



UE22CS352B - Object Oriented Analysis & Design

Mini Project Report

Healthcare Appointment Management System

Submitted by:

SHEIK GOUSE PASHA: PES1UG22CS556

SHRINIVAS T G: PES1UG22CS584

VIKASH DUTTA: PES1UG23CS838

Semester 6 Section B

BHARGAVI MOKASHI

January - May 2025

**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
FACULTY OF ENGINEERING
PES UNIVERSITY**

(Established under Karnataka Act No. 16 of 2013)
100ft Ring Road, Bengaluru – 560 085, Karnataka, India

Problem Statement:

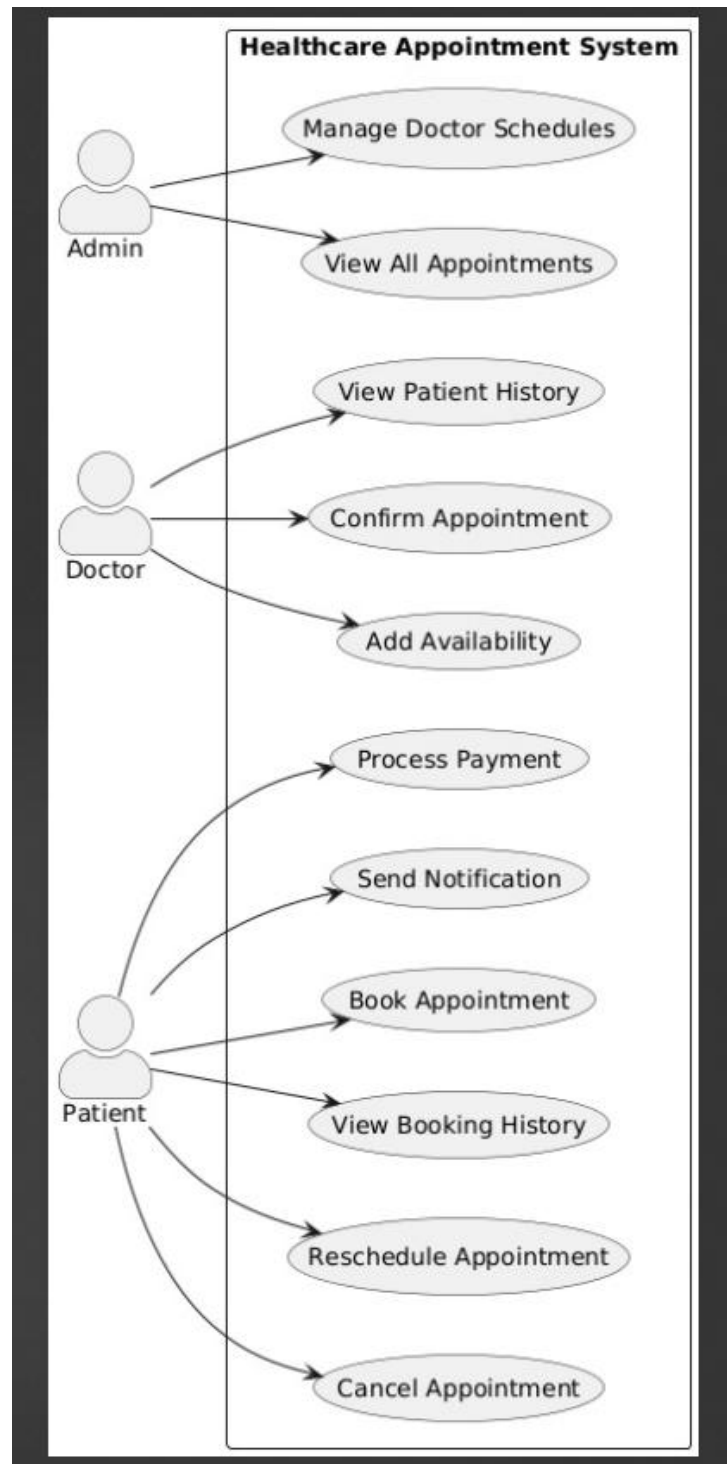
Managing doctor appointments manually can be inefficient, error-prone, and time-consuming for hospitals and clinics. Patients often face challenges in booking, rescheduling, or tracking appointments, while admins and doctors struggle with organizing schedules and accessing patient history. This project aims to develop a centralized Healthcare Appointment System to streamline the entire appointment lifecycle for admins, doctors, and patients

