UNIVERSITY OF MANAGEMENT AND TECHNOLOGY

SOFTWARE ENGINEERING (W-3)

PROJECT TITLE: "*HOSPITAL MANAGEMENT SYSTEM*"

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Assignment no. 01

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1. Project Abstract:

Our project, "Medical Care," aims to develop a comprehensive Hospital Management System (HMS) to streamline administrative, clinical, and financial operations in hospitals. Medical Care integrates patient registration, appointment scheduling, electronic health records, billing, and inventory management to enhance patient care and operational efficiency.

2. Introduction:

Medical Care is a web-based HMS designed to address the challenges faced by hospitals in managing patient data, resources, and services. The system provides a user-friendly interface for hospital staff, patients, and administrators to access and manage information efficiently.

3. Motivation and Scope:

Motivation

- Improve patient care quality
- Enhance operational efficiency
- Reduce errors and costs

Scope:

- Patient registration and management
- Appointment scheduling
- Electronic health records
- Billing and insurance claims
- Inventory management

Assumptions:

- Hospital staff will use the system regularly
- Patient data will be accurate and up-to-date

4. Related Work:

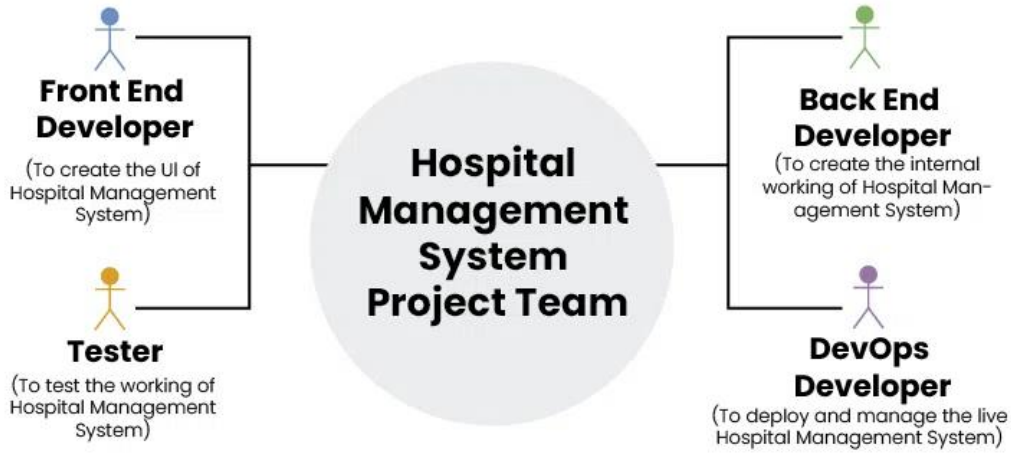
Existing HMS include:

- Medical tech
- Epic Systems
- Cerner Corporation

Medical Care differs by providing:

- Integrated patient engagement portal
- Real-time analytics for decision-making
- Mobile accessibility for staff and patients

5. System Architecture:



6. Goals and Objectives:

Goals:

- Improve patient satisfaction by 20%
- Reduce operational costs by 15%
- Enhance staff productivity by 25%

Objectives:

- Develop a user-friendly interface
- Implement electronic health records
- Integrate billing and insurance claims

7. Individual Tasks:

Task 1: Patient Registration Module (Estimated effort: 3 months)

- Design and develop patient registration form
- Integrate with existing hospital database

Task 2: Appointment Scheduling Module (Estimated effort: 2 months)

- Design and develop appointment scheduling interface
- Integrate with patient registration module

Task 3: Electronic Health Records Module (Estimated effort: 4 months)

- Design and develop EHR interface
- Integrate with patient registration and appointment scheduling modules

8. Future Work:

Possible extensions:

- Telemedicine integration
- Artificial intelligence-powered diagnostic tools
- Mobile application for patients

9. Tools and Technologies:

- Front-end: HTML5, CSS3, JavaScript, ReactJS
- Back-end: Node.js, Express.js, MongoDB
- Database: MongoDB
- Integration: API-based integration with existing hospital systems