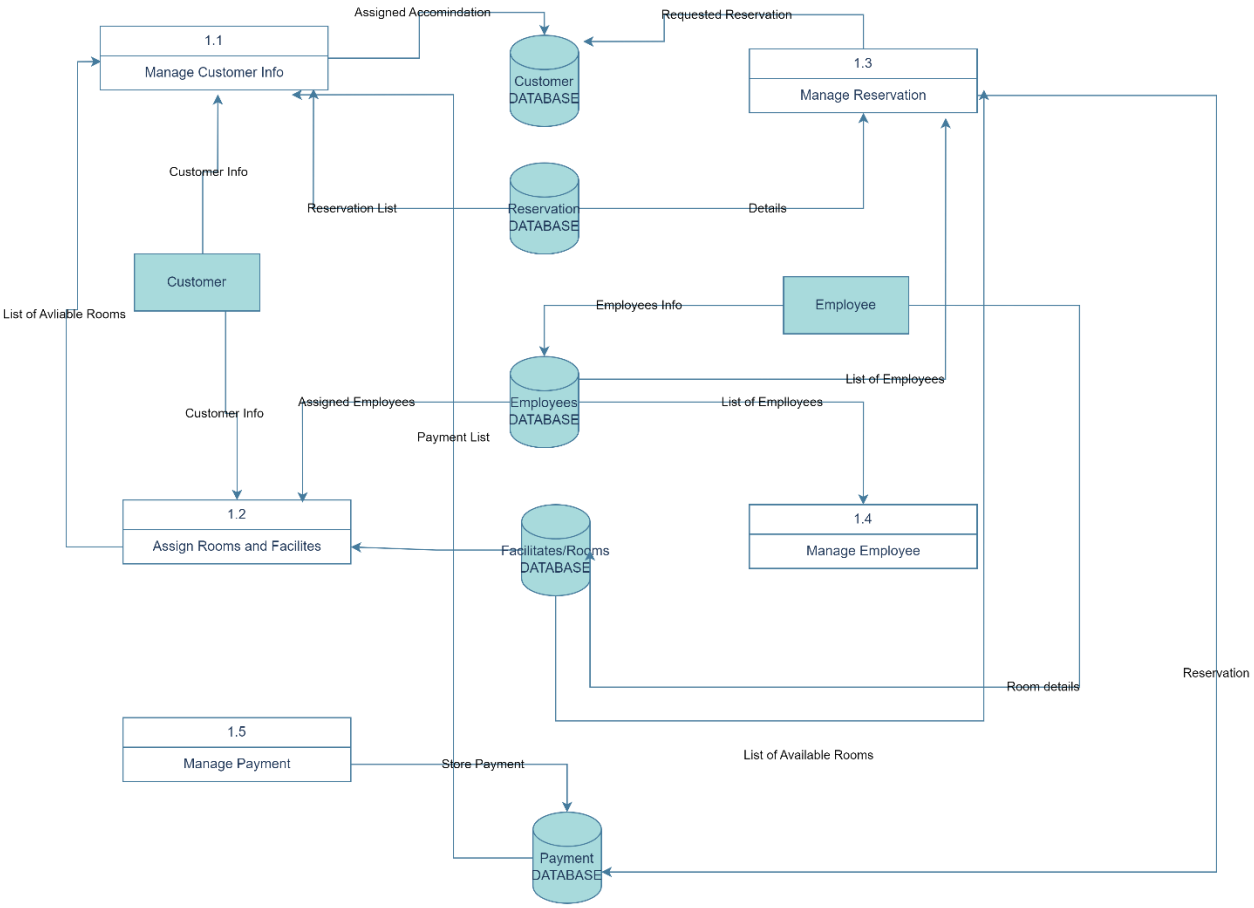

Email
Birth
City
Street
Country
ID
Address
Phone
Name
Age
Customer
Give
Check in/Out
BOOK
BOOK Ticket
Code
Room
Hotel Activities
ID
FeedBack
Payrolls
Manage
Manage
Manage
Check availability of
Center Care
GYM
Code
SPA
Monthly Price
Ticket Price
Add Meal Order to
Restaurant
Analyze
Restaurant Officer
ID
Age
Birth
ID
Phone
Email
Employee
O
Receptionist
Manager
HR
Finance
Manage

