

# **Blood Donors Website**

## **Degree Project Report**



**Umaer Raza Satti**

01-233082-047

**Misbah Ur Rehman**

01-233082-019

**SUPERVISOR**

Mr. Adeel Nasir

**Department of GS & AS**

**Bahