

FINAL YEAR PROJECT · B.TECH COMPUTER SCIENCE

Hospital Appointment Booking System

Online OPD booking with token tracking

PRESENTED BY

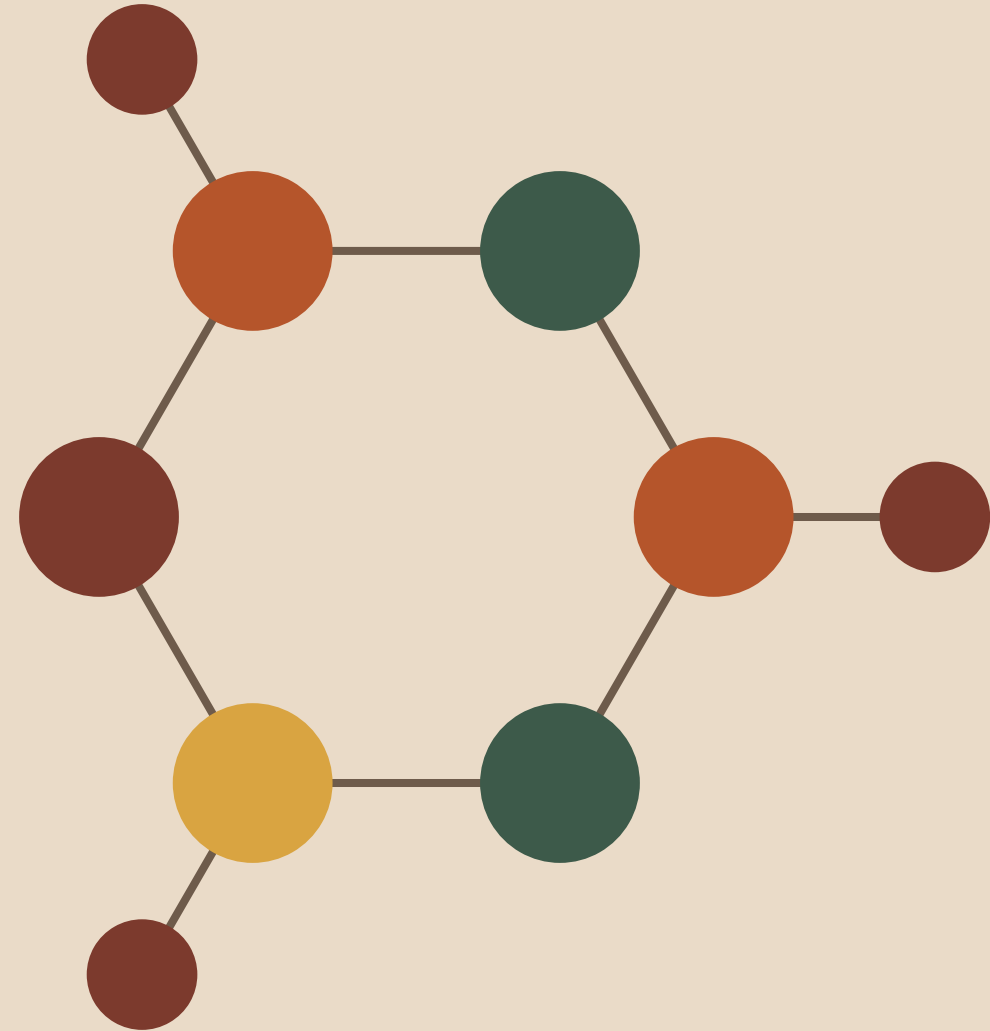
**Aarav Sharma · Diya
Patel**

GUIDED BY

Prof. R. K. Mehta

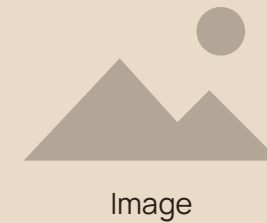
DEPARTMENT

**Computer Science,
2025-26**



Agenda

- 01 Introduction
- 02 Literature & Gap
- 03 Proposed System
- 04 Implementation
- 05 Results
- 06 Conclusion



01

INTRODUCTION



Outpatient appointment booking is still handled manually in most places — slow, error-prone and hard to track.

