

 <p style="text-align: center;">BACHELOR PROJECT</p>				
PROJECT TITLE Room Management Appliance System				
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Chapter-01

1 Introduction

1.1 About the System

Room Management System is used to display room information for different usage like meeting rooms schedules, classrooms, events... The middleware responsible of controlling and streaming over meeting room's door label screens provides the user with features like reserving meeting room space, displaying the availability of meeting rooms (available/busy), upcoming events, and advertisements. The appliance indicates who has reserved the space and for what period. The appliance allows users to reserve a room and check the availability of other rooms. The system is a web based scheduling system but the status of each room can be checked at location. It incorporates the use of small flat panel displays to eliminate scheduling conflicts, interruptions, and encourage better space utilization.

1.2 Purpose:

The purpose of the system to reserve the appropriate room when needed from any location on the network · Display meeting information outside each room · Easily extend room reservation with the touch screen · Release a room if meeting finishes early · Quickly identify occupied and available rooms by a red or green light · Grab a room with the touch screen for an uninterrupted impromptu meeting.

1.3 Scope:

The system will make easy to reserve or check room to the users whenever they need from anywhere by using internet. It will take less time for reservation and make easy to select room and check room. User can easily cancel reservation if needed.

1.4 Vision:

All the room displays are networked so then can be accessed via a web interface (a single URL). Every room's schedule can viewed from the web interface and maintained by an administrator. A user should be able to check the availability of any room from the room display and the web interface. The web interface allows for reserving rooms along with searching tools to find available rooms at given times. All significant management of the building's space information will be done through this interface.

1.1.1 Why the System Needed?

- ✓ Make reservation without visiting the rooms.
- ✓ Cancel reservation easily if needed.
- ✓ To make reservation in short time.
- ✓ Reserve multiple room at a time.
- ✓ Make reservation from anywhere

1.1.2 Proposed solution:

- ✓ User can make reservation quickly using internet.
- ✓ User don't need to visit the required room.
- ✓ User can make reservation from anywhere.
- ✓ User can also cancel reservation.
- ✓ User can make multiple reservation.

Chapter-02

2 System analysis

2.1 Actor goal list

Table 1 Actor goal List

Actor	Goals
Administrator	Add a User Delete A User Add Room Update Room Information Delete Room View Reservation Room
User	Make A Reservation Delete Reservation Change Reservation Check Room Information View Reservation Information

2.2 Use Case model:

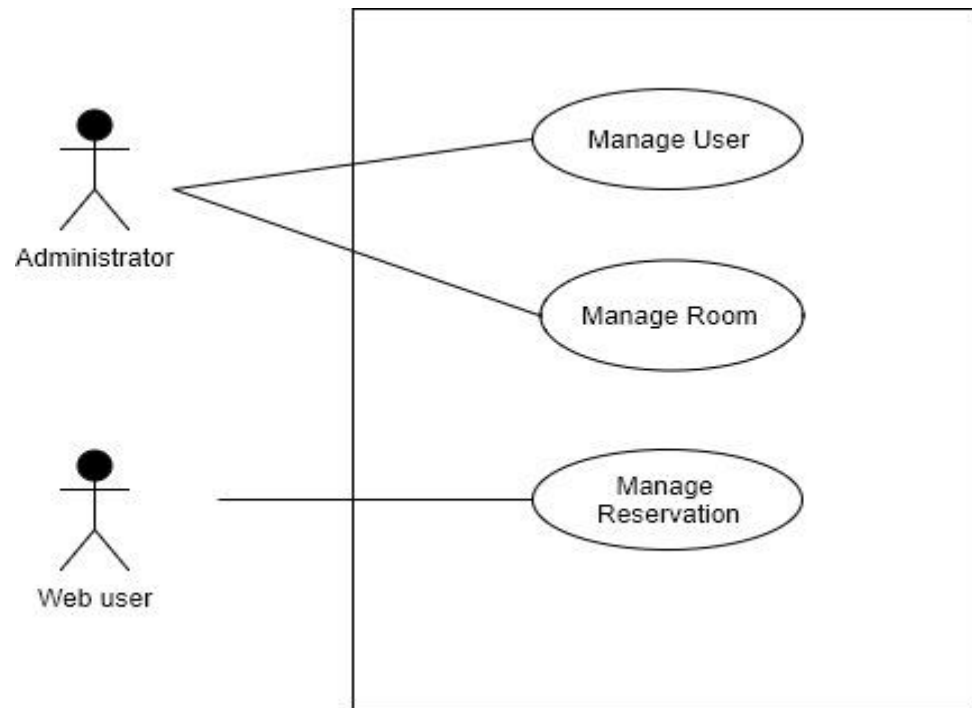


Figure 1 Use Case Model

2.3 Use case description

2.3.1 Manage User Use-Case:

When a user wanted to register in the site and provides proper information then Admin will approved it. Admin can add a User, delete a user.

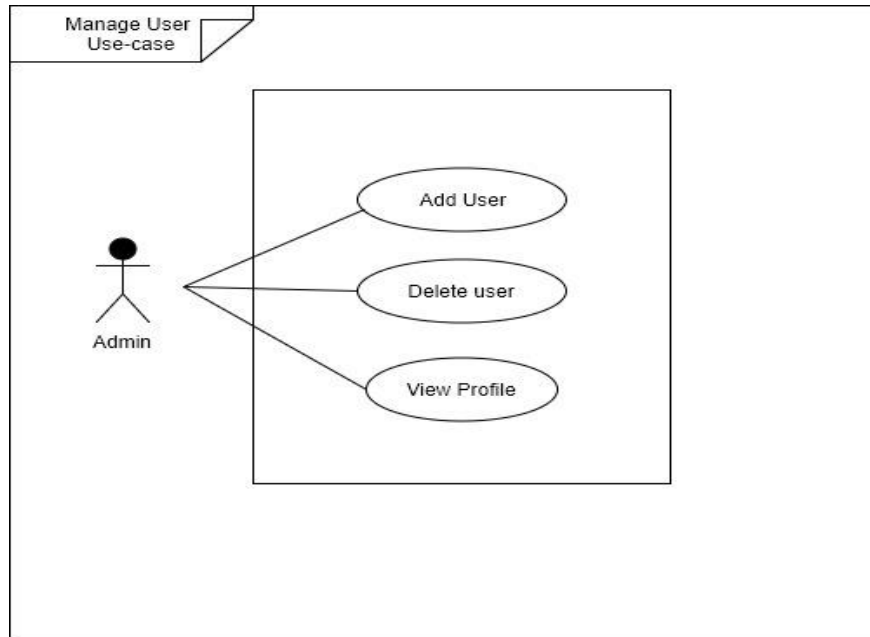


Figure 2 Manage User Use Case

2.3.2 Manage Room Use-Case

Administrator have authority to add room, Update room information, Delete Room and view reservation room.

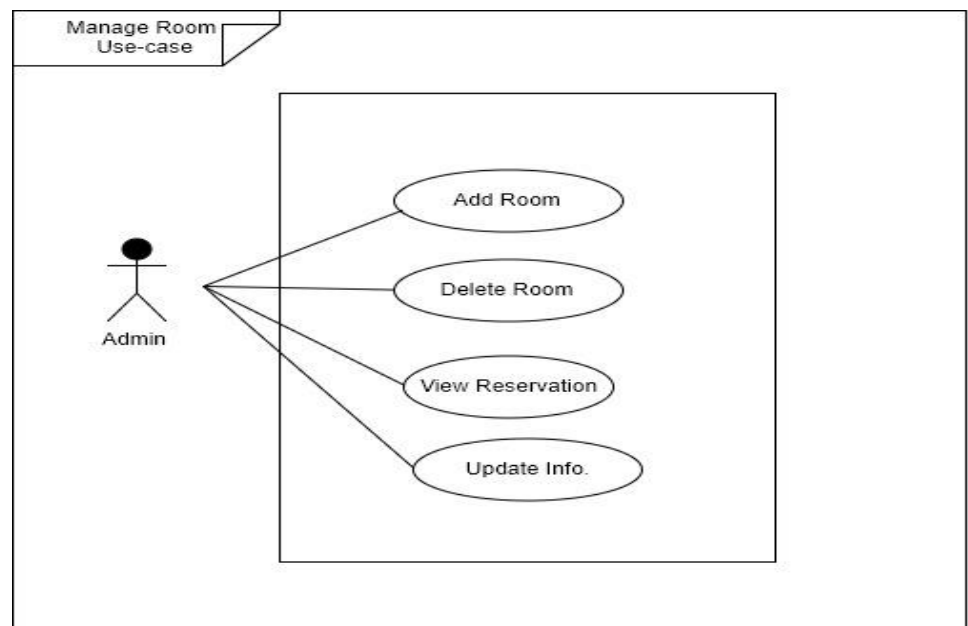


Figure 3 Manage Room Use Case

2.3.3 Manage Reservation Use-Case:

User can check room information and reserve a room that he/she want. User can also can a reservation if they want.

