

SOFTWARE ENGINEERING

HOTEL RECOMMENDATION SYSTEM



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1. Introduction:-

1.1 Purpose:-

The purpose of this project is to provide the customers, a software solution that recommends users to choose the best hotel in the respective area. The following SRS document will outline the features of the “Hotel Recommendation System” and the requirements that the project will adhere to in developing the software for the organization.

1.2 Intended Audience:-

This document is used by developers for understanding the requirements of the project; also the intended users of this document are project managers for planning and scheduling, testers to generate test cases, document writers for preparation of user manual and for other end-users/stakeholders to validate their requirements.

1.3 Project Scope:-

Hotel Recommendation system is aimed at managing database about the rooms, villas or home stays in a given specific location by the user. It also recommends a particular hotel on the basis of ratings by other users. The system is intended to automate the process of vacant rooms or the rooms occupied directly by the administrator or in simple language we can say that this process can be managed by the hotel manager, thereafter the updated details of the particular hotel will be displayed to other users. The objective of the project helps the users to choose a hotel on the grounds if it has vacant rooms or not.

The goal of the project is to reduce the time and cost incurred in an access to the database and design a database feasible to provide appropriate results to the queries of all users.

1.4 System Requirements:-

Programming Language	HTML,CSS,Javascript,PHP
IDE	VS-code
Database	phpMyadmin

1.5 DESIGN AND IMPLEMENTATION CONSTRAINTS

Design Constraints

Design mechanisms are limited to the markup languages and PHP and localhost DB. The user interface must be viewable on any device.

Safety and Security Considerations

Since personal information of customers who are using our software will be contained and accessed Safety and Security considerations need to be taken into account that personal and sensitive information are not accessed by unauthorized users.

The end user having the software installed at his desktop should be able to login using the valid credentials. Post validation of the credentials entered, the system allows access into the database. Upon access the user should be able to perform operations like insert, delete, and update information of the users into the database. Provision should be provided for the user to query the database to obtain various reports.

2. System Features:-

#	Title of system feature	Description	Priority	Functional requirements
1	login	This is used to login and maintain the security by authenticating the users.	High - 9	<u>Login feature:</u> <ul style="list-style-type: none">• Should accept the user name password.• A case insensitive comparison is done for a user name and a case sensitive comparison is done for a password.• If the correct user id and password are supplied then, Main Menu should be displayed.• If an invalid user id or password is entered then the system should display error message "Login Denied" and should quit the application.

2	Menu	This feature behaves as a user interface to display the features of the database and guides the user to access the database and also gets the location of user	High 8	<p>Prompt the user to make choice with the 4 types of menus available.</p> <p><u>Hotel menu:</u> insert update or view hotels <u>User menu:</u> insert update or view the user information. <u>Booking menu:</u> create customer records for the particular hotel selected by the user <u>Payment menu:</u>Take the required payment essentials of the user and confirm the booking. <u>Cancellation menu:</u> Delete the customer records who opted to cancel the room booked.</p>
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3	Hotel menu	This feature adds new hotels , updates Hotel name of the existing department record, and helps in viewing department details.	High 7	<p>Add Hotel</p> <p>Add the room availabilities of the hotel</p> <p>Add the hotel name</p> <p>Add the room types</p> <p>Update Hotel</p> <p>Update the hotel name if required</p> <p>Update the availability of rooms</p> <p>Update the hotel location</p> <p>Update the room types</p> <p>View Hotel</p> <p>View the hotel name</p> <p>View the rooms available</p> <p>View the room types</p>
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4 .	User menu	This feature adds new	Medium	Add Information

		<p>User information, Update</p> <p>the user information.</p>	7	<p>Username</p> <p>User phone number</p> <p>User address</p> <p>User mail</p> <p>Update Information</p> <p>Update the following information if necessary</p> <p>Username</p> <p>User phone number</p> <p>User address</p> <p>User mail</p>
5.	Booking menu	<p>This feature avails user to book the room in the required hotel.</p>	Medium	<p>Create Record</p> <p>Generate a booking receipt with following details</p>

				Username User phone number User address User mail Room type Check in date Check out date Room price
6 .	Payment menu	This feature allows to make payment for the booked room in the respective hotel either through credit or debit	High 9	Add the card details Update the card details

		card.		
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7	Cancellation menu	This feature allows user to cancel the booking	Medium 5	Delete the booking receipt or record of the user
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3. External Interface Requirements:-

3.1 User Interfaces:-

Hotel menu:- insert update or view hotels

User menu:- insert update or view the user information.

Booking menu:- create customer records for the particular hotel selected by the user

Payment menu:- Take the required payment essentials of the user and confirm the booking.

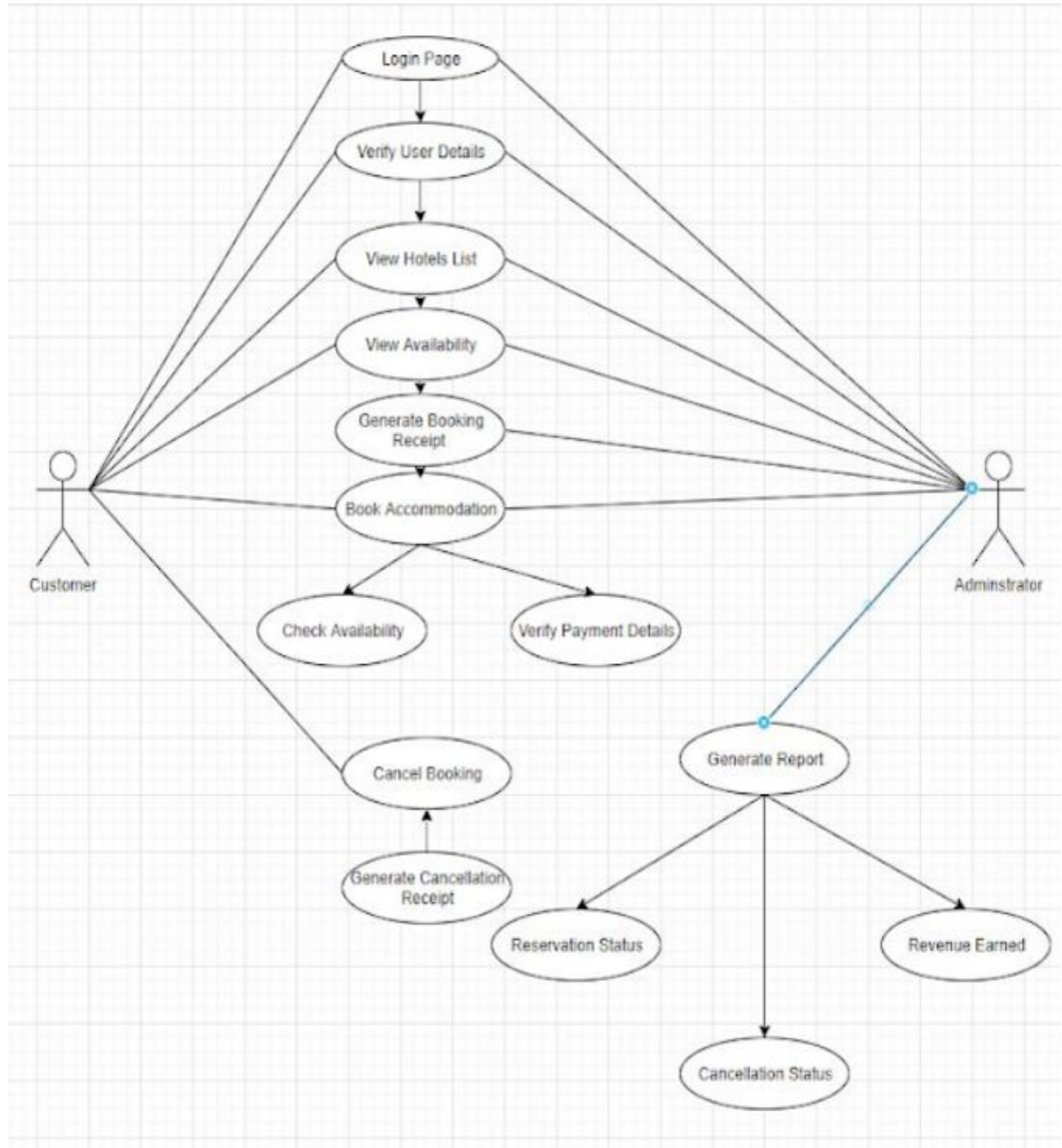
Cancellation menu:- Delete the customer records who opted to cancel the room booked.

3.1 Software Interfaces:-

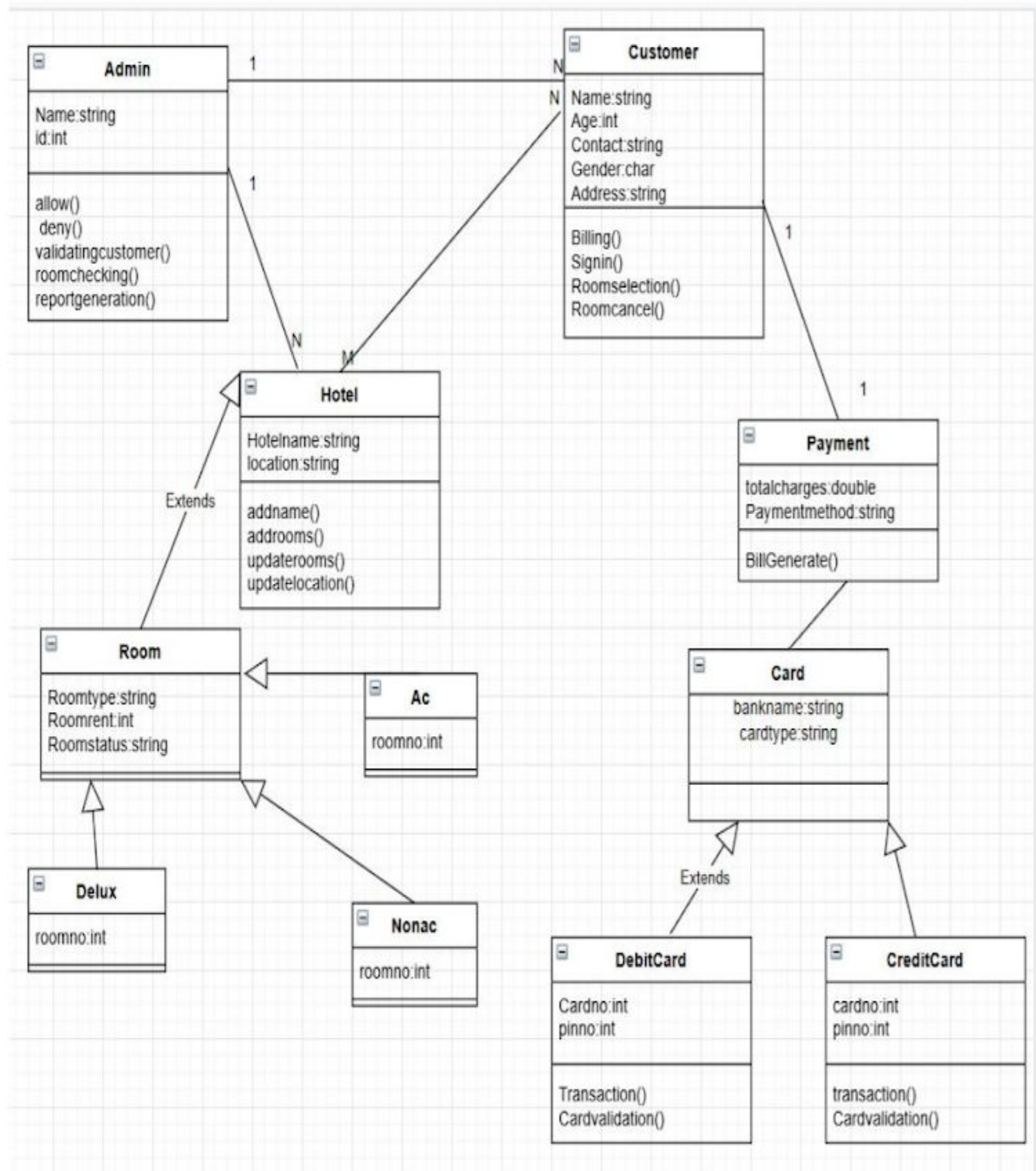
Programming Language	HTML,CSS,Javascript,PHP
IDE	VS-code
Database	phpMyadmin