Architecture Diagrams

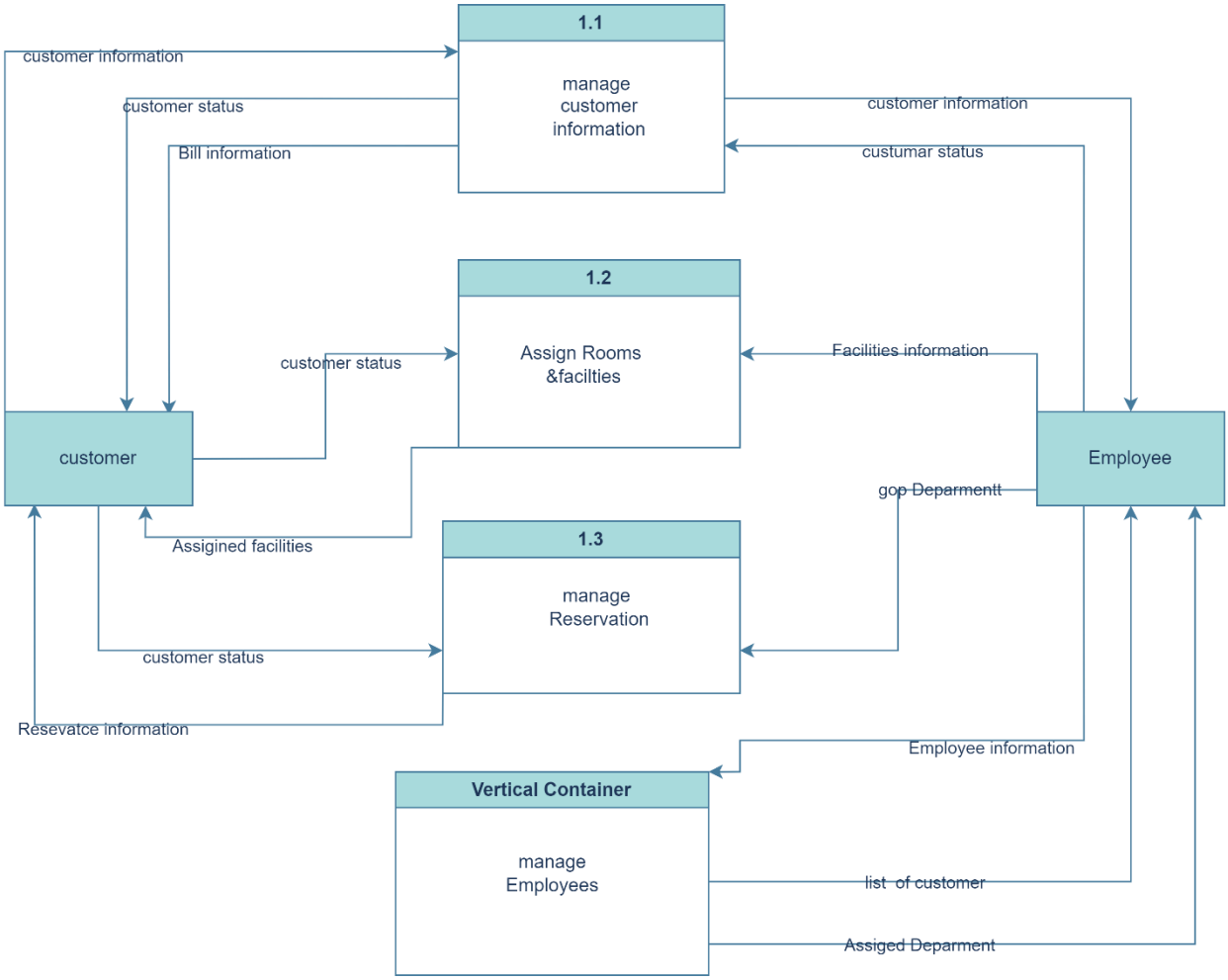
Architecture Diagram (Level 0)



Architecture Diagram (Level 1)



Architecture Diagram (Level 2)



Interfaces Definitions

1. Employee Management Interface :

   This interface is responsible for managing employees in the hotel, including adding, removing, updating, and retrieving employee information. It also provides methods for retrieving an employee by ID or getting a list of all available employees for a given date range.

   • public void addEmployee(Employee employee)

   • public void removeEmployee(Employee employee)

   • public void updateEmployee(Employee employee)

   • public Employee getEmployeeById(int employeeId)

   • public List<Employee> getAllEmployees()

   • public List<Employee> getAvailableEmployees(Date startDate, Date endDate)

2. Billing and Payment Interface :

   This interface is responsible for calculating guest bills, processing payments, and managing payment records.

   • public void calculateBill(Guest guest, Room room, Date checkInDate, Date checkOutDate)

   • public boolean makePayment(Guest guest, Payment payment)

3. Room Management Interface :

This interface is responsible for managing rooms in the hotel, including adding, removing, updating, and retrieving room information. It also provides methods for retrieving a room by ID or getting a list of all available rooms for a given date range.

- public void addRoom(Room room)
- public void removeRoom(Room room)
- public void updateRoom(Room room)
- public Room getRoomById(int roomId)
- public List<Room> getAllRooms()
- public List<Room> getAvailableRooms(Date checkInDate, Date checkOutDate)

4. User Management Interface :

This interface is responsible for managing user accounts, including adding, removing, updating, and retrieving user information. It also provides methods for retrieving users by ID or username, as well as retrieving a list of all users.

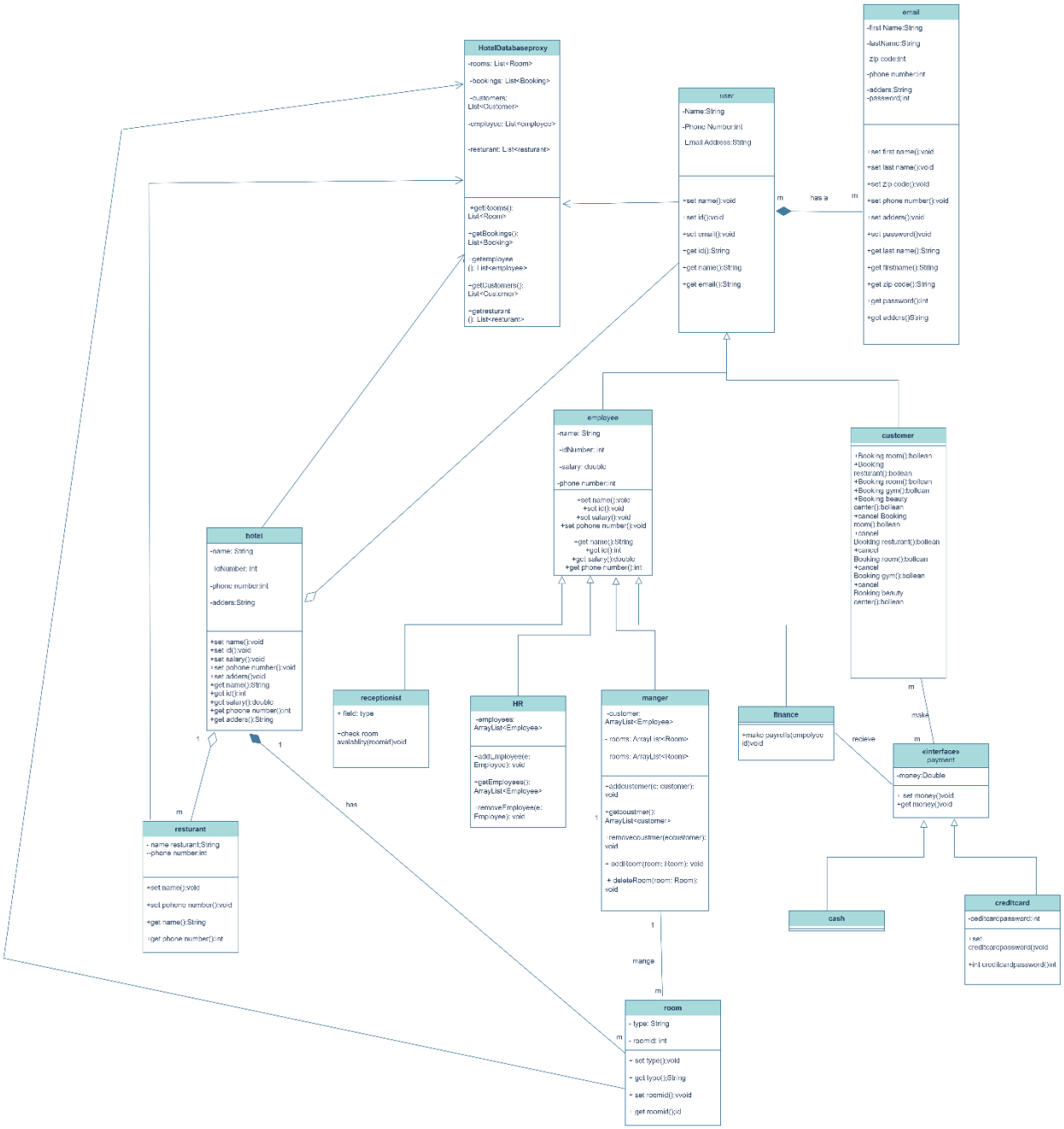
- public void addUser(User user)
- public void removeUser(User user)
- public void updateUser(User user)
- public User getUserById(int userId)
- public User getUserByUsername(String username)
- public List<User> getAllUsers()

5. Booking Interface :

This interface is responsible for booking a room for a guest for a given date range.

- public boolean bookRoom(Guest guest, Room room, Date checkInDate, Date checkOutDate)

UML Diagram


HotelDatabaseproxy
-rooms: List<Room>
-bookings: List<Booking>
-customers: List<Customer>
-employee: List<employee>
-resturant: List<resturant>
+getrooms(): List<Room>
+getBookings(): List<Booking>
+getemployee (): List<employee>
+getCustomers(): List<Customer>
+getresturant (): List<resturant>
user
-Name:String
-Phone Number:int
-Email Address:String
+set name():void
+set id():void
+set email():void
-get id():String
+get name():String
+get email():String
email
-first Name:String
-lastName:String
zip code:int
-phone number:int
-addars:String
-password:int
+set first name():void
+set last name():void
+set zip code():void
+set phone number():void
+set addars():void
+set password():void
+get last name():String
+get firstname():String
+get zip code():String
+get password():int
+get addars():String
has a
employee
-name: String
-idNumber: int
-salary: double
-phone number:int
+set name():void
+set id():void
+set salary():void
+set pohone number():void
+get name():String
+get id():int
+get salary():double
+get phone number():int
customer
+Booking room():bollean
+Booking resturant():bollean
+Booking room():bollean
+Booking gym():bollean
+Booking beauty center():bollean
+cancel Booking room():bollean
+cancel Booking resturant():bollean
+cancel Booking room():bollean
+cancel Booking gym():bollean
+cancel Booking beauty center():bollean
hotel
-name: String
idNumber: int
-phone number:int
-addars:String
+set name():void
+set id():void
+set salary():void
+set pohone number():void
+set addars():void
+get name():String
+get id():int
+get salary():double
+get phone number():int
+get addars():String
receptionist
+ field: type
-check room availshilty(roomid)void
HR
-employees: ArrayList<Employee>
-add_employee(e: Employee): void
+getEmployees(): ArrayList<Employee>
-removeFmployee(e: Fmployee): void
manger
-customer: ArrayList<Employee>
- rooms: ArrayList<Room>
rooms: ArrayList<Room>
-addcustomer(c: customer): void
+getcoustmer(): ArrayList<customer>
-remvecustmer(ecoustomer): void
- addRoom(room: Room): void
+ deleteRoom(room: Room): void
finance
+meke payrolls(empolyoe id)void
recieve
make
«interface» payment
-money:Double
+ set money()void
+get money()void
cash
creditcard
-creditcardpassword:int
+ set creditcardpassword()void
+int creditcardpassword()int
resturant
- name resturant:String
--phone number:int
+set name():void
+set pohone number():void
+get name():String
+get phone number():int
has
mange
room
- type: String
- roomid: int
+ set type():void
+ get type():String
+ set roomid():void
- get roomid():id