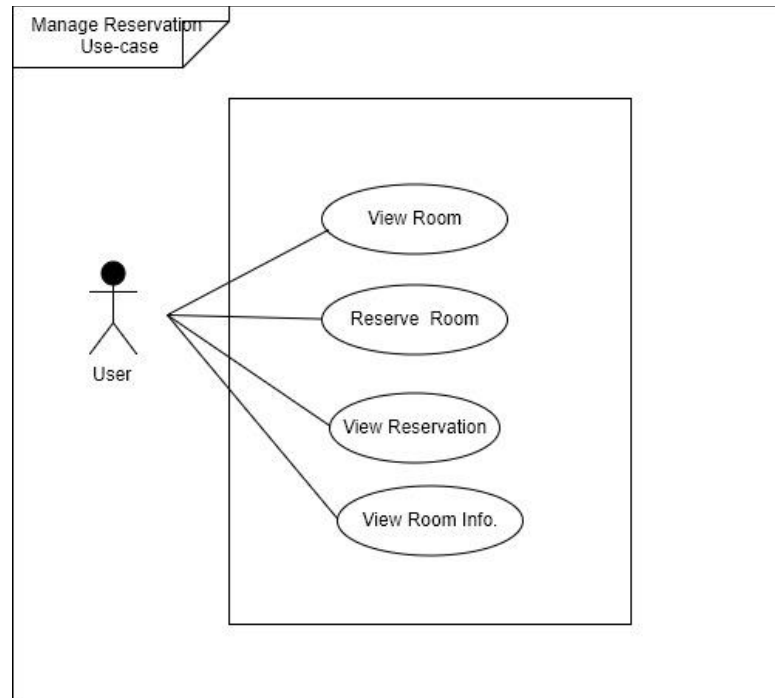


Figure 4 Manage reservation Usecase

2.3.4 Activity Diagram:

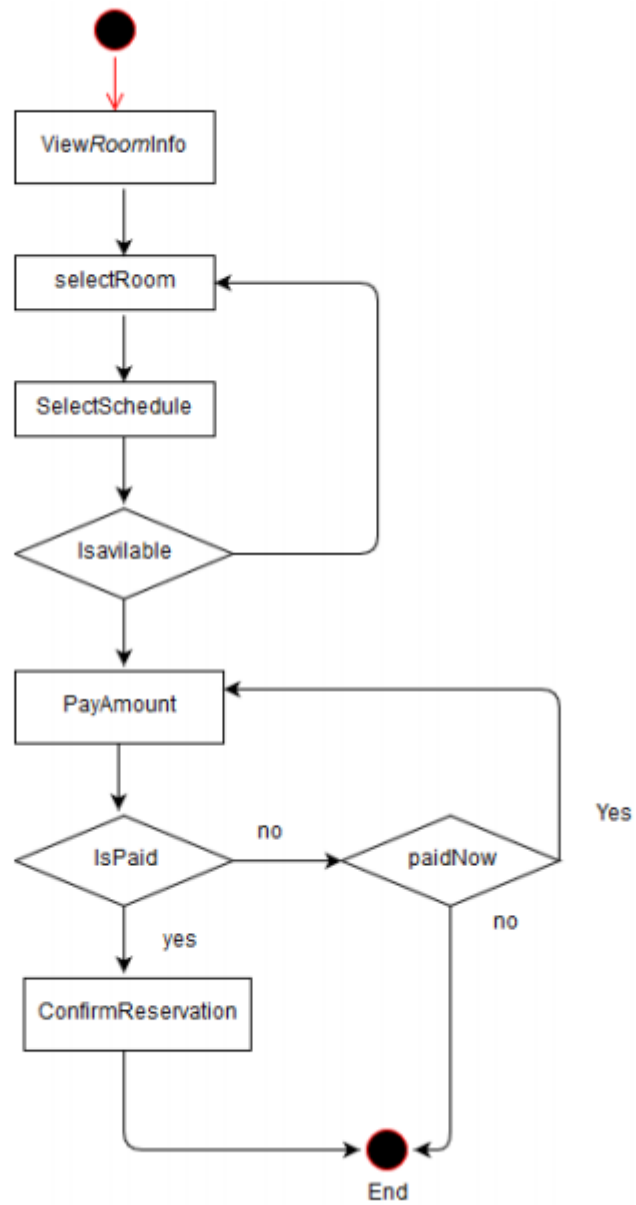


Figure 5 Activity Diagram

2.3.4 Use case description(details)

Table 2 Use case Description(Manage User)

Use Case Name:	Manage User									
Scenario :	Manage the all register web user									
Brief Description:	When a user wanted to register in the site and provides proper information then Admin will approved it.									
Actors:	Administrator									
Stakeholders:	Web user Administrator									
Preconditions:	Web user must exist. Internet must be connected. Registration form must be provided.									
Post conditions:	User list must be provided. Delete option must be provided.									
Flow of Events:	<table><tr><th>Actor</th><th>System</th></tr><tr><td>1. Create registration option.</td><td>1.1. Create registration form.</td></tr><tr><td>2. Listed the require information.</td><td>2.1. Provides form with require information.</td></tr><tr><td>3. Customer request for registration form.</td><td>3.1. Provides customer registration form.</td></tr></table>		Actor	System	1. Create registration option.	1.1. Create registration form.	2. Listed the require information.	2.1. Provides form with require information.	3. Customer request for registration form.	3.1. Provides customer registration form.
Actor	System									
1. Create registration option.	1.1. Create registration form.									
2. Listed the require information.	2.1. Provides form with require information.									
3. Customer request for registration form.	3.1. Provides customer registration form.									

