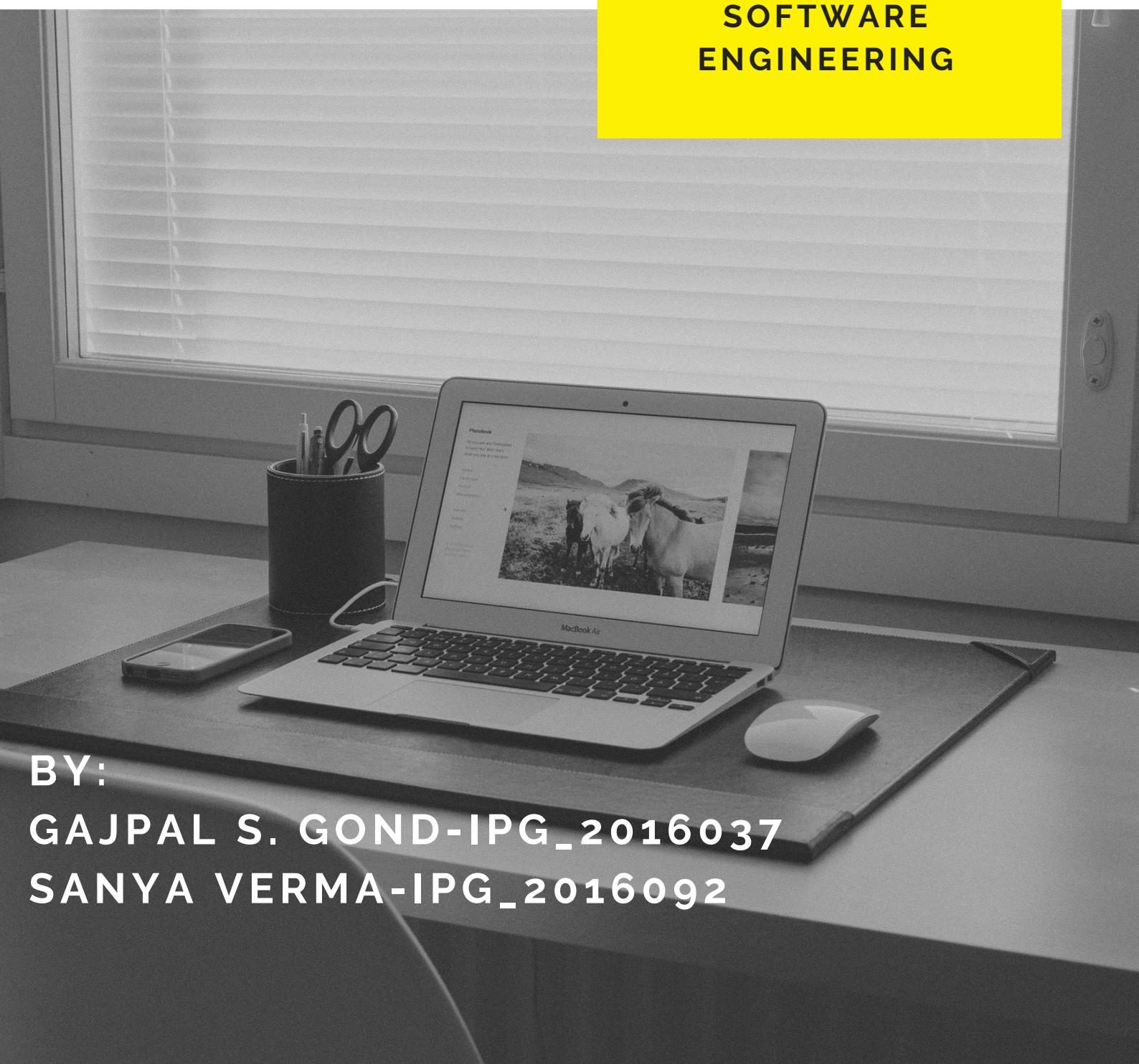


WEBSITE FOR:
**HOTEL
MANAGEMENT
SYSTEM**



**SOFTWARE
ENGINEERING**



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Project Selection and Planning

ANALYZING THE CURRENT SYSTEM:

The current manual system uses paperwork and direct human language communication by mouth to manage the hotel. This delays information transmission in the hotel. Booking is done through phone calls or through visit to the hotel booking office. The guest's personal details such as Name, Age, Nationality, and Duration of stay, are input during booking in. The booking office orders for preparation of the guest's room before his/ her check in date.

The documents are transferred manually to the filling department for compilation of the guest's file. On the reporting date the file is transferred to the reception.

On checking in the guest is given the key to his allocated room, he also specify if he needs room service.

The receptionist hands over the guest's file to the accountant on the next table. Here the guest pays accommodation and meals fee. The guest's file is updated on daily basis of his expenditure costs. The accounts department generates the bills on daily basis and delivered to the guests in their rooms at dusk by the service maids. The guest pays at the accounts desk, where the receipts are generated. For a one meal customer the bill is generated immediately after ordering and he pays at the accountant desk before leaving. During checking out of guests, their expenditure outlines are generated a day before check-out date. The guests receive their outlines at the accounts desk as they check out, where they pay for bills balances if any..

PROBLEMS IN MANUAL SYSTEM:

- Difficulty in location of guest files: due to the large number of guests' files, location of guest files during checking in, updating of daily expenditures, receipt generation and checking out is extremely difficult for the hotel employees.
- Large storage space: the physical files occupy too much space of about two rooms full of storage cabinets. This occupies the hotel's space that could have otherwise been used for income generation by the hotel.
- Human and computational errors: many errors enabled by the system due to tedious computations required during data processing cost the hotel management heavily.

- Poorly generated records: poorly generated records encourage omission of some important data by the employees. Such data as the guests' luggage is omitted. This leads to security problems at the hotel such as armed robberies.
- Complains from guests: due to poor management of documents encouraged by the manual system, several cases were reported where guests complained of overcharging, charging of services not used by the guests.
- Poor communication: due to poor communication between the departments, guests are often served with services they didn't order.
- Difficulty in data analysis: The accountants usually found it difficult to analyze the guests' data during generation of expenditure bills due to missing of some records.

THE DEVELOPED/PROPOSED SYSTEM:

OBJECTIVES:

- To enable online booking via the internet.
- To enable automated data entry methods
- .Ensure efficient and reliable communication within the hotel.
- Avoid data entry errors by use of input masks
- .Enable easy authorized modification of data.
- Enforce security measures to avoid unauthorized access to guest records
- .Enable fast and easy retrieval of guest records and data for fast reference activities.

SCOPE OF THE SYSTEM:

The system will cover: booking, accommodation, employee management and accounts details. Moreover, special services such as statistical graph of the hotel will be automated by the system also, the billing and salary transactions of guests and employees will be maintained in the database.

To help the system smoothly carry out its intended purpose to meet the hotel management needs, the following tables will be used to store data:

ACCOMMODATION TABLE

The table contains the accommodation details of a guest. These details help uniquely identify the guest with his room and services offered for the room. These details include: (regno, fname, sname, id card no, Room no, Category, Telephone ext ,charges, amount charged, Total charge, Rcpt no, Payment, Nationality)

ADMISSION TABLE

The table contains guest details input on admission of the guest into the hotel at the reception. This information keeps track of the duration that the guest has stayed at the hotel. If the guest intends to stay for more than a day, he has to book in for accommodation in advance; else, his information will be input into the system at the reception. The guest luggage informations entered in the system to ensure maximum security of luggage at the hotel. For this to become a reality, the following fields have been used :

(room no, out date, in date, luggage, Id card no, nationality, sname, fname, regno)