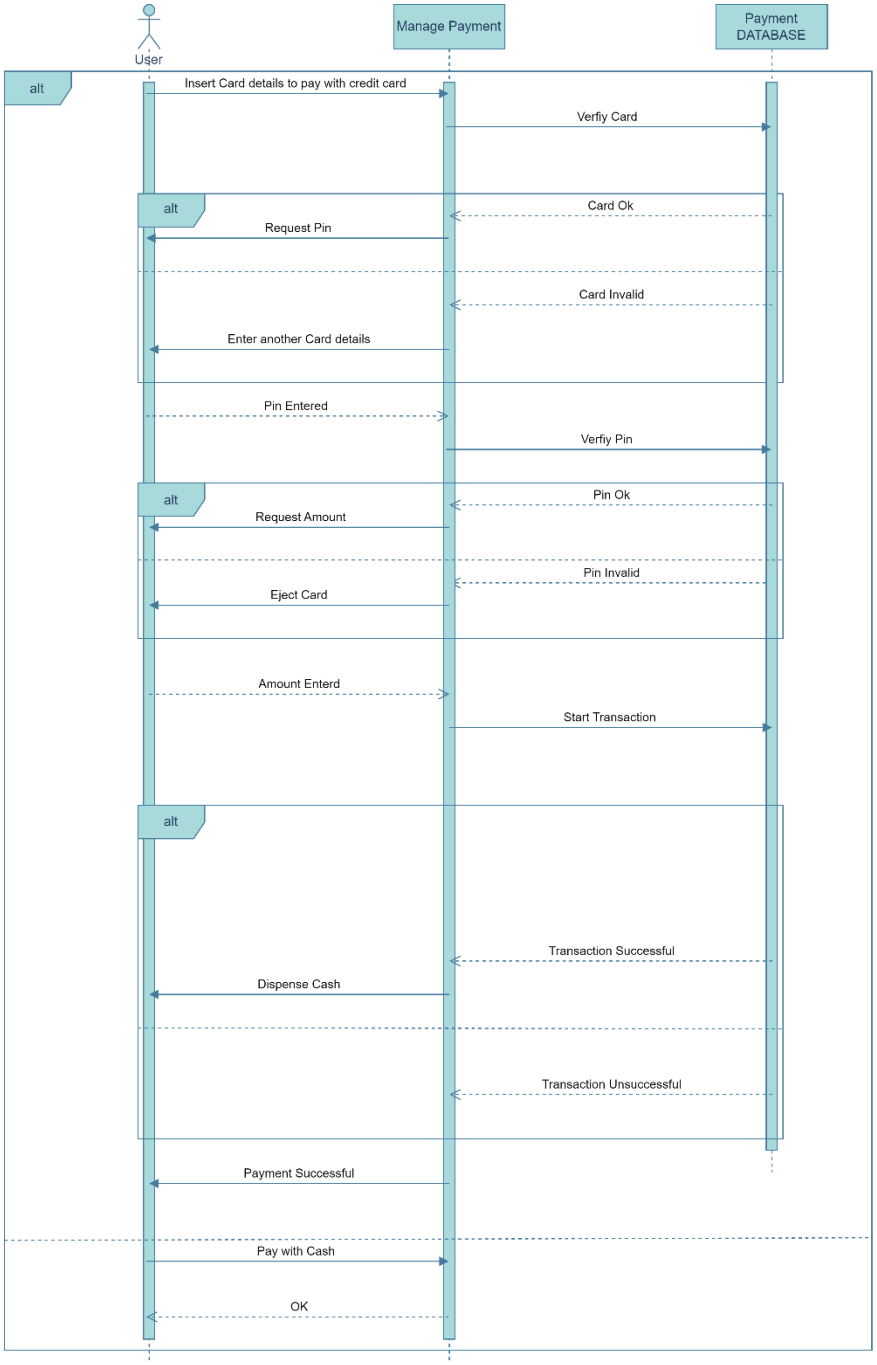
Traceability Matrix

A Registration System	B Booking Management	C Room Management	D User Management System
E Employee Management	F Feedback	G Records Staff	H Payment
I Bills	J Payrolls		

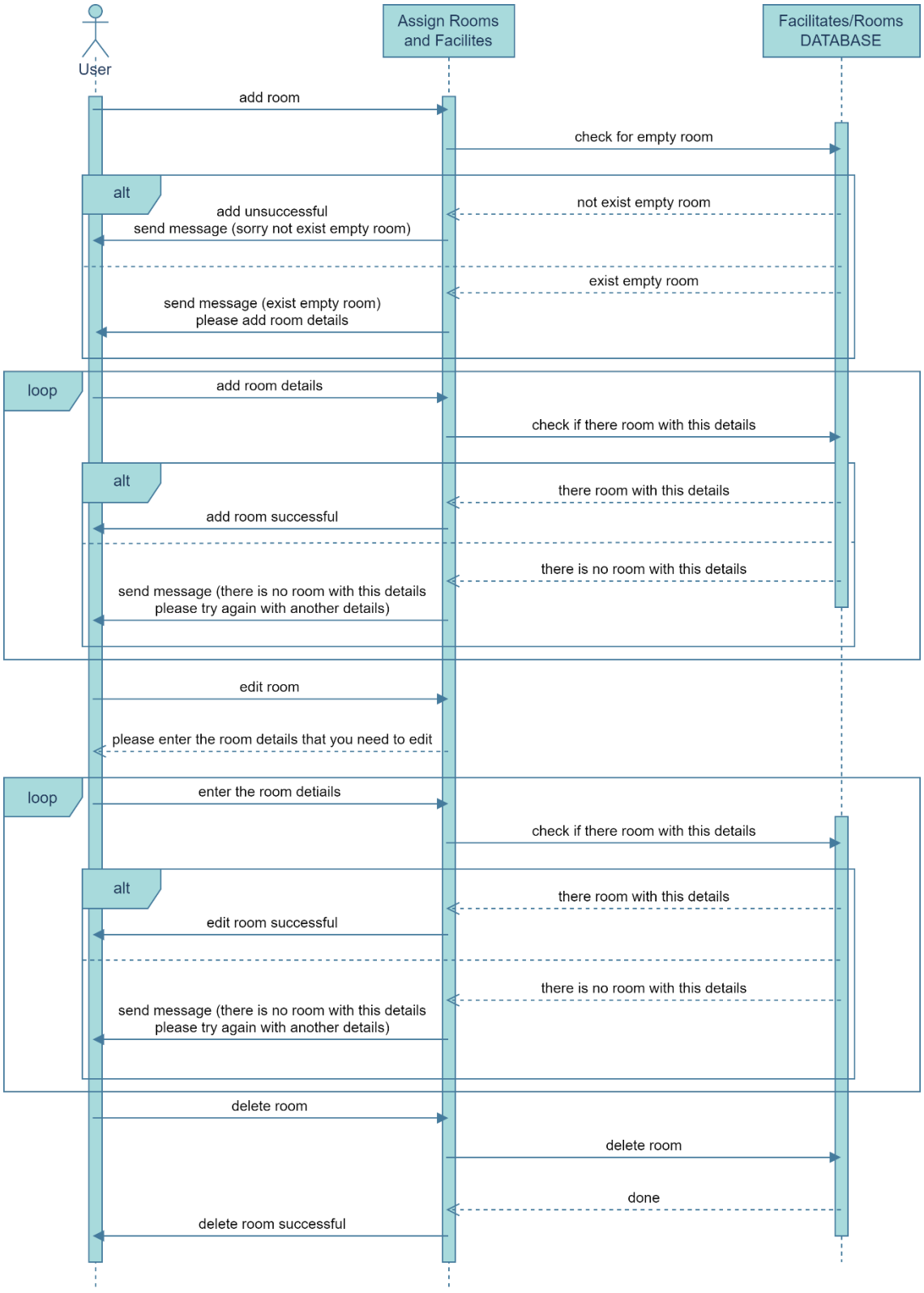
Use Case Symbol	Receptionist	HR	Manager	Finance	Customer	Hotel
A	1	1	1	1	1	1
B	1	0	1	0	1	1
C	1	0	1	1	0	1
D	1	0	1	1	1	1
E	0	1	1	0	0	1
F	1	0	0	0	1	1
G	0	1	1	0	0	1
H	1	0	0	0	1	1
I	1	0	0	1	1	1
J	0	1	1	1	0	1

