



Daffodil International University (DIU)
Department OF Software Engineering (SWE)

PROJECT: HOSTEL MANAGEMENT SYSTEM

Course Title: System Analysis & Design project
Course Code: SE231

Submitted To:
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PROJECT PROPOSAL

1.1. OVERVIEW

1.1.1. BACKGROUND

To reduce human suffering we can use a software system for **Hostel Management Systems (HMS)**. In the traditional system hostel admin keeps all details on the register paper. But now they can keep all things in the software system. They can show their hotel online to users or customers. Customers can choose their favorite room or they can search their room. Also they can select which types of room they want, Ac/ non-Ac, single bed or double bed, expensive room or normal room etc. This software system is to make the performance of certain tasks faster than humans. There customers can order food in online, also they can say their opinion about what they need, what they want etc. They can pay their payment online also. Hostel admin save all data at database so there is no fear of losing data here. So this system is very helpful for users or customers.

1.1.2. OBJECTIVE

Hostel management system will be a web based system for reducing time and trouble. The system will have different level of user -

1. System Administrator
2. Users
3. Hotel admin

List of operation that the system will provide are-

1. Customers can show rooms and can select room.
2. They can communicate with admin through the system.
3. They can pay through the system.
4. System save all details or data of customers.

5. Customers can order food through the system.

1.1.3. SCOPE

The project hotel management system will be a web based system that will be used for maintaining the records in an organized manner and replace old paper work system. This project aims at automation the hotel management for smooth working of the hotel by automating almost all the activities. Updates and modifications will be easily achievable and all the calculations and accounting work would be accurate. Hotel management system will reduce customers time and trouble. Customer can easily show all rooms in system. Which room is available or which room is unavailable. Then they can search or select which types of room they want Ac/non-Ac, single bed or double bed etc. After the room reservation system give them one card with their id. When customer show the card to hotel admin then admin confirm the room. Customer can also order food and tell the admin about all their problem.

1.1.4. ASSUMPTIONS AND CONSTRAINTS

It is assumed that the users or customers are comfortable with computers or smartphones. Customers also need to know how to use the internet. Admin need to know how to save the user details and how to respond to user messages. Since everyone will use this system, here we use English and Bangla language also we use pictures as if people can easily understand.

1.1.5 DEPENDENCIES AND RISKS

The user must have web access in order to use the system. The main risk behind implementing the project is security. Since customers can pay bill online, there is a risk. If somebody hacked the system then all things we can lose. So during development it will be one of our major concerns. Another concern is having common bugs such as the common users having the same functionalities as the doctors or system admin.

1.2. PROJECT DELIVERY

1.2.1 DELIVERABLES

The following contents will be delivered with the project:

- Project Demo
- User manual along with Tutorial
- Documentation

1.2.2 TIMESCALES

The time frame for implementing the project is given in Figure 1.2.1.

1.2.3 WORK DISTRIBUTION

The work distribution of the project is given in Table 1.2.1.

1.2.4 PROJECT RESOURCES

The resources required to finish the project is given in Table 1.2.2.

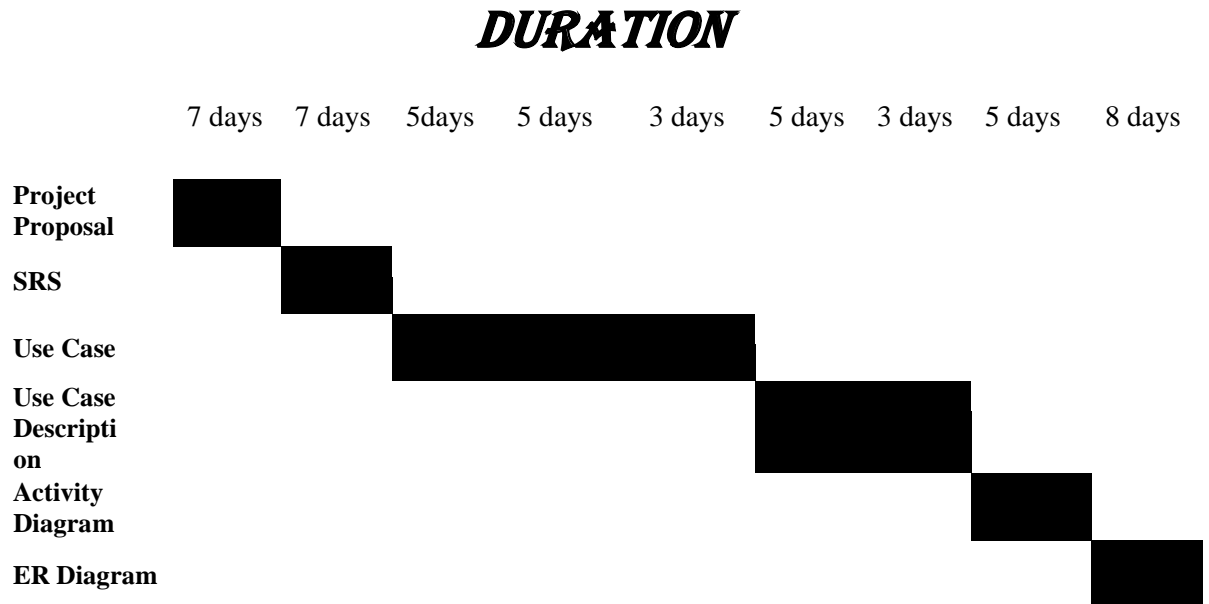


Figure 1.2.1: Time frames for project implementation

WORK DISTRIBUTION

<i>Work</i>	<i>Name</i>	<i>Time</i>
Project Proposal	Shahriar Hayder Annoy	7days
Software Requirement Specification	Md. Fahim Bhuiyan	7 days
Use Case	Md. Fahim Bhuiyan	13 days
Use Case Description	Shahriar Hayder Annoy	8 days
Activity Diagram	Md. Fahim Bhuiyan	5 days
ER Diagram	Shahriar Hayder Annoy	8 days

Table 1.2.1 Work Distribution

PROJECT RESOURCES

Hardware Requirements		
Processor	RAM	Hard Disk Space
CORE i3	2gb or higher	512mb or higher
Software Requirements		
Operating System	Database	
For user no specific OS is required. The server machine must have Windows XP/Vista/10 along with .NET framework 4 and IIS.	SQL Server 2014	

Table 1.2.2 Project Resources

1.3. SUMMARY

Time is our most valuable asset. We cannot waste it when there is scope of utilizing it in a better way. Our proposed system named HMS will be developed to meet this purpose. It will save the time of the mass people wasted during the time. Along with this, HMS will also help the administrator to see the previous records of an all customer. As a result s/he can take decisions more wisely. If the customer loses his/her information s/he can retrieve it from the website. We hope that HMS is useful for customer and administrator also. Our whole nation will be beneficial especially rural people will get benefit from this system.

SOFTWARE REQUIREMENT SPECIFICATION

2.1 FUNCTIONAL REQUIREMENT:

FR001	Login and registration system
Description	After search the uri customer need to registration or login the system
Stakeholder	Customer and Admin

FR002	Select Floor
Description	Which floor you want to rent select here
Stakeholder	Customer and Admin

FR003	Select Room Type
Description	Which type of room you want to rent select here
Stakeholder	Customer and Admin

FR004	Select price category
Description	After select Room Type then select which price range you are afford
Stakeholder	Customer and Admin

FR005	Received Virtual Card
Description	After complete Select Floor, Select Room Type & Select price category step then you receive a virtual card from this system
Stakeholder	Customer and Admin

FR006	Manager Confirmations
Description	After Received Virtual Card this card confirmation and verification by manager on this step
Stakeholder	Manager

FR007	Room Booking
Description	After Manager Confirmations manager booked a room for his/her customer.
Stakeholder	Manager

FR008	Confirm Message
Description	On this step customer receive his/her room booking confirm message
Stakeholder	Customer

FR009	Order Food
Description	Customer order food
Stakeholder	Customer and Admin

FR010	Payment
Description	Pay your money with bkaash or rocket or card or cash
Stakeholder	Customer and Admin

FR011	Payment Verify
Description	After customer payment manager can verify it.
Stakeholder	Customer and Admin

FR0012	Confirm message or notification
Description	After successfully pay system send you one confirmation message or notification on your mobile.
Stakeholder	Customer and Admin

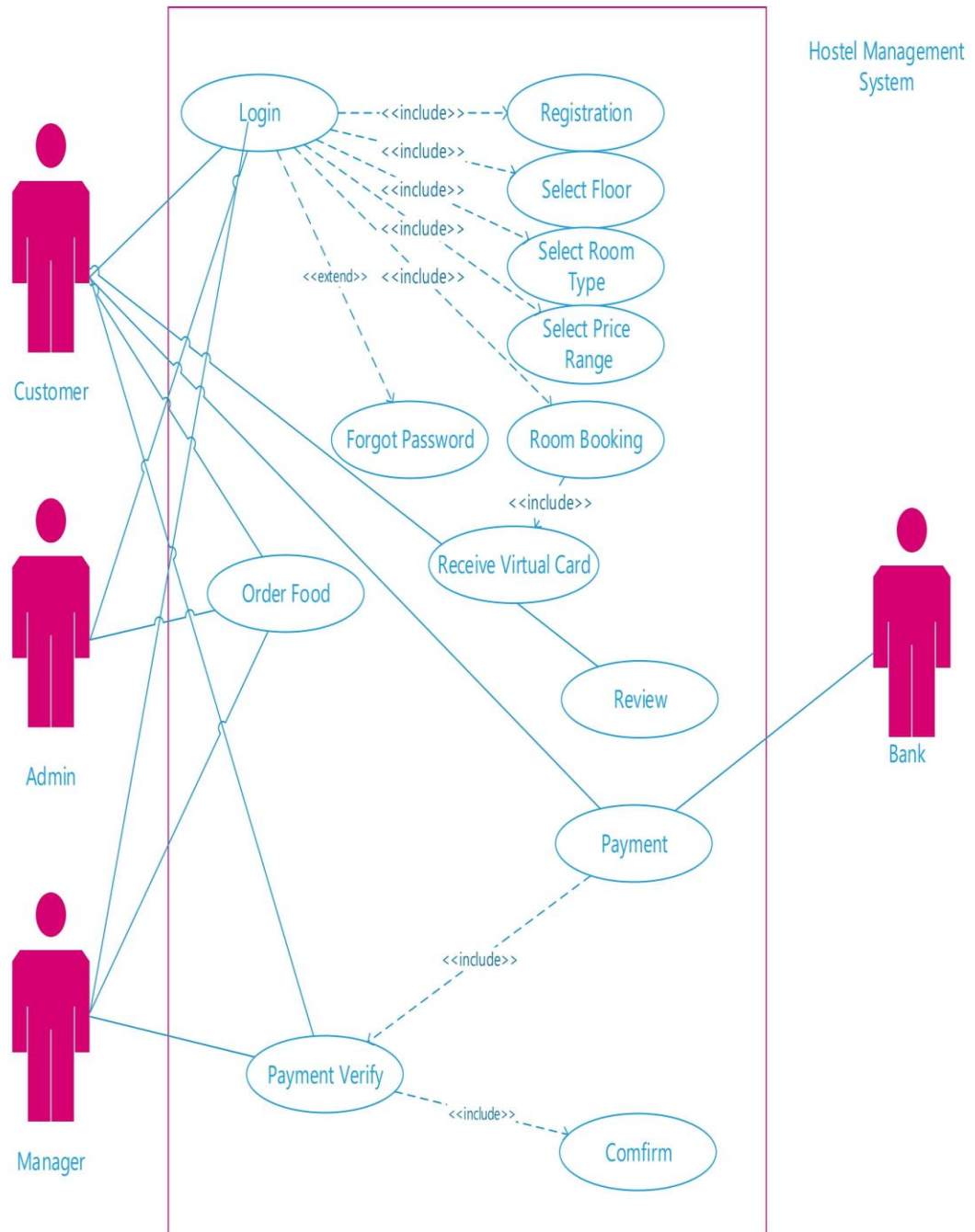
FR0013	Review
Description	Here you can say about your experience to share on review option and also see other review
Stakeholder	Customer and Admin

2.2 NON-FUNCTIONAL REQUIREMENT:

Non-functional requirements are the constraints that must development the various non-functional requirements are:

1. Provide rating after request completion.
2. Select available time slot for response to issue
3. Get predefined fields of question for better characterizing the main problem area.
4. Customer can contact with manager (customer can chat or can call to manager).
5. System administrator or Admin save all data at database.

USE CASE DIAGRAM



USE CASE DESCRIPTION

Use Case	Registration
Goal	Customers fill up the registration form and make the account. Customers interact with the system with the account.
Precondition	Customer should login by giving a username and password
Success End Condition	Registration is complete.
Failed End Condition	Registration is incomplete.
Primary Actor: Secondary Actor:	Customer, Admin
Trigger	Request for registration
Description/Main Success Scenario	<div style="text-align: center;"> Step Action </div> <ol style="list-style-type: none"> 1. Customer browses the site 2. Selects log-in 3. 2.1. user name 4. 2.2. ID 5. 2.3. request to log-in <div style="text-align: center;"> select register fill up information Submit the information </div>
Alternative Flows	Step Branching Action Incomplete registration.
Quality Requirements	The customer should register within 30 seconds.

Use Case	Login
Goal	A customer needs to log-in to the system using their corresponding user name and password.
Precondition	User has to have a valid account
Success End Condition	Successfully log-in.

Failed End Condition	Invalid password or user name
Primary Actor: Secondary Actor:	Customer, Admin
Trigger	Login button
Description/Main Success Scenario	<p>Step Action</p> <ol style="list-style-type: none"> 1. User ID 2. Password 3. New page with all the information regarding the User and account is shown by the system
Alternative Flows	<p>Step Branching Action</p> <ol style="list-style-type: none"> 1. Customer is asked to provide valid log in password 2. Error message regarding the issues.
Quality Requirements	The customer should login within 30 seconds.

Use Case	Forgot password
Goal	Customer can easily log-in the system
Precondition	Keyword entered and select forgot password button pressed.
Success End Condition	Customer can easily enter the system
Failed End Condition	
Primary Actor: Secondary Actor:	Customer, Admin
Trigger	Request for forgot password
Description/Main Success Scenario	<p>Step Action</p> <ol style="list-style-type: none"> 1. Search the site 2. Type user ID 3. Password 4. Customer send request to the admin 5. Log-in the system

Alternative Flows	Step Branching Action 1. Connection failed 2. Invalid password 3. They cannot able to entered the system
Quality Requirements	The customer should confirm within 30 seconds

Use Case	Select Floor
Goal	Customer can see all floor
Precondition	Customer should complete the registration
Success End Condition	Customer select his/her room
Failed End Condition	Customer can't select floor
Primary Actor: Secondary Actor:	Customer, Admin
Trigger	Request to select floor
Description/Main Success Scenario	Step Action 1. Log-in 2. Fill up the registration information 3. Submit it 4. Open a new window 5. Request to select the category.
Alternative Flows	Customer directly contact with admin for select floor
Quality Requirements	

Use case	Select Room Type
Goal	Customer can see and choose room
Precondition	Customer should complete the registration or login first
Success End Condition	Customer get his/her select room
Failed End Condition	Customer can't search room type
Primary Actor:	Customer, Admin
Secondary Actor:	
Trigger	Request for select room
Description/Main Success Scenario	<p>Step action</p> <ol style="list-style-type: none"> 1. Customer request for room 2. Website see to them all type of room 3. Customer see the room and select his/her favorite room
Alternative Flows	Customer directly contact with admin for select room
Quality Requirements	

Use Case	Select Price Range
Goal	Customer can see his/her room Within certain prices
Precondition	Customer need to registration or login the system first
Success End Condition	Customer can booking room within certain prices
Failed End Condition	None

Primary Actor: Secondary Actor:	Customer, Admin
Trigger	Request for select for price range
Description/Main Success Scenario	<p>Step Action</p> <ol style="list-style-type: none"> 1. Customer request for see his/her room within his/her certain price 2. Website see them all room within his/her certain price 3. Customer see all room and select his/her certain room
Alternative Flows	Customer need to contact with admin
Quality Requirements	

Use Case	Room booking
Goal	Customer confirm booking his/her room in online
Precondition	Customer first need to registration or login in the system
Success End Condition	Customer book his/her room in online
Failed End Condition	Customer can't booking his/her room in online
Primary Actor: Secondary Actor:	Admin, Customer
Trigger	Request for online room booking
Description/Main Success Scenario	<p>Step action</p> <ol style="list-style-type: none"> 1. Request for online booking

	2. Then website give one virtual card to customer 3. When customer show the card to admin, admin complete his/her room booking/reservation
Alternative Flows	If website don't booked the room then customer need to contact with admin with email or number
Quality Requirements	

Use Case	Receive Virtual card
Goal	Admin give virtual card or confirmation room card
Precondition	Customer need to book room then website give one virtual card
Success End Condition	When the customer shows this virtual card to the admin, admin complete his/her confirm his room reservation or confirmation
Failed End Condition	Without virtual card admin don't complete room reservation
Primary Actor: Secondary Actor:	Customer, Admin
Trigger	Request for give online virtual card
Description/Main Success Scenario	Step Action 1. After online room booking website give one virtual confirmation card 2. When the customer shows this card to the admin at the hotel then admin complete his/her room reservation
Alternative Flows	Step action

	<ol style="list-style-type: none"> 1. If after online room booking website don't give virtual card customer need to email to admin 2. Then admin give to customer virtual card at email
Quality Requirements	The customer should confirm by signature within certain time

Use Case	Admin confirmation
Goal	Customer complete or confirm his/her room reservation
Precondition	Customer need to book room in online and must get the virtual card
Success End Condition	Customer get his/her select room
Failed End Condition	Customer don't get his/her select room
Primary Actor: Secondary Actor:	Admin, Customer
Trigger	request for complete or confirm room reservation
Description/Main Success Scenario	<p>Step Action</p> <ol style="list-style-type: none"> 1. After select room, price range, floor customer need to booking room in online 2. Then website give one virtual card 3. Then the customer shows this card to the admin at the hotel 4. Admin show the card and confirm his/her room reservation 5. Then admin give key of his/her select room
Alternative Flows	<ol style="list-style-type: none"> 1. If admin don't confirm his/her reservation then customer need to reserve room directly at hotel 2. Or customers again book the room in online then show the virtual card to admin at the hotel.

Quality Requirements	
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Use Case	Details
Goal	Customer can see the all payment details information
Precondition	Need to at least one payment
Success End Condition	Can see the all payment information
Failed End Condition	Connection failed
Primary Actor: Secondary Actor:	Customer Bkash
Trigger	Request to see payment details
Description/Main Success Scenario	<p>Step Action</p> <ol style="list-style-type: none"> 1. Customer can send a details request 2. Bkash accept the request 3. Display the all payment details 4. Customer signs for payment
Alternative Flows	Customer need to connect with admin
Quality Requirements	

Use Case	Payment
Goal	Customer can pay for his/her hostel cost
Precondition	Customer should see the payment details
Success End Condition	Customer can buy the hostel cost
Failed End Condition	Customer has not send the money

Primary Actor: Secondary Actor:	Customer Bkash
Trigger	Request send to payment
Description/Main Success Scenario	Step Action 1. Customer send payment request 1. Bkash accept the customer request 2. Bkash captures customers name, address and phone number. 3. Customer send for payment verify 4. . Bkash send confirm message.
Alternative Flows	Step Branching Action 1. Some incorrect information 2. Problem for paying 3. Bkash does not send confirmation message 4.The system reject the entry
Quality Requirements	

Use Case	Payment verify
Goal	Customer givers payment verify information
Precondition	Customer must be paying for hostel cost
Success End Condition	Payment confirm message
Failed End Condition	Bkash has not send the payment verification
Primary Actor:	Customer
Secondary Actor:	Bkash
Trigger	Request to showing payment verification

Description/Main Success Scenario	Step Action 1. Customer send with a payment verification. 2. Bkash accept the request 3. Send the verification of payment 4. Customer give confirmation message
Alternative Flows	Step Branching Action 1. Bkash forgot to send payment verification mail
Quality Requirements	System need to send verification message within 10 seconds

Use Case	Confirm message
Goal	Customers must pay money. Then they gives a confirmation message
Precondition	Customer must be payment money
Success End Condition	Customer successfully got his delivery
Failed End Condition	Bkash forgot to send payment confirmation message
Primary Actor:	Customer
Secondary Actor:	Bkash
Trigger	Request to send confirmation message
Description/Main Success Scenario	Step Action 1. request send to confirmation message 2. Bkash accept their request 3. Bkash send confirmation message 4. Display the message

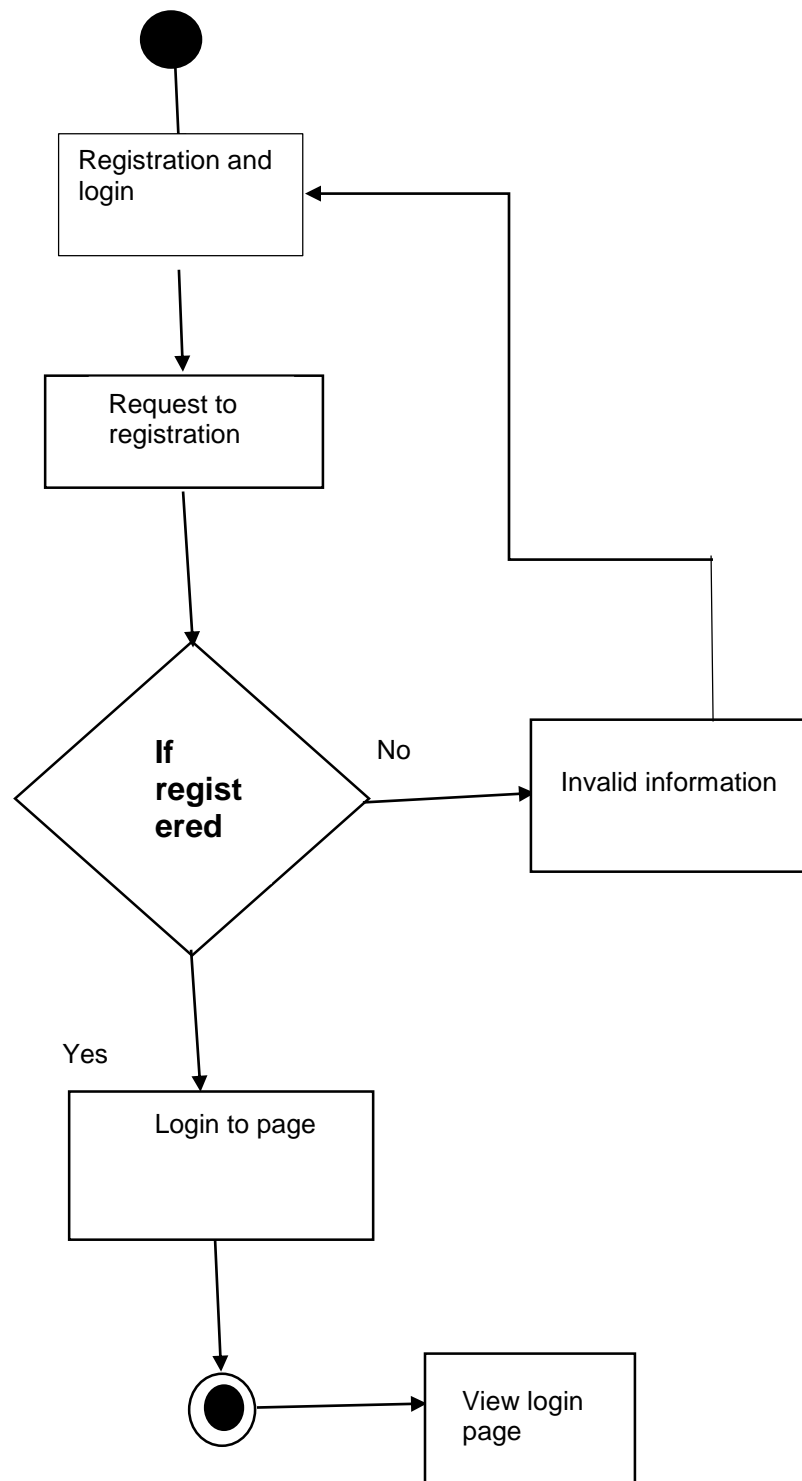
Alternative Flows	Step Branching Action 1. Payment transaction fails
Quality Requirements	Confirm message need to send within 30 second

Use Case	Review
Goal	Customer satisfied to hostel experience and they send review
Precondition	The customer must receive the hostel experience
Success End Condition	The customer is very satisfied his/her hostel experience.
Failed End Condition	The customer is not happy to his/her hostel experience. Customer send negative review
Primary Actor:	Customer
Secondary Actor:	Admin
Trigger	Request to send review
Description/Main Success Scenario	Step Action The customer send to review request Admin accept the request Customer send the positive review Admin can see the review
Alternative Flows	Step Branching action 1. The customer is not satisfy to his/her hostel experience 2. The customer send the negative review
Quality Requirements	The customer can reply or like the review