4. UML Diagrams:-

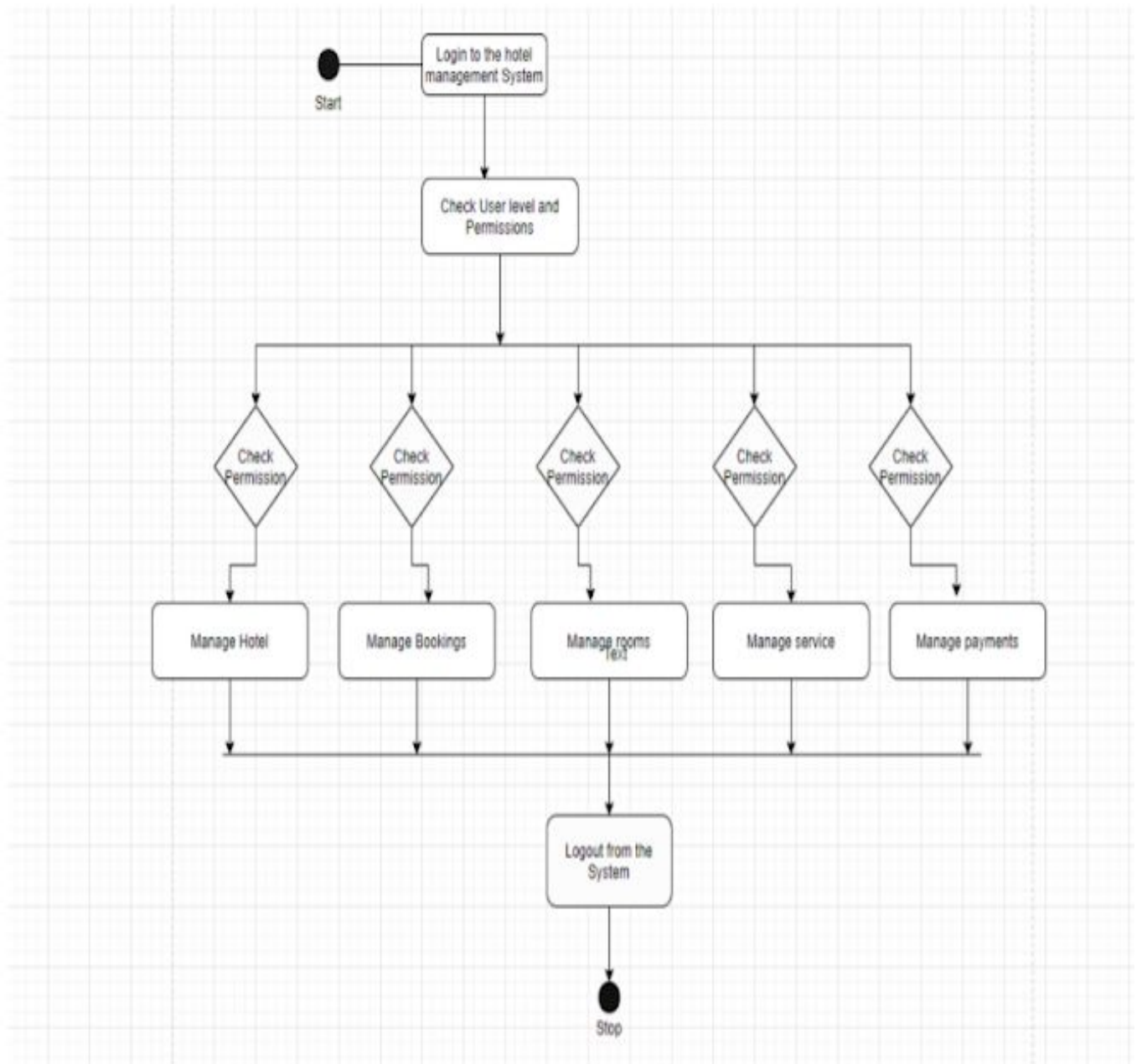
a) Use Case:-



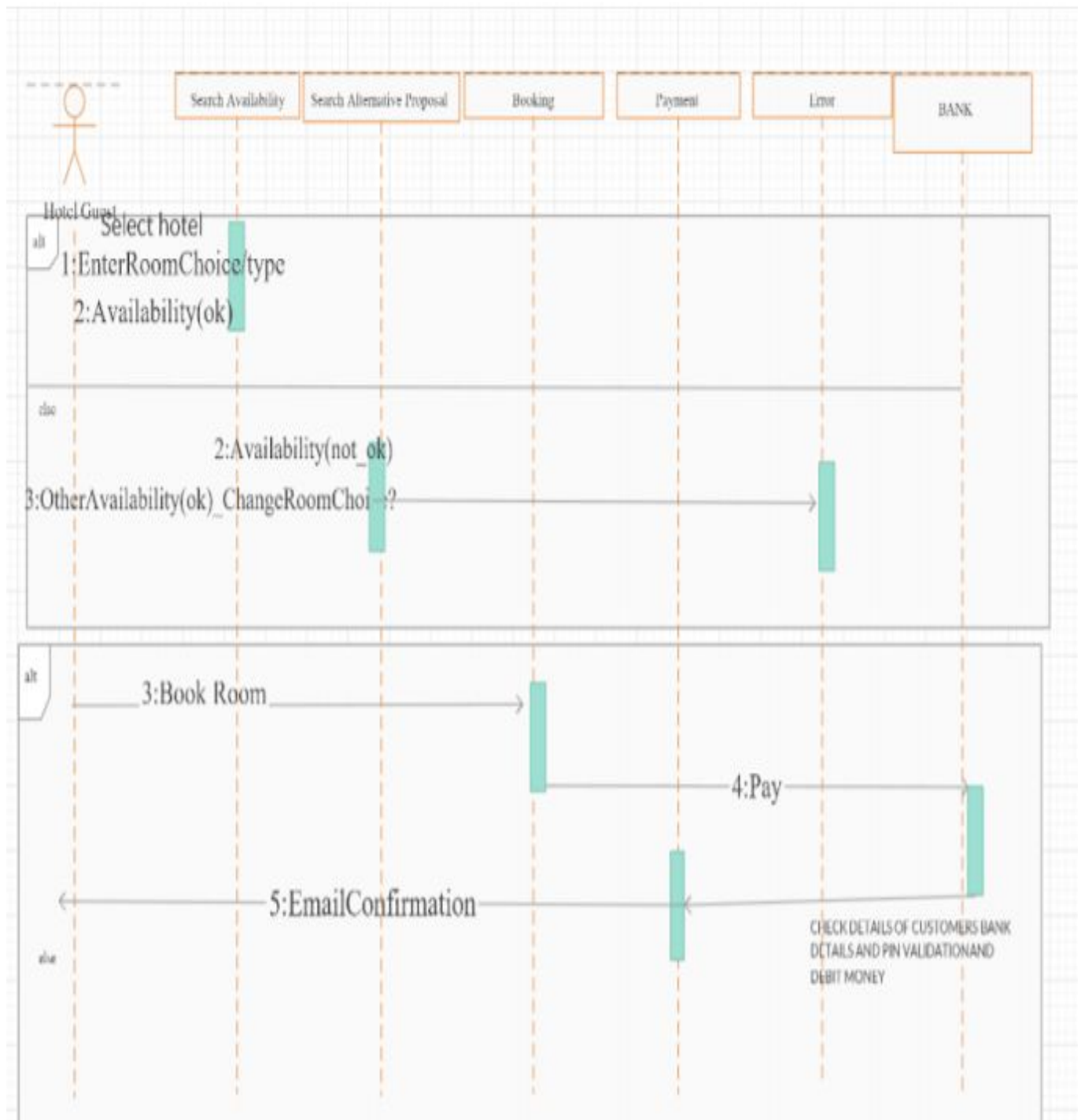
b) Class Diagram:-



c) Activity Diagram:-

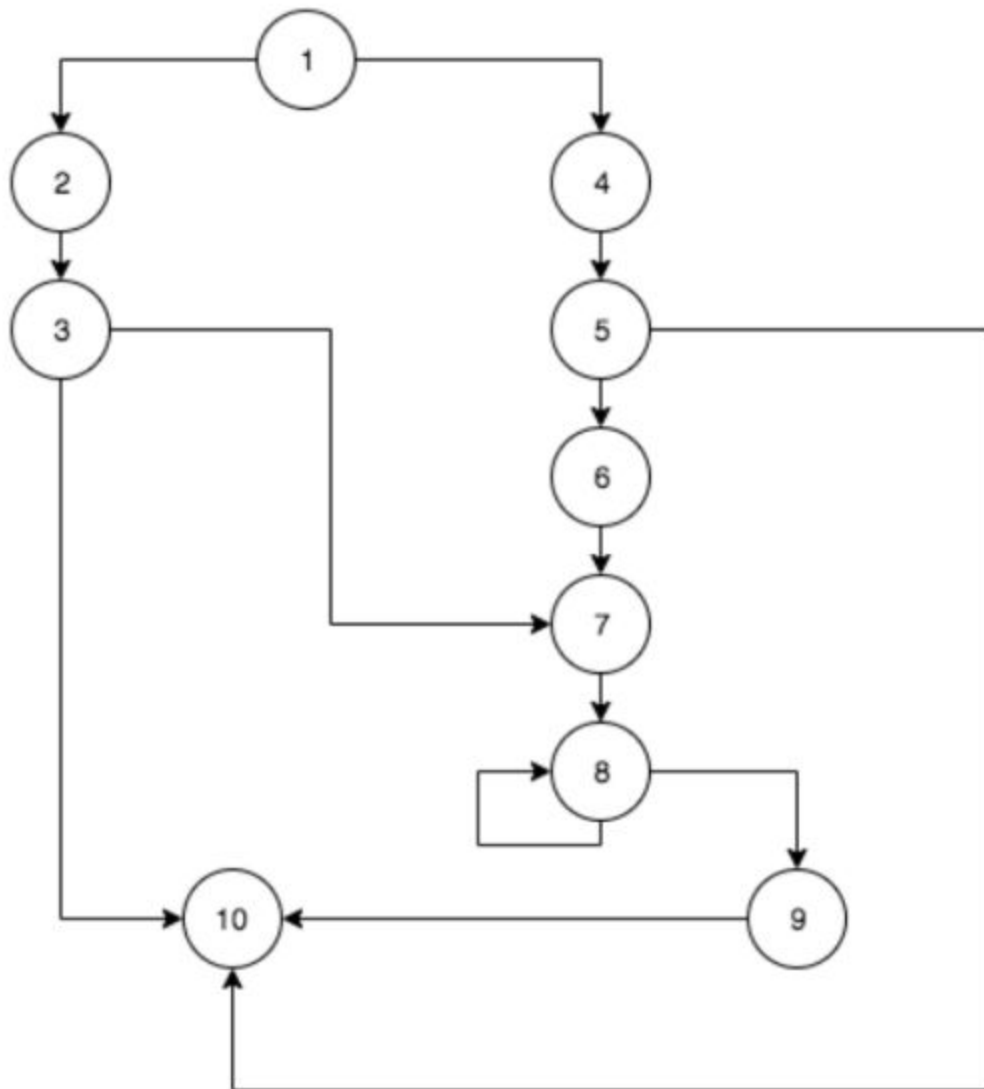


d) Sequence Diagram:-



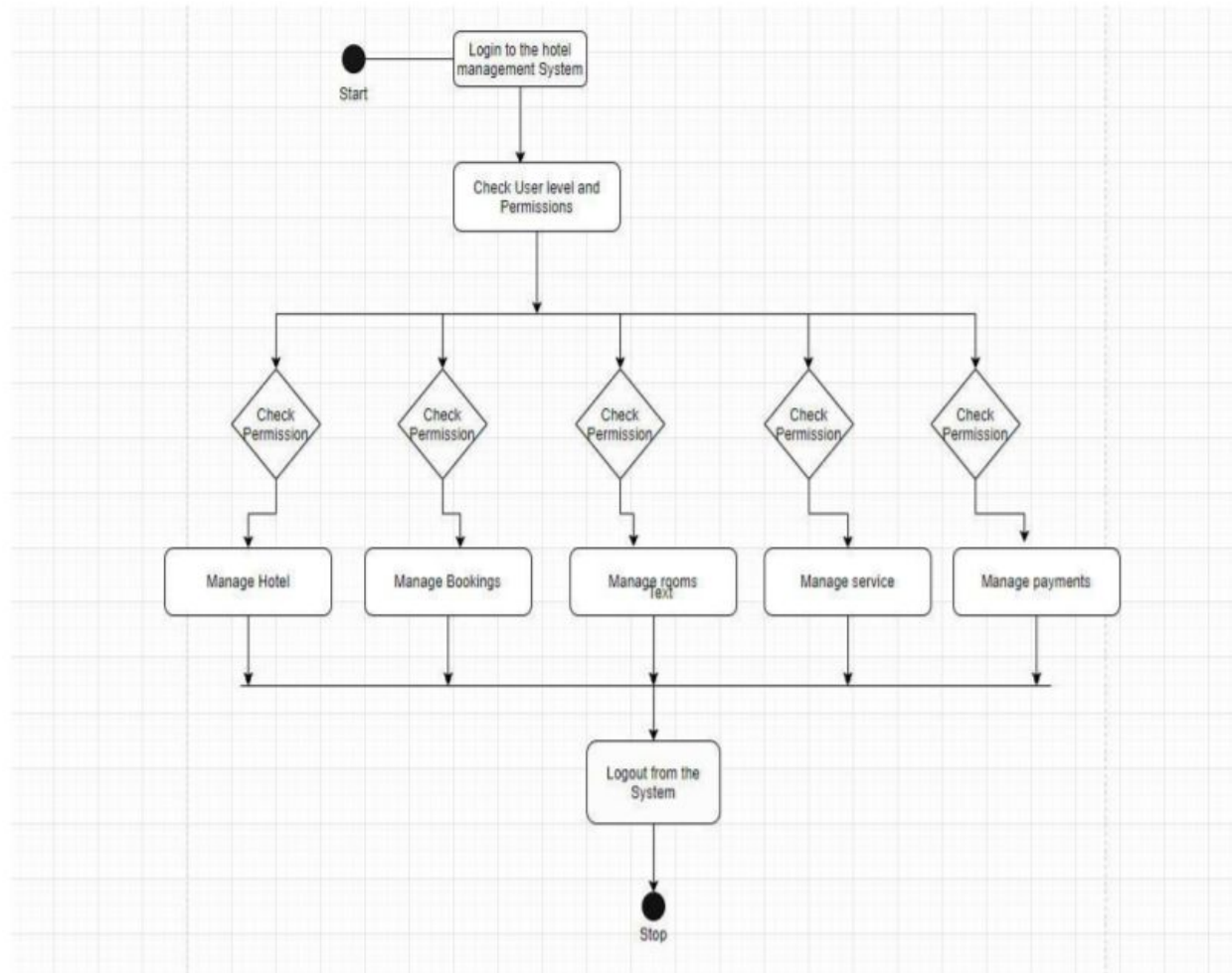
Cyclomatic complexity

Cyclomatic Complexity:



