

26/8/24

- ① Hotel Management System
- ② Credit card processing
- ③ Library management System
- ④ Stock maintenance system
- ⑤ Passport automation system

Step 1: Develop a problem statement

Step 2: Develop a complete IEEE standard SRS Document with several requirements

Purpose

Scope → Introduction

Overview

Functional Requirements

Non Functional Requirements

Performance Requirements

Design Constraints

Non Functional Attributes

Preliminary schedule and budget

## ① HOTEL MANAGEMENT SYSTEM:

Hotels need to manage daily tasks like room booking, check-in, check-out, billing, staff management etc. If done manually, it is prone to errors. A Hotel Management System is required to simplify the process of managing hotel operations in a digitalised way.

## SRS Document

### 1. Introduction

1.1 Purpose: The purpose of this system is to manage hotel operations like room booking, customer details, billing, check-in / check-out etc. This software will reduce manual work and errors and help hotel employees work faster.

### 2. Scope:

This software is designed for small and medium sized hotels. It allows employees to:

- Book rooms and check room availability
- Manage guest check in and check out
- Generate and print bills
- Store guest and staff information
- View daily, monthly and yearly reports

### 3. Overview:

This document explains the requirements and functionality of the Hotel Management System. It includes:

- A description of what the system should do
- User interface and design requirements
- Budget and timeline estimates

### 4. General Description

- A graphical user interface
- Secure login access
- Reporting and bill generation features

## 5. Functional Requirements

The system must provide the following features;

1. Room Booking
2. Room availability
3. Guest Management
4. Billing
5. Check in / Check out
6. Staff Management
7. Reports
8. Log in System.

## 6. Interface Requirements:

- User Interface (UI):
- Hardware interface
- Software Interface

## 7. Performance Requirements

- The system should load any form or report within 2 seconds.
- It must handle upto 100 concurrent users
- System uptime must be 99.5% during hotel hours

## 8. Design Constraints

- The system must support only English language
- It must run on Windows 10/7
- Data must be backed up daily to avoid data loss

## 9. Non Functional Attributes

- Security:
  - Password - protected login
  - Role based access (admin/staff)

- Usability

→ Simple, clean user interface

## 10. Preliminary Schedule and Budget

### Development Timeline

Phase	Duration
Requirement Gathering	1 week
System Design	2 weeks
Development	5 weeks
Testing and Debugging	2 weeks
Buffer Time	1 week
Deployment	1 week

### Estimated Budget:

Item:	Estimated Cost
Developer salary	5000 Rs
Testing tools	8000 Rs
Hosting / server	10,000 Rs
Miscellaneous	3,000 Rs
Total cost:	26,000 Rs

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Bajna Gold

Date:

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# SRS for Credit Card System

## i) Introduction :

### ii) Purpose

The purpose of this document is to specify all the functional and nonfunctional requirements for a credit card system. The system will handle transaction automation, fund fraud detection and reporting.

### 1.2 Scope : The system will handle card approvals, payments, fraud detection.

Overview: A secure and efficient system for credit card users and banks

#### General Description :

- The system allows customers to use credit card services very smoothly

## 3) Functional Requirements

- Transaction processing
- User authentication
- Fraud detection system
- Bill Generation

## 4) Interface Requirements :

- Secure login for customers and admin
- Transaction history display

Low error rate

### 5) Performance Requirements

- High processing speed

- 24/7 system availability

- Minimum failure rate with failover

### 6) Design constraints

- Requires secure encryption

- Must follow banking regulations

### 7) Non-functional attributes

- Security and Reliability

- Low latency

- Data Backup and support

### 8) Preliminary Schedule and Budget

Phase

Analysis

Duration (weeks)

3

Budget (£)

3000

Development

2

7000

Testing

1

2000

6

121000 £

# Library Management System

Problem Statement: We require a software to handle book records, issuer records, member data and return / borrowing of books

## 1) Introduction :

1.1 Propose - To automate book return, issue and record management in libraries

1.2 Scope : The system will manage book catalogues members and borrowing transactions

1.3 Overview : A digital solution to library management reducing errors done by humans

## 2) General Descriptions :

The system will maintain details of books, members and issue/return records. It will reduce manual work and save time

## 3) Functional requirements

- Book search and catalog management
- Member registration and record
- Book issue and return tracking
- Report Generation.