EMPLOYEE TABLE

The table contains valuable and delicate information about the employees. The table is for use by the hotel management to keep track of the employee records and performance at the hotel to enable the hotel realize its maximum potential and reduce any possible irrelevant expenditure. The table has the following fields that enable it ensure maximum operability and co-operation (residence, mobile no, account no, salary, position, department, position, office tel, officenumber, email, address, contacts, id card no, staff names, staff no)

THE DELIVERED SYSTEM:

ADVANTAGES:

- The system enables easy and fast access to the guest files.
- The system provides better data management facilities.
- The system enable online booking of guests into the hotel hence international guests can easily book into the hotel.
- The system provides performance evaluation of the employees to ensure maximum output from the employees.
- The system provides security measures to access to the hotel's information lowering data security threats.
- The system help reduce the congestion of guests ensuring best service output for customer satisfaction purposes

- .Easy update of the guest records.High customer service standards attract more guests to the hotel.
- Reduction of data entry and processing errors.Greatly reduce paper use at the hotel.

DISADVANTAGES:

- The system will undergo system entropy hence an extra cost of updating will be incurred to keep the system competitive in the ICT and BUSSINESS world.
- The hotel will incur an extra cost on the electricity and internet bills due to computerization of the hotel management.
- The hotel will be required to train its employees on how to manage the system hence the hotel output capacity will reduce a bit during this period

SYSTEM REQUIREMENT SPECIFICATIONS

USER INTERFACE:

The user interface for system shall be compatible to any type of web browser such as Mozilla Firefox, Google Chrome, and Internet Explorer.

SOFTWARE INTERFACES:

Web Server:-

Apache Tomcat Server , OS (Windows)

Database Server:-

MYSQL, OS (Windows)

Development End:-

J2EE,Java,JSP,Servlet,HTML,XML,JavaScript,
OS(Windows)

COMMUNICATION INTERFACE:

The System shall be using HTTP/HTTPS for communication over Internet and for intranet communications, it shall use TCP/IP protocol.

HARDWARE INTERFACES:

SERVER SIDE

Processor:Intel or AMD 2GHZ

RAM:4GB

Disk Space:10GB

Monitor Resolution:1024x768

CLIENT SIDE

Processor:Intel or AMD 1GHZ

RAM:512MB

Disk Space:2GB

Monitor Resolution:1024x768

FUNCTIONAL REQUIREMENTS:

REGISTRATION

- The Employee should be able to register with their details
- The system should record following customer details into member database.

Name

Email

Password

Address

DOB

LOGGING IN

- The system should verify the manager's/employees email & password against the member database when logging in
- After login, member should be directed to Home screen

RESERVATION

- The system should enable customer to check for availability of rooms
- The system should display rate for all rooms
- The system should allow customer to confirm or cancel the booking
- The system should record booking details into database

RECEPTIONIST ACCESS

- The system should allow Receptionist to update, add or delete booking information
- The system should provide customer desk portal access to receptionist for providing response to customer inquiry

MANAGER ACCESS

- The system should generate financial and customer report for manager
- The system should enable manager full modification access to customer ,booking and room information

P A Y M E N T M A N A G E M E N T S Y S T E M

- The system should allow customer to pay bill via online using credit or debit card

NON-FUNCTIONAL REQUIREMENTS:

PERFORMANCE REQUIREMENTS:

- Data in database should be updated within 2 seconds.
- Query results must return results within 5 seconds
- Load time of UI Should not take more than 2 seconds
- Login Validation should be done within 3 seconds
- Response to customer inquiry must be done within 5 minutes.

SECURITY REQUIREMENTS:

- All external communications between the data's server and client must be encrypted
- All data must be stored, protected or protectively marked.
- Payment Process should use HTTP over Secure protocol to secure the payment transactions

SAFETY REQUIREMENTS:

- Database should be backed up every hour.
- Under failure, system should be able to come back at normal operation under an hour.