Sequence Diagrams

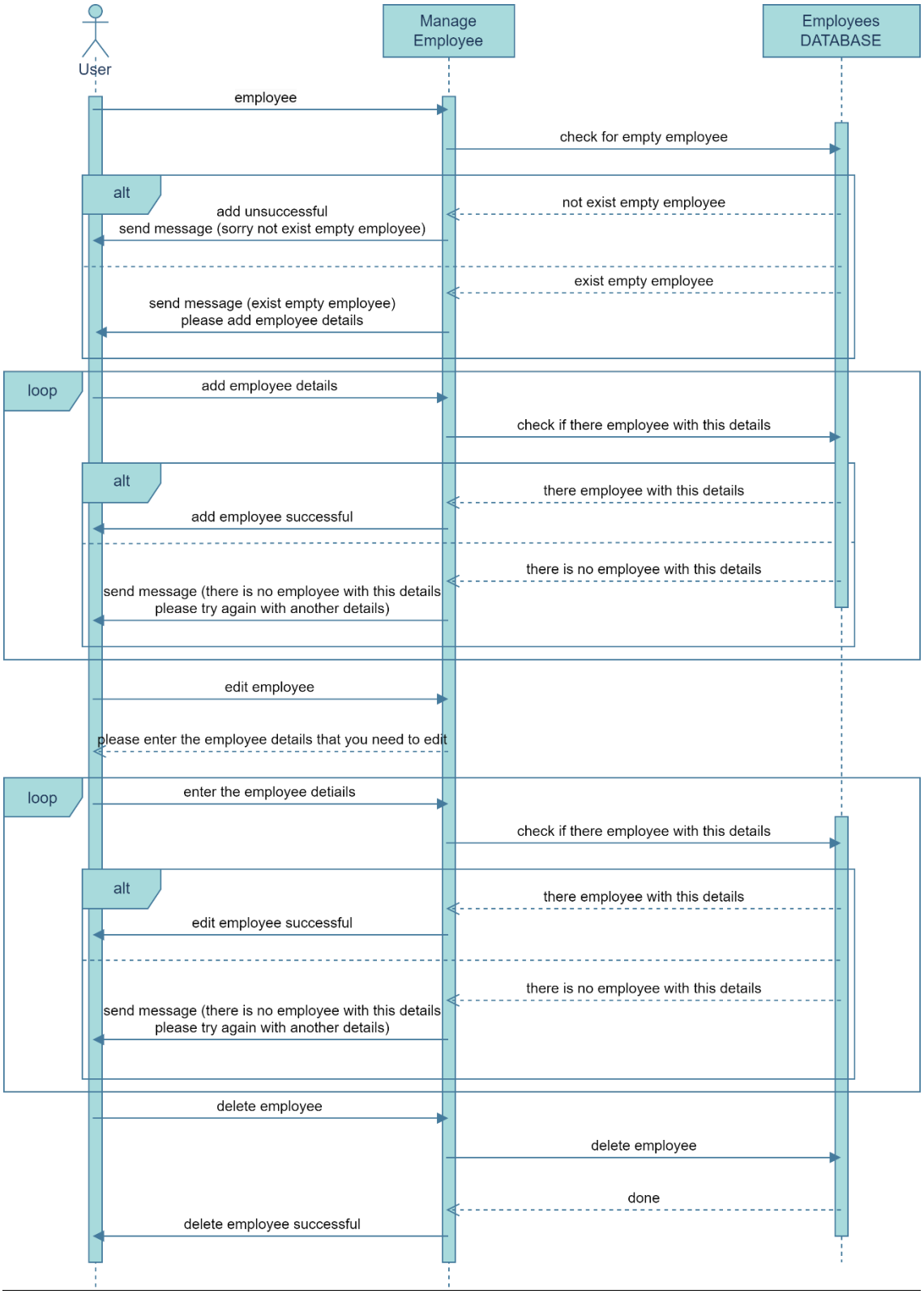
Sequence Diagram (Payment)



