

# ① HOTEL MANAGEMENT SYSTEM

## → Problem Statement:

The hotel management system aims to streamline the hotel's operations, enhance customer experience and manage resources effectively, maintaining online reputation, data security challenges, change in technology and rising technology. The current manual system is prone to errors, time consuming and results in delays.

## → User requirements:

- To be able to check for availability of rooms.
- To make payments or cancel bookings.
- To be able to reserve rooms.
- To receive orders or extend bookings.
- To oversee all operations.

## → System requirement

### - Functional requirements:

- To provide price ranges for all rooms and availability of rooms for customers.
- To have cancellation features.
- Email confirmation to customers.
- Generate bills and process payment.
- To allow staff to add and change location.

### - Non-functional requirements:

- The system should be reliable with error handling and available 24/7.
- It must work with a wide range of systems with hardware and software configurations.
- The system must have minimum downtime and good recovery time.
- The system should secure and protect the customers information.

→ Domain requirements:

- Compliance with local and national laws governing hospitality industry.
- Compliance with food and safety laws.
- Compliance with industry standards for credit cards processing and data security.

## ② CREDIT CARD PROCESSING

### → Problem Statement:

A credit card processing system is required to enable, secure and efficient payment processing for merchants and customers. It includes the sequence of phases involved in the creation of a credit card transaction and the usage details of the card used by the customer.

### → User requirements:

- The customer review the amount to be paid for the purchases.
- Should be able to handle refunds and charge backs.
- They can generate the bill if payment is successful.

### → System requirements:

#### - Functional requirements:

- Ability to store and process credit card information safely.
- Fraud detection and prevention
- It must accept PIN.
- It must perform verification with bank databases.
- Reporting and customer support.
- It must generate receipts for customer and vendor.

#### - Non-functional requirements:

- System should be reliable and available 24/7 with backup and recovery mechanisms.
- It should ensure security, with strong authentication and portability.
- It must be easy to maintain and update with documentation and well structured code.

→ Domain requirements:

- It must be compliant with industry standard security regulations such as PCI-DSS.
- It must be compliant with online transaction laws.
- It must practice highest level encryption and data security.
- It must be properly configured for interfacing and authentication with bank systems.

### ③ LIBRARY MANAGEMENT SYSTEM

#### → Problem statement:

Library Management system is designed to solve the problem of managing and maintaining the books and other resources of a library efficiently. It requires a system that helps the librarians to perform all activities required to the library and the users can utilise it efficiently.

#### SRS

#### → User requirements:

- To check for all the books availability in their collection.
- They can check the books possible borrow and return date.
- Can see one's account, borrowed books and other details.
- Tracking of books and fined if not returned on time.
- Can issue accounts, library id/card or edit any information.

#### → System requirements:

##### - Functional requirements:

- System must allow staff to perform tasks like for creation of new users, updating details of books.
- Must be able to list all the books available in their respective categories.
- Managing overdue books and dealing with customer.
- Patron management, inventory management and catalogue services

##### - Non-Functional requirements:

- It must be portable and reliable and available 24/7.
- Compatible with other applications and systems used by the library.
- The system must be easy to use for users of all ages with good user-interface and clear instructions on return policies.

→ Domain requirements:

- Compliance with latest data securities and network securities trends.
- It must provide encryption / decryption .
- Should comply with all the library policies and regulations. and try different book formats.

#### ④ STOCK MAINTENANCE SYSTEM

##### → Problem statement:

This system mainly focuses on those companies which sell to make their tasks easier so that they have enough stock to meet the customers demands. It solves the problem of efficiently managing and maintaining inventory for business. Manual processes for tracking inventory levels, restocking and generating reports can be time-consuming. The system aims to automate these tasks and provide real-time insights into stock levels.

##### SRS

##### → User requirements:

- The supplier has to create an account and list all the products available with details.
- The company can view the stock of the supplier or place orders for new stock.
- Receive information when the stock is low or if new stock has arrived, and accept purchase orders from companies.
- They can store data of the goods and warehouses.