CAPACITY REQUIREMENTS:

- Not more than 10,000 members to be registered
- System need to handle at least 20 transactions during peak hours.

AVAILABILITY REQUIREMENTS:

- Report should be generated automatically every day for manager and anytime upon request.

SOFTWARE SYSTEM ATTRIBUTES:

- Correctness: This system should satisfy the normal regular Hotel Management operations precisely to fulfill the end user objectives
- Efficiency: Enough resources to be implemented to achieve the particular task efficiently without any hassle.
- Flexibility: System should be flexible enough to provide space to add new features and to handle them conveniently
- Integrity: System should focus on securing the customer information and avoid data losses as much as possible
- Portability: The system should run in any Microsoft windows environment.
- Usability: The system should provide user manual to every level of users.

- Testability: The system should be able to be tested to confirm the performance and clients specifications.
- Maintainability: The system should be maintainable.

SOFTWARE DEV MODEL

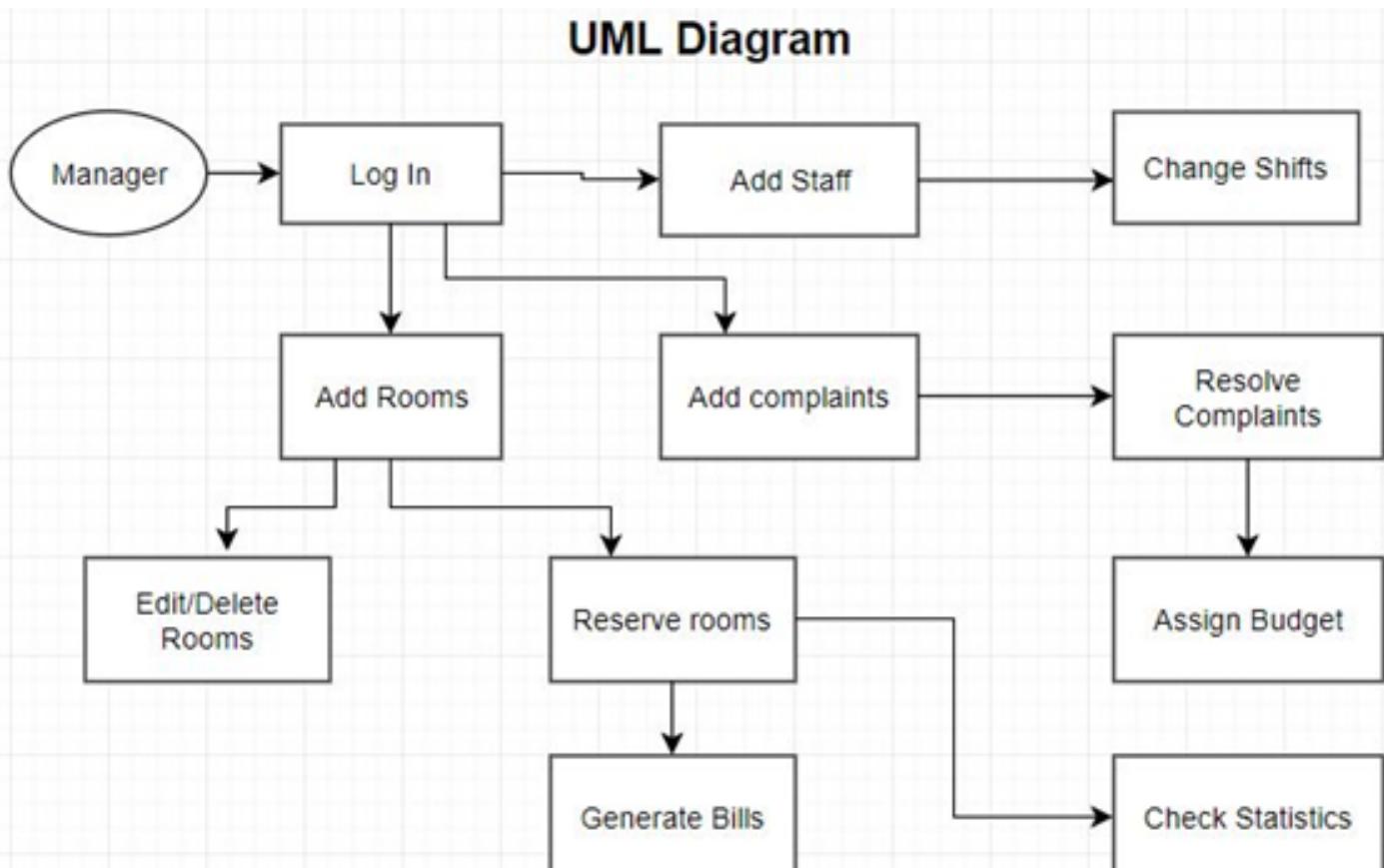
For this Hotel Management Software the development model being used is Iterative Development Model.

In this Iterative model, iterative process starts with a simple implementation of a small set of the software requirements and iteratively enhances the evolving versions until the complete system is implemented and ready to be deployed.

An iterative life cycle model does not attempt to start with a full specification of requirements. Instead, development begins by specifying and implementing just part of the software, which is then reviewed to identify further requirements. This process is then repeated, producing a new version of the software at the end of each iteration of the model.

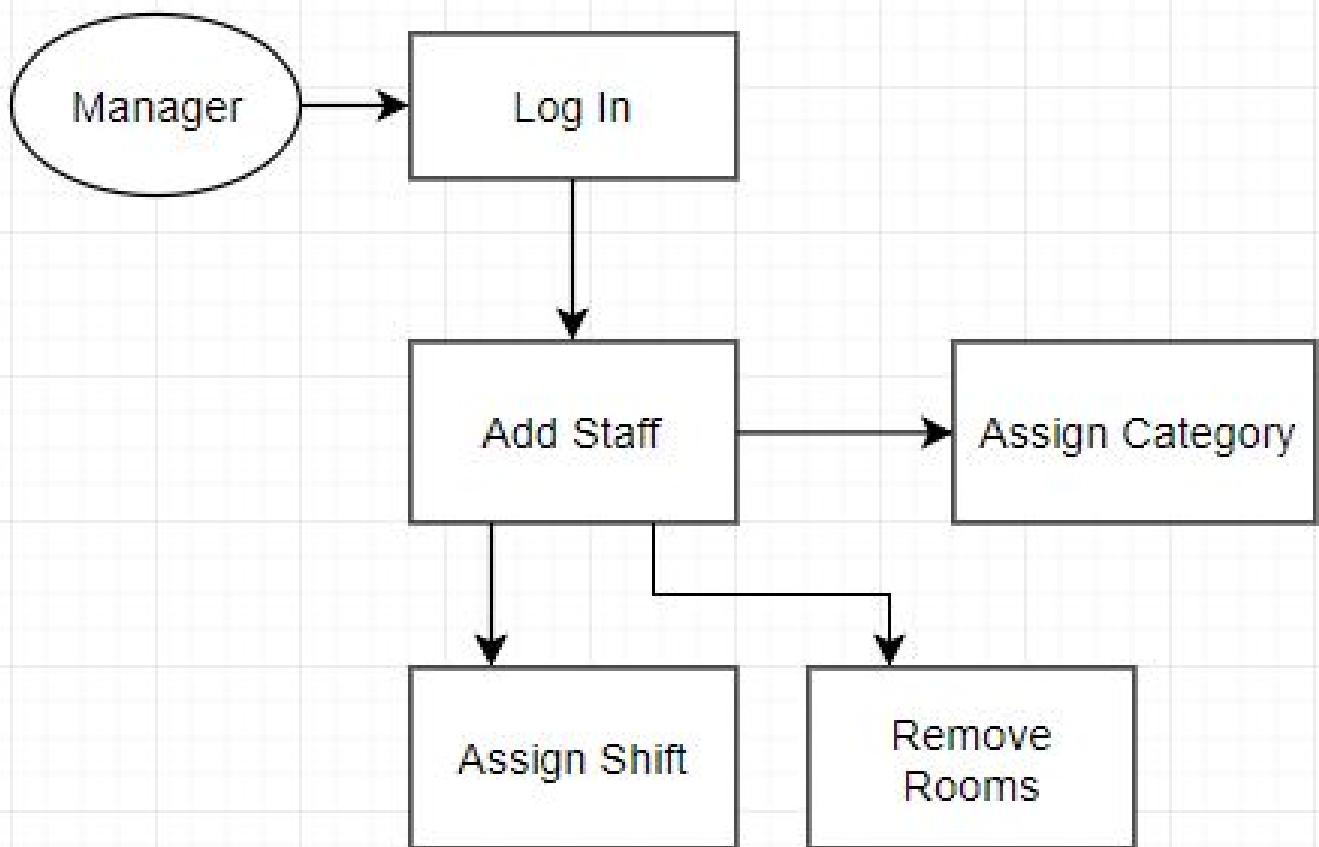
The reason for using Iterative model in our project is that the functions are divided into modules, which can handle the future requirements separately and with ease and our project can be modified as and when required.

UML DIAGRAM

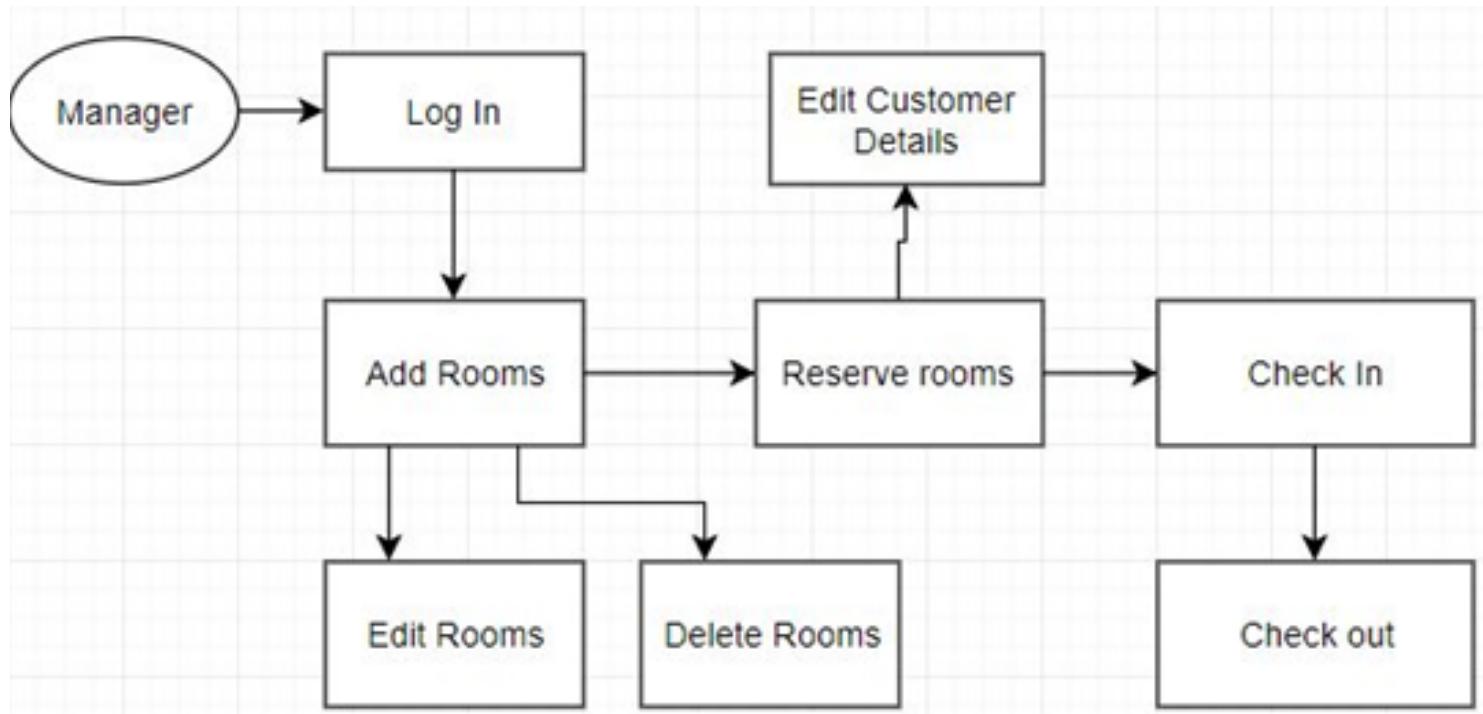


USE CASE DIAGRAMS

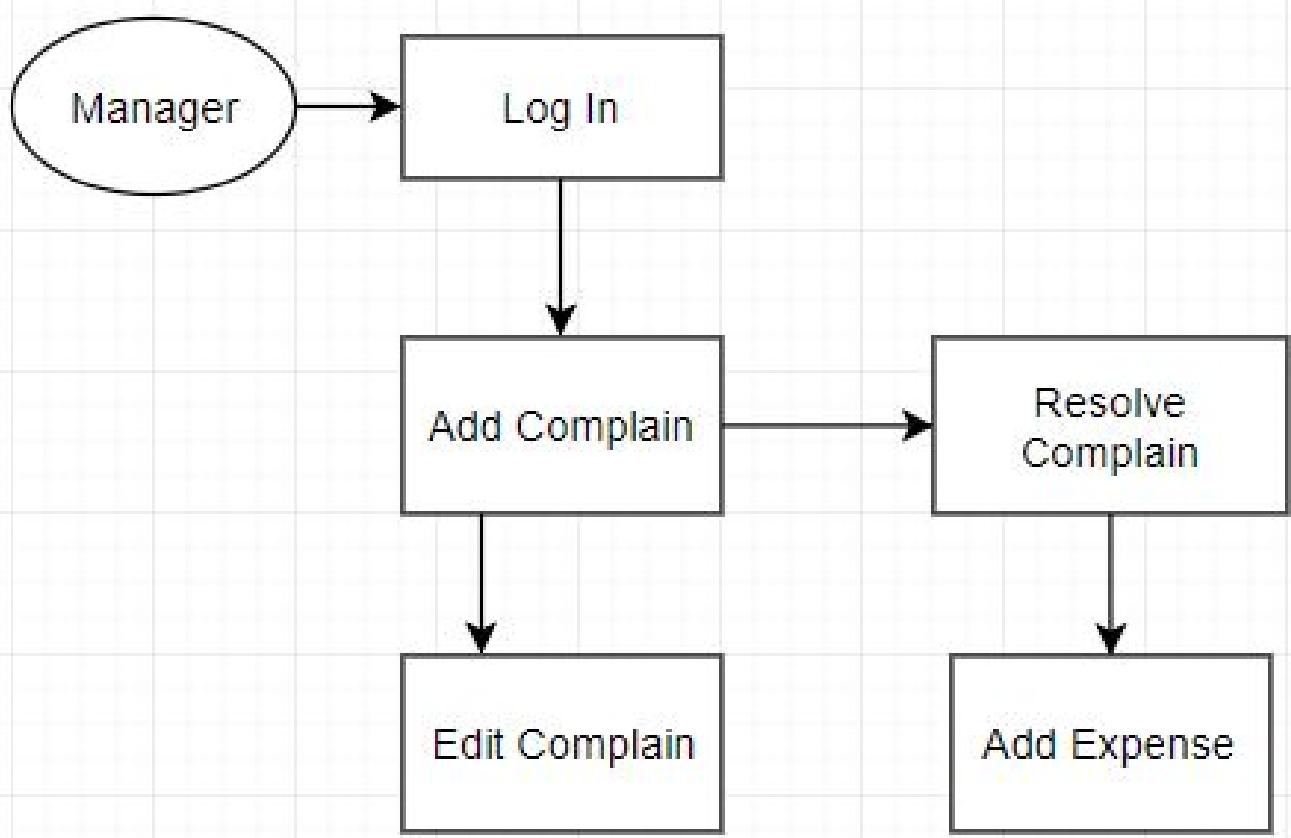
Staff - Use Case



Rooms- Use Case



Complain - Use Case



ESTIMATION OF COST

DOMAIN NAME:

The URL (a.k.a. domain name), is what people type in their browser to get to your website. Without one, the only way to visit your site would be to type in its IP address.

What it'll cost: Usually between \$10 and \$20. For a customized domain extension (such as .restaurant, .online, etc.), you can expect to pay premium rates as high as \$200 and \$300 per year, depending on your choice.

SSL CERTIFICATE

SSL (secure socket layer) certificates encrypt sensitive data like credit card numbers and personal information. An SSL certificate is a must if you run an ecommerce website as it secures and protects your customers sensitive data and personal information from being intercepted.

What it'll cost: SSL certificates are issued by certification authorities (CA's) and range from \$10 a month to as high as \$1000 a month.

WEBSITE HOSTING

Purchasing a domain name is likened to acquiring land: you'll have an address, but you'll need something there to contain all your stuff. In this example, web hosting is your land, and web content is your "stuff".

What it'll cost: Most web hosting companies offer shared hosting plans that range from around \$10 a month to as high as \$99 a month for managed hosting. The more traffic your website gets, and the more features you add to your site, the higher your price will be.

CONTENT MANAGEMENT SYSTEM

A CMS, or content management system, is what you use to display text, pictures, videos, articles, etc., on your website.

While a CMS isn't mandatory, having one will save you time, and make your website much more efficient. What it'll cost: Depending on the CMS you choose, you could be looking at thousands of dollars for a customized one, or pay nothing using popular ones like WordPress.

COPYWRITING

Content to be written for web pages requires copywriting. Strong copywriting is a call to action into itself, as it encourages potential clients to see you as a leader in your field. Poor copywriting involves duplicate content from your own site or from someone else's.

How much you'll pay: If you outsource copywriting services on an individual basis, freelancers generally charge per word. Some freelancers and agencies offer packages that provide you with all the content you require at a cheaper rate.

They may charge extra to update those pages, and charge for additional copywriting upon request. Costs can range from \$5 per 500 words to \$500 for multiple pages of original written work.

SOCIAL MEDIA

Social media is a great platform for you to creatively promote your business, without selling to anyone. You can showcase what you have to offer in fun and creative ways, perhaps through humorous memes, video footage, statistical infographics or even a simple message. Sometimes, a business will promote an upcoming sale exclusively on one form of social media in order to make it worth following. Running contests on social media has also been proven to increase followers and engagement. Additionally, social media is a platform where customers can voice their concerns directly and publicly to a business.

How much you'll pay: There are many forms of social media, and you might be charged to have each one maintained and updated. The content on social media should not be identical on all networks, so taking the time to customize content will cost you. Monthly maintenance and updates could cost between \$250 per month to \$2,500, depending on the agency you use.

WEB DESIGN EXPENSES

While launching a new website, you'll need to spend some money to have it designed and tested. **What it'll cost:** The costs to design a site range from approximately \$1,000 to \$20,000, depending on what kind of website you're running, what CMS you're using, and how much customization is desired.