Why this project matters

Introduction

- ▶ Outpatient appointment booking matters to patients and hospital staff every day
- ▶ Current methods are manual, slow and hard to scale
- ▶ Affordable technology now makes automation practical
- ▶ This project builds hospital appointment booking system as a working prototype

CONTEXT

Most patients and hospital staff we surveyed still rely on paper or spreadsheets for outpatient appointment booking.

Objectives

- ▶ Automate the core steps of outpatient appointment booking
- ▶ Give patients and hospital staff a simple, mobile-friendly interface
- ▶ Store data securely and generate reports
- ▶ Evaluate the system against the existing process



Literature survey

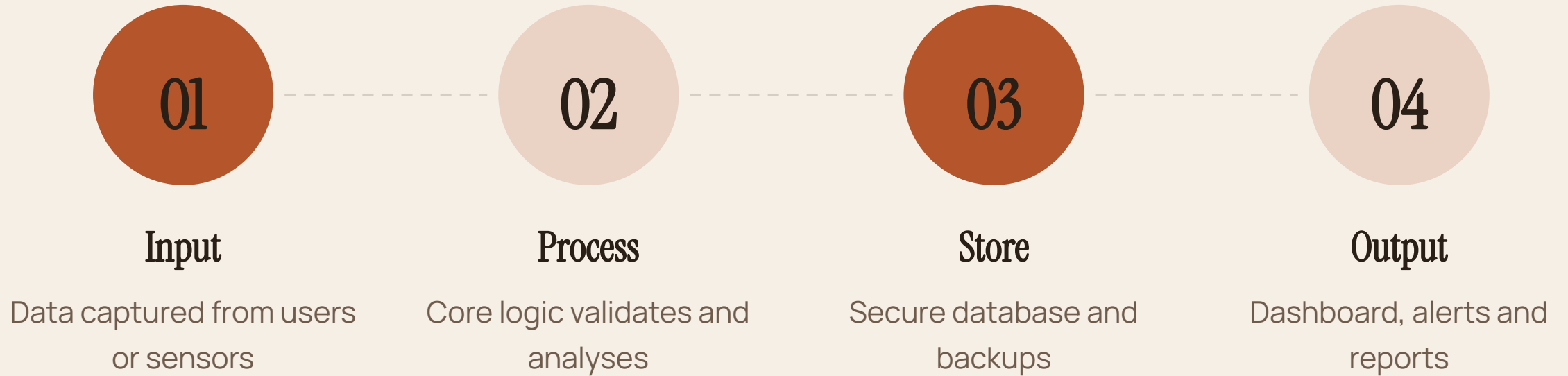
Study	Approach	Limitation
Study A	Rule-based automation	Not adaptive
Study B	Mobile data collection	No analytics
Commercial tools	Full-featured suites	Costly and complex

Representative summaries – replace with your own citations.

02

PROPOSED SYSTEM

System architecture



Block diagram



Block diagram / flowchart

Every module talks through one simple, testable interface.

The system is built in layers: an input layer, a processing service, a database and a dashboard. Each layer can be tested independently, which keeps hospital appointment booking system simple to maintain and extend.

Technology stack

01

React

Patient and staff web
app

02

Spring Boot

Booking APIs

03

PostgreSQL

Appointments and
doctors

04

Twilio-style SMS

Token alerts (any SMS
gateway)