##### → System requirements:

###### - Functional requirements:

- The system must allow suppliers and customers to show the available products.
- Tracking inventory levels.
- Generating reports on sales and stock level.
- The system must also provide features for restocking, order management and stock levels analysis.
- To generate purchase orders and sales order.

### - Non-functional requirements:

- Ensure the integrity of stock data and prevent data loss/ corruption.
- Include data backup, recovery and error checking.
- Should be able to handle a large number of products and transactions.
- System must be very reliable with high level fault tolerance.

### → Domain requirements:

- The system should comply with standard policies and regulations including safety regulations.
- It must have a user friendly interface.
- Robust security features to protect data and prevent unauthorized access.

## ⑤ PASSPORT AUTOMATA SYSTEM

### → Problem statement:

It aims to streamline and automate the passport application process, reducing wait time and improving overall efficiency. The current process of obtaining a passport is time consuming and the system aims to resolve these issues by automating.

### SRS

### → User requirements:

- The user can make an account and fill and upload documents and also perform payment.
- The authority can view the users requests and service them.
- Receive notifications from passport interviewers.
- Should allow officials to verify the authenticity of passports and manage the process.

### → System requirements:

#### - Functional requirements:

- Allows users to submit passport applicants online.
- Display all fields of passport operation available.
- The system must be able accept online fee payment.
- Features for document verification and background checks.
- Ability to track status of applications.

#### - Non-functional requirements:

- System must be secure with strong authentication and encryption mechanisms.
- Ensure data integrity and prevent unauthorized access or modification.
- Transactions to be available always.

→ Domain requirements:

- System must comply with international regulations and standards for passports issue and verification.
- It must be able to process documents uploaded during verification.
- It must also secure payments and support multiple languages and be accessible to users.

## ⑥ RAILWAY MANAGEMENT SYSTEM

### → Problem statement:

As travelling through train is ~~is~~ a mode of transport for many people for long distance, the ~~needed~~ manual ticket process is a huge uncertainty for all the passengers or knowing the train details. This system is to improve overall efficiency of the railway system for ticket booking.

### SRS

### → User requirements:

- They can view the schedule for train arrival and location data also, be informed about delays.
- They can pay for the tickets, implement reservations.
- Tracking of tickets and cancellation of ticket before the train schedule time limit.
- It should provide productive analytics to improve train scheduling and operations.

### → System requirements:

#### - Functional requirements:

- The system must ~~the~~ provide the train list and display the time.
- Allow passengers to book and cancel tickets according to availability.
- It must accept and process payments.
- Provide real time updates on train status, arrival and departure timings.
- Real time reservations.

#### - Non-functional requirements:

- It should allow high volume of transactions and handle users simultaneously.

- It must include industry standard data security mechanism.
- Available 24/7 and data shown is reliable.

→ Domain requirements:

- System should comply with railway regulations and safety standards.
- Compliant to secure online transactions rules like using SSL for security.
- It must be able to generate report and perform analytics on various railway station operations.

## ① ONLINE SHOPPING SYSTEM

### → Problem statement :

The problem is to develop an online shopping system that allows users to browse and purchase products online. The system must provide browsing features, adding them to cart and checking out securely. This system allows you to remotely buy almost anything with wide variety of options and discounts.

### SRS

#### → User requirements:

- The system must display the list of all available products by category and search for specific items.
- It must accept orders from users and add them to cart and check out.
- They can also perform returns and exchanges if applicable.
- They can track orders and give ratings.

#### → System requirements

##### - Functional requirements:

- User registration and authentication.
- Browse products by category.
- Search products with filters.
- Add products to carts and manage cart.
- Checkout and payment processing.
- Order tracking and process return/exchange requests.

##### - Non-functional requirements:

- The system should load quickly and give fast response.
- Include elements such as clear and concise product descriptions, and responsive design.
- It must be easy to use for all age category customers.

- It should comply have user friendly UI.

→ Domain requirements:

- Compliant with handling payments and also COD.
- It should comply with all relevant laws and regulations related to online shopping and e-commerce.
- It should manage shipping by calculating rates and tracking.
- Ensure high level of customer privacy and data security.
- Provide a help centre for support with issues.