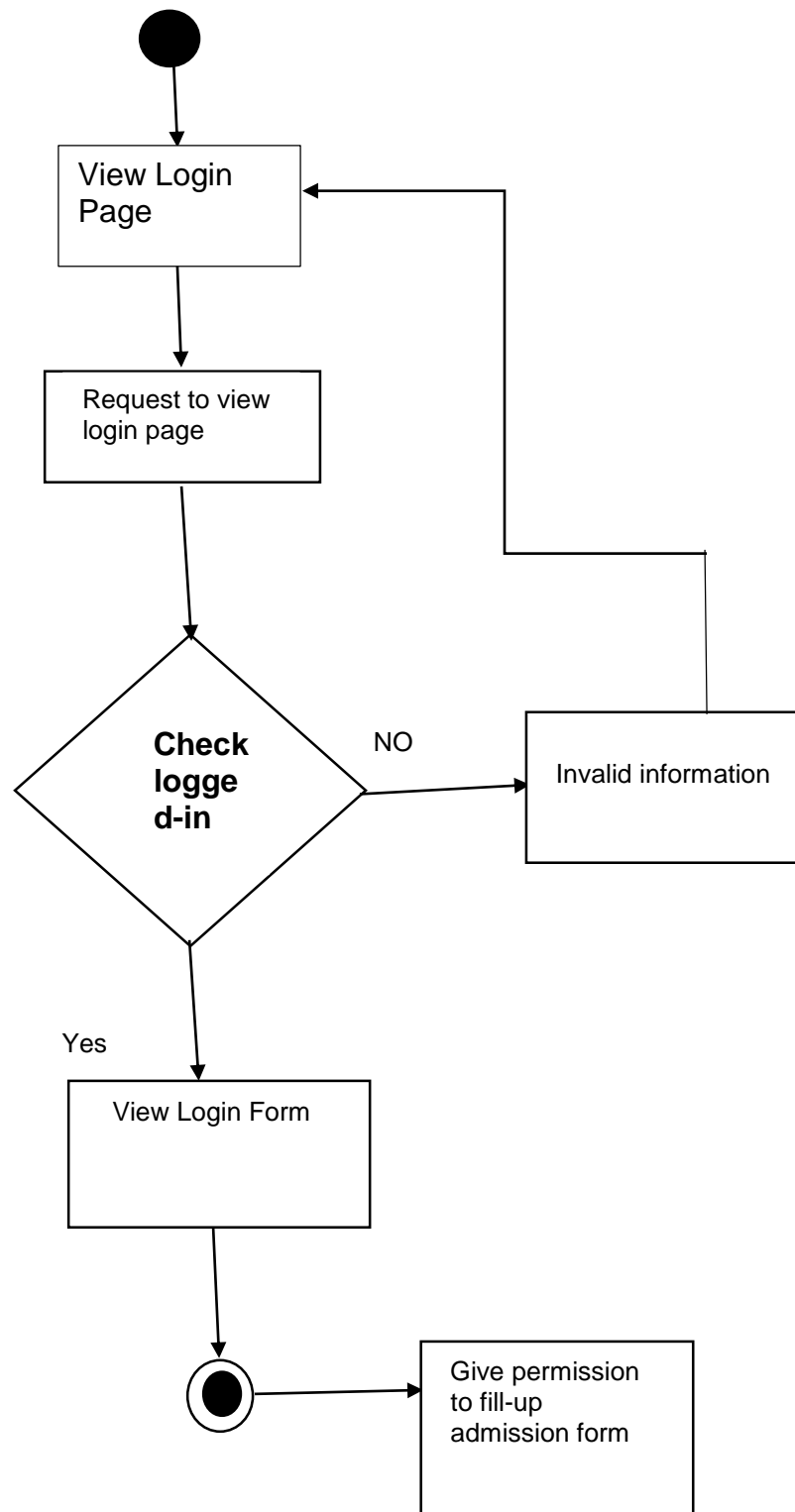
Use Case	Order food
Goal	Customer can order food easily
Precondition	Customer first need to login the system and need to reserve the room at hotel
Success End Condition	Customer can order food at hotel
Failed End Condition	Can't order food at hotel
Primary Actor:	Admin, Customer
Secondary Actor:	
Trigger	Request for order food
Description/Main Success Scenario	<p>Step Action</p> <ol style="list-style-type: none"> 1. After login and room reservation at hotel, request for food order 2. Select his/her food 3. Order the food 4. Payment for food 5. Then hotel stuff give food at room
Alternative Flows	Customer need to directly order food at canteen or connect with admin
Quality Requirements	

ACTIVITY DIAGRAM

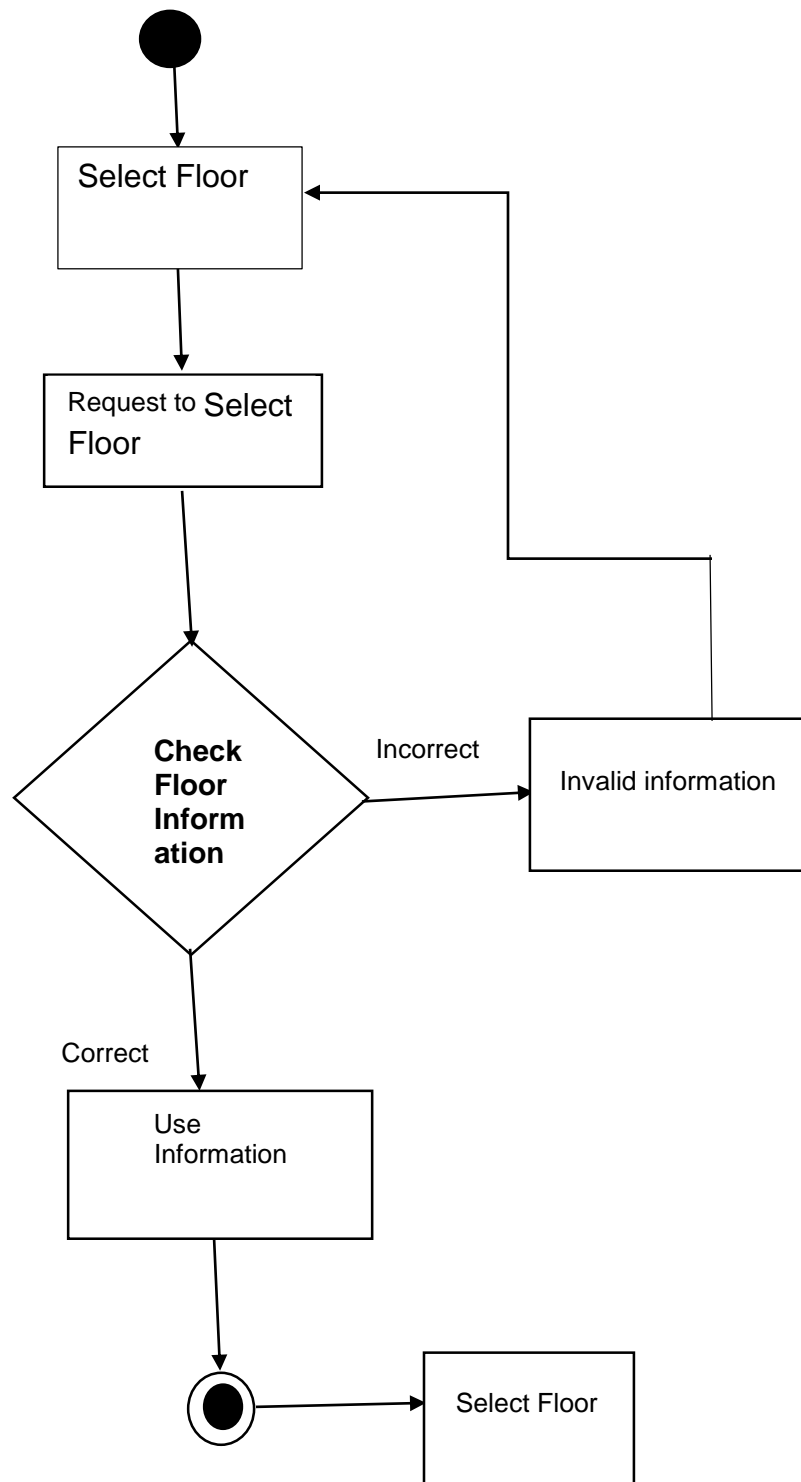
Registration and login



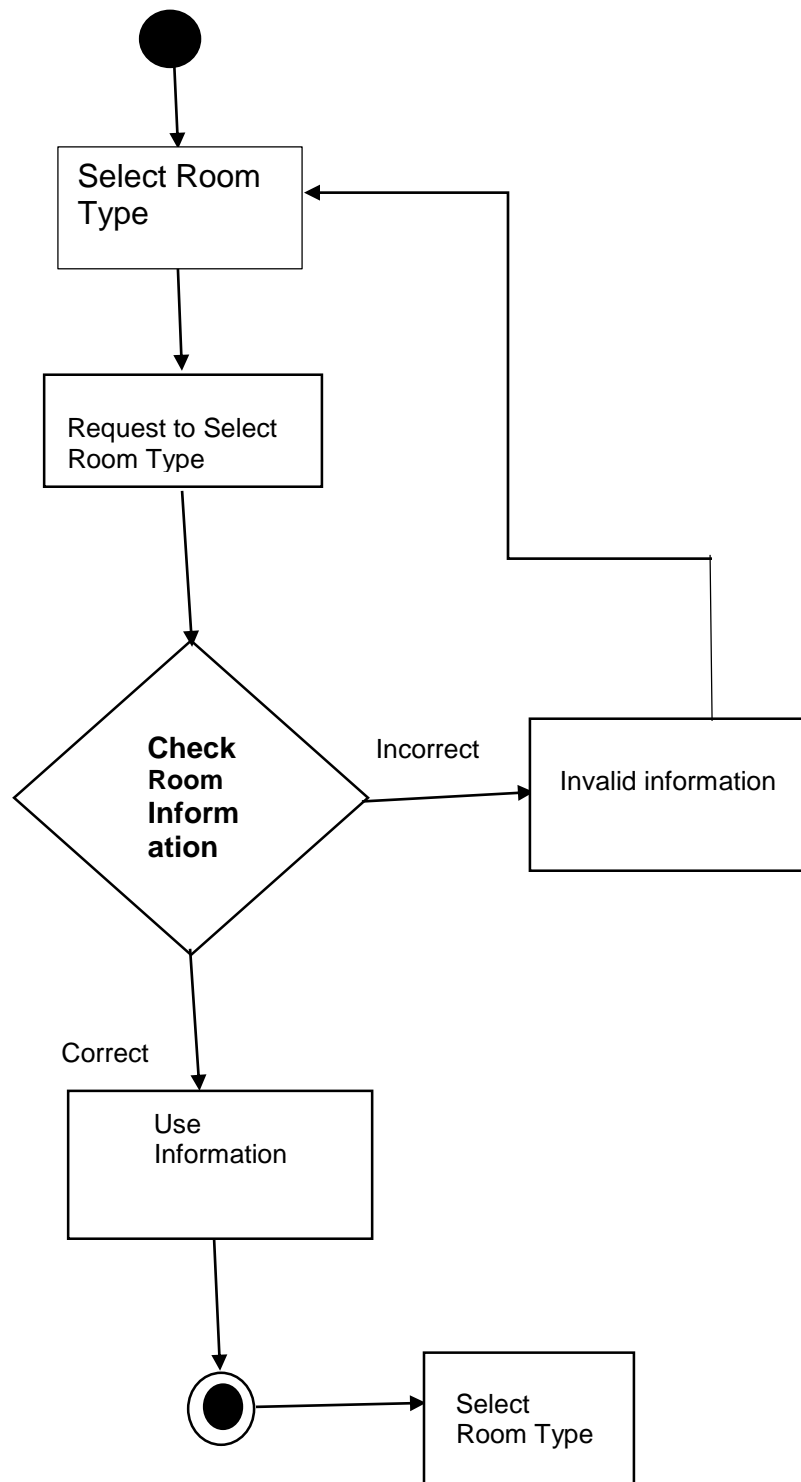
View Login Page



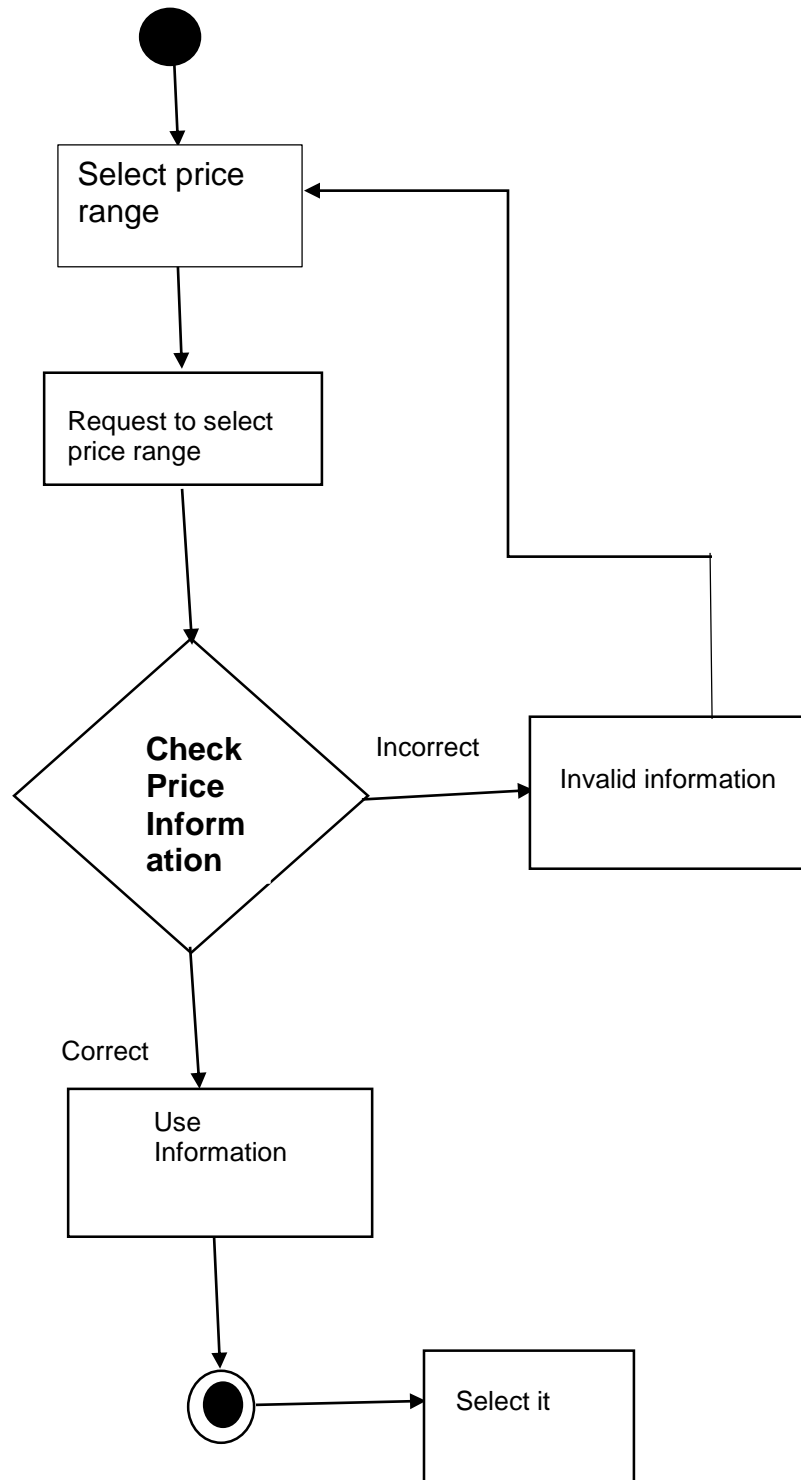
Select Floor



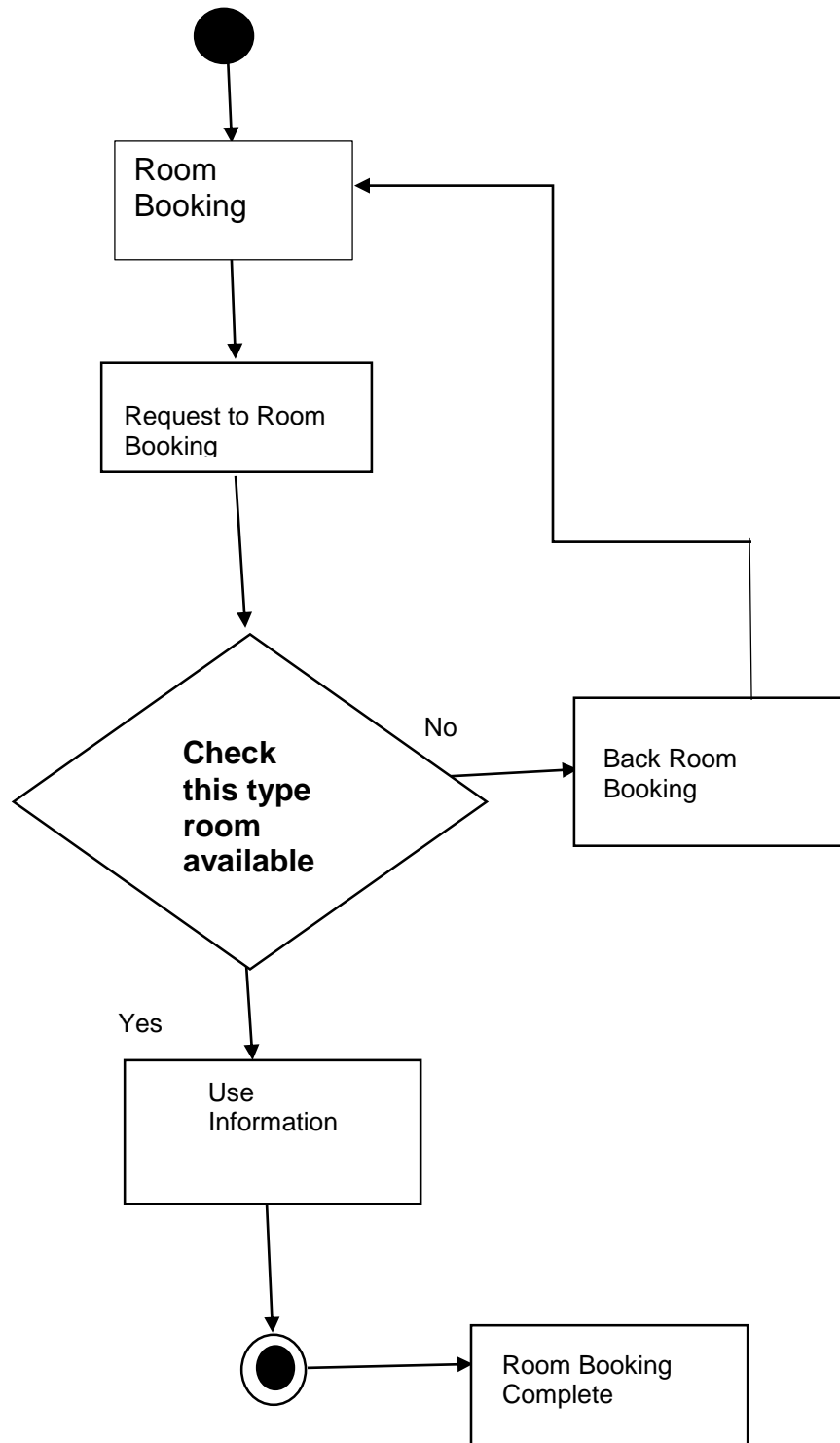
Select Room Type



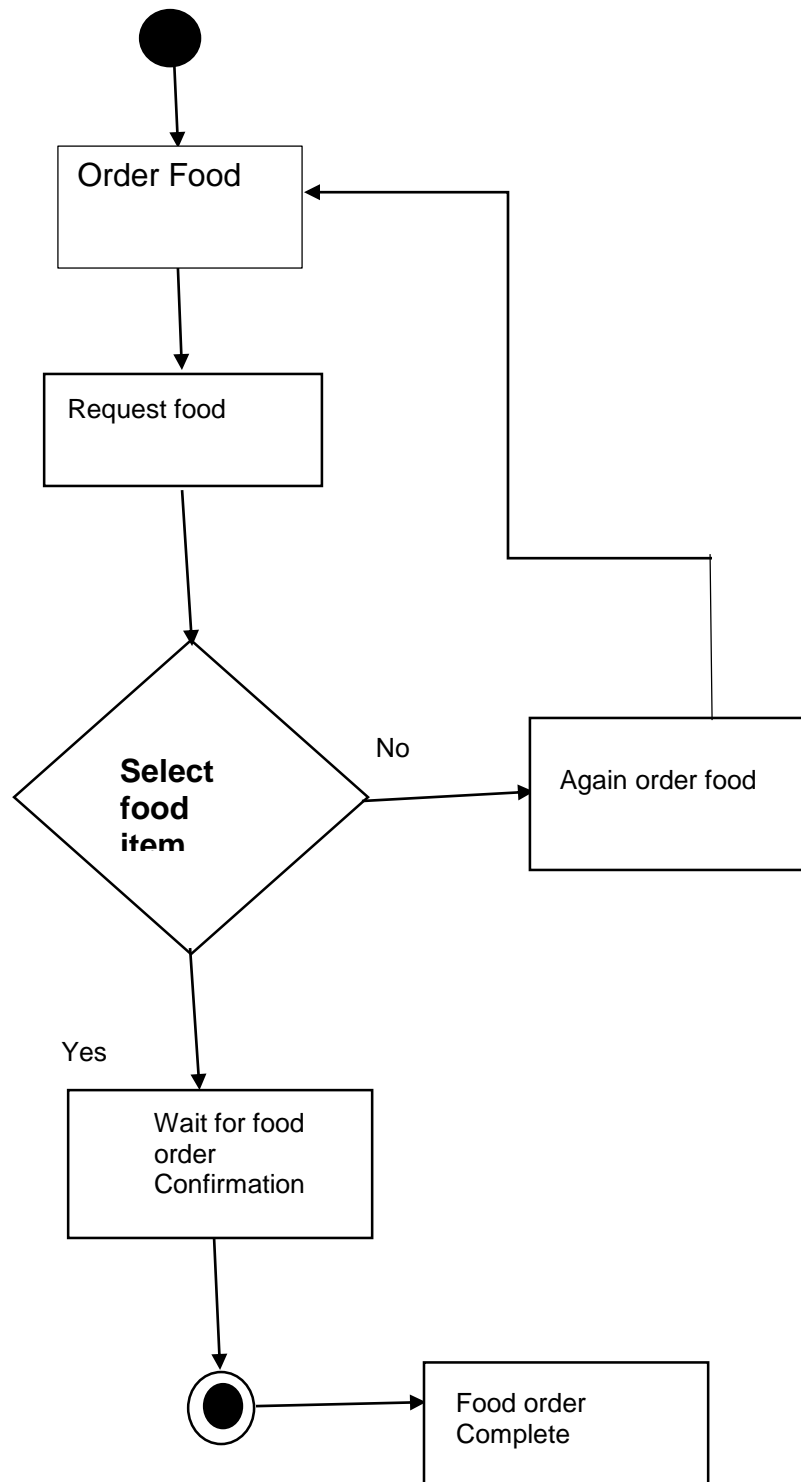