Exception Conditions:	<p>1.1. If the user can use the site without registration there is less important of this use case.</p> <p>2.1. If the user do not need to provide their information administrator will pause this use case.</p>
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Table 3 Manage Room

Use Case Name:	Manage Room
Scenario :	Manage the all the room.
Brief Description:	Administrator will add room and provides all necessary room information that needed. He can check reservation if anyone reserve any room. He also can delete a room if needed
Actors:	System Administrator
Stakeholders:	Web user Administrator
Preconditions:	Room must be exist.
Post conditions:	Provides all necessary information. Check if any room reserved or not.

Flow of Events:	Actor		System	
	1. Add a new room. 2. Provide room information. 3. Check reservation.		1.1. Create a new room 2.1. Add information with room. 3.1. Provides reservation information.	
Exception Conditions:	1.1 If a room does not exist there is less important of this use case. 2.1. If the information does not accurate with added room then admin will check information. 3.1 If user did not reserve any room, admin will pause this use case.			

Table 4 Manage Reservation

Use Case Name:	Manage Reservation
Scenario :	Manage the reservation of room.
Brief Description:	When a user check room information, he/ she can reserve a room with necessary information. They can cancel a reserve room or delete their reservation.
Actors:	Web User
Stakeholders:	Web user Administrator
Preconditions:	Web user must exist. Internet must be connected. Registration and login must be done.

Post conditions:	Room must be provided. Availability must be provided.				
Flow of Events:	<table><tr><th>Actor</th><th>System</th></tr><tr><td>1. Login with information 2. Check room. 3. Confirm Reservation.</td><td>1.1. Verify user 2.1. Provides room with require information.</td></tr></table>	Actor	System	1. Login with information 2. Check room. 3. Confirm Reservation.	1.1. Verify user 2.1. Provides room with require information.
Actor	System				
1. Login with information 2. Check room. 3. Confirm Reservation.	1.1. Verify user 2.1. Provides room with require information.				
Exception Conditions:	1.2. If a user does not exist this use case will paused by the user. 2.1. If a room does not exist user will pause this use case.				