Key Features:

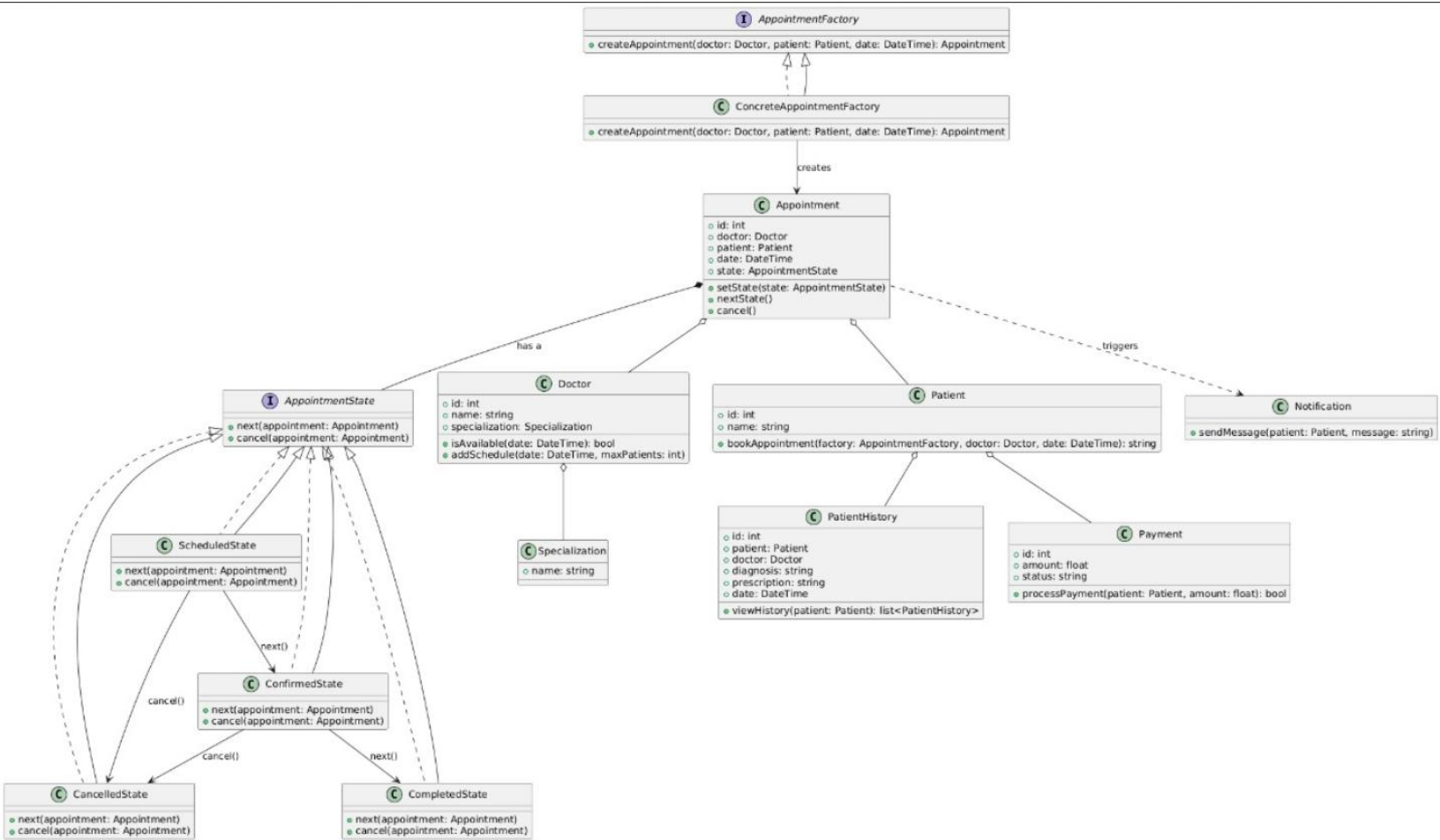
- ☐ **Admin Dashboard** to manage doctor schedules and monitor all appointments.
- ☐ **Doctor Availability Management** to define working hours and limit bookings per day.
- ☐ **Patient Portal** to book, cancel, or reschedule appointments conveniently.
- ☐ **Appointment Confirmation System** managed by doctors for better control.
- ☐ **Booking History Tracking** for patients to view upcoming appointments.
- ☐ **Specialization-Based Doctor Filtering** to help patients choose the right doctor.
- ☐ **Date-Based Doctor Availability Search** to streamline booking.