## 4) Interface Requirements

- Login for librarian and admin
- Search option for books
- Database for records

### 5) Performance requirements

- Quick search and updates
- Concurrency control
- Fast startup

### 6) Design constraints

- Works on local computers or web based
- Requires a database system

### 7) Non Functional Attributes

- Data security and reliability
- Easy to use for librarians
- Scalability for large libraries

### 8) Preliminary Schedule and Budget

Phase	Duration (weeks)	Cost (£)
Analysis	3	8,000
Development	5	10,000
Testing	2	2,000
Total (10 weeks)		20,000 £

Implementation plan (a)  
Initial planning phase  
Detailed planning phase  
Design phase: DB design and schema  
Implementation phase

Testing phase (a)

Deployment phase



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## Stock Management System

### Problem Statement:

To develop a software for ease in stock management and error reduction.

### SRS:

**Introduction:** To maintain and manage stock records efficiently saving time and efforts

**Scope:** The system helps organisation to track available stocks, update sales/purchase details and generate reports.

**Overview:** The software provides and automates stock management for businesses.

### (2) General Description:

The system will maintain track of available stocks, generate reports and update stock details, which will reduce manual labor and save time.

### (3) Functional Requirements:

- Add new stock items
- Update stock on sales
- Generate monthly/daily reports
- Notify price changes

### (4) Interface Requirements

- UI for admin/staff
- Stock search option
- Database for records

### (5) Performance Requirements

- Must handle at least 1000 transactions / day
- Response time < 2 seconds
- High fault tolerance.

### (6) Design Constraints

- cross platform
- concurrency control

### (7) Non Functional Attributes

- Data Security and encryption
- Backup and recovery
- Scalable for high user base

### 8) Preliminary schedule and budget

Phase	Duration (weeks)	Cost (int.)
Analysis	2	2000
Development	4	3000
Testing	2	1000
<u>Total</u>	<u>8 weeks</u>	<u>8000/-</u>

Costs in mind during planning

• Computer hardware, memory, etc.

• Programming language

Management costs (HR)

• Total cost of software development



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# SRS DOCUMENT

## PASSPORT AUTOMATION SYSTEM

Problem statement : The traditional passport application system is often slow and error prone and burdened with manual paperwork.

### 1. Introduction

1.1 Purpose : The purpose of this document is to define the functional and non-functional requirements for a passport authentication system.

### 1.2 Scope

The model will send notifications at each stage of processing and ensure high level of security.

### 1.3 Overview :

The passport authentication will be web based and mobile accessible.

### 2. General Description

The system will maintain passport status and will deal with passport related services reducing time and labour.

### 3. Functional Requirements

- User Registration and authentication
- payment processing
- ~~Appointment Scheduling~~
- verification
- report and analysis

4. Interface Requirements
- Application dashboard with clean UI
  - Biometric scanning
  - Database connectivity
5. Performance Requirements
- Should handle 10,000+ concurrent users
  - Response time ≤ 2 seconds