03

IMPLEMENTATION

Project timeline



Implementation snapshots



Image 1

Main dashboard

Overview of live data



Image 2

Data entry

Simple forms with validation



Image 3

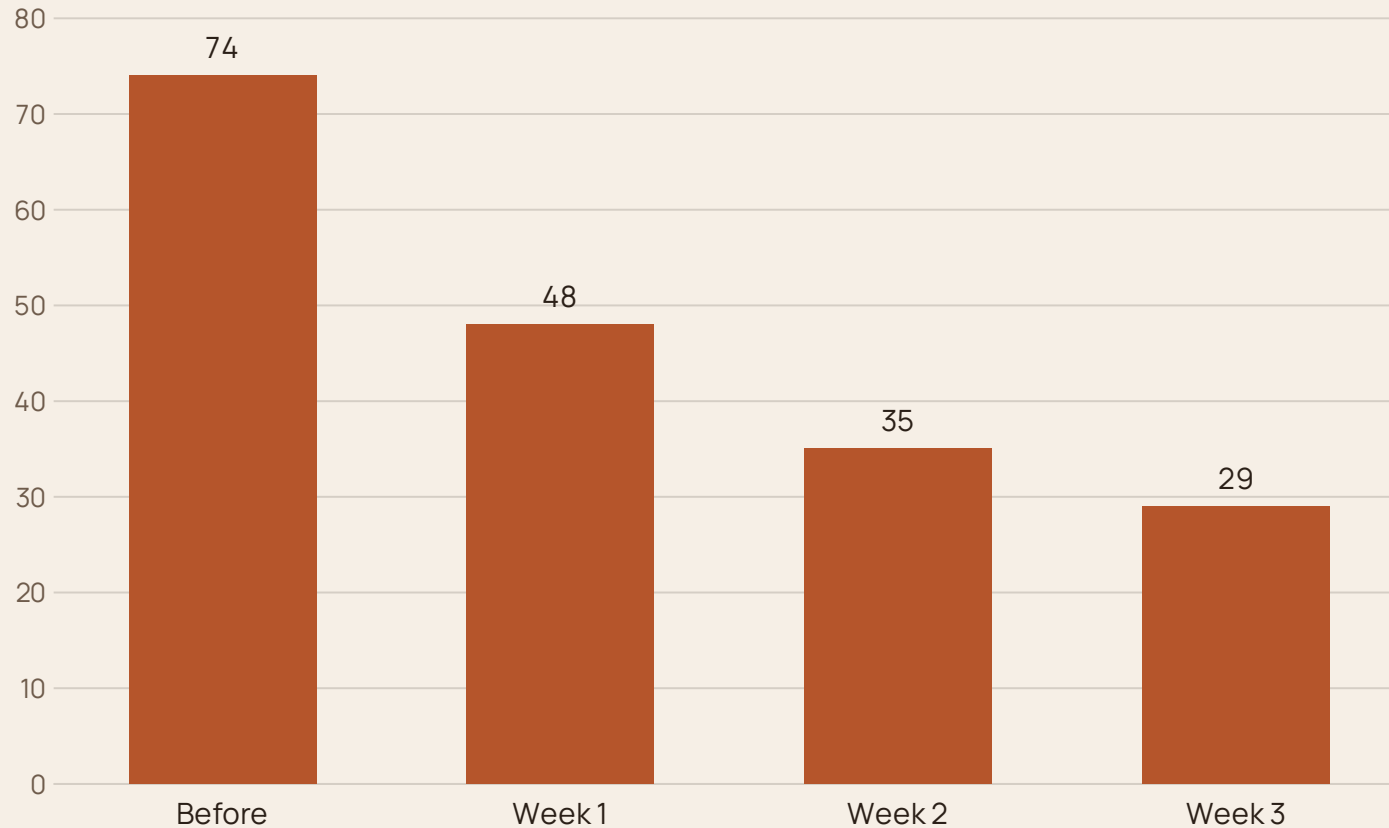
Reports

Exportable summaries

04

RESULTS

Results



Sample data for illustration – replace with your own figures.

60%

shorter waiting time

The prototype improved steadily over the evaluation period (sample data).

Key outcomes

60%

shorter waiting time

100%

records digitised

< 1 s

average response

Figures from our test setup (sample data).

Conclusion

- ▶ Hospital Appointment Booking System meets its main objectives
- ▶ Automation saves time and reduces errors for patients and hospital staff
- ▶ The design is simple to extend and maintain



Image

Future scope

01

Mobile app

Native apps for Android and iOS

02

AI insights

Predictions from historical data

03

Scale-up

Deploy across more sites

Thank you

Questions and suggestions are welcome.

Aarav Sharma · Diya Patel
Dept. of Computer Science