2.3.5 System sequence diagram

2.3.5.1 Manage User:

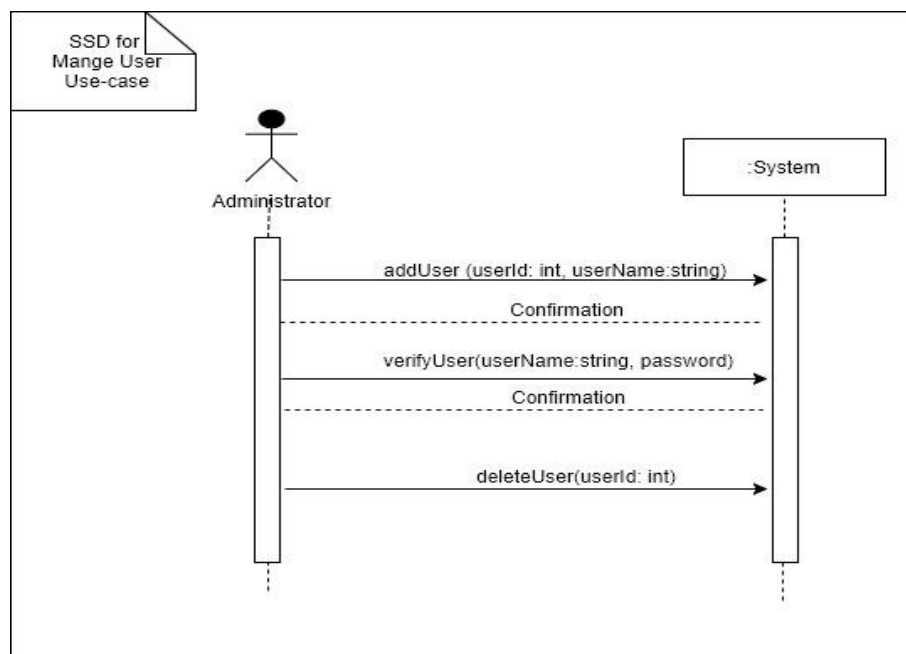


Figure 6 Manage User

2.3.5.2 Manage Room:

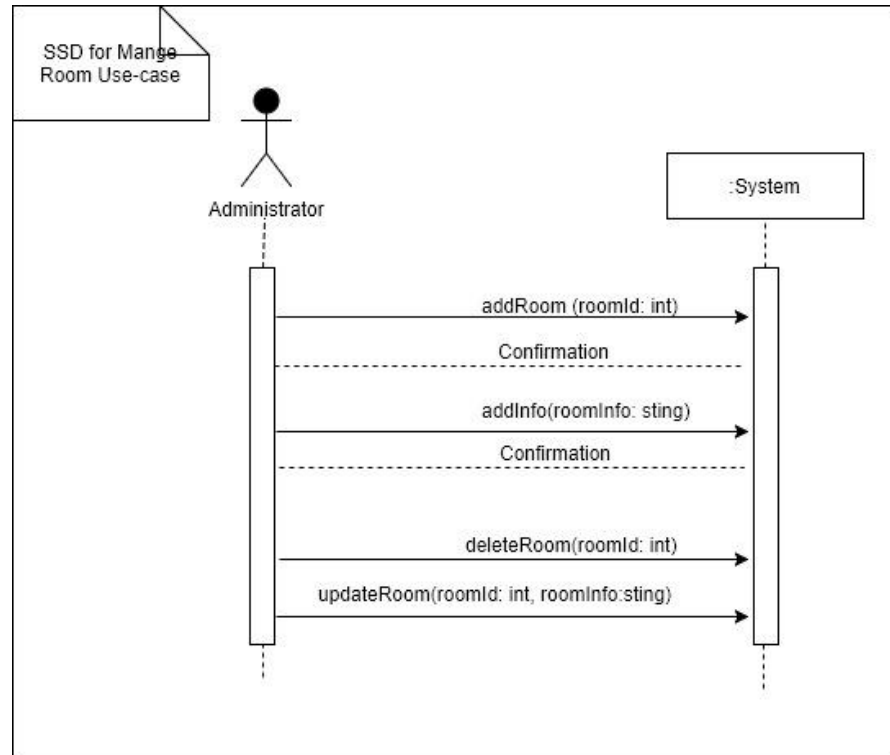


Figure 7 Manage Room

2.3.5.3 Manage Reservation:

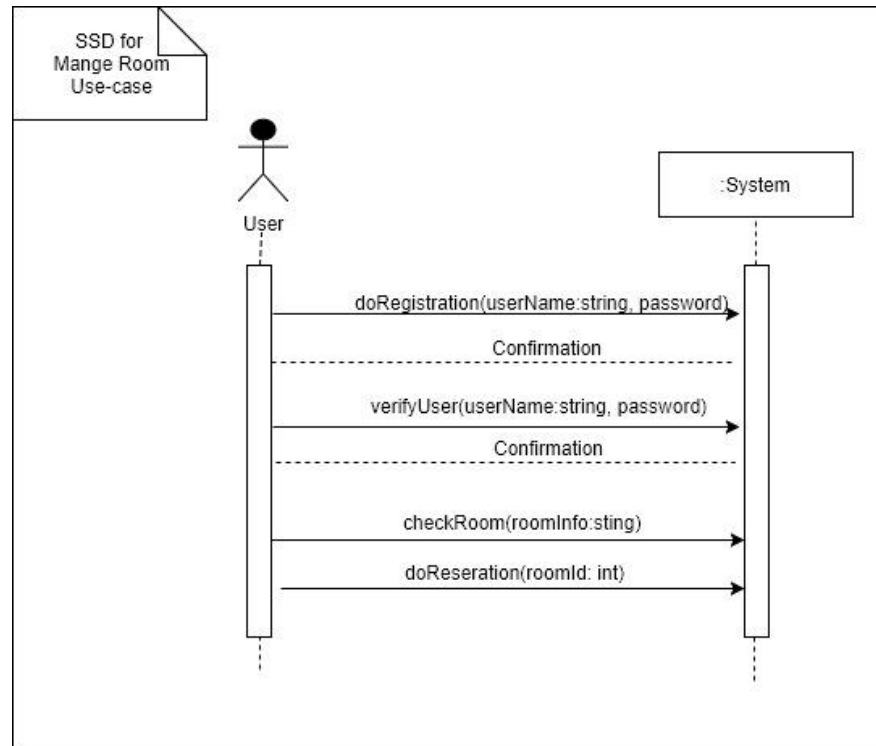


Figure 8 Manage Reservation

2.3.5.4 Domain model:

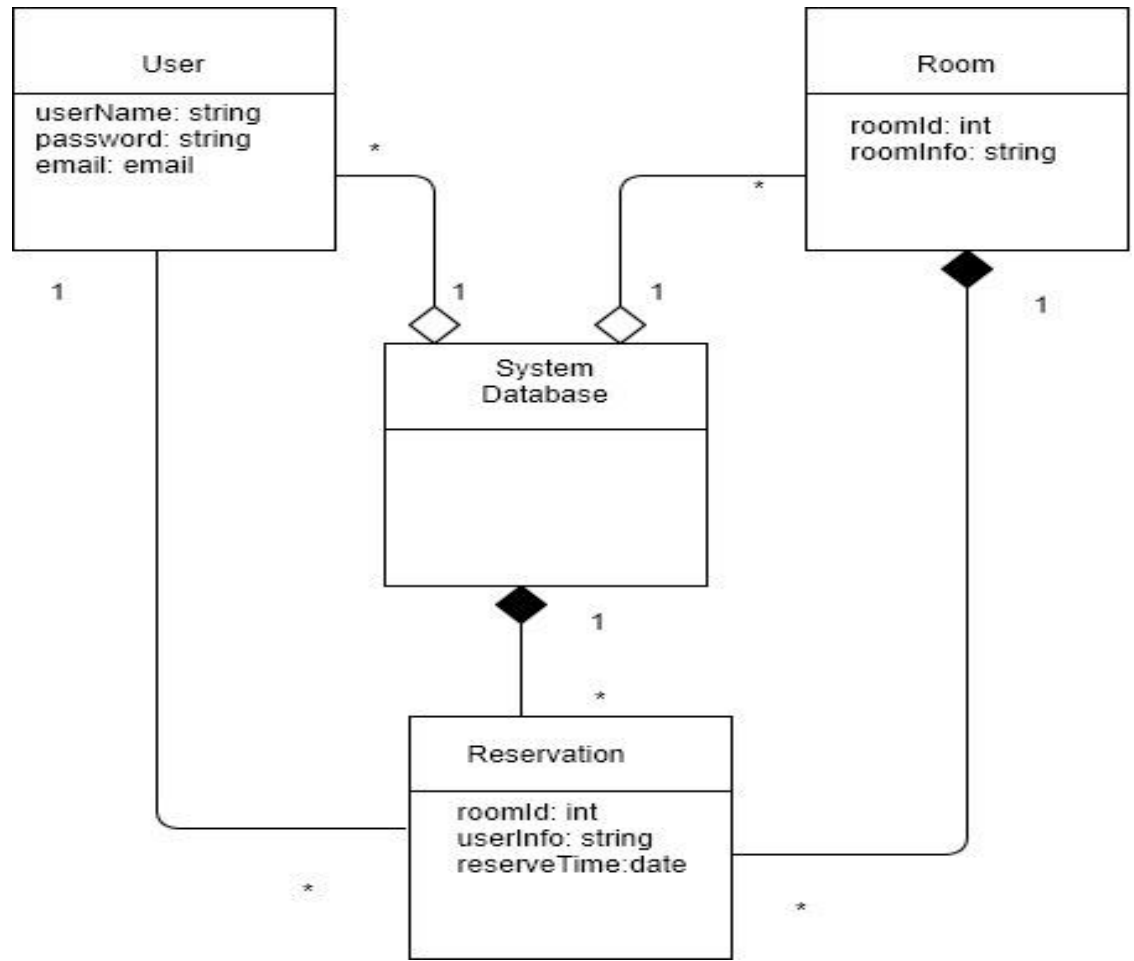


Figure 9 Domain Model