$$\begin{aligned} P &= \text{No. of regions} = 4 \\ V(G) &= P + 1 = 4 + 1 = 5 \\ V(G) &= 13 - 10 + 2 = 3 + 2 = 5 \end{aligned}$$

Functional point analysis



FP analysis:

INFORMATION DOMAIN	COUNT	WEIGHTAGE FACTOR			
		SIMPLE	AVERAGE	COMPLEX	
EXTERNAL INPUT	6	3	4	6	24
EXTERNAL OUTPUT	4	4	5	7	20
EXTERNAL INQUIRY	1	3	4	6	4
INTERNAL LOGICAL FILES	2	7	10	5	20
EXTERNAL INTERFACE FILES	3	5	7	10	21

$FP = COUNT * (0.65 + 0.01 * \sum(f_i))$ HERE,

COUNT =
 $89 \sum(f_i) = 28$

$FP = 89 * (0.65 + 0.01 * 28)$ $FP = 82.77$ Total
 ESTIMATED LOC = $82.77 * 125 = 10346.25$

ESTIMATION TECHNIQUES _LOC APPROACH:

•BURDENED LABOUR RATE : \$8000

•AVERAGE PRODUCTIVITY : $10346/7 = 1332$ I.COST PER LOC :
LABOUR RATE/AVG PRODUCTIVITY

: $\$8000/1332=6.006$: $6.006 \times \$6=\36.036 I.TOTAL PROJECT COST
: COST PER LOC*ESTIMATED LOC

: $\$6 \times 10346$: $\$62398$ I.ESTIMATED EFFORT : TOTAL PROJECT
COST/LABOUR RATE

: $\$62398/\$8000=7.79975$: $7.79975 \times 8 \text{ PERSON/MONTH}=62.396=62 \text{ persons.}$

