

OOP Course : Blood Donation Application – Weekend Hackathon

Duration : 1.5 day

Date 28/08/2021

Submission date and Time : On or before 5 PM - 29/08/2021

Note: Two members from each group can submit one copy of the final working program or application

- **Copying of programs from other groups is strictly not allowed.**
 - **Use of any programming language is allowed but Python is preferred.**
 - **Upload the final copy of the working program to Git hub account that was shared in CR Google Sheet (if not created , create the Git Hub account and upload the Working program)**
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Objective : To develop a Blood donation application for an NGO XYZ.

Why do XYZ is looking for a new application?

Disadvantages of the existing Manual Blood donation system:

- 1. Manual Process is too time consuming, often leads to error prone results*
- 2. Lack of skilled resources to manage the existing application*
- 3. Not enough data or lot of missing records in the existing system*
- 4. Results are not accurate*

Scope of the New System :

1. New Automated online blood donation management application should maintain information of all blood donors and also helps the recipients to track and search the right donor whenever required.
2. It has two modules namely Admin and User.
3. Admin can add hospitals having blood banks and blood donation camps. Admin can view the list of donors of a particular area with proper Blood group details. Admin can check for blood requests and in case of emergency they send notifications to blood donors as per the requirements.
4. Any registered user can make a specific blood group request .
5. Any registered user(donor) can also donate blood. They may get a specific request from Blood donation camps or hospitals for blood donation and may donate blood in case of emergency. They can either accept or ignore it.

This small application aims at maintaining all the information regarding Blood bank details in the city, Registered users, Blood donation camps, and Registered blood donors.

Problem Statement :

1. Design an efficient online application for the Company XYZ. Assume all the data items , types and sample values for donors, recipients, hospital, branch names etc.
2. Clearly specify all the assumptions made in the programs.
3. Refer at any Blood donation systems for more understanding.

Facilities to be designed and developed : (these facilities are developed as functions in Programs)

1. Collect the blood sample details every day at each blood bank (identify various data types and data fields)
2. Store rare blood groups from any other Blood bank branches in the same city (identify the mechanism to store branch details)
3. Find out blood group specific details, branch wise and date wise details whenever required
4. Functions : Retrieval of Donor specific data, Rare blood group specific data, and Branch specific data.