6. Design Constraints
- Govt. security standard compliance
  - Cross platform compatible

### 7. Nonfunctional Attributes

- Security: Data Encryption
- Backup & recovery support
- Scalability

### 8. Preliminary schedule and Budget

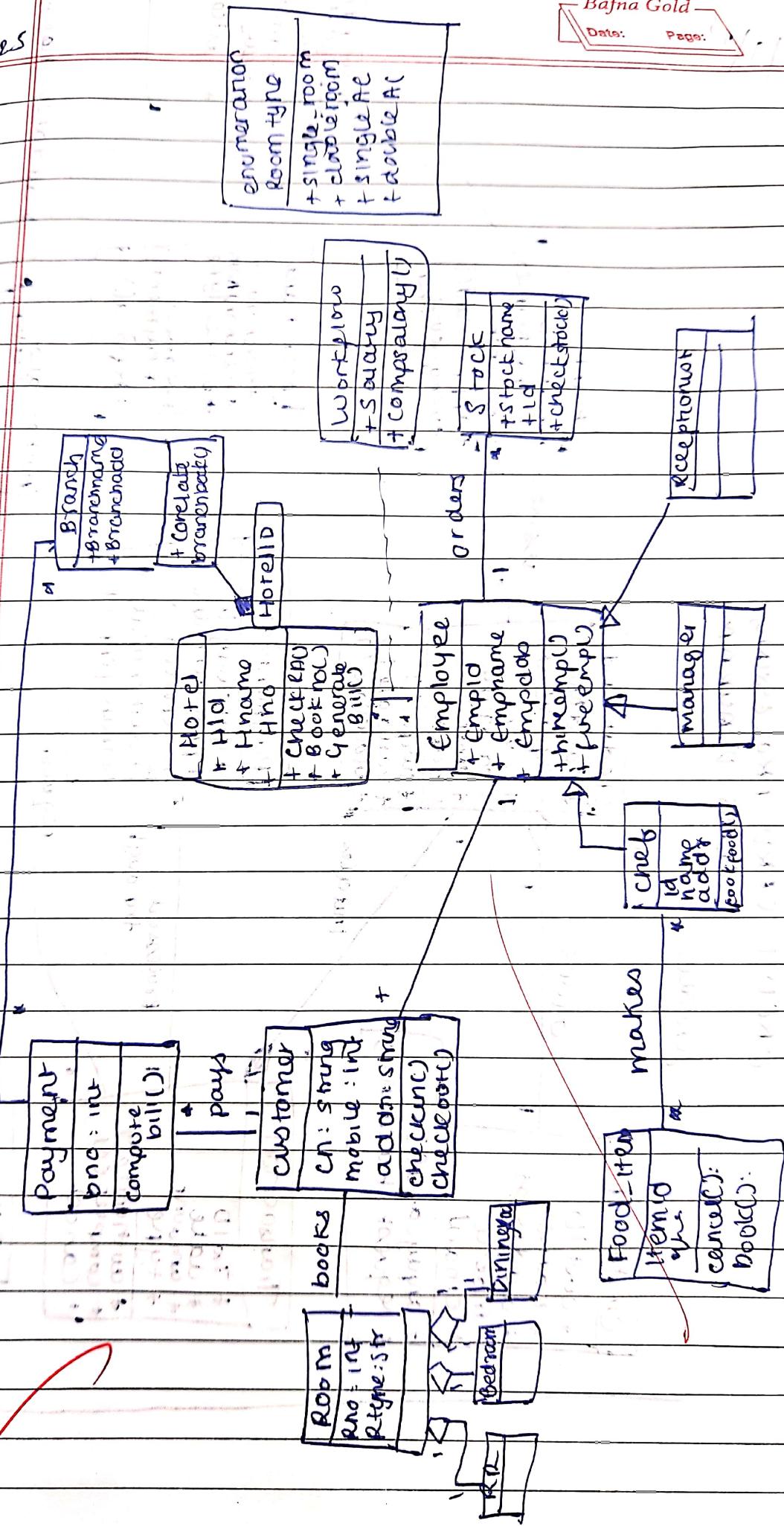
Phase	Duration	Cost £
Analysis	4 weeks	2000
Development	5 months	5000
Testing	3 months	2000
<u>Total</u>	<u>12 weeks</u>	<u>9000 £</u>

