Internet Programming (sessional) [CSE-326]

Proposal Report on:

CUET Campus Medical Center

Group No:

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1   Objectives

The objectives of this project are:

- To design and implement a web-based medical center system specifically for CUET students.

- To efficiently track and store patients' medical records and prescriptions accessible to doctors, patients, and administrators.

- To display real-time roaster information for doctors and ambulances, helping students and staff know availability at any time.

- To maintain a database of student blood donors and facilitate blood donation requests from hospital staff.

- To notify students proactively about health alerts, such as outbreaks of dengue or other viral diseases.

- To integrate an AI assistant that provides personalized health advice based on previous medical records.

2   Introduction

Managing medical information and health services on campus can be challenging due to scattered data and limited accessibility. The proposed CUET Medical Center website aims to centralize all relevant information and provide easy access to both staff and students. By combining patient record management, doctor and ambulance availability, blood donation tracking, health alerts, and AI-based health guidance, the system ensures efficient and timely medical support. This platform will also reduce administrative workload and improve overall healthcare responsiveness for the university community.

2.1   Motivation

The motivation behind this project comes from the need for a streamlined, accessible, and modern healthcare management system for CUET. Currently, students and staff rely on manual or partial processes that can lead to delays in medical support and inefficient tracking of records. A centralized web system not only improves operational efficiency but also empowers students to take proactive steps toward their health by providing timely notifications and AI-driven suggestions.

3   Potential Stakeholders

The potential stakeholders of the CUET Medical Center website include:

- **Students:** Can access their medical history, receive health notifications, and benefit from AI-based health guidance.

- **Doctors:** Can manage patient records, check availability, and coordinate with the hospital staff efficiently.

- **Hospital Staff/Administrators:** Can monitor overall hospital operations, manage blood donation requests, and send awareness notifications.

- **Blood Donors:** Students registered in the blood database can be contacted quickly for urgent donations.

- **University Community:** Benefits from a healthier campus environment through preventive health alerts and organized medical services.

4 Existing Related Work

Epic Health Care Ltd. is a professional healthcare service provider in Chattogram, Bangladesh, offering diagnostic services, specialist consultations, appointment booking, and access to online medical reports through its web platform. While their operations target a general public audience and follow a commercial healthcare model, the website demonstrates how medical information can be centralized, and services can be efficiently delivered online. Features such as test scheduling, report access, and doctor availability showcase the benefits of web-based healthcare systems. Although the proposed CUET Medical Center website focuses specifically on a campus community with additional functionalities like student blood donor management, health alerts, and AI-based guidance, Epic Health Care provides a useful reference for designing a user-friendly and accessible medical service platform.
[1]

5 Contribution of the Work

This project contributes a complete web-based solution tailored to CUET's campus medical needs. Unlike existing systems, it integrates multiple functionalities-medical record tracking, doctor/ambulance availability, blood donor management, awareness notifications, and AI-based health guidance-into a single platform. It simplifies administrative work, improves health response times, and encourages students to engage proactively with their personal health.

6 Proposed Features of the Web Application

The major features of the proposed CUET Medical Center website include:

- **Medical Record Management:** Doctors, patients, and administrators can view and update past records and prescriptions.

- **Doctor & Ambulance Roaster:** Displays real-time availability of doctors and ambulances.

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[1] https://www.epichcl.com/

- **Blood Database:** Maintains a list of student donors and allows staff to request donations efficiently.

- **Health Awareness Notifications:** Sends automated emails to students about viral outbreaks and preventive steps.

- **AI Assistant:** Provides personalized health advice and dietary recommendations based on past medical history.