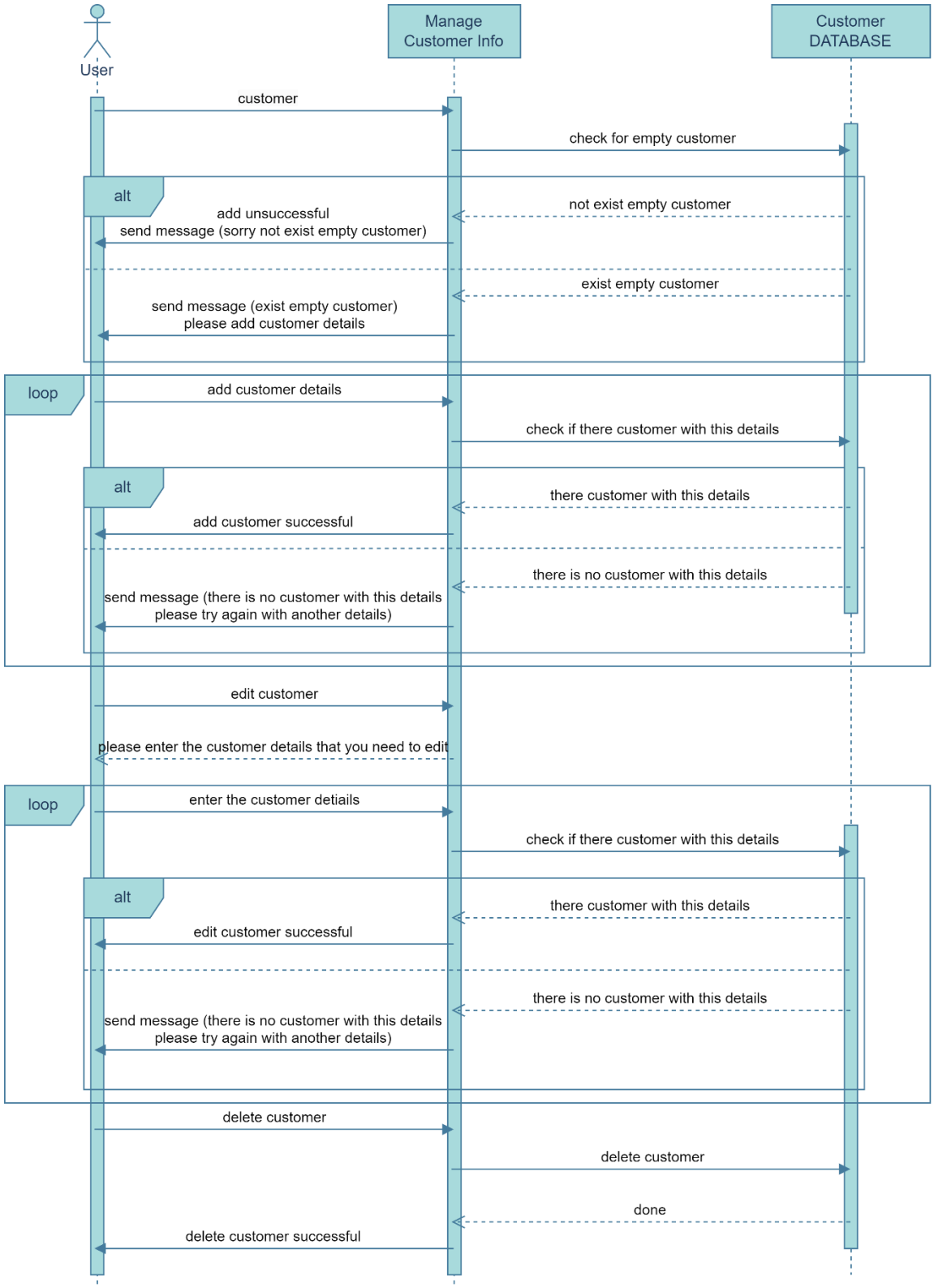
Sequence Diagram (Room Management)



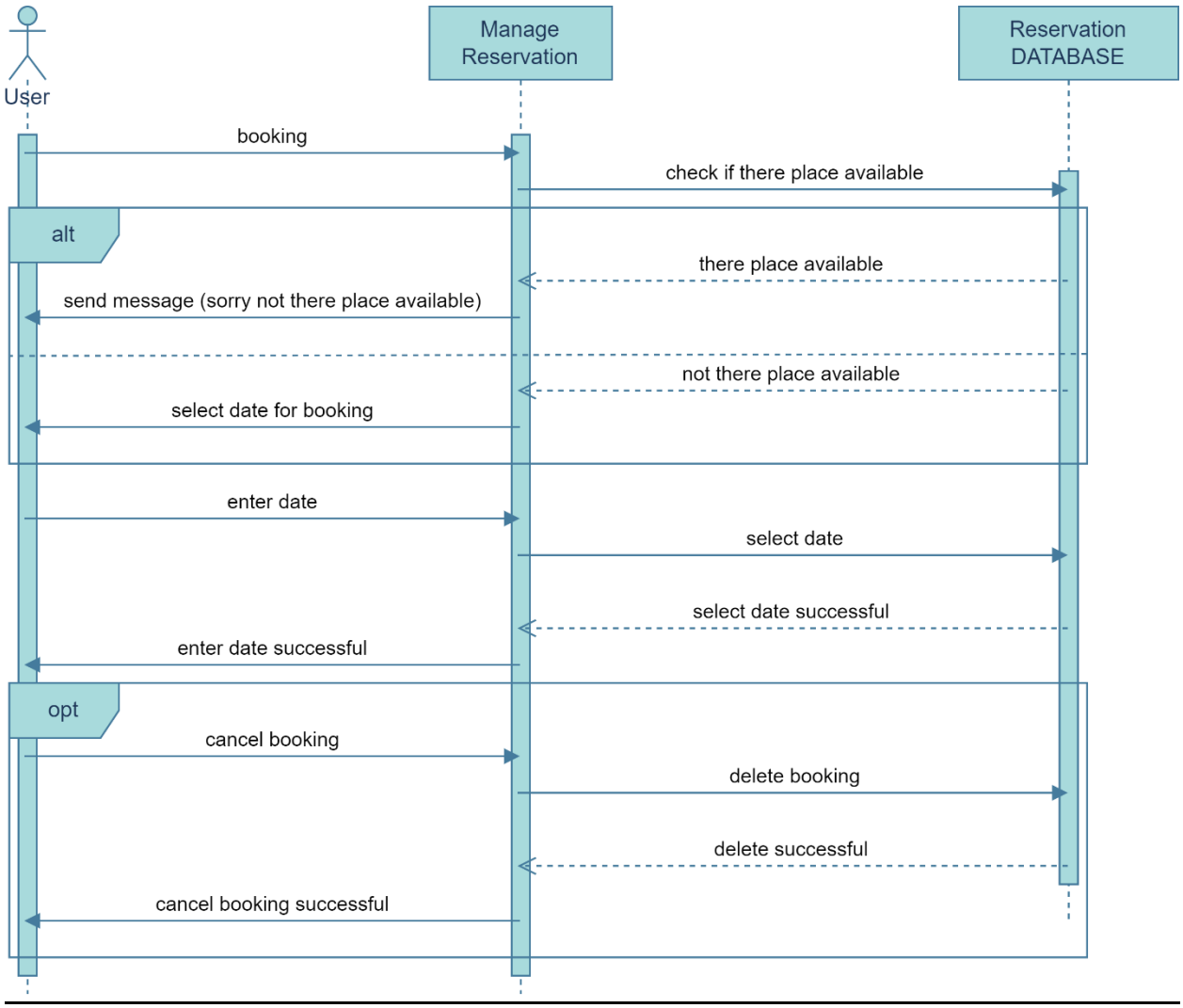
Sequence Diagram (Employee Management)



Sequence Diagram (User Management)

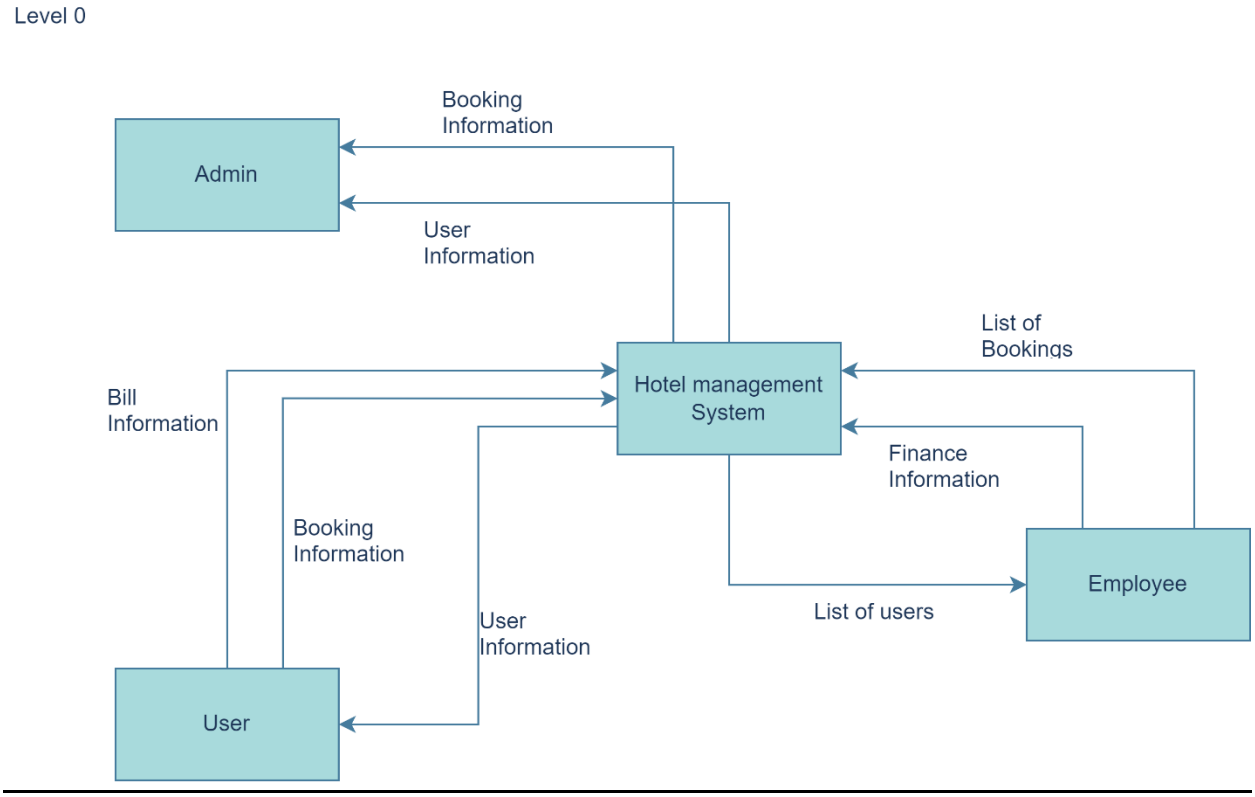


Sequence Diagram (Booking)

