Khulna University of Engineering and Technology

Dept. of Electronics and Communication Engineering

Course Title: **Database System Laboratory**

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Project Title:

Blood Bank Management System

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Introduction:

Structured Query Language (SQL) is a standard language for storing, manipulating and retrieving data in databases. SQL can execute queries against a database, retrieve data from database, update-insert-delete records, create new database, create new tables in a database, set permissions on tables, procedures and views etc. In this project we will use all these features of SQL to create a database that will serve the purpose of a Blood Bank Management System.

The Blood Bank Management System aims to automate the process of blood bank management. Doctors can easily find available blood types and identify potential donors. Donors can register themselves and be notifies when their blood type is in demand. Blood banks can effectively manage their inventory, keeping tracks of blood units and their expiration dates. Patients can quickly find the blood they need. By utilizing SQL's powerful features, the project intends to streamline the operations of blood banks, thereby ensuring timely and efficient service for all parties involved.

Project features:

Entity Sets and Attributes of the project:

Doctor: doctor_id, doctor_name, specialization, contact_number
Donor: donor_id, donor_name, donor_address, gender, age, blood_type, blood_pressure, contact_number, weight

Blood: donor_id, blood_type, blood_bank_id, expiration_date

Blood_Bank: blood_bank_id, blood_bank_name, bank_address

Patient: patient_id, patient_name, age, required_blood_type, hospital_address, contact_number

Different SQL operations, functions will be used to execute the codes properly. Primary and Foreign keys will also be included in the relationships of the entities.

Some features that The Blood Bank Management System might include are briefed down below:

Inventory Management: Real-time tracking of blood quantities, types and expiration dates in multiple blood bank locations.

Donor Management: A system for donors to register, update their profiles, and get notified when their blood type is needed.

Doctor Dashboard: A system for doctors to see blood availability, request blood.

By including these features, the Blood Bank Management System would not only automate many of the day-to-day tasks involved in blood bank management but also offer a robust and comprehensive tool to ensure the best possible service for donors, patients, and healthcare providers alike.

Entity Relationship Diagram: