

BLOOD UNITY

A Project Report

Submitted in partial fulfilment of the
requirement for the award of the Degree

BACHELOR OF SCIENCE (COMPUTER SCIENCE)

By

Mr. Sourabh Yadav

Roll No: -100

Under the esteemed guidance of

Mrs. Trupti Rongare

Assistant Professor



DEPARTMENT OF COMPUTER SCIENCE

SATISH PRADHAN DNYANASADHANA COLLEGE OF ARTS,

SCIENCE AND COMMERCE

(Affiliated To University Of Mumbai)

THANE, 400604

MAHARASHTRA

2024-2025

**SATISH PRADHAN DNYANASADHANA COLLEGE OF ARTS,
SCIENCE AND COMMERCE**

(Affiliated To University Of Mumbai)

THANE, MAHARASHTRA , 400604

DEPARTMENT OF COMPUTER SCIENCE



CERTIFICATE

This is to certify that the project entitled, **Blood Unity** is bonafied work of **Mr. Sourabh Omprakash Yadav** bearing **Seat. No: _____** submitted in partial fulfilment of the requirements for the award of degree of **BACHELOR OF SCIENCE in COMPUTER SCIENCE** from University of Mumbai.

Internal Guide

Head of Department

External Examiner

Date :

College Seal

ABSTRACT

This project presents a web-based blood donation platform that uses JSP and Java as the backend to provide a robust and scalable solution for connecting blood donors with recipients. The platform enables users to create accounts, log in securely, and access features such as searching for nearby blood banks, scheduling donations, and viewing donation history. Donors can easily register their availability, while recipients can post requests for specific blood types, ensuring an efficient matching process.

The backend, built with Java, manages user data, donation records, and request fulfillment through secure database transactions, ensuring reliable performance. The application incorporates features for real-time updates and notifications to keep users informed about urgent donation needs. With a focus on scalability and security, the platform ensures data encryption and secure authentication to protect sensitive information.

This project demonstrates how JSP and Java can be effectively utilized to build a web-based blood donation platform that facilitates timely and secure blood donations, offering a valuable tool for hospitals, organizations, and individuals in need of blood.

ACKNOWLEDGEMENT

I would like to extend our heartiest thanks with a deep sense of gratitude and respect to all those who provided me immense help and guidance during my period. I would like to thank my Project Guide **Asst.Prof. Trupti Rongare** for providing a vision about the system. I have greatly benefited from their regular critical reviews and inspiration throughout my work I am grateful for their guidance, encouragement, understanding and support in the development process.

I would also like to thank my college for giving resources whenever I wanted and for giving me the opportunity to develop the project. I would like to express my sincere thanks to our Head of Department **Dr. Sujata Iyer** for having facilitated us with the essential infrastructure resources without which this project would not have seen the light of the day. I am also thankful to the entire staff of CS/IT for their constant encouragement of my suggestions and moral support throughout the duration of my project. Last but not the least I would like to mention here that I am greatly indebted to each and everybody my friends and who has been associated with my project at any stage but whose name does not find a place in this acknowledgement.

With Sincere Regards, Sourabh Omprakash Yadav

TABLE OF CONTENTS

Sr. No.	Project Chapters	Page No.
1.	Chapter 1: Introduction 1.1 Background 1.2 Objectives 1.3 Purpose & Scope 1.3.1 Purpose 1.3.2 Scope	1-4
2.	Chapter 2 : System Analysis 2.1 Existing System 2.2 proposed System 2.3 Requirement Analysis 2.4 Hardware Requirements 2.5 Software Requirements 2.6 Justification of selection of Technology	5-10
3.	Chapter 3 : System Design 3.1 Modulo Division 3.2 Data Dictionary 3.3 Entity Relationship Diagrams 3.4 Data Flow Diagrams 3.5 Use Case Diagram 3.6 Deployment Diagram 3.7 Class Diagram 3.8 Component Diagram 3.9 Activity Diagram 3.10 Object Diagram 3.11 State Chart Diagram 3.12 Gantt Chart	11-36
4.	Chapter 4: Implementation and Testing 4.1 Code 4.2 Testing Approach 4.2.1 Unit Testing 4.2.2 Integration System	37-72
5.	Chapter 5 : Result	73-76
6.	Chapter 6: Conclusion and Future Work	77-78
7.	Chapter 7: References	79

List of Figures

Sr. No.	Figures Name	Page No.
1.	Entity Relationship Diagrams	16
2.	Data Flow Diagrams	18-19
3.	Use Case Diagram	21
4.	Deployment Diagram	24
5.	Class Diagram	26
6.	Component Diagram	27
7.	Activity Diagram	29
8.	Object Diagram	30
9.	State Chart Diagram	32
10.	Flow Chart Diagram	33
11.	Gantt Chart	35