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Hotel Management System

Documentation

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INTRODUCTION

This software has been made in a user friendly interface, so that anyone can add, delete the entries of customers and handle all the transactions easily. As a security we have provided Admin & user level authentication for different modules such as set-up-user etc., also the user name and password gets stored in the database in encrypted format more dealing with the security.

Customer can either make booking in advance, or he can directly Check-In. For the convenience of Administration, we have provided facility to generate report of transactions made in terms of check-in & check-out, bookings by day or specified timespan.

REPORTS

Basically report contain the output, it's a documented type of result present information about given input by user or developer

Helpful to take a decision about what we should do now or what we will should do in a future

FWHAT SOFTWARE MODEL YOU USE FOR BUILT IT?

We use extreme programming model of agile for built our project

WHY XP?

Because XP covered our project need .basically up work on 5 steps of making

1 plan 2 design 3 code 4 testing 5 release

So first I plan what should we make and we design according to plan than code according to design, test and release benefits.

Flexible requirement change

If during the development user want to change on it so up allowed to change.

Refactoring

Improve internal structure of code but not change on external behavior.

Up s efficient light weight and maximum limit of complete task is 1 to 2 weeks.

Pair programming

1 or more person work together to perform program, and help each other, minimum chance of development failed.

Unit testing

Individual test the component of the system.

System testing

Test overall the system and then release the project.

This application is specially developed to help hotel staff.

The project Hotel Management manages and maintains the records of customers and room in the hotel.

The rooms have different categories such as Deluxe, Semi-Deluxe etc., so their charges and records will be maintained accordingly.

PROJECT FEATURES:

1 HOTEL'S ROOM INFORMATION:

It provides User to easily search room's availability, category & easy updating of the room's records. The room numbers and cost per stay can be changed.

Room's category such as deluxe, semi-deluxe can be edited and accordingly floor can be set.

2 REPORT GENERATION

This feature help's in easy maintenance of record of customers check-in, check-out & booking details. The reports can be generated day wise or specified timespan wise.

3 PASSWORD PROTECTED

This feature provides privacy to the application. The user name and password can't be identified by anybody even if somebody checks it in the database. As we are encrypting user name & passwords and storing them in the same format.

4 DIFFERENT LOGIN LEVELS

This feature provides different levels of Authentication.

4.1 ADMINISTRATOR:

Administrator can add and delete rooms, he can add new user, and he can decide the price of the room.

4.2 USER

User can do everything except the rights that the Administrator has.

WHY & HOW IT WORKS?

This is a Project work undertaken in context of partial fulfillment of BSCS. We have tried our best to make the complicated process of Hotel Management System as simple as possible using Structured & Modular technique & Menu oriented interface.

We have tried to design the software in such a way that user may not have any difficulty in using this package & further expansion is possible without much effort. Even though we cannot claim that this work to be entirely exhaustive, the main

purpose of our exercise is perform each customer's activity in computerized way rather than manually which is time consuming.

We are confident that this software package can be readily used by non-programming personal avoiding human handled chance of error. This project is used by two types of users.

I. Users.

ii. Administrator (management of the Hotel).

Administrator can maintain daily updates in the hotel records. Administrator must be an authorized user. He can further change the password, logout etc.

The main aim of the entire activity is to automate the process of day to day activities of Hotel like Room activities, Admission of a New Customer, Assign a room according to customer's demand, checkout of a computer and releasing the room and finally compute the bill etc.

The limited time and resources have restricted us to incorporate, in this project, only a main activities that are performed in a HOTEL Management System, but utmost care has been taken to make the system efficient and user friendly.

"HOTEL Management System" has been designed to computerize the following functions that are performed by the system:

- Room Detail Functions
- Opening a New Room
- Modification to room assigned
- Check-in and check-out Detail Functions
- Admission of New customer
- Check-out of customer
- Room assigning related to customer's need.

Statement of Customer Details

- Check-in customer
- Check-out customer
- Room Details
- Total number of Customers in the Hotel
- Individual customer Report

OBJECTIVE

During the past several decades' personnel function has been transformed from a relatively obscure record keeping staff too central and top level management function.

There are many factors that have influenced this transformation like technological advances, professionalism, and general recognition of human beings as most important resources.

- A computer based management system is designed to handle all the primary Information required to calculate monthly statements. Separate database is Maintained to handle all the details required for the correct statement calculation And generation.
- This project intends to introduce more user friendliness in the various activities such as record updating, maintenance, and searching.
- The searching of record has been made quite simple as all the details of the Customer can be obtained by simply keying in the identification of that customer.
- Similarly, record maintenance and updating can also be accomplished by using The identification of the customer with all the details being automatically Generated. These details are also being promptly automatically updated in the Master file thus keeping the record absolutely up-to-date.
- The entire information has maintained in the database or Files and whoever wants to retrieve can't retrieve, only authorization user can retrieve the necessary Information which can be easily be accessible from the file.
- The main objective of the entire activity is to automate the process of day to day activities of Hotel like:

1. Room activities,
2. Admission of a New Customer,
3. Assign a room according to customer's demand,
4. Checkout of a computer and releasing the room
5. Finally compute the bill etc.
6. Advance bookings.
7. Cancellation.

This project have some more features:

- No data duplication
- No Paper Work Required
- Time Efficient

- Cost Efficient
- Automatic data validation
- User friendly environment
- Data security and reliability
- Fast data insertion & retrieval
- Easy performance check

ADVANTAGES

We have designed the given proposed system in ASP.NET and SQL to automate the processes of Hotel. This project is useful for the authorities who can add room details, availability of rooms, booking etc.

The following steps that give the detailed information of the need of proposed system are:

- **Performance:** During past several decades, the records are supposed to be manually handled for all activities. The manual handling of the record is time consuming and highly prone to error. To improve the performance of the Hotel Management System, the computerized system is to be undertaken. This project is fully computerized and user friendly even that any of the members can see the report and status of the company.
- **Efficiency:** The basic need of this system is efficiency. The system should be efficient so that whenever a new customer submits his/her details the system is updated automatically. This record will be useful for other users instantly.
- **Control:** The complete control of the project is under the hands of authorized Person who has the password to access this project, an illegal access is not supposed to deal with. All the control is under the administrator and the other members have the rights to just see the records not to change any transaction or entry.
- **Security:** Security is the main criteria for the proposed system. Since illegal access may corrupt the database. So security has to be given in this project.

FEASIBILITY STUDY

A feasibility study is carried out to select the best system that must satisfy requirements and its working ability in an organization.