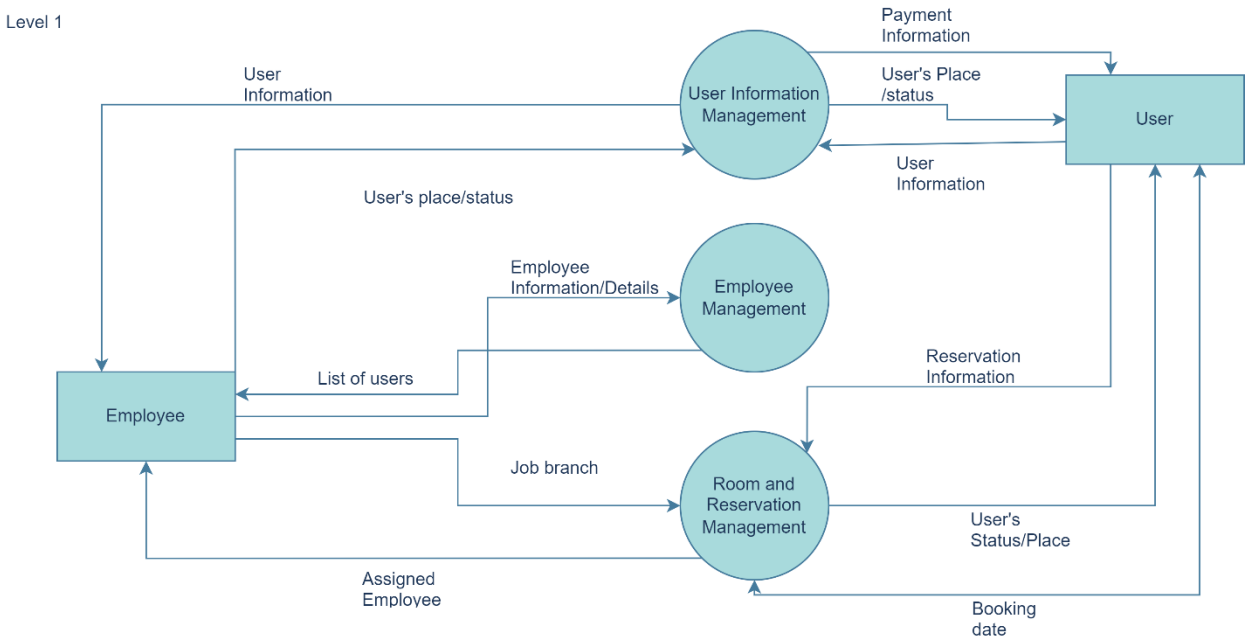


Data Flow Diagrams

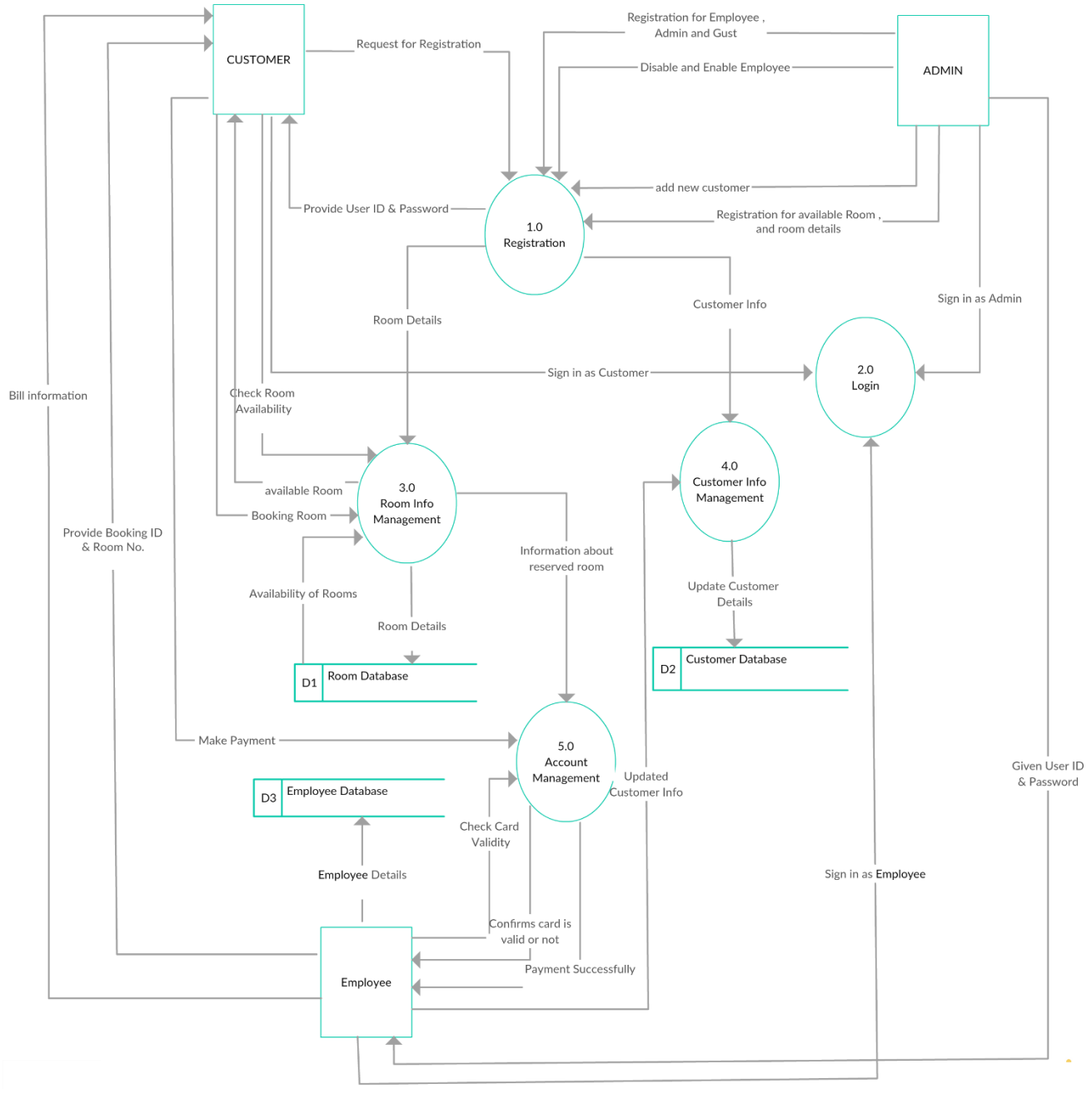
Data Flow Diagram (Level 0)



Data Flow Diagram (Level 1)



Data Flow Diagram (Level 2)



Links

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- Architecture Diagram (Level 2)
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- Sequence Diagram (Payment)
- Sequence Diagram (Room Management)
- Sequence Diagram (Employee Management)
- Sequence Diagram (User Management)
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