Developing a Comprehensive Patient Care System in the Health Sector

Submitted in the partial fulfillment for the award of

the degree of

BACHELOR OF ENGINEERING

IN

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Key Features

Electronic Health Records

Appointment Scheduling

Communication Tools

Patient Portal

Workflow automation

Patient Engagement and Education

1. Electronic Health Records (EHR):
The ability to maintain digital records of patient information including medical history, diagnoses, medications, treatment plans, immunization dates, allergies, radiology images, and laboratory test results.

2. Appointment Scheduling:
A feature that allows patients to schedule appointments with healthcare providers and manage their appointments efficiently. This may include reminders and notifications to reduce no-show rates.

3. Billing and Insurance Management:
 Capability to manage patient billing, insurance claims, and reimbursement processes. This includes generating invoices, verifying insurance coverage, and processing claims electronically.

Major Constraints

Budgetary Constraints

Technical Support

Scalability

Vendor Lock-in

User Adoption & Training

Physical (Geographic and Demographic) Factors

Budgetary Constraints:
Healthcare organizations often operate within limited budgets, which can constrain the resources available for investing in and maintaining a Patient Care System. Budgetary constraints may limit the scope of system features, customization, and ongoing support and maintenance

Technical Infrastructure:
The availability and scalability of technical infrastructure, including hardware, software, and networking resources, can constrain the capabilities and performance of the Patient Care System. Limited infrastructure may affect system responsiveness, reliability, and the ability to handle increasing volumes of data and users.

Vendor Lock-In:
Healthcare organizations may face constraints related to vendor lock-in, where reliance on a single vendor for software or services limits flexibility, interoperability, and cost-effectiveness. Breaking vendor lock-in may require significant investment and effort to migrate to alternative solutions.

The features are aligned to the constraints in such a way that with each Feature seeks to eradicate the problems/ challenges each constraint may pose.

We want to build a system which is reliable, cheap,

Trustworthy and which increases the efficiency of the overall Healthcare system

PROPOSED DESIGN: