

# 1. Hotel Management System

- Problem statement : The problem involves optimizing various aspects of hotel operations to ensure guest satisfaction, efficient use of resources and profitability. The problem includes managing hotel rooms, staff, inventory, bookings, customer service, and financial reporting. The main challenge is to balance the needs of guests and the hotel's operational requirements while maximizing revenue and minimizing costs. Some specific problems that may arise in hotel management includes overbooking, revenue mgmt, maintenance, etc. Ultimate goal is to deliver exceptional customer service while maintaining sustainable business model.

## • SRS

### 1. Introduction :

1.1 Purpose : To clearly document and define functional and non-functional req. by ensuring effective hotel mgmt. serves as roadmap for development that can improve the operations which will then enhance the guest experience.

1.2 Scope : To run and ensure that hotels function as smooth as possible. Development time depends on how complex the management system is and size of system.

1.3 Overview : Application is developed to optimize hotel operation, leading to

increased efficiency, improved guest satisfaction and increased revenue.

## 2. General description

Helps manage and automate various aspects of operations like room booking, guest reservation, billing, inventory and staff mgmt. Provide a centralised platform for staff to manage efficiently. Benefits will be increasing the managing of inventory efficiently, increasing accuracy, better services due to improved guest experience, user community would include customers, hotel staff, guests, IT professionals for implementing and maintaining the system.

## 3. Functional Requirements

- Reservation management - room reservation including availability, pricing & confirmation cancellation and modify too
- Front desk operations - check in and out
- Billing and payments
- Inventory management
- Staff management
- Reporting and analytics
- Security and data privacy
- Integration with other systems

## 4. Interface Requirements

- Should have user friendly interface that's easy to navigate. Should be designed to provide clear hotel's overview

- should be compatible with mobile devices.
- should support multiple languages enabling staff and customers to be comfortable
- More accessible and integrate with payment gateways to make sure the process is efficient
- should have robust security system including authentication

## 5. Performance Requirements :

- Response time should be faster enabling staff to access quickly.
- System should be scalable enabling it to handle increasing volume of data
- ~~Reliability~~ Reliability : should be reliable with minimum errors and downtime. Have a backup & recovery system
- Security and Privacy : should have robust security including encryption and access control.
- should comply with relevant laws & regulations

## 6. Design constraints :

- Hardware constraints : system has to be mostly integrated within the already existing hotel infrastructure
- Software limitations : constraint of the amount of data that can be processed or stored, the speed of data
- Time constraint : can't take multiple years to develop & implement
- Security : must adhere to security regulations and protect guests data



#### 7. Non-functional requirements:

- Performance: should be able to handle large no of concurrent users & transactions.
- Reliability: should be available and reliable at all-times
- Security: system should be secure & protect sensitive data from theft.
- Scalability: should be able to scale up & down
- Maintainability: easy to maintain

#### 8. Preliminary Schedule and Budget:

##### Schedule:

Planning: 15 days

Development phase: 6 months, 15 days

Testing: 2 months

Deployment: 3 weeks

##### Budget:

Hardware: \$100,000 - \$150,000

Training: \$45,000 - \$49,000

Personel: \$600,000