Select Price Range



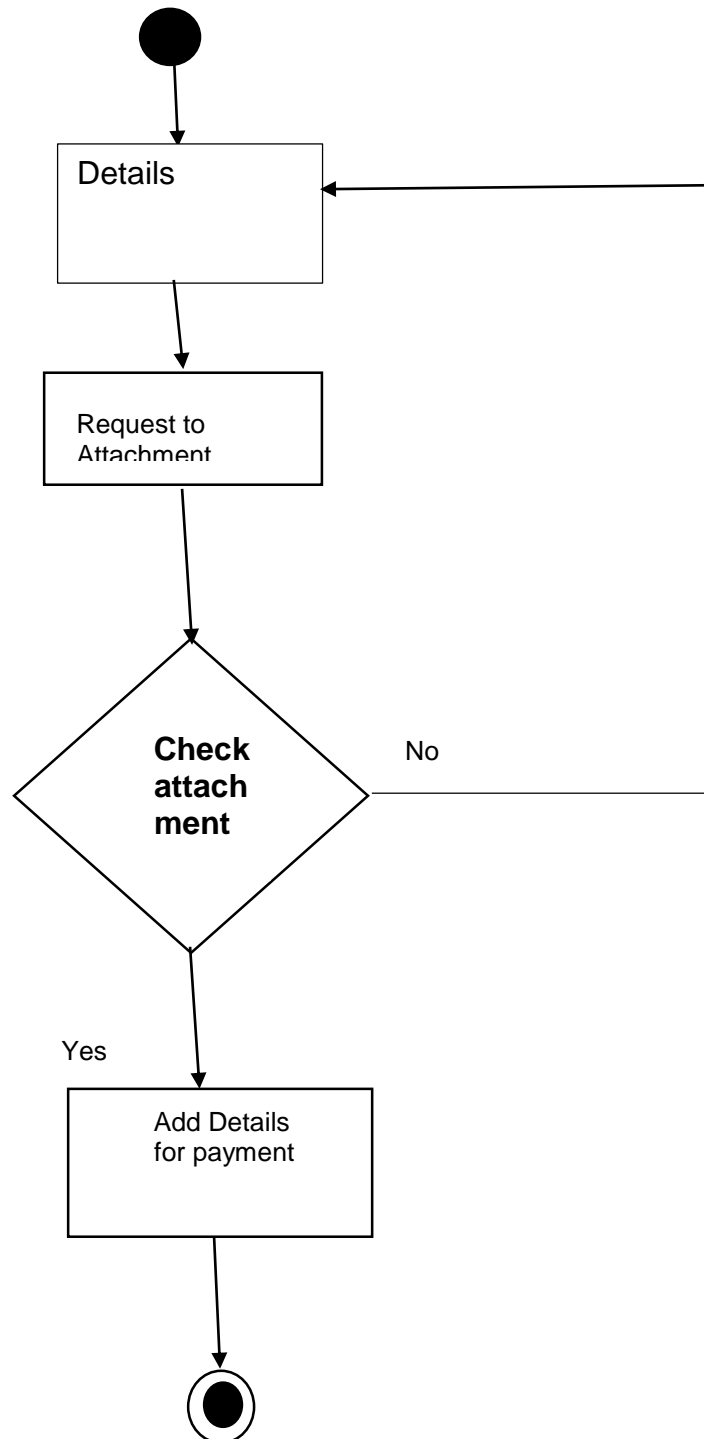
Room Booking



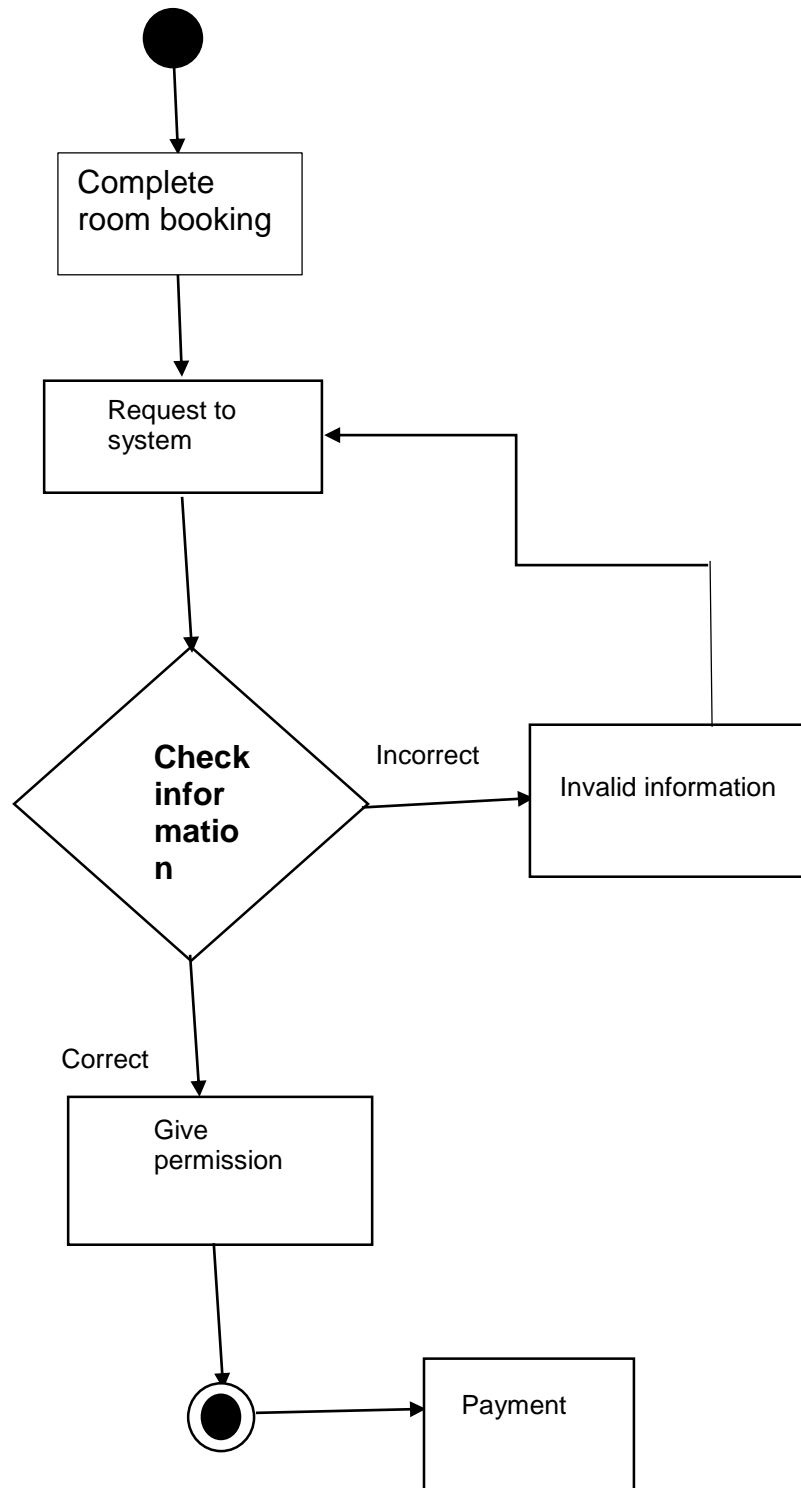
Order Food



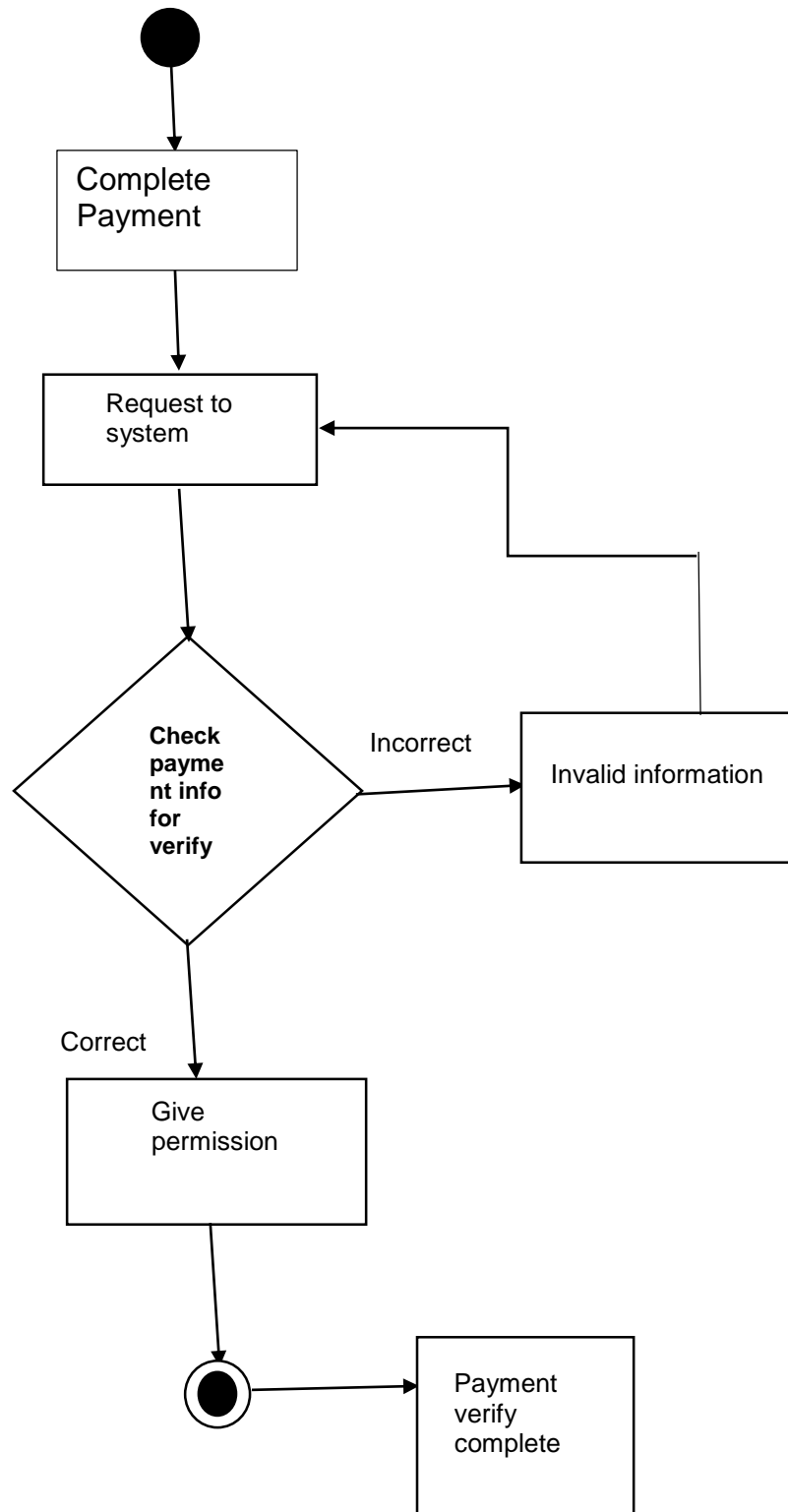
Details



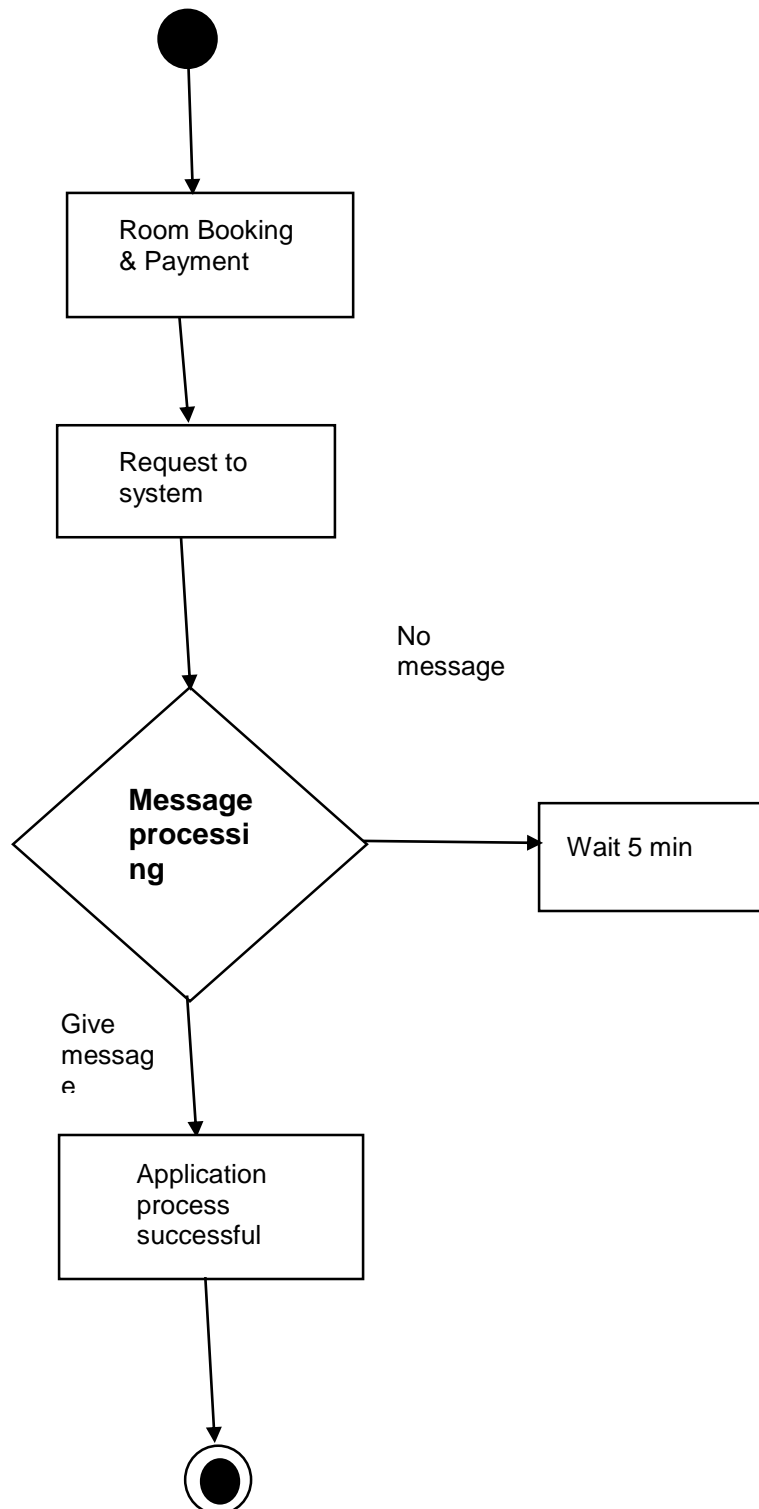
Payment



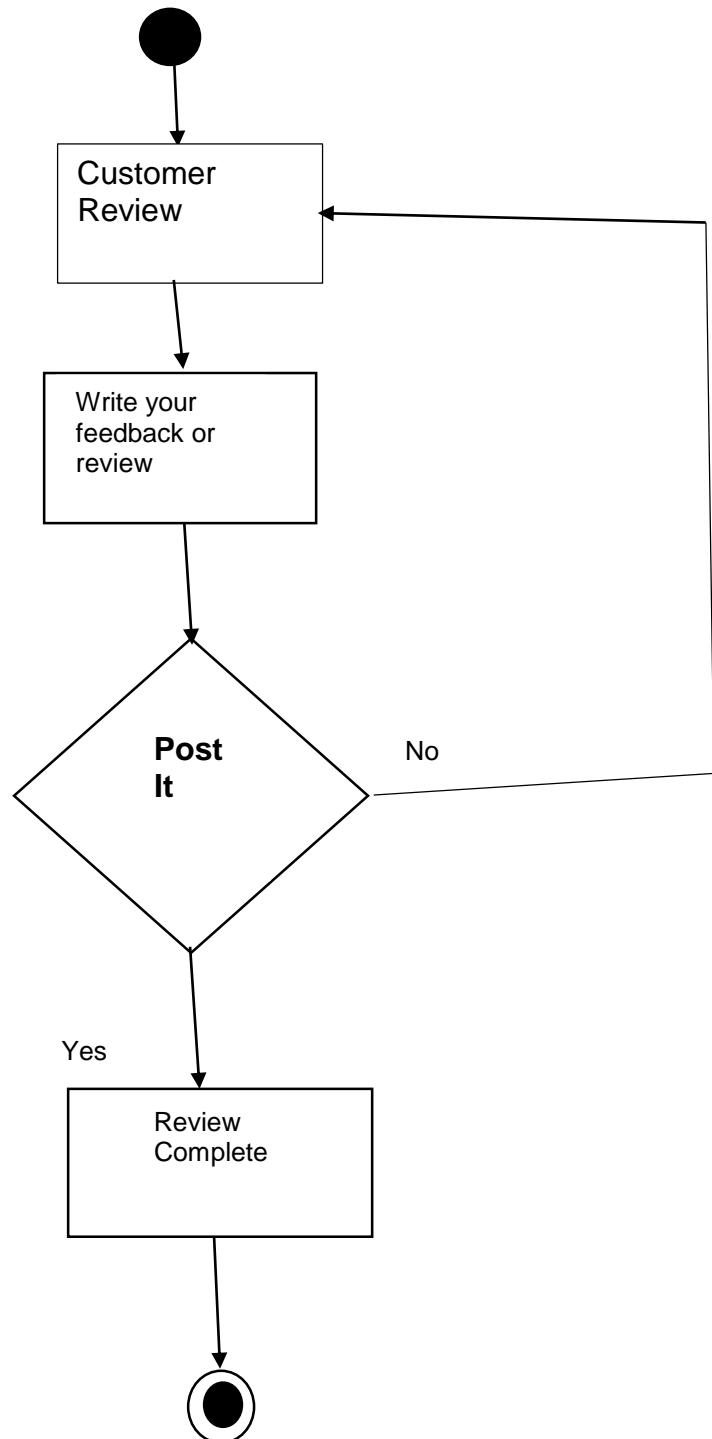
Payment Verify