Models:

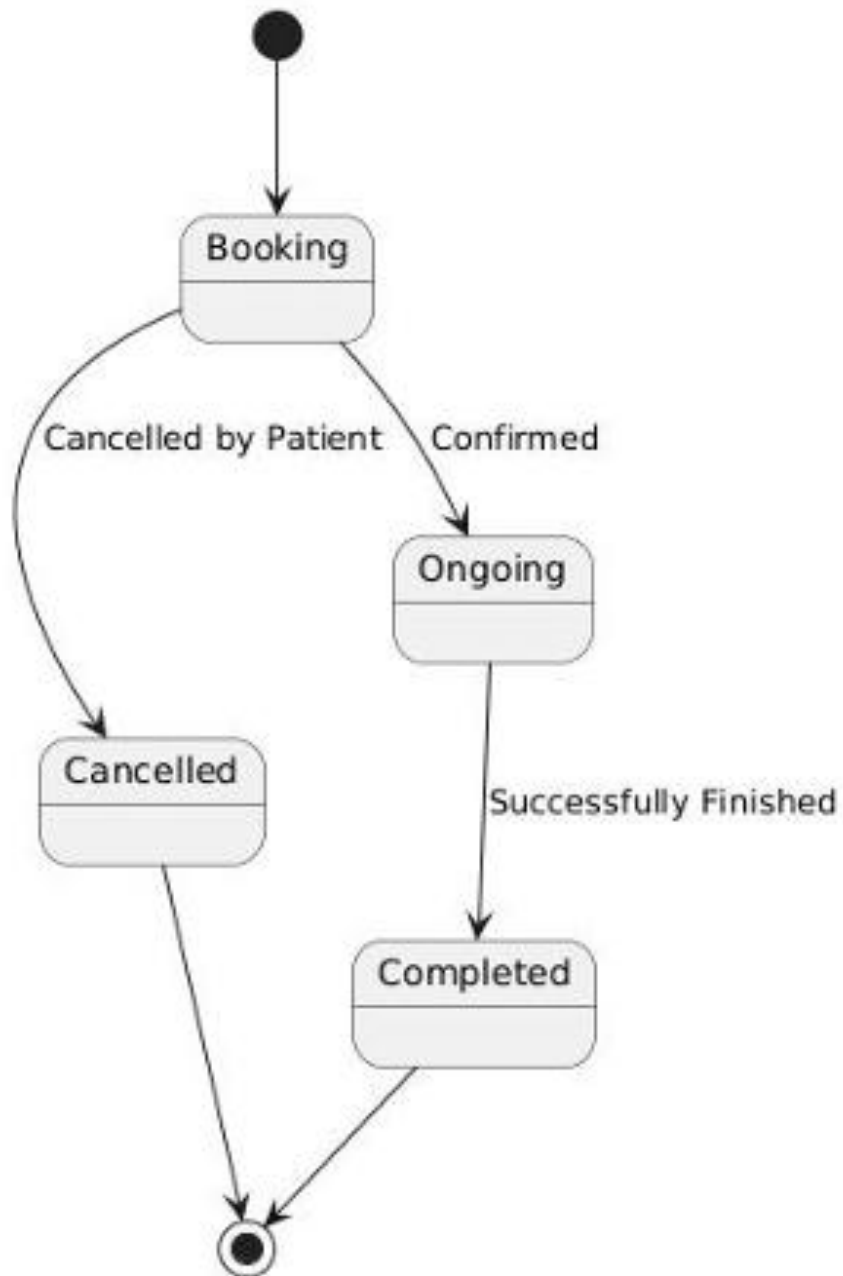
Use Case Diagram:



Class Diagram:

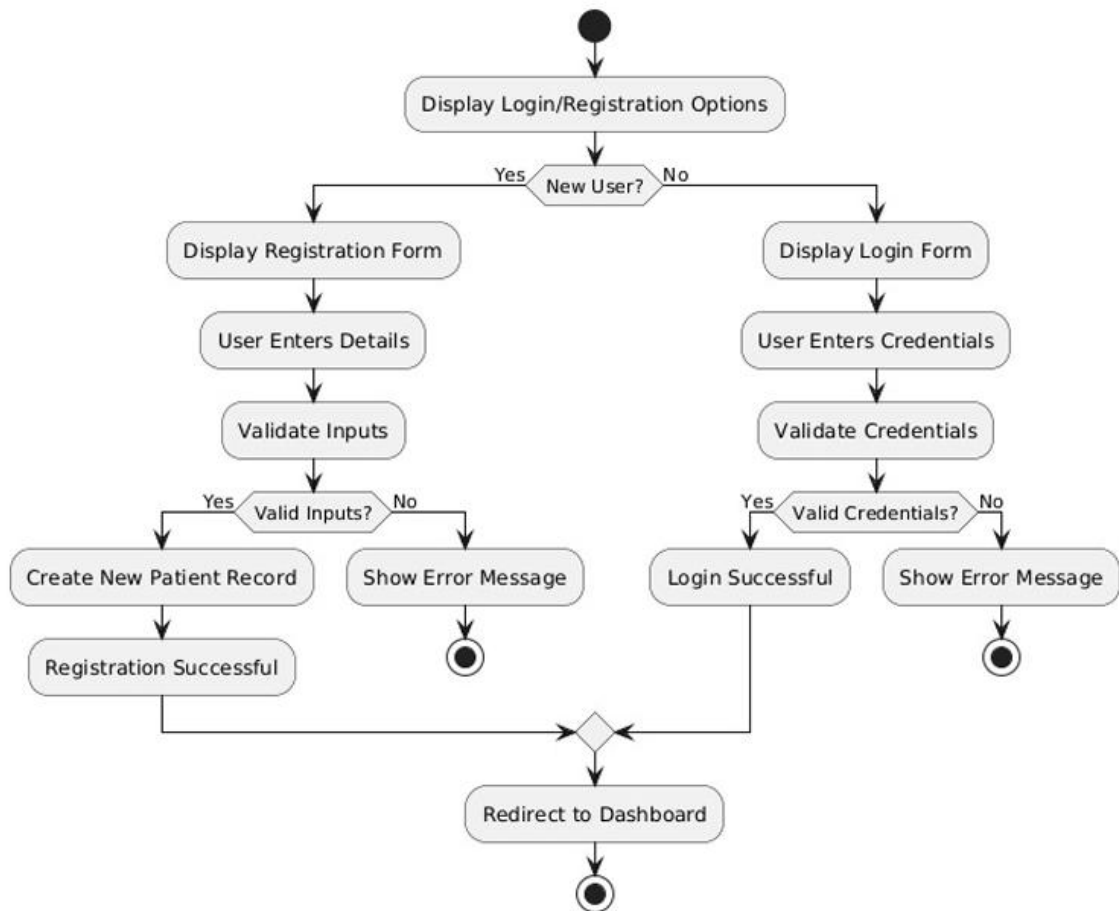


State Diagram:

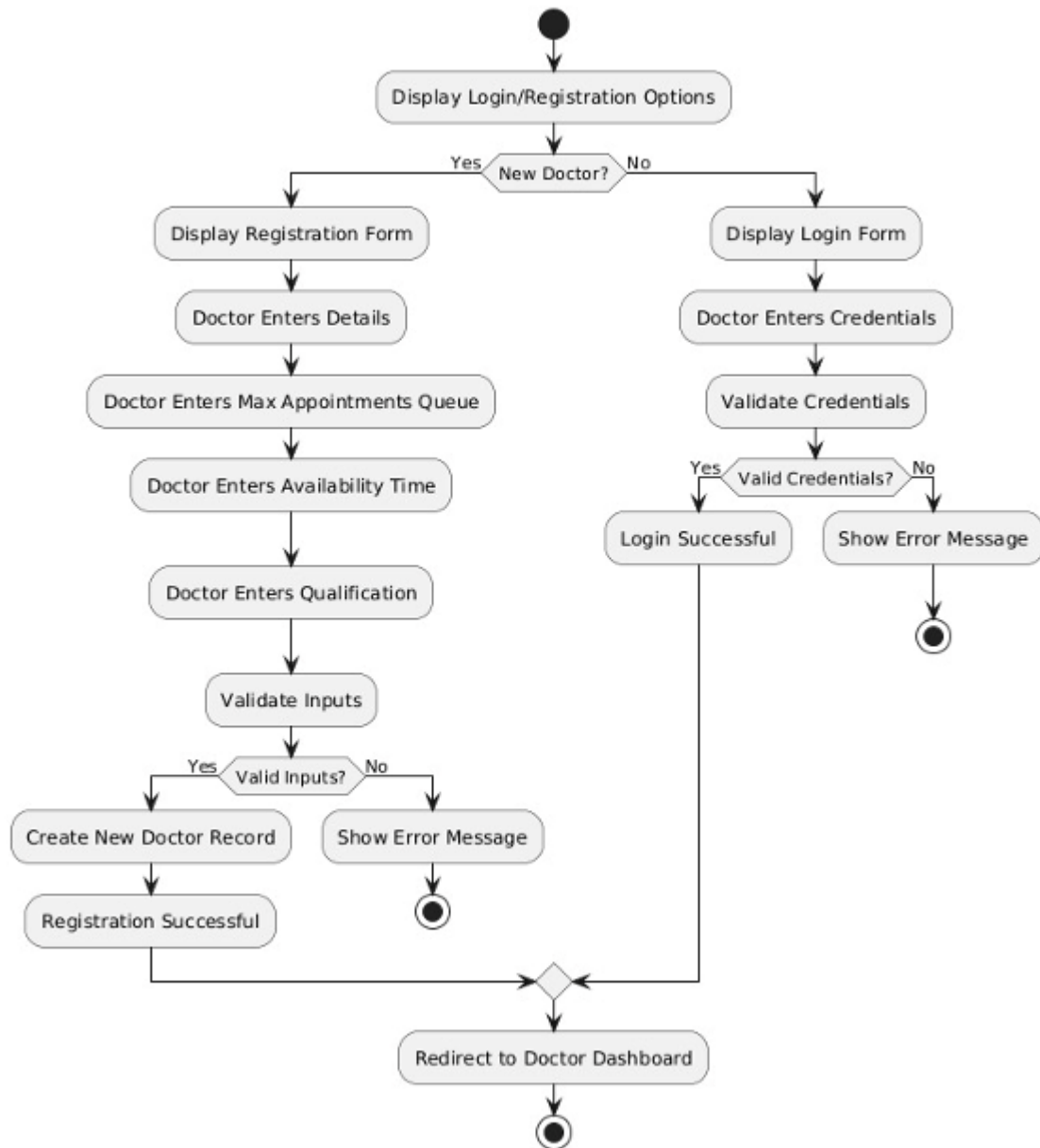


Activity Diagrams:

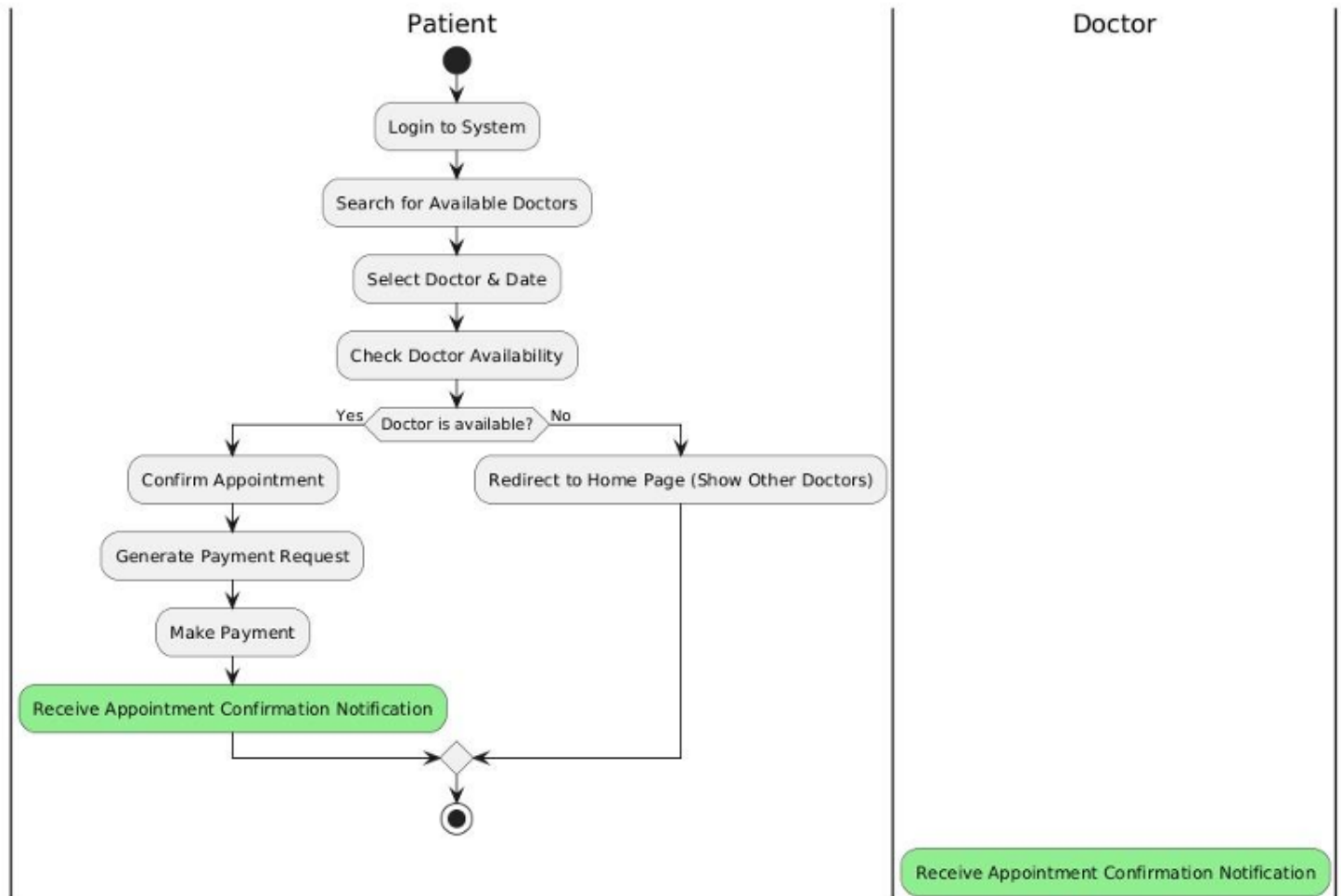
1)Patient Login



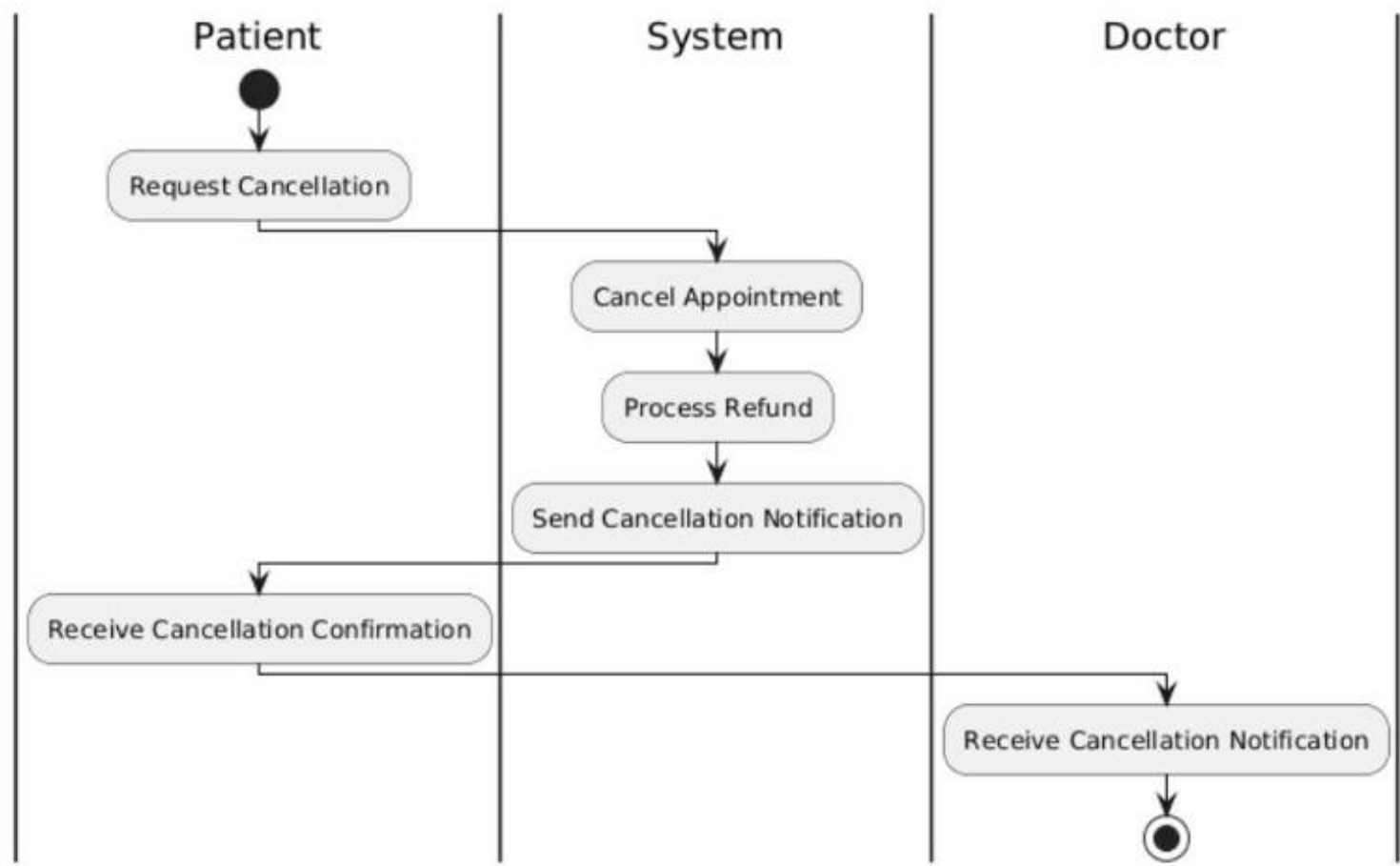
2) Doctor Login



3)Patient Appointment



4)Appointment Cancellation



Architecture Patterns, Design Principles, and Design Patterns:

Architecture Patterns

Model – View – Controller Pattern (MVC)

Design Principles

1. Open – Close principle
2. Interface Segregation principle
3. Single Responsibility principle

Design Patterns


1. Strategy pattern
2. Factory pattern
3. Dependency Injection pattern

Github link to the Codebase:

<https://github.com/Abhinandan-1008/Healthcare-Appointment-Management-System>

Screenshots

UI:



Welcome to Healthcare Appointment System

Providing quality healthcare services with efficient management

Doctors

Patients

Appointments

Records

★ Our Services

✓ Online appointment scheduling

✓ Digital patient records management

✓ Doctor availability tracking

✓ Secure patient-doctor communication

Register

Login

♥ Caring for your health, managing your care ♥

Patient Registration

Patient Name

Enter your full name

Patient Age

Enter your age

Patient Gender

Select gender

Contact Number

Enter 10-digit mobile num

Address

Enter your address

Symptoms

Describe your symptoms

Register