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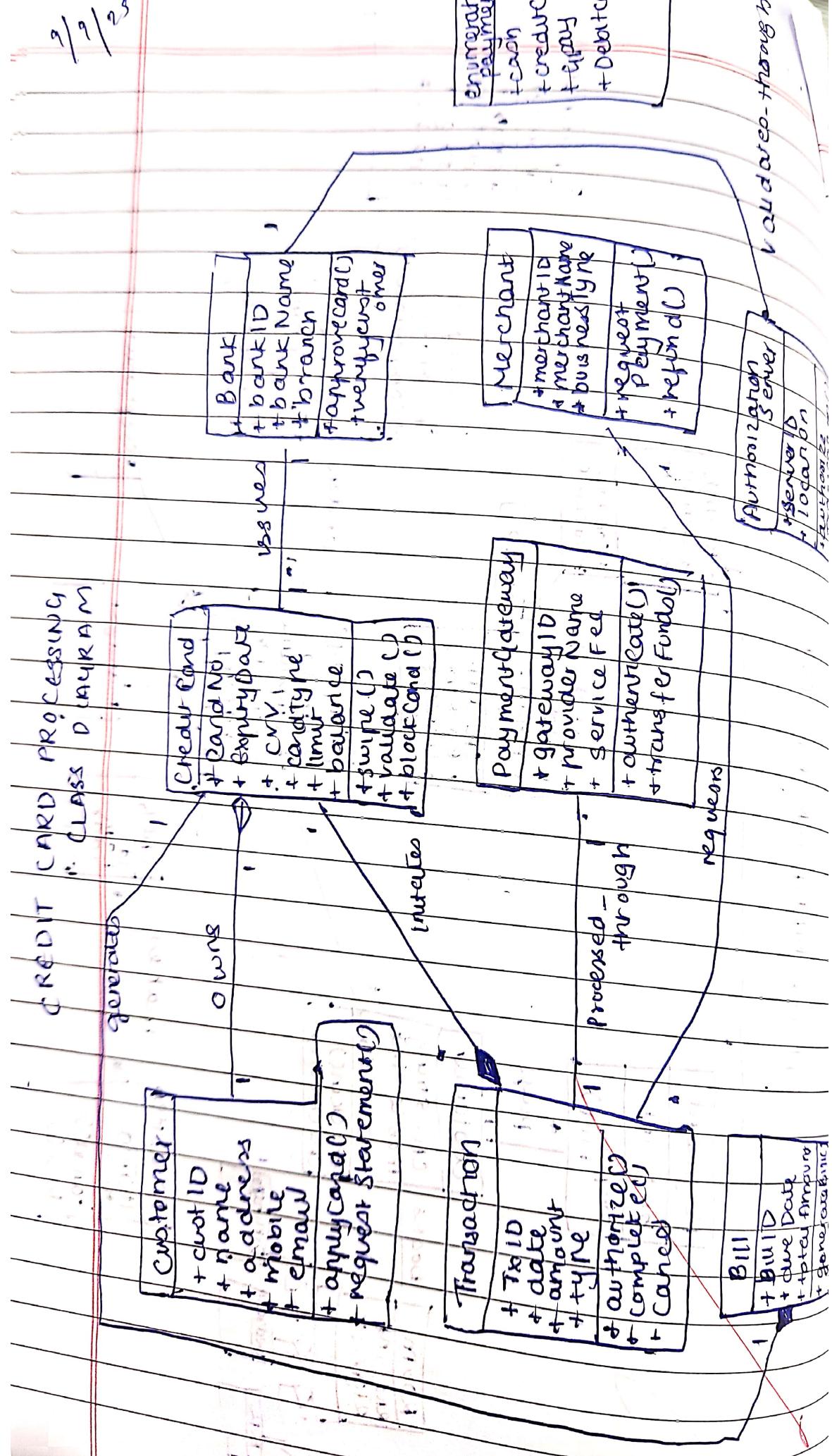