Send a confirmation message

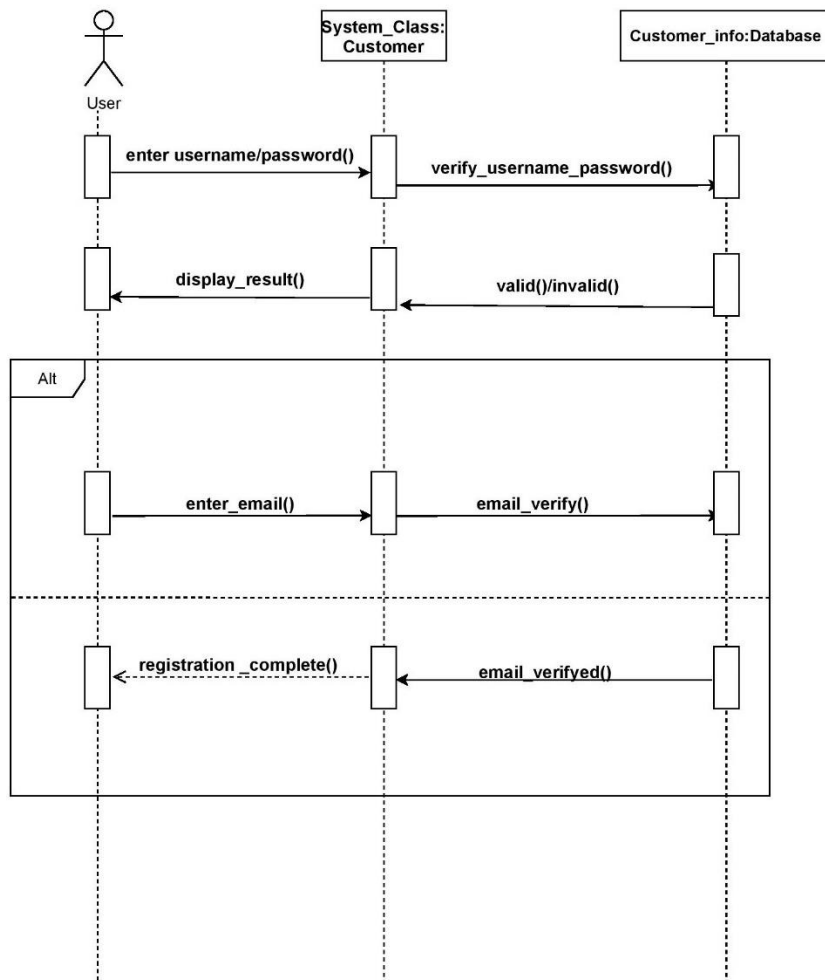


Review

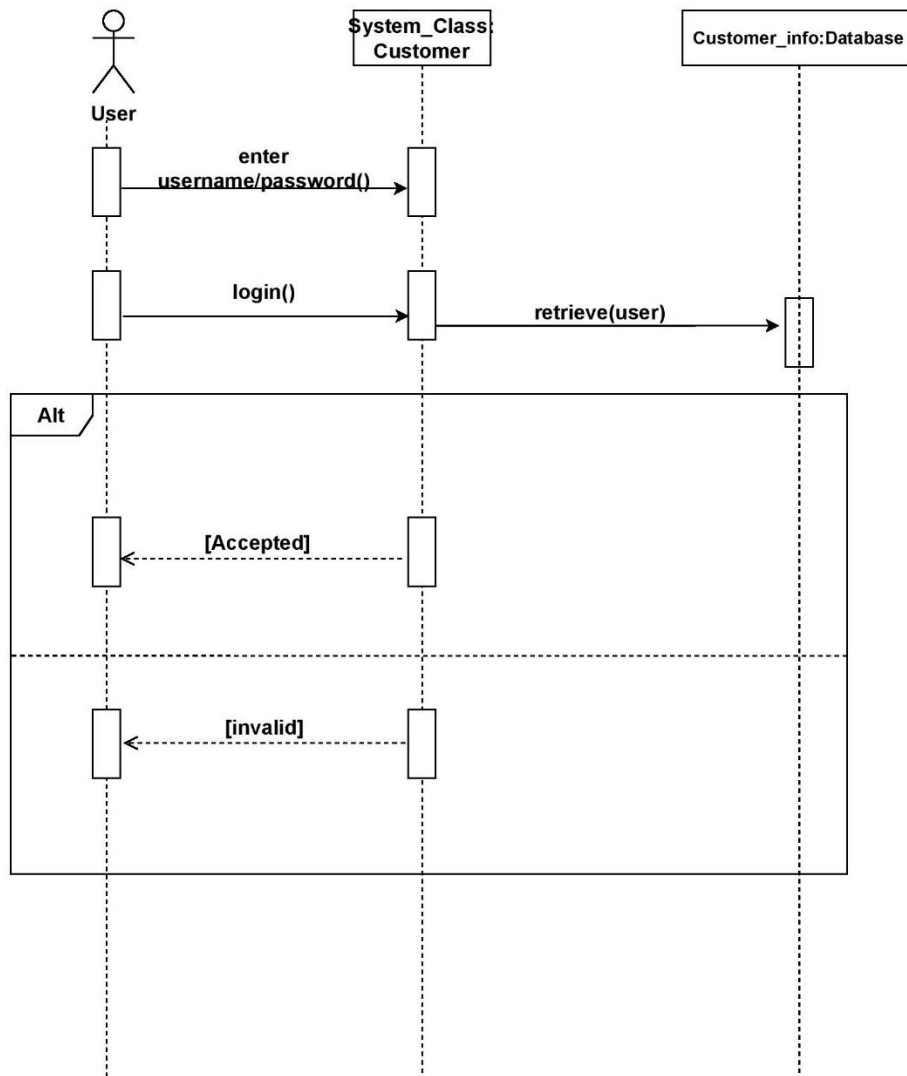


SEQUENCE DIAGRAM

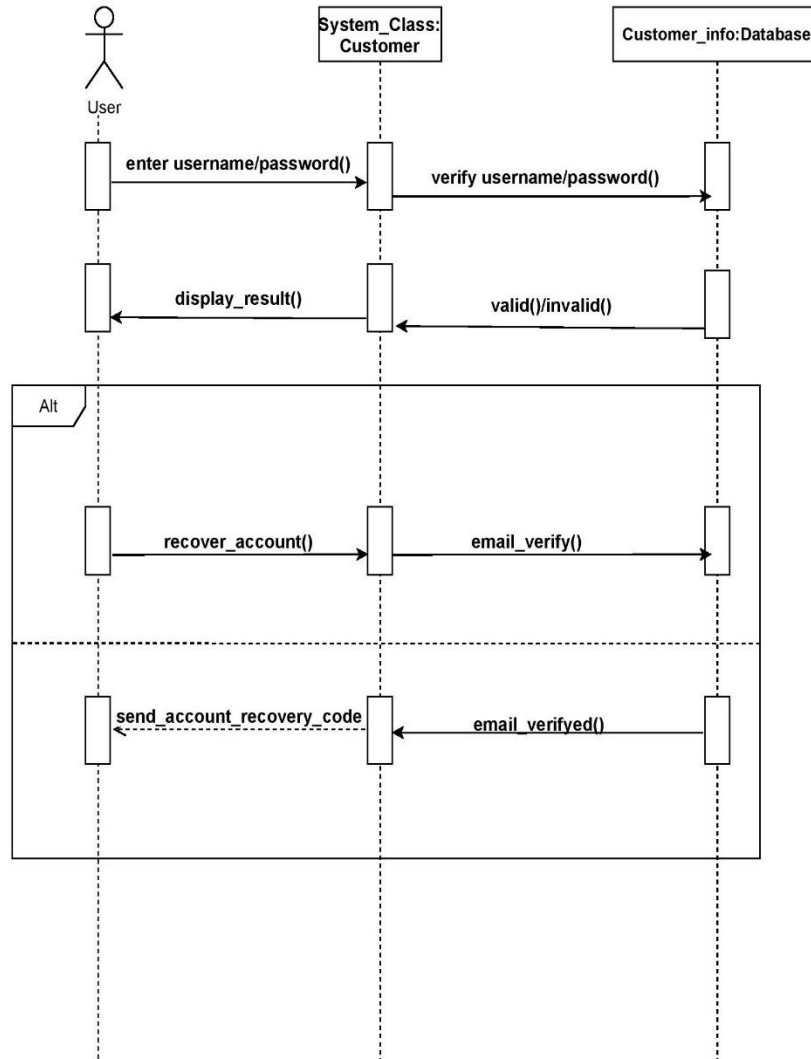
Registration



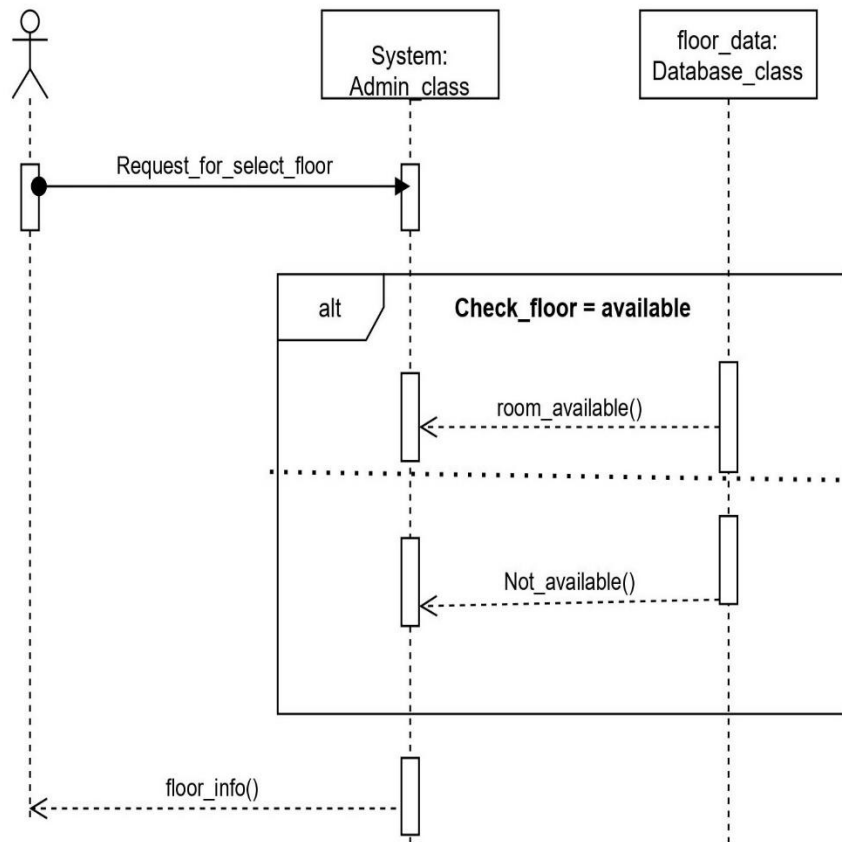
Log In



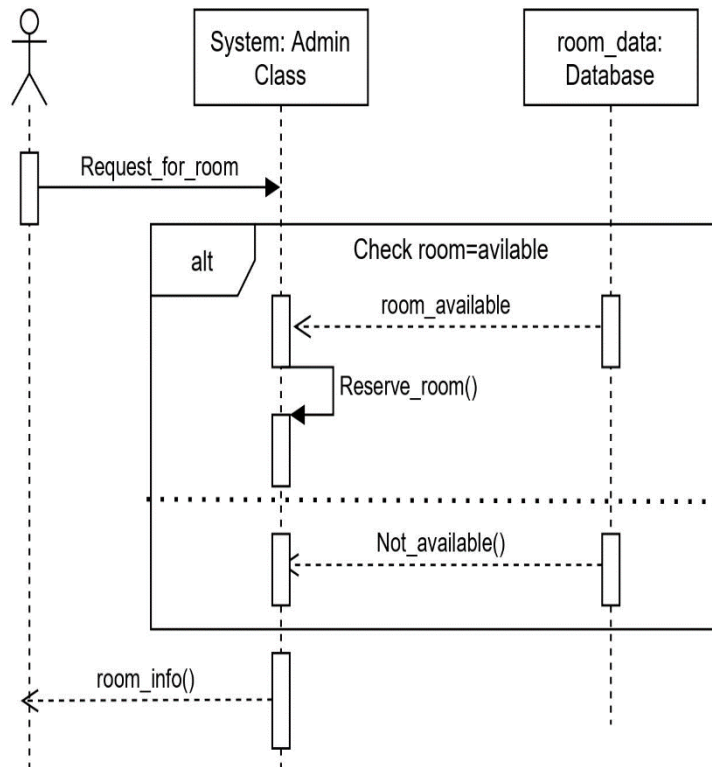
Forget Password