1. TECHNICAL FEASIBILITY:

The technical aspect of feasibility is largely concerned with answering the question of who, why, where, what and how much in the context of the existing system and the proposed system. These questions are asked to the user of the system. An investigation of present procedure is needed in order to identify the volumes, trends and frequencies that will specify the effect of the design of any computer based system. In our project all these points are handled. Based on this we have designed the input screens, table showing list of input fields with different possibilities of validation and their acceptability to the user gauged and correction is done whenever it is necessary.

Technical feasibility study covers the technical aspects as far as the automation is concerned.

2. ECONOMIC FEASIBILITY:

During the analysis of economic feasibility, the financial aspects of project is taken into consideration. As this wizard helps in the faster development of the applications, the time factor is reduced prominently, thus saving cost.

As today's world requires "Go Green", means avoiding unnecessary use of paper, keeping this in mind we tried to make the things automatically, reducing the paperwork(reducing the skilled people to do the data entry part) reducing production hours. What we need is person from basic computer background, that's it!

3. OPERATIONAL FEASIBILITY:

Operational feasibility deals with feasibility of the system in operational manner.

This system has been found to very simple & easy to use because it is user friendly. The operational feasibility is found to be extremely useful. As the

proposed system is in VB.NET, the look is quite understandable to the user, still we providing an official training for them to handle the application.

Product Functions

- Make Reservations
- Search Rooms
- Add Payment
- Issue Bills
- Manage Guest (Add, Update Guest)
- Manage Room Details (Add, Update, Delete)
- Manage Staff (Add, Update, Delete, View)
- Manage Inventory (Add, Edit, Delete)
- Set Rates
- Retrieve Reports (Staff payment, Income)
- Manage Users (Add, Update, Delete)
- Taking Backups
- E-mail notifications

Functional Requirements

Function 1	Make Reservations
Input	Member Code, Total child's, Total Adults, check-in date, check out date, status, Number of nights
Output	Database Record, Database successfully updated pop-up
Workflow	Validate the given details and record the information in to the database.

Function 2	Add Guest
Input	Member Member Code, Contact, Company, Name, E-mail, Gender, Address
Output	Database Record, Database successfully updated pop-up
Workflow	Validate the given details and record the information in to the Database.

Function 3	Add staff member
Input	Member Code, Employee Name, Employee Address, NIC, Salary, Name Age, Occupation, E-mail
Output	Database Record, Database successfully updated pop-up
Workflow	Validate the given details and record the information in to the database.

Function 4	Search Rooms
Input	Period, Check-in, Check-out, Guest
Output	Display a pop-up with available room details
Workflow	Validate the given details and check for the available rooms in a given time period and return its availability.

Function 5	Add Payments
Input	Total, 1 pay time, Credit card details
Output	Database Record, Database successfully updated pop-up
Workflow	Validate the given details and record the information in to the database.

Function 6	Issue Bill
Input	Billing no, Quantity, Price, Taxes, Date, Services, Unit
Output	Printed version of the bill
Workflow	Validate the given details and total cost is calculated according to the Services gain by the customer.

Function 7	Set Rates
Input	Check-in, Check-out, Day, No. of guests, First night price, Extension price
Output	Database Record, Database successfully updated pop-up
Workflow	Validate the given details and record the information in to the Database.

Function 8	Taking Backups
Input	Location to save the backup file
Output	Display a pop-up showing backup successfully created
Workflow	Validate the user given location to save the backup file. Save the backup file to the user specified location

Specific Requirement

Functional Requirement

- Make Reservations
- Search Rooms
- Add Payment
- Issue Bills
- Manage Guest (Add, Update Guest)
- Manage Room Details (Add, Update, Delete)
- Manage Staff (Add, Update, Delete, View)
- Manage Inventory (Add, Edit, Delete)
- Set Rates
- Retrieve Reports (Staff payment, Income)
- Manage Users (Add, Update, Delete)
- Taking Backups
- E-mail notifications

Non Functional Requirements

Safety Requirements

There are several user levels in hotel management system, Access to the various subsystems will be protected by a user log in screen that requires a user name and password. This gives different views and accessible functions of user levels through the system. Maintaining backups ensure the system database security. System can be restoring in any case of emergency.

Security Requirements

Customer Service Representatives and Managers and owner will be able to log in to the Hotel Management System. Customer Service Representatives will have access to the Reservation/Booking and subsystems. Managers will have access to the Management subsystem as well as the Reservation/Booking subsystems. Owner has the maximum privilege to all subsystems. Access to the various subsystems will be protected by a user log in screen that requires a user name and password.

Other Requirements

When the system is completely developed and submitted to the client, few sessions will be required to make the users of the system understand about the functionality of it and some time to adapt to the system. After those sessions, it's required that a member from the development team should spend sometime in the system background for an agreed time period. That time period will be used in identifying new bugs that could not be reached in the earlier phases of the development process.

Client should have a valid e-mail account in order to receive reservation e-mail notifications.

Logical Database Requirements

The logical database requirements include the retention of the following data elements.

- Customer firstname
- Customer lastname
- Customer Code
- Customer address
- Customer phone number
- Number of occupants
- Room no
- Floor no
- Building no
- Room status
- Employee id
- Bill no
- Default room rate
- Rate description
- Guaranteed room (yes/no)
- Expected check-in date
- Actual check-in time
- Expected check-out time
- Actual check-out date
- Customer feedback
- Payment type
- Total Bill

SYSTEM REQUIREMENT

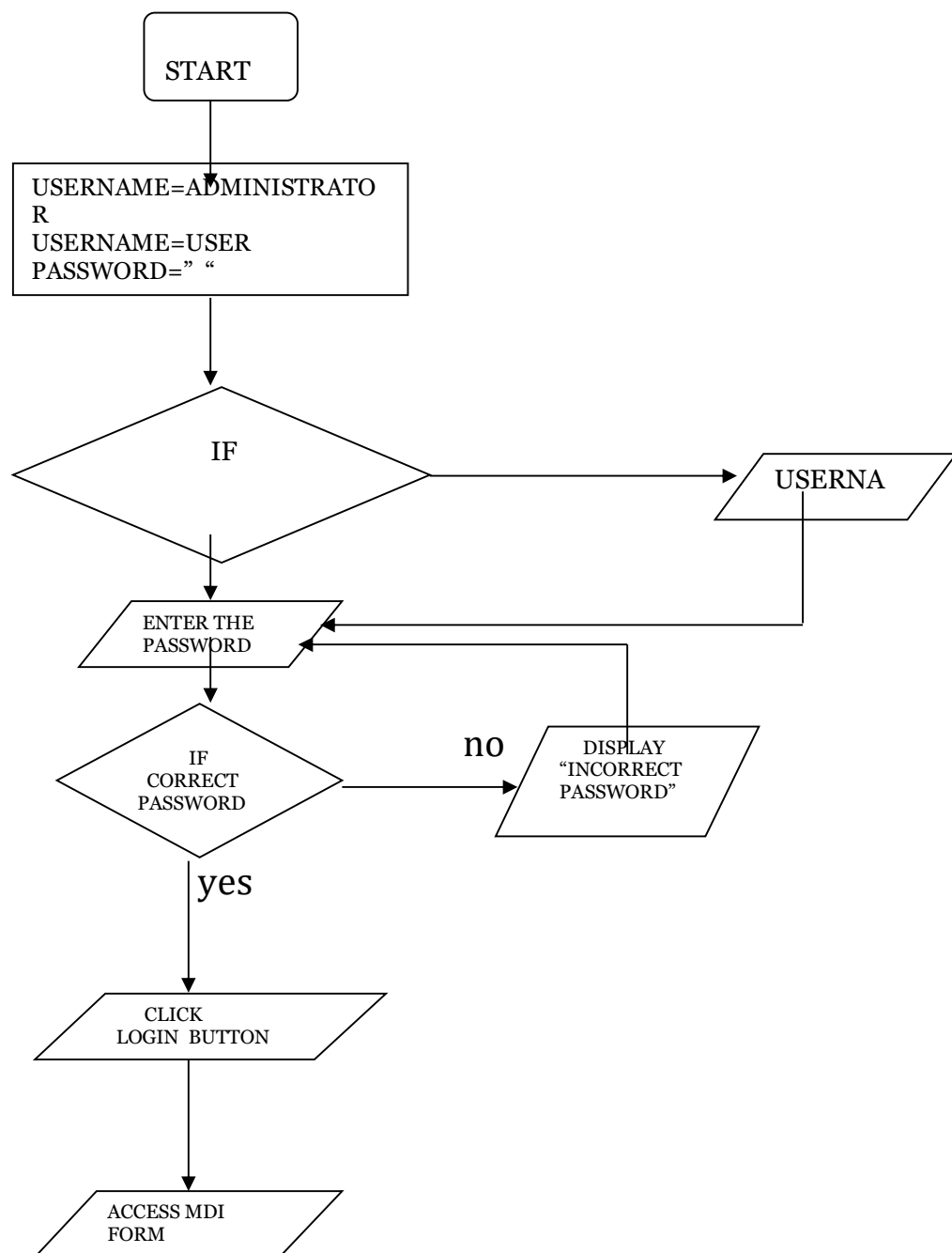
Hardware

- Core 2Due or higher processor
- 2 GB RAM
- 2 GB free space.

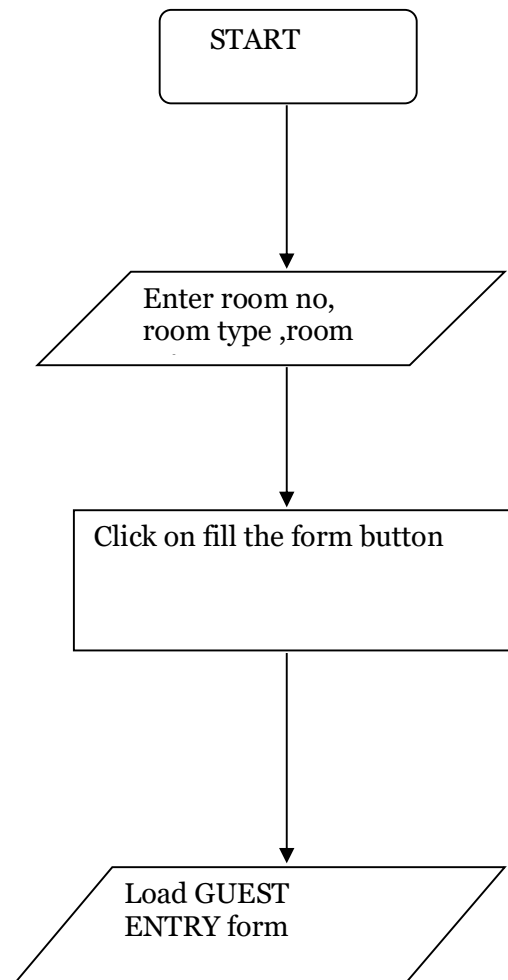
FLOW CHARTS

FLOW CHARTS

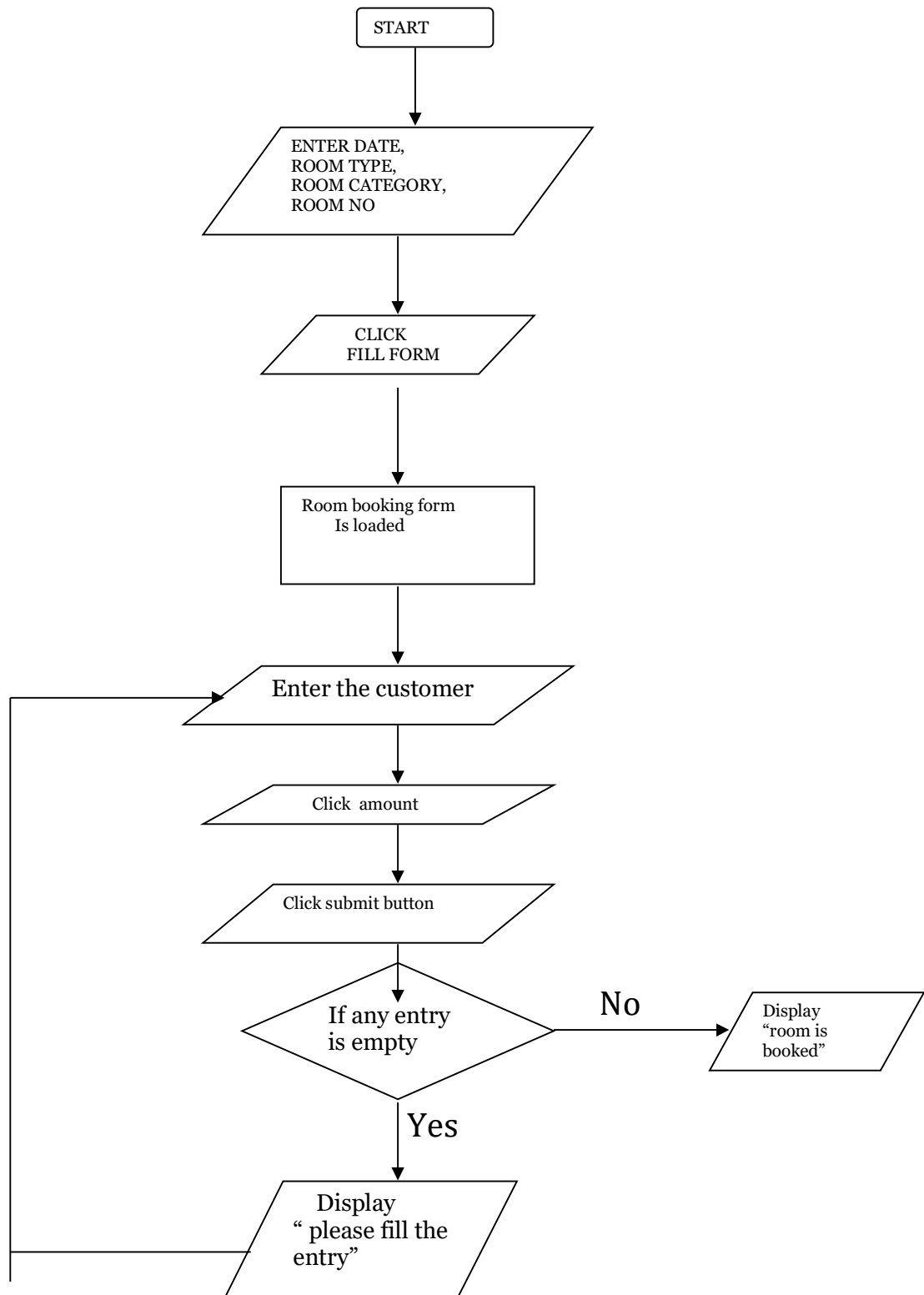
1. LOGIN FORM



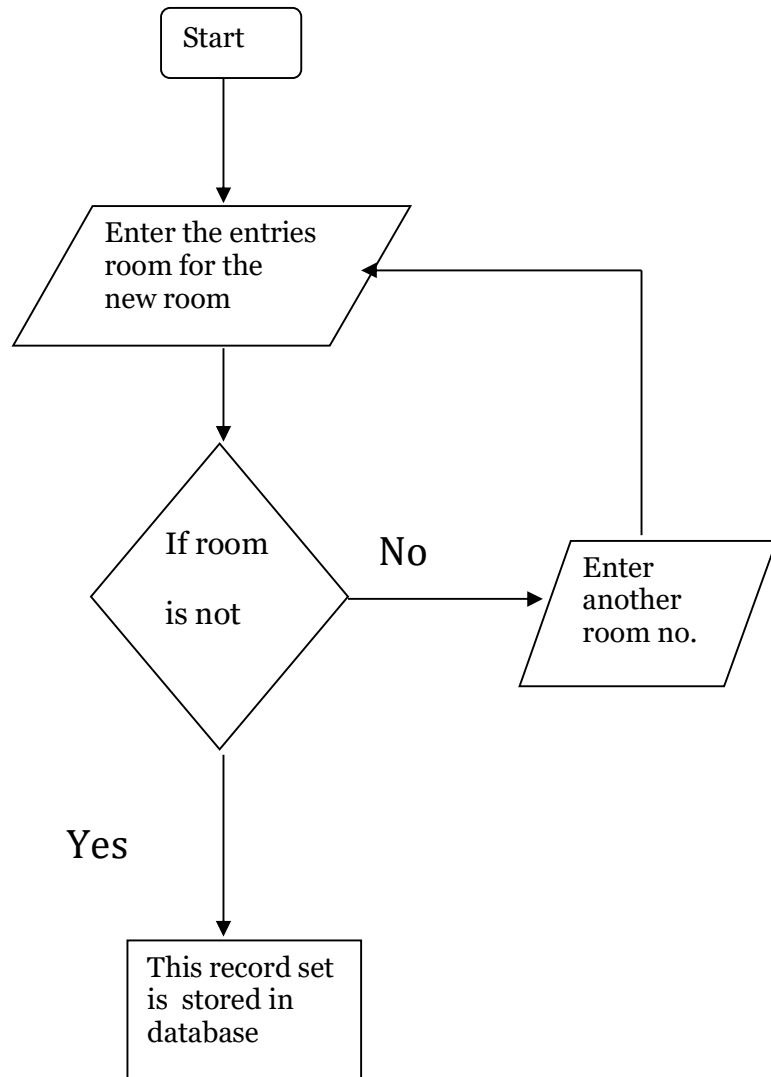