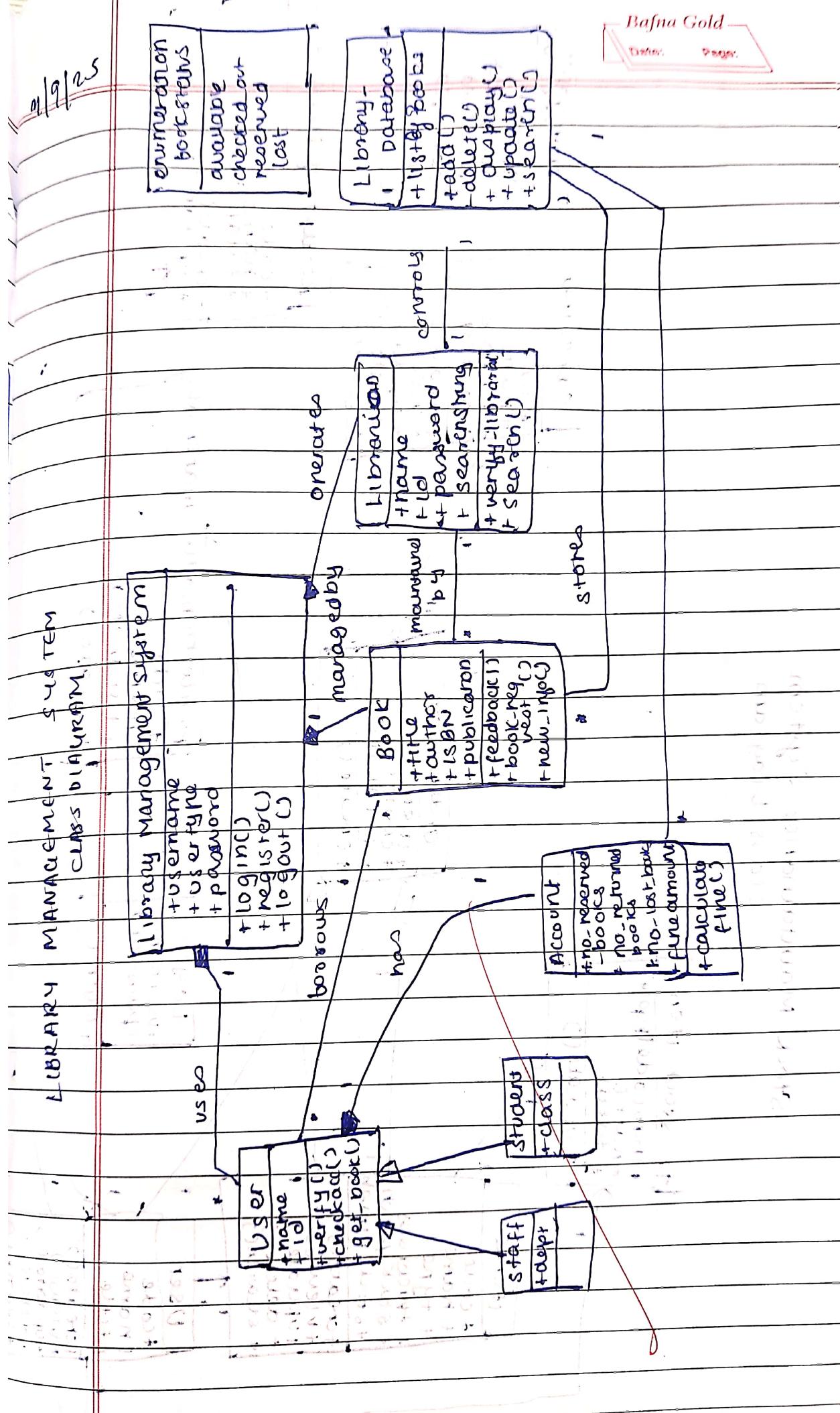
# HOTEL MANAGEMENT - CLASS DIAGRAM

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## Stock Maintenance System Class Diagram