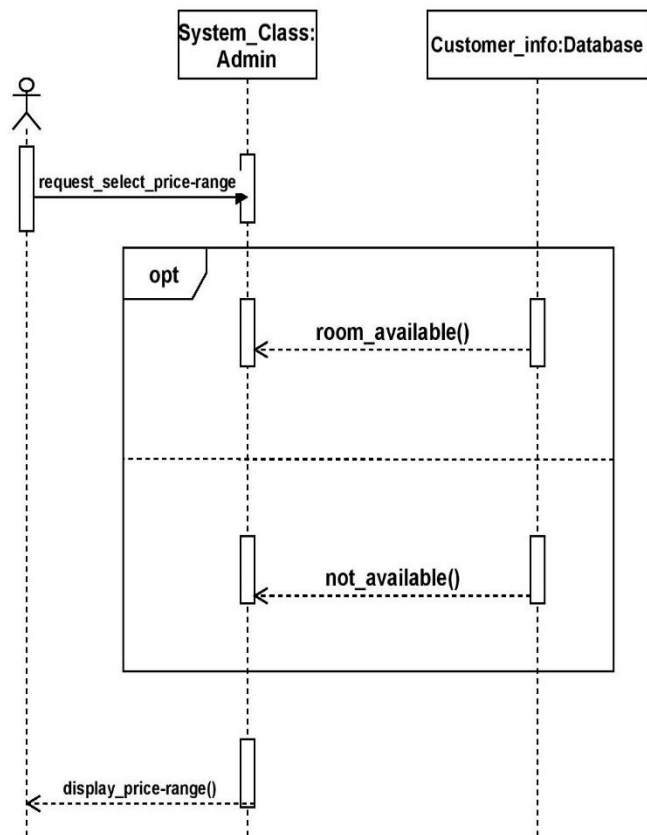
Select Floor



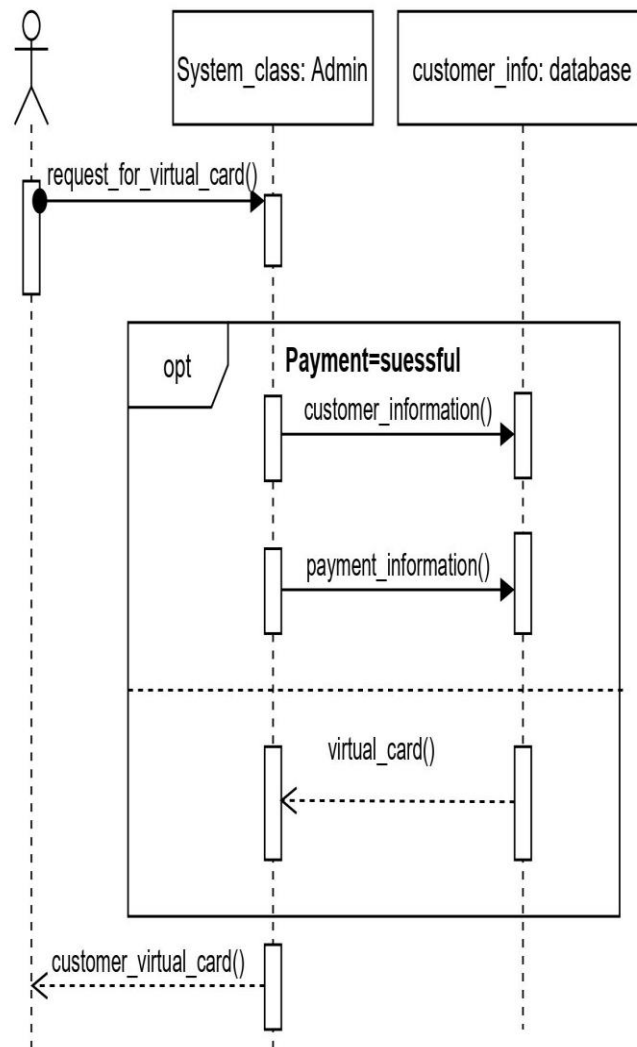
Select Room type



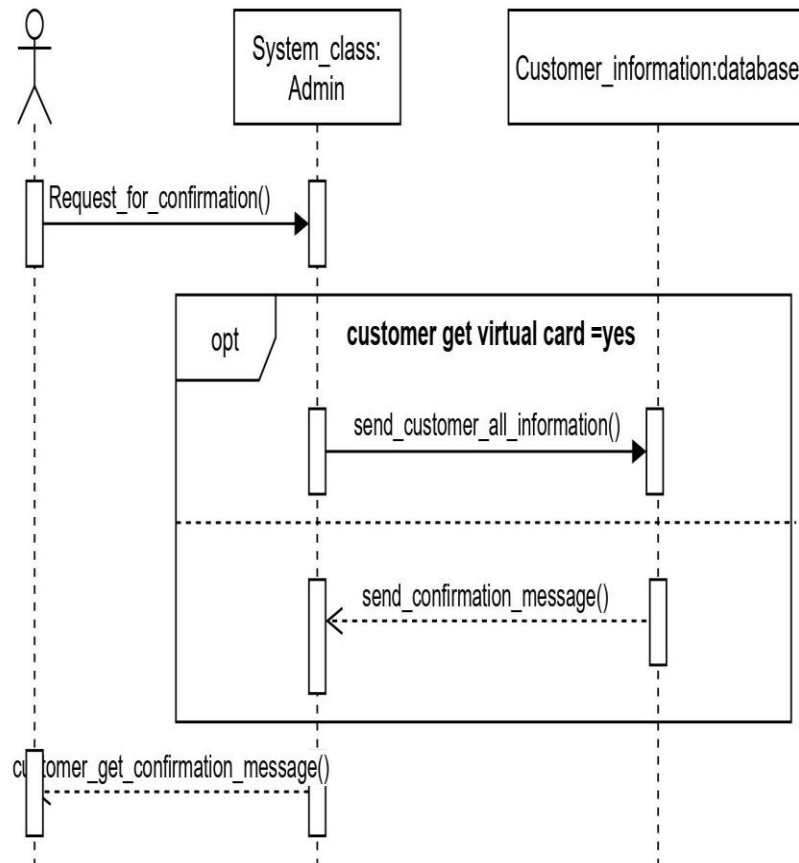
Select Price Range



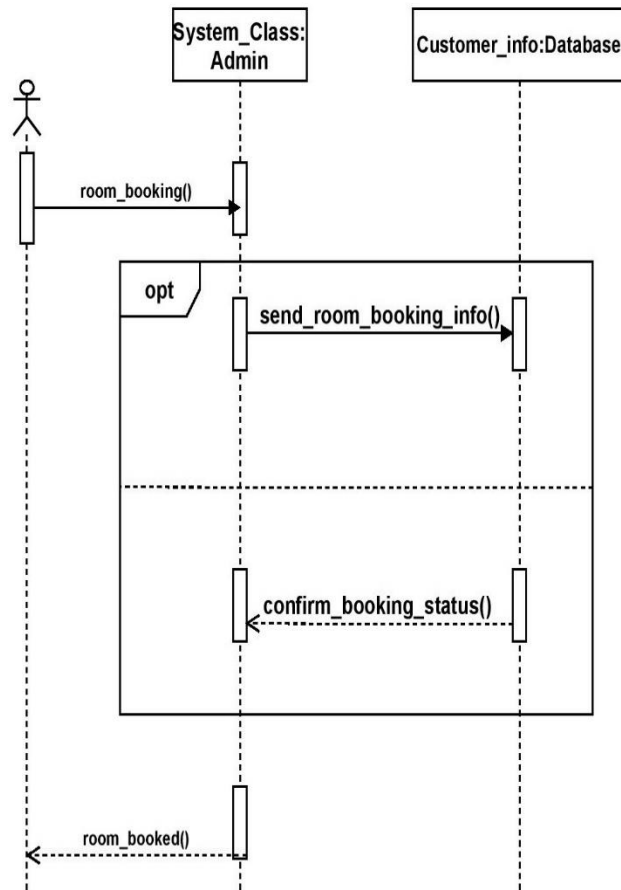
Receive Virtual Card



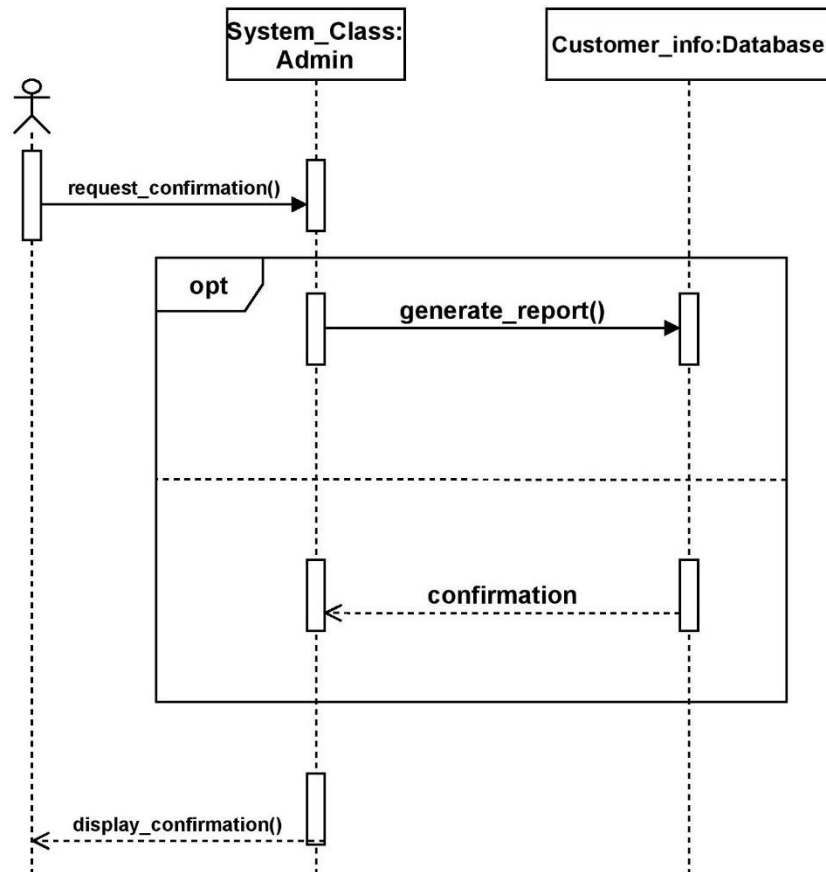
Admin confirmation