2.ROOM BOOKING FORM



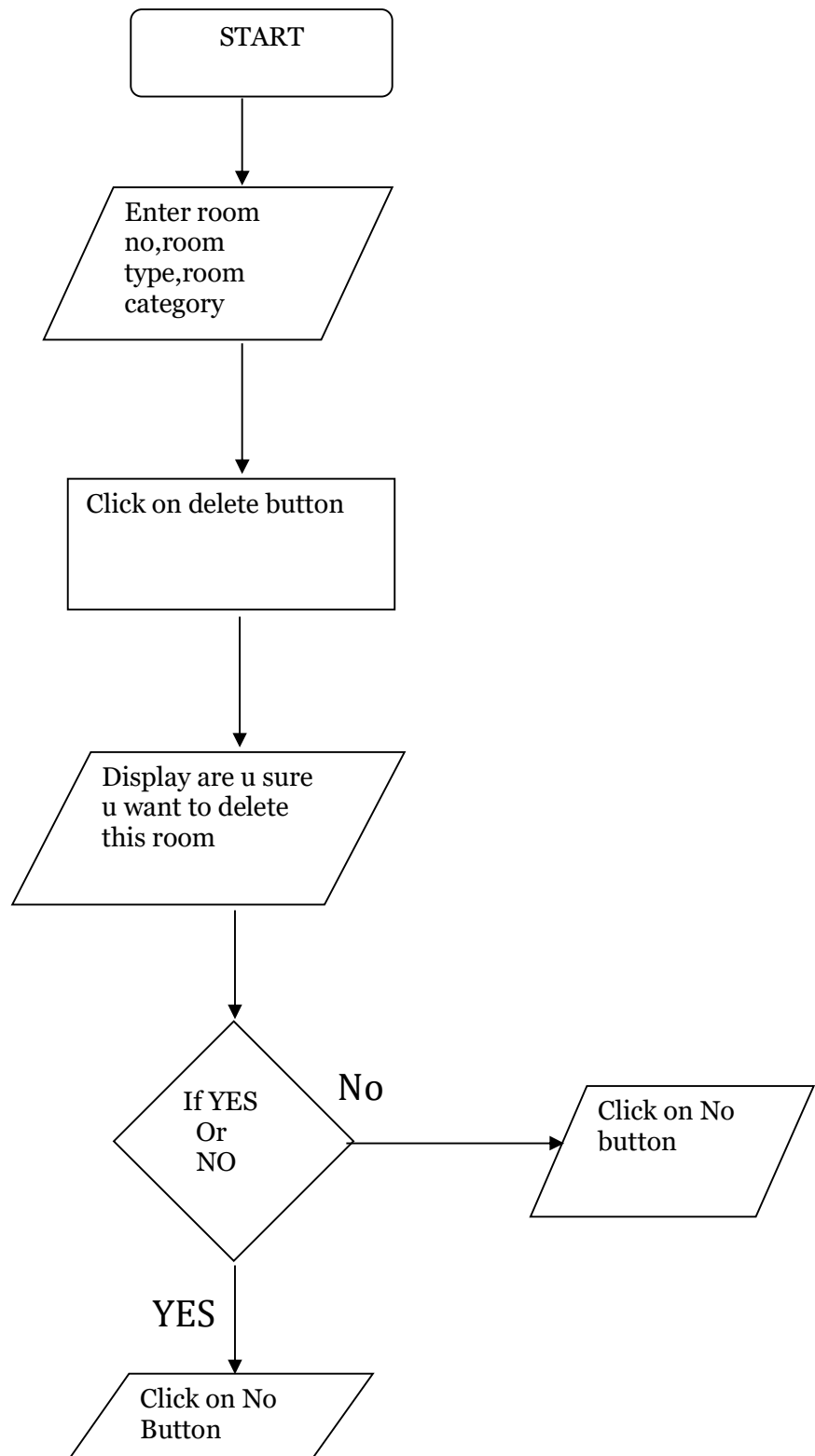
3. GUEST ENTRY FORM



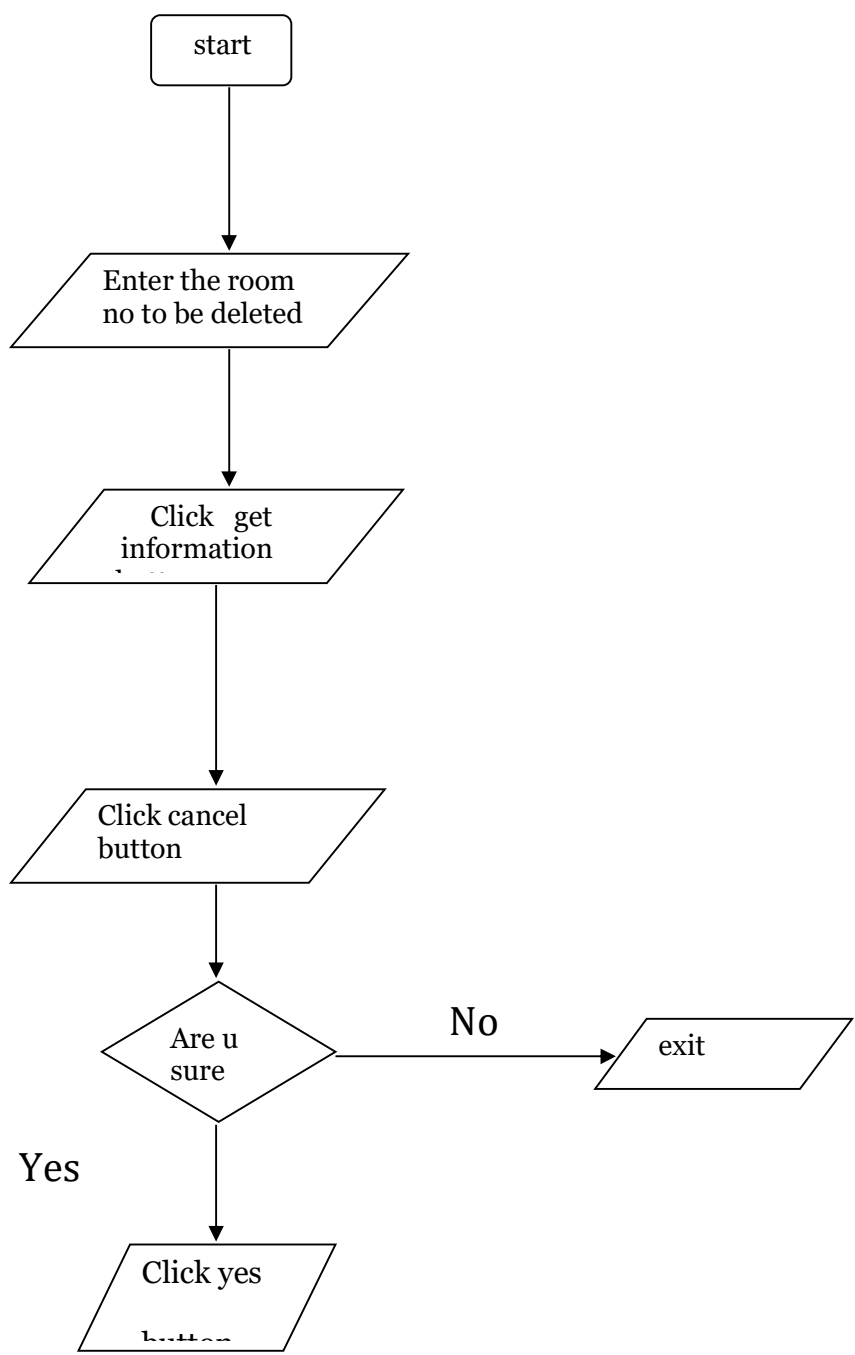
4.ADD FORM



5.DELETE FORM



6. CANCELLATION FORM

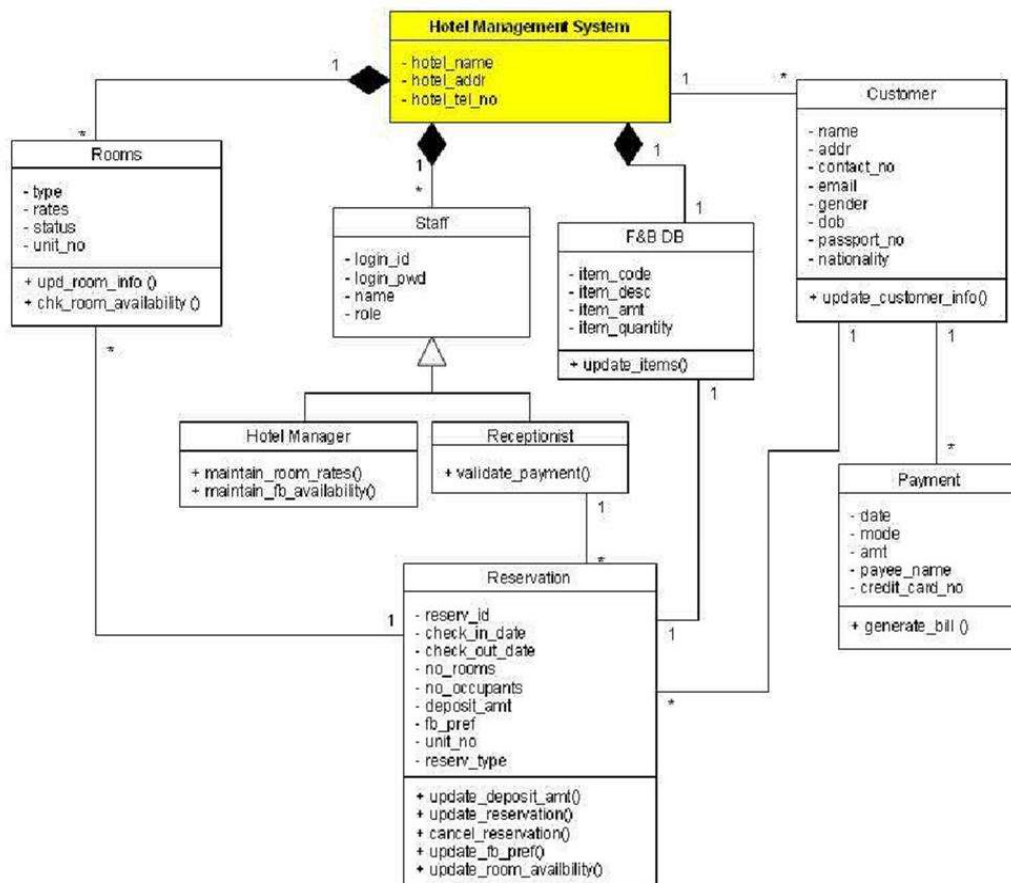


UML DIAGRAMS

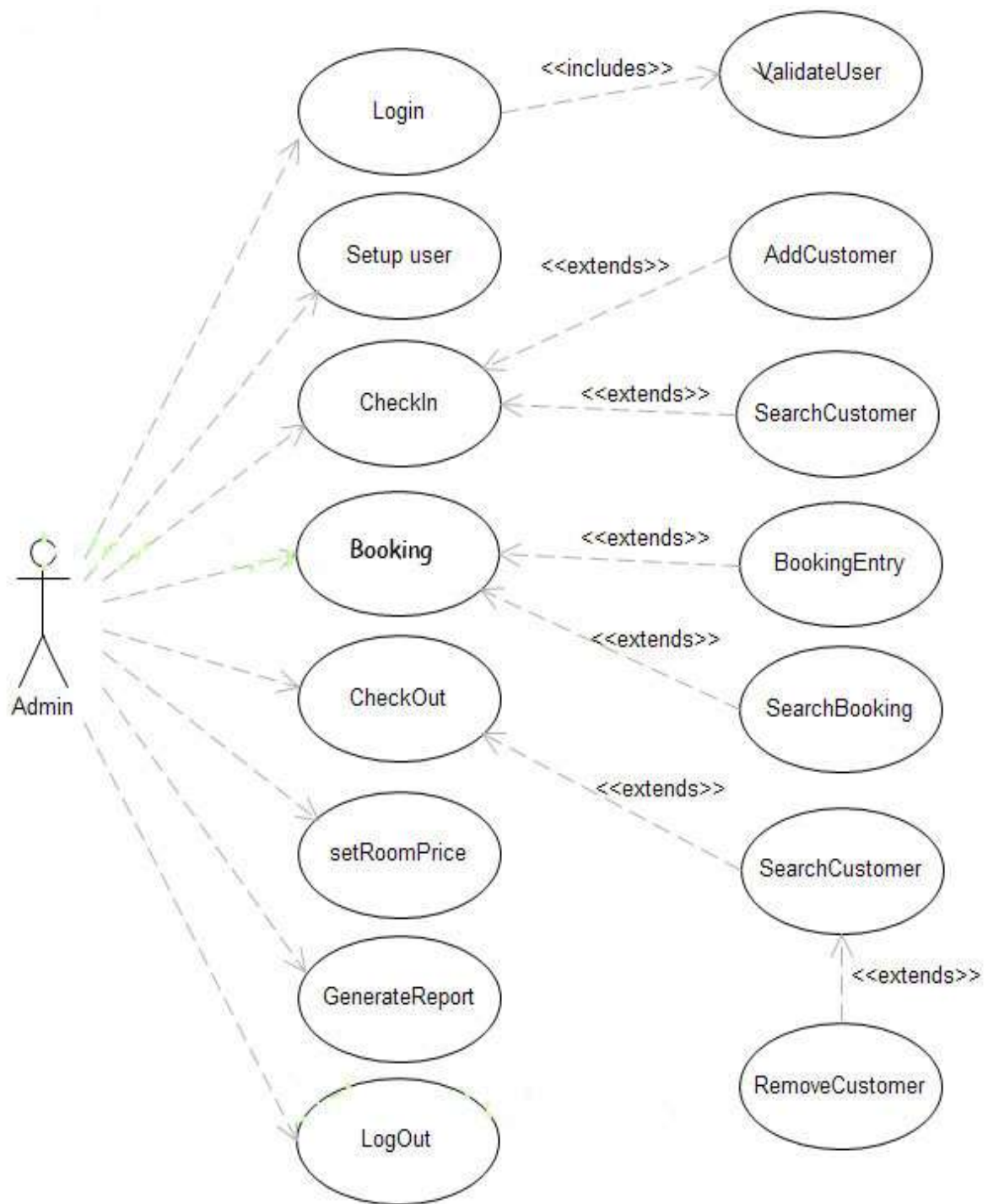
CLASS DIAGRAM

USE-CASE DIAGRAM

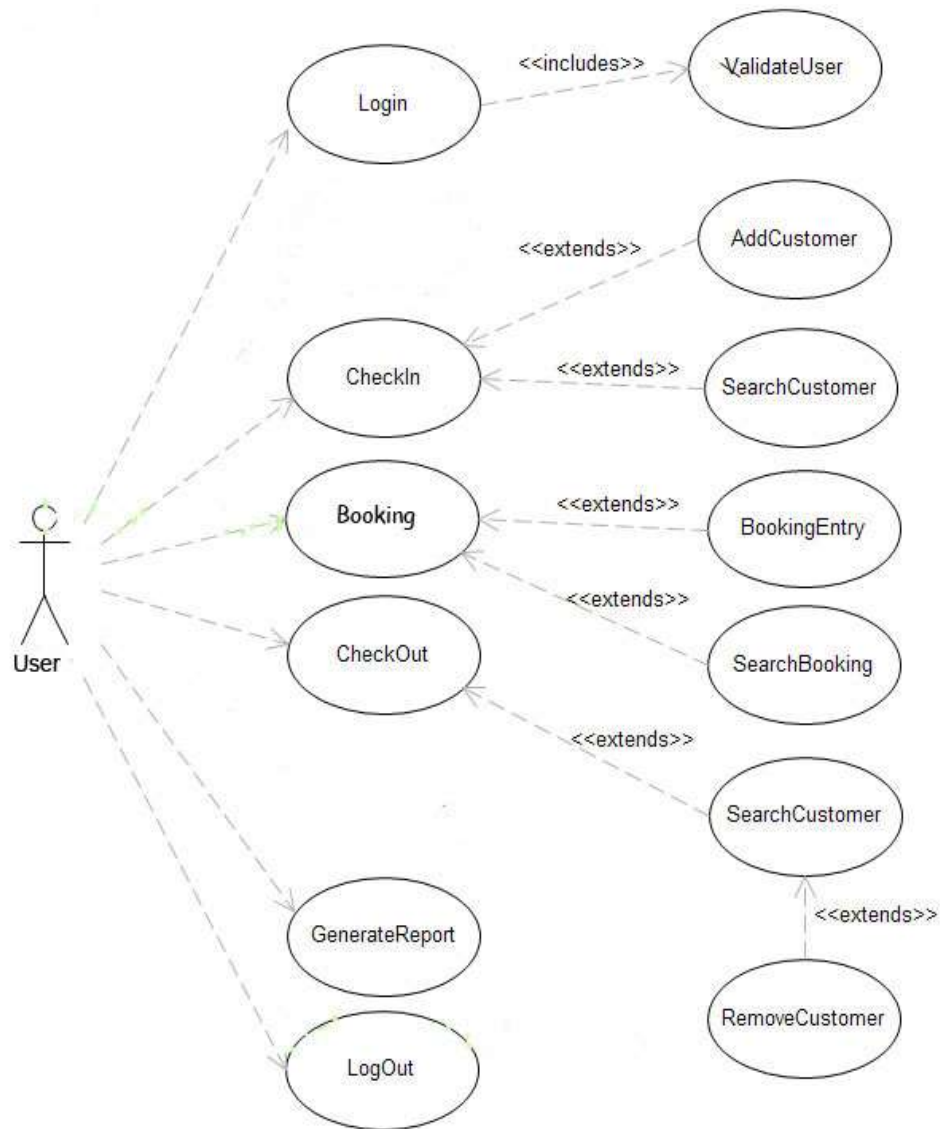
1.Admin



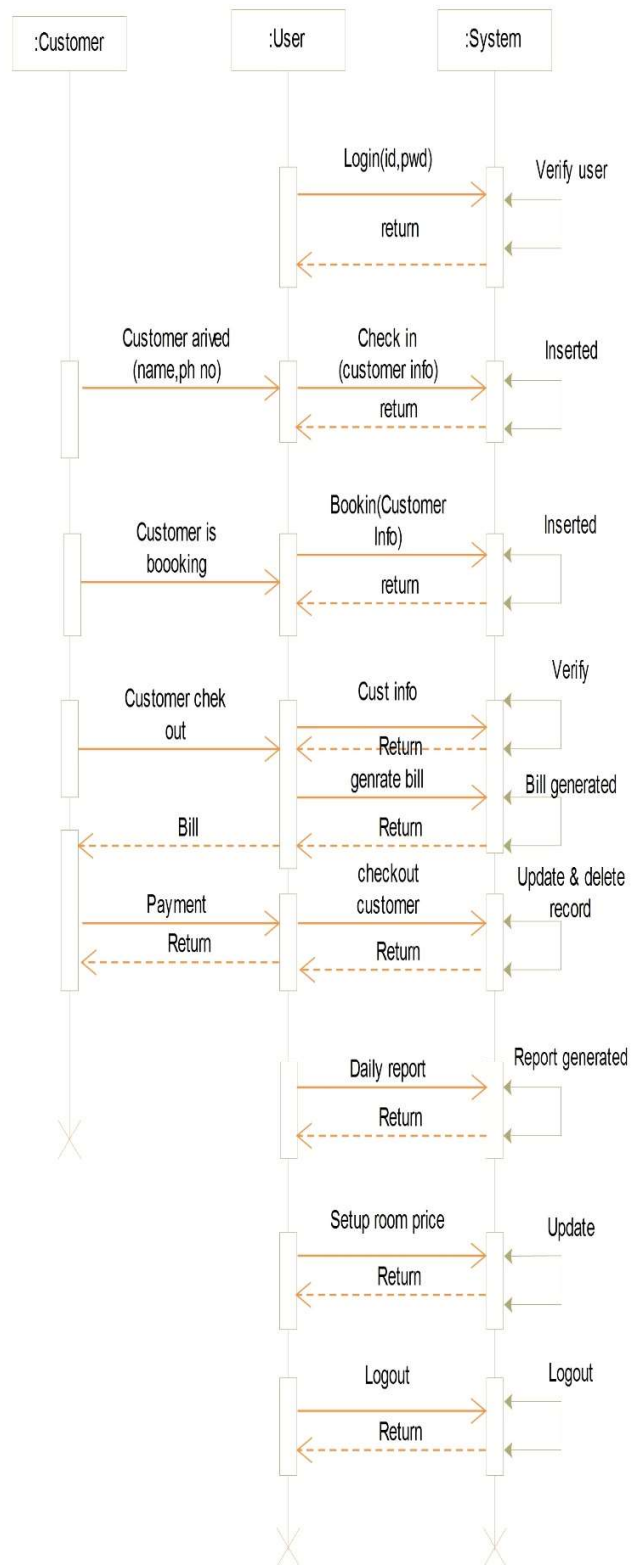
3.Working of the Hotel Management System



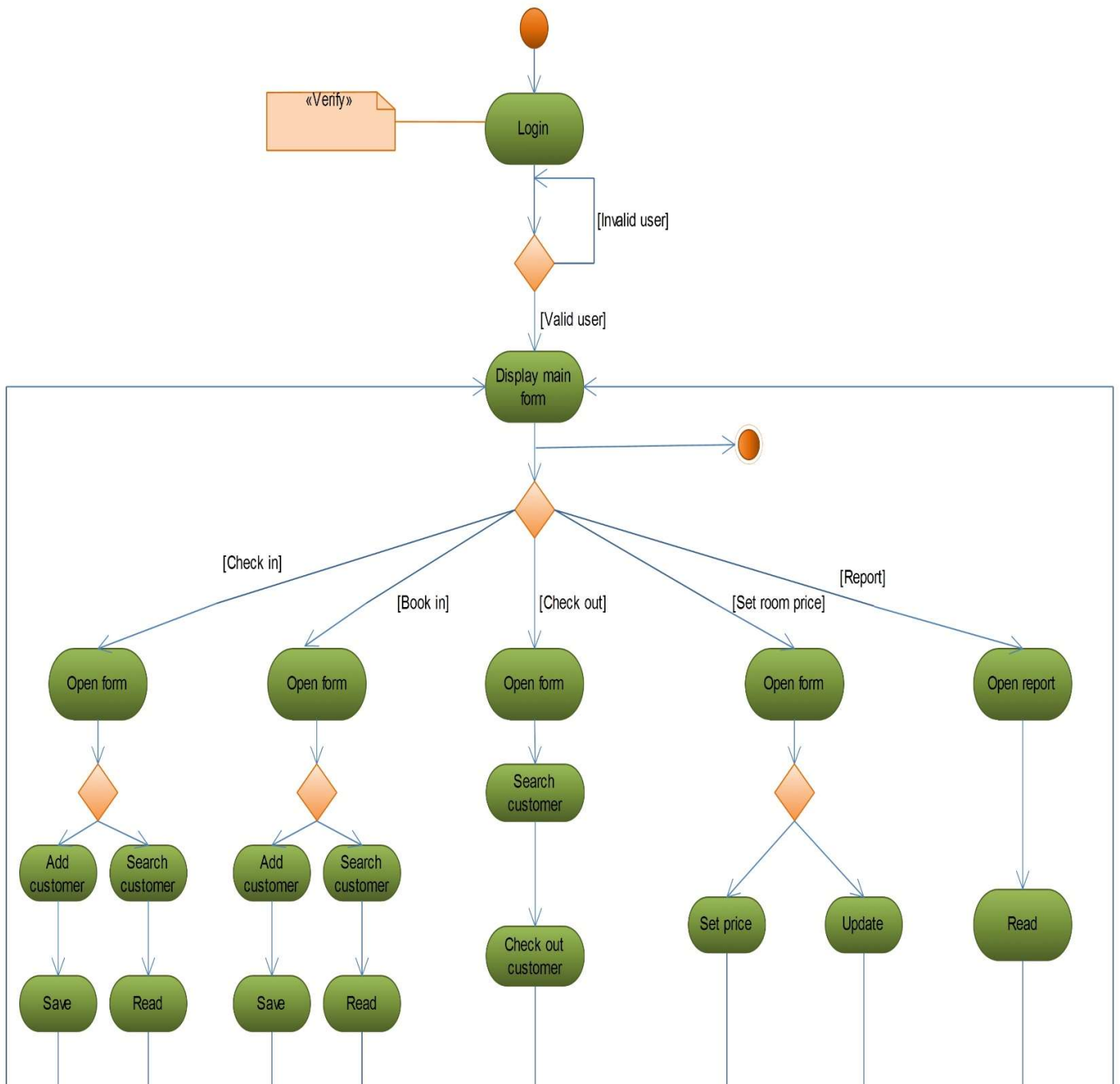
2.User



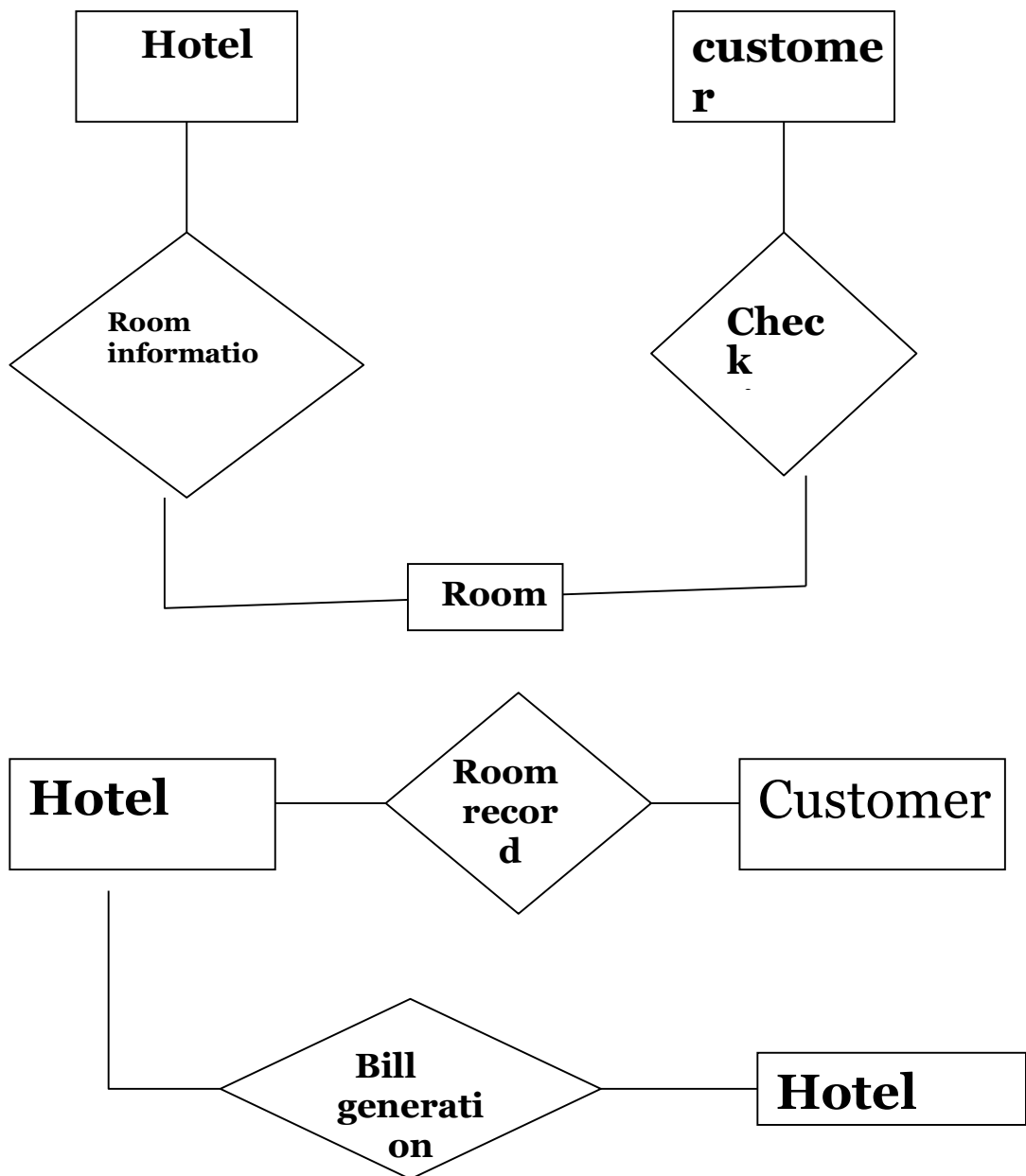
SEQUENCE DIAGRAM



ACTIVITY DIAGRAM



E-R DIAGRAM



CONTEXT LEVEL DFD HOTEL MANAGEMENT SYSTEM