Reset Form

Go Back

Login to Healthcare Appointment System

Select User Type

Patient Login

Doctor Login

Admin Login

Go Back


[Return to Main Page](#)

Patient:




Healthcare Appointment System

Please login to access your account

 Username

p106

 Password


.....



 Login

Invalid Credentials

 Go Back

 [Return to Main Page](#)

Patient Dashboard

Profile Management

[View Your Profile](#)

Appointment Management

[Request Appointment](#)

[Reschedule Appointment](#)

[Cancel Appointment](#)

[View All Appointments](#)

[Go Back](#)

[Return to Main Page](#)

Available Doctor Schedules

Doctor ID	Name	Available Day	Slot Start	Slot End
D1004	Dr B. Sick	Saturday	12:00:00	03:00:00
D1013	akshay	Saturday	17:30:00	21:30:00

Book Appointment

Doctor ID

[Book Appointment](#)

[Go Back](#)

[Return to Main Page](#)

My Appointments

Appointment ID	Patient ID	Patient Name	Slot	Date	Doctor ID	Doctor Name	Department
29	p106	abu tahir	17:30:00	2025-04-19	D1013	akshay	leg pain

Go Back

[Return to Main Page](#)

Reschedule Appointment

Appointment ID	Patient ID	Name	Slot	Date	Doctor ID	Doctor's Name	Department
28	P106	abu tahir	17:30:00	2025-04-21	D1013	akshay	leg pain
29	p106	abu tahir	17:30:00	2025-04-19	D1013	akshay	leg pain

Select New Appointment Date

Appointment ID

Enter appointment ID to r

New Appointment Date

dd-mm-yyyy



Reschedule Appointment

Go Back

My Appointments

Appointment ID	Patient ID	Patient Name	Slot	Date	Doctor ID	Doctor Name	Department
28	P106	abu tahir	17:30:00	2025-04-21	D1013	akshay	leg pain
29	p106	abu tahir	17:30:00	2025-04-19	D1013	akshay	leg pain

Go Back

[Return to Main Page](#)

Doctor:

Doctor Dashboard

Patient Management

View Patient Profile

Appointment Management

View My Appointments

Schedule Management

Add New Schedule

View My Schedule

Go Back

[Return to Main Page](#)

View Patient Details

Patient ID

View Patient

Go Back

My Appointments

Appointment ID	Patient ID	Patient Name	Slot	Date	Doctor ID	Doctor Name	Department
28	P106	abu tahir	17:30:00	2025-04-21	D1013	akshay	leg pain
29	p106	abu tahir	17:30:00	2025-04-19	D1013	akshay	leg pain

Go Back

[Return to Main Page](#)

Add New Schedule

Available Day

Monday

Start Time

10:34 AM

End Time

03:34 AM

Add Schedule

Reset

Go Back

[Return to Main Page](#)

My Schedule

Doctor ID	Name	Available Day	Slot Start	Slot End
D1013	akshay	Saturday	17:30:00	21:30:00

Go Back

[Return to Main Page](#)

Admin:

Admin Dashboard

Doctor Management

Add New Doctor

Remove Doctor

View All Doctors

Patient Management

Remove Patient

View All Patients

Go Back

[Return to Main Page](#)

Add New Doctor

Doctor Name

santu

Doctor Age

30

Gender

Male

Years of Experience

5

Contact Number

7541238925

Address

gokak

Department

Neurologists

Register Doctor

Go Back

Doctor Directory

Doctor ID	Name	Specialization	Experience	Gender	Age	Contact Number	Address
D1000	Dr Pullen	Cardiologists	5	m	30	+1 582-558-3861	1128, 3rd Floor, Fat No 13a Wings, Sanjay Society, Prabhadevi
D1001	Dr Fillmore	Anesthesiologists	15	f	50	+1 464-485-6722	91, Shri Krishna Bhavan, Hindu Colony, Dadar(e)
D1002	Dr Mangle	Dermatologists	10	m	45	+1 312-795-2062	20/1, North Crescent Road, T Nagar
D1003	Dr Ken Hurt	Neurologists	8	m	38	+1 319-730-5064	18th Road, Opp Electric Office, Chembur (east)
D1004	Dr B. Sick	Gastroenterologists	3	f	34	+1 218-654-7743	Central Lane, Bengali Market
D1005	Dr Watamaniuk	Dermatologists	11	m	45	+1 202-411-8219	S 614, Nehru Enclave, School Block, Shakarpur
D1006	Dr Lipp	Cardiologists	25	f	55	+1 305-270-1658	A-11, Part 2, Greater Kailash Enclave
D1007	Dr Carey	Dermatologists	5	f	40	+1 225-897-3950	106, Sarita Bldg, Near Dahisar Tol Naka, Dahisar
D1008	Dr Nervo	Neurologists	11	f	47	+1 582-262-9538	Opp S B I,dr V S Road, Ambawadi
D1009	Dr Hurt	Dermatologists	10	m	50	+1 434-723-6523	Samta Nagar Tel Exchange, Western Express Highway, Nr Santa
D1011	akash	Gastroenterologists	4	m	22	6360663654	prabhat nagar jamkhandi
D1012	ADITYA R M	Cardiologists	5	m	24	1543124587	NAGARABAVI

Patient Records

Patient ID	Name	Gender	Age	Contact No.	Symptoms
P103	sushant	M	23	4569767634	Head ache
P104	Adarsh	M	23	1230987651	Hair Fall
P105	aditya jain	M	23	9099876123	throat pain
P106	abu tahir	M	26	9611023456	leg pain

[Return to Main Page](#)

Individual contributions of the team members:

Name	Module worked on
Abhinandan S	Integrated SPRING beans and worked on Services to implement interfaces
Aditya R Mirji	Model part of MVC and implementation of design patterns
Aditya Shenoy	Controller part of MVC and implementation of design principles
Akash CN	Managed setup and added dependencies and worked on View part of MVC and UI of project along with error handling