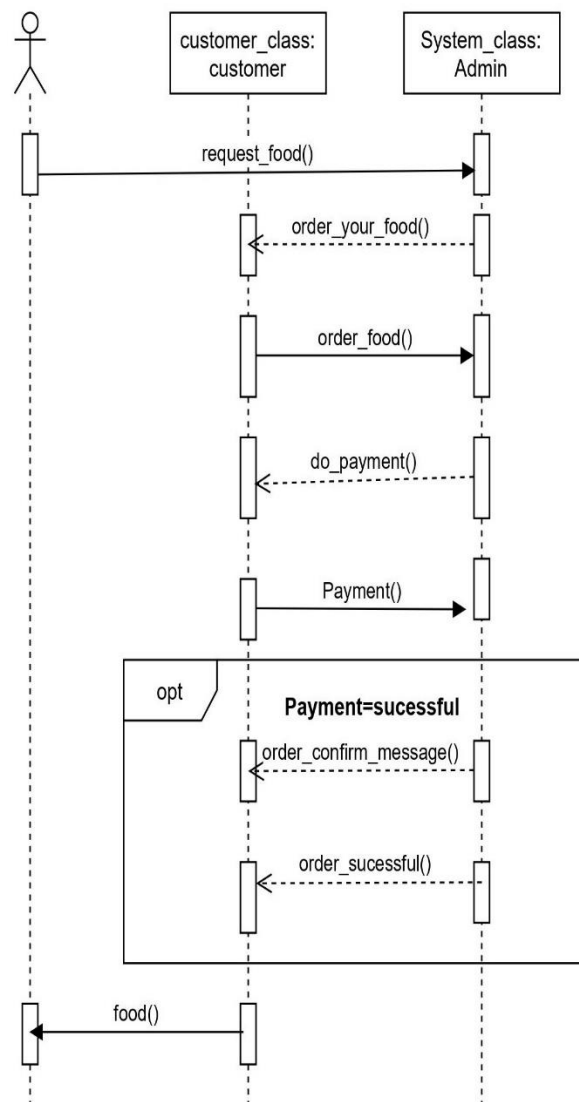
Room Booking



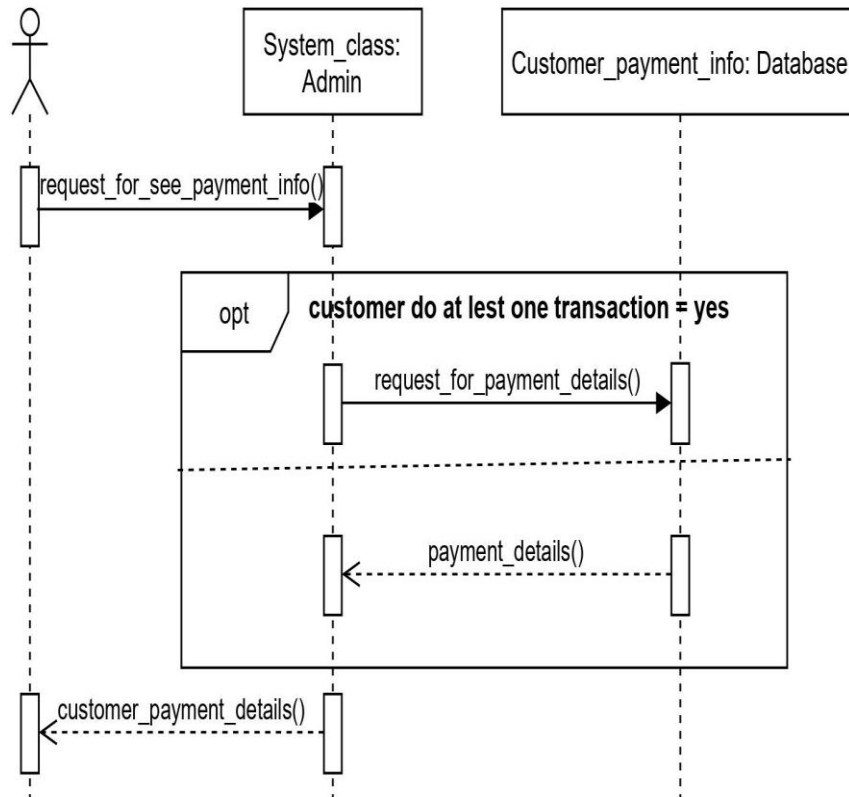
Confirm

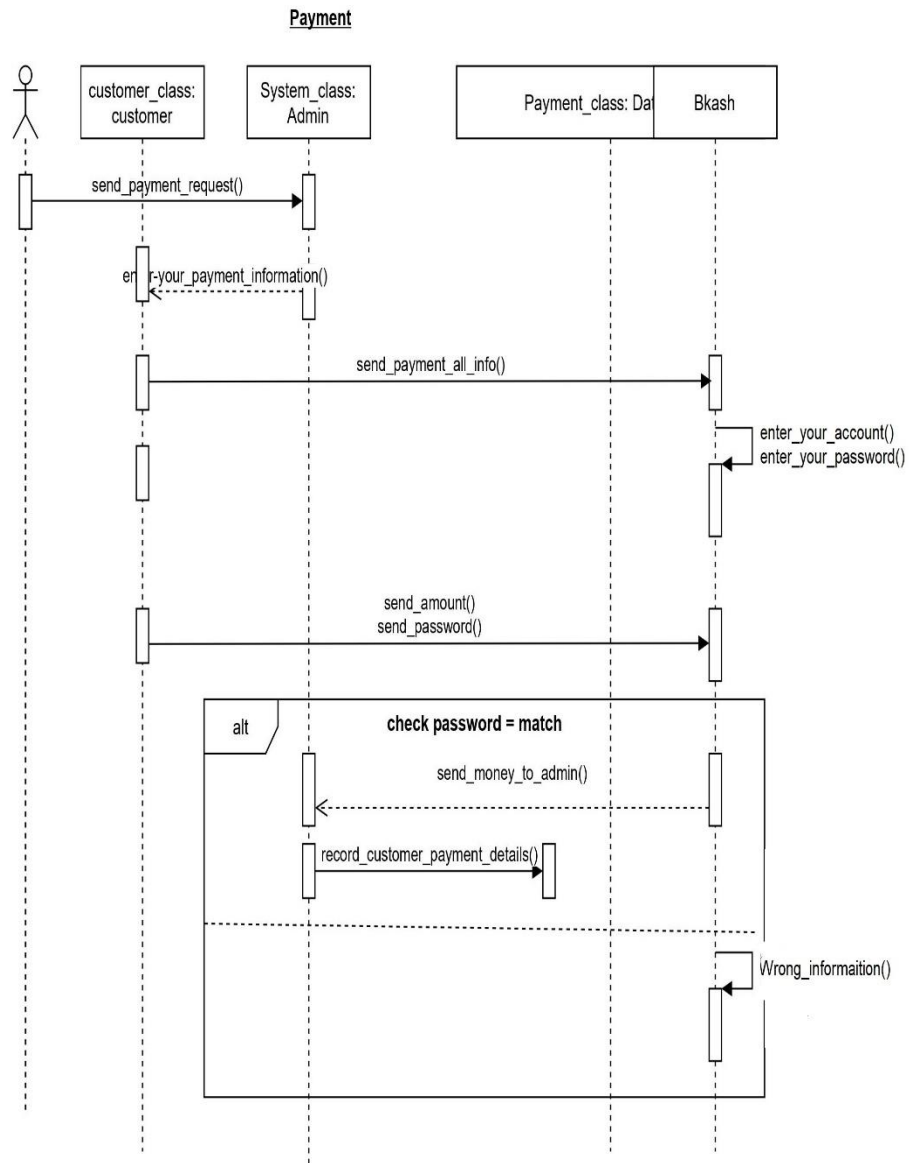


Order Food

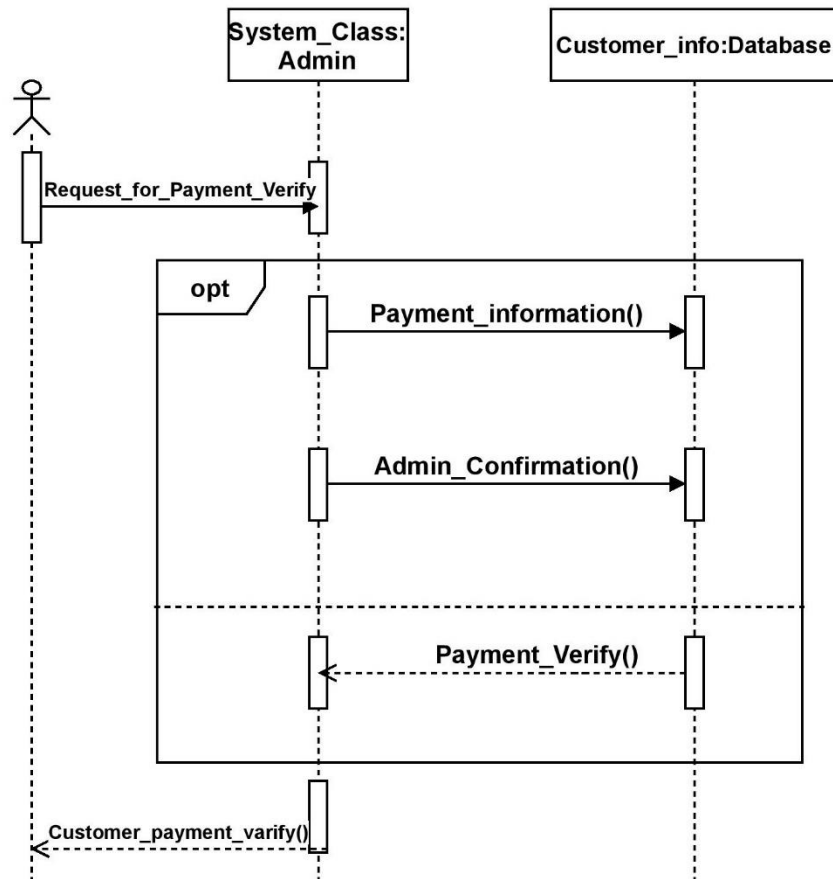


Details

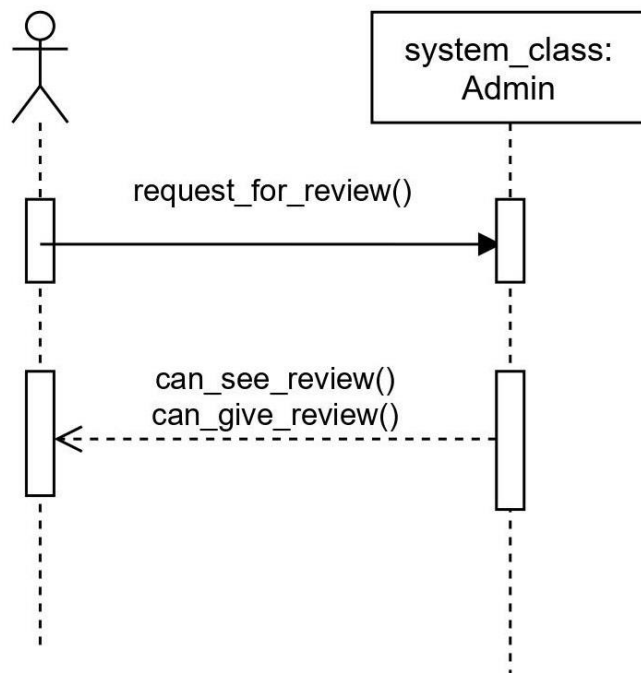




Payment Verify



review



THANK YOU