Chapter-03

3 System Design

3.1 Sequence Diagram Of View Room Info

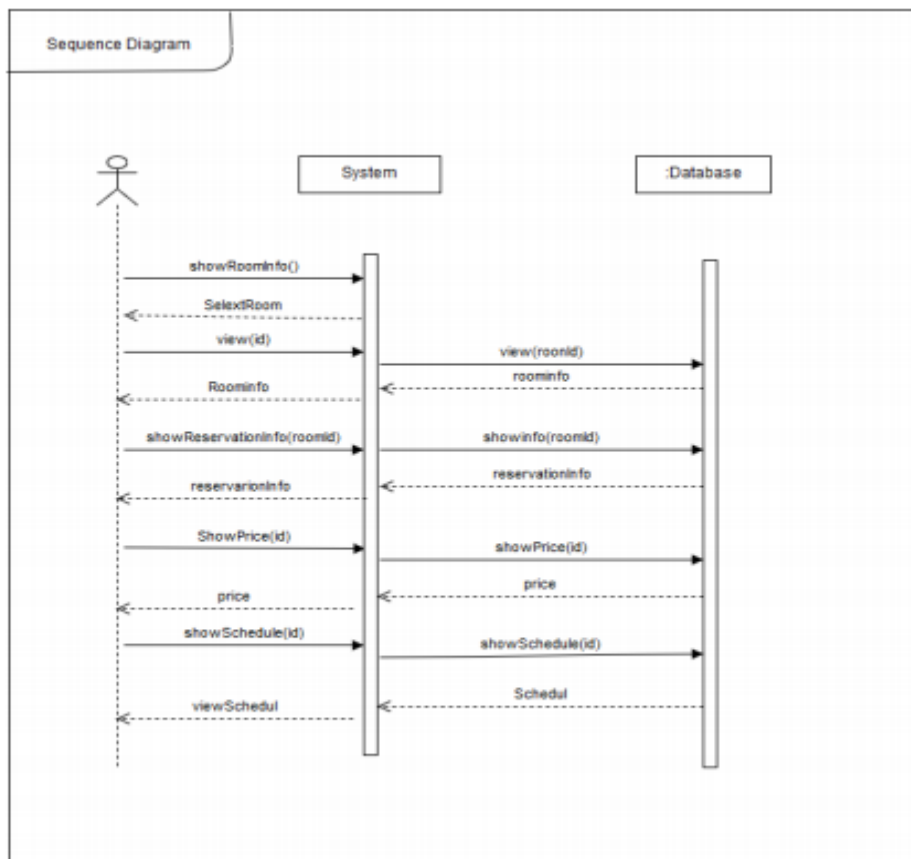


Figure 10 Sequence Diagram of view room Info

3.1.1 Sequence diagram of view reserve Room

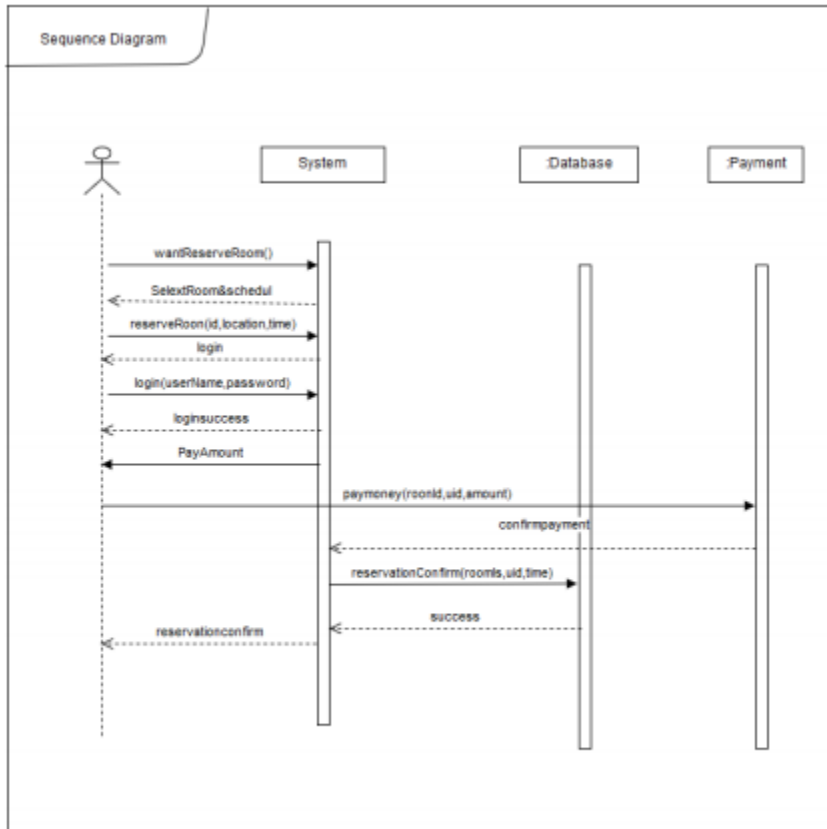


Figure 11 Sequence diagram of view reserve Room

3.2 Class Diagram

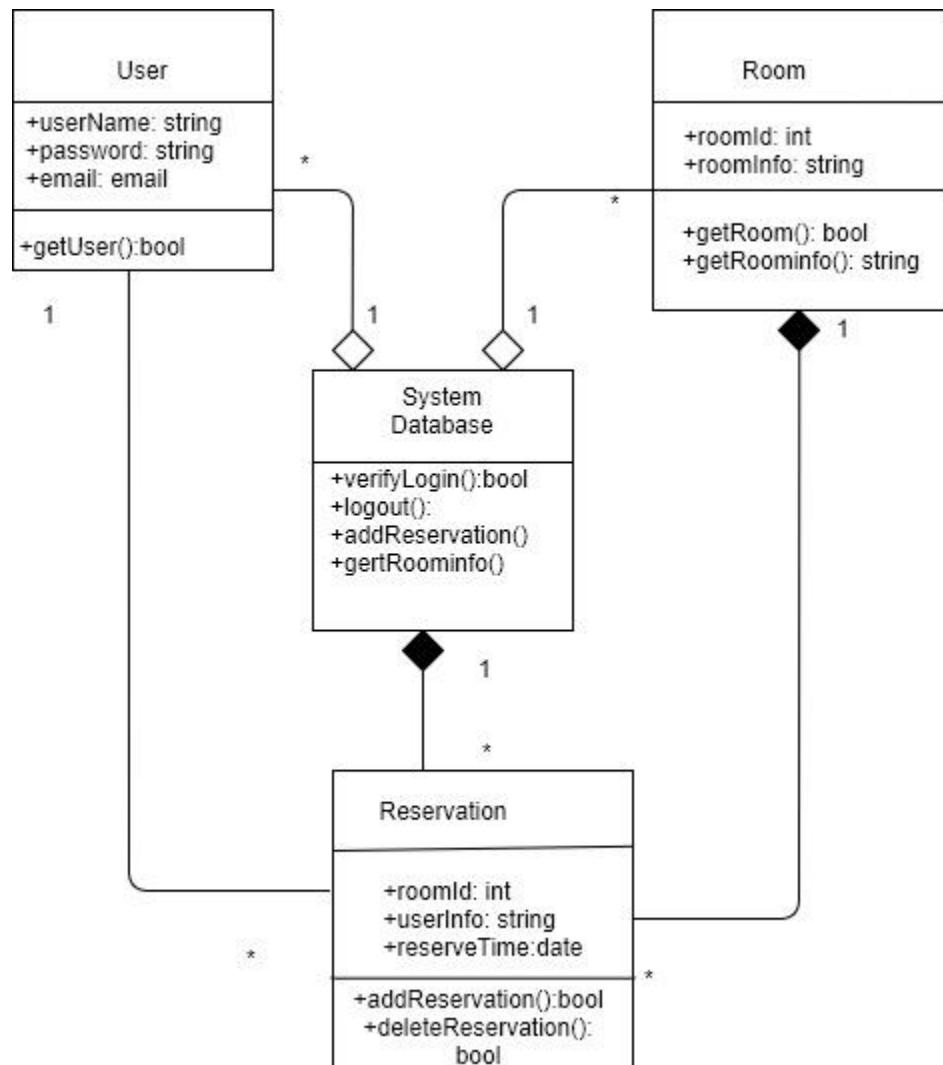


Figure 12 Class Diagram

3.3 ER Diagram

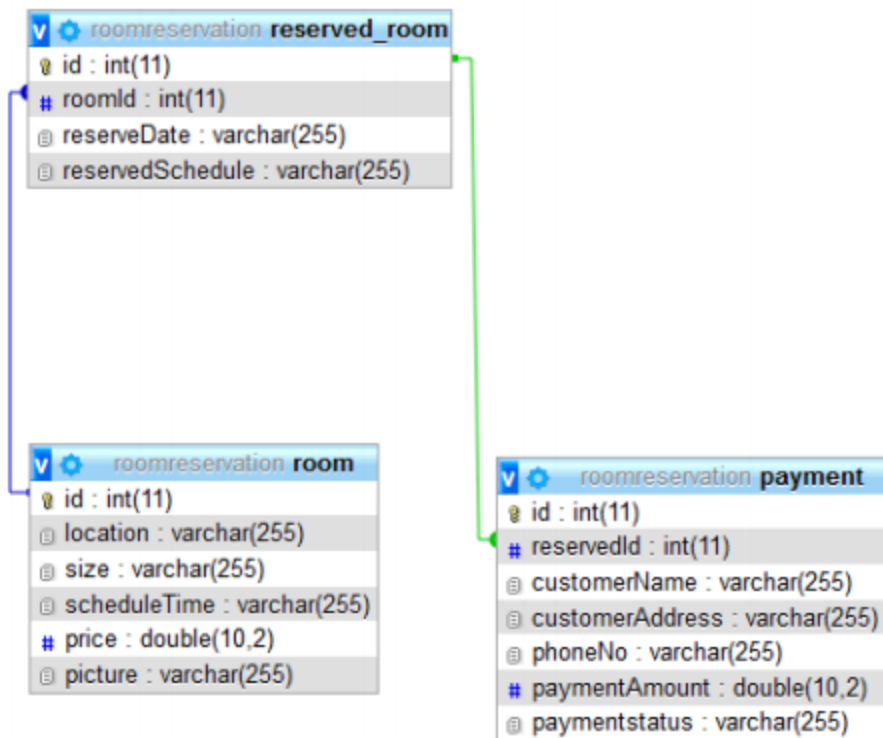


Figure 13 ER Diagram

Chapter 4

3 Implementation:

Implementation perspective describes software implementations in a particular technology (such as php).Implementation means programming and building the system, not deploying it.

In the implementation phase, the developer builds the components either from scratch or by composition given the architecture document from the design phase and the requirement document from the analysis phase. The architecture document should give guidance.

4.1 Tools &Technologies

Following are the tools and technologies used in development of this project:

PHP

My SQL

Atom

XAMPP

HTML5, CSS, JavaScript, J-query, Twitter bootstrap

4.2 Project Link

<https://github.com/sabbir2804/sabbir>