Results:-

Sign Up Page:-

Sign Up



Full Name



Email Address



Phone number



Create Password

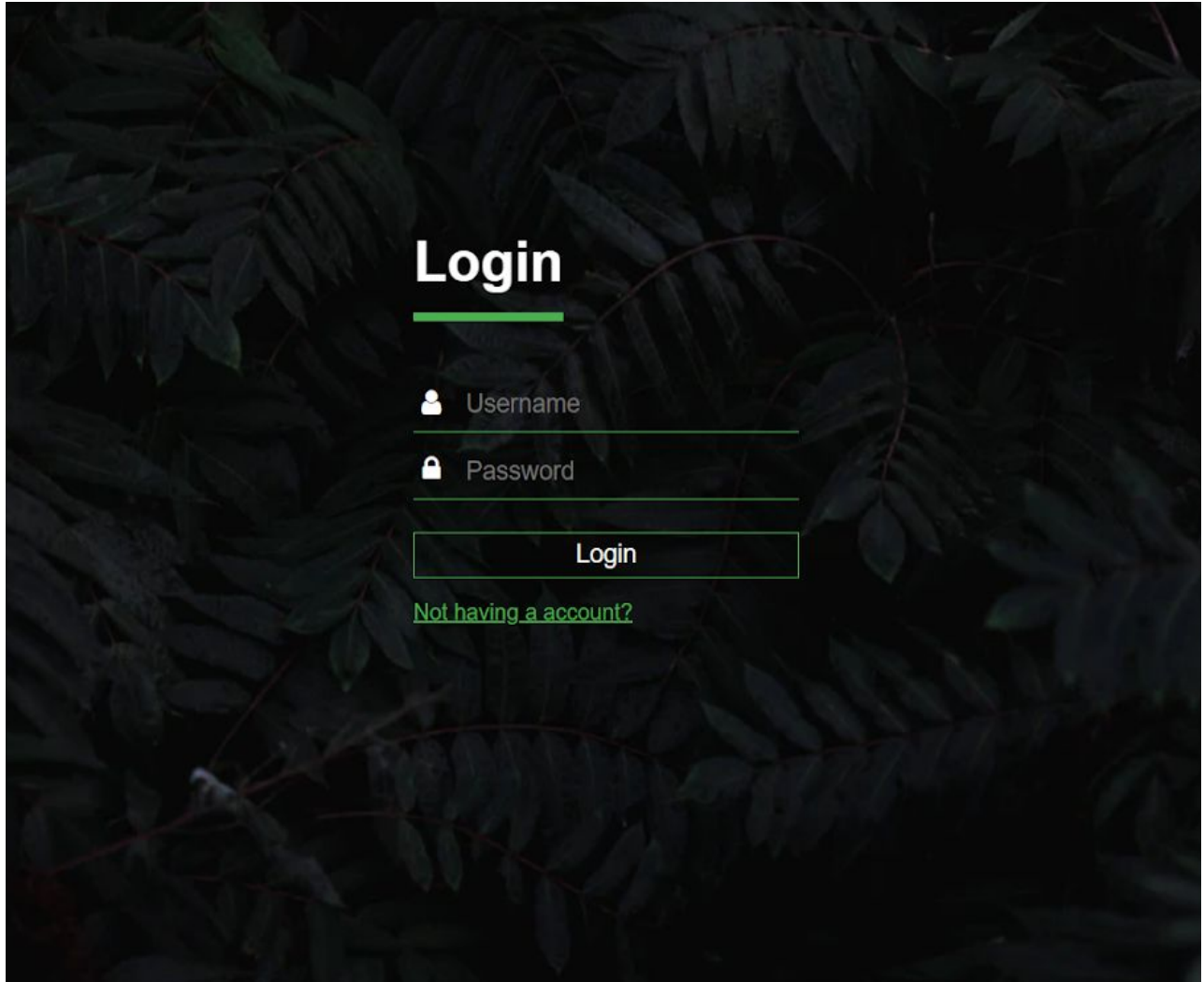


Confirm Password

Create Account

Have An Account? [Log In](#)

Login Page:-



Home Page For User:-

Hotel Recommendation System



Keys Hotel

Location: Vishakapatnam

Details:

75 ROAD, DABA GARDEN, VISAKHAPATNAM, ANDHRA PRADESH - 530020 Distance from airport - 11 km



Novotel

Home Page for Admin:-

Hotel Recommendation System



Menu

- [Add Hotels](#)
- [Add Rooms](#)

Hotel Recommendation System