Title of the project : Blood Aid

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Project Overview : This Java application serves as a user-friendly platform connecting blood donors and recipients, addressing the growing demand for blood donations. It offers key functionalities such as donor/recipient registration, blood request posting, neighborhood-based donor searches, and personal profile management. With an intuitive interface, donors can showcase their blood type, donation status, and availability, while recipients can easily find and contact donors. Real-time notifications keep users updated on new requests, ensuring urgent needs are met.

Motivation behind the project: The motivation behind this project is to create a secure, non-profit platform that directly connects blood donors and recipients, ensuring timely support for urgent blood needs. Unlike traditional methods, this system fosters community engagement, accelerates the donation process, raises awareness, and ultimately enhances public health by saving lives.
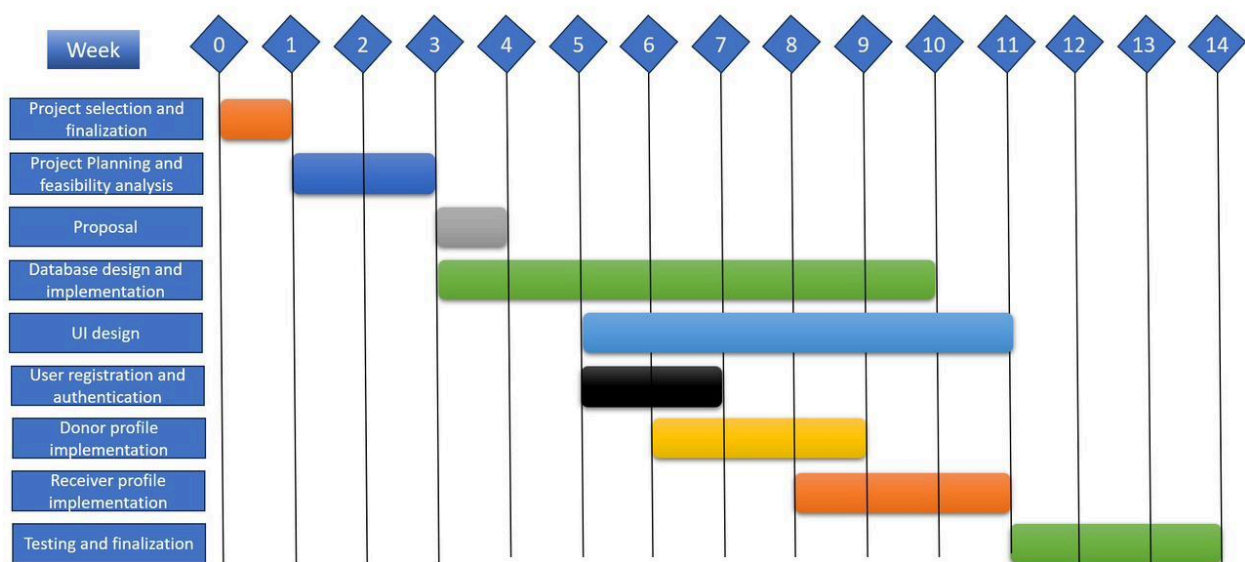
Key features of the project:

** **Donor** : i) User Authentication

ii) Blood Request List

iii) Eligibility Status

iv) Donation History

v) Point Reward System

Recipient: i) Request for blood any time

ii) Filtered Search For Blood (By region and Blood Group)
iii) Contact with donor
iv) Login

Tools and Technology: Java (IntelliJ IDEA), SQL (Mysql), Github

Timeline:

Week	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Project selection and finalization	■														
Project Planning and feasibility analysis		■	■												
Proposal				■											
Database design and implementation				■	■	■	■	■	■	■					
UI design						■	■	■	■	■	■				
User registration and authentication						■	■								
Donor profile implementation							■	■							
Receiver profile implementation									■	■	■				
Testing and finalization												■	■	■	

Class Diagram:

Donor

eligibility status
donationHistory
points
availability
date

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viewBloodRequest()
checkEligibility()
updateDonationHistory()
redeem points()

User

id
name
email
password
phone
bloodGroup
region

---

login()
logout()
editProfile()
viewProfile()

Recipient

bloodRequestList
contactedDonors

---

requestBlood()
filteredDonors
contactDonor

BloodRequest

requestID
recipientID
bloodGroup
region
status

---

updateStatus()
viewRequestDetails()

Notification

notificationID
userID
message
timestamp

---

sendNotification()
viewNotification()

PointSystem

donorID
points

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addpoints()
viewPoints()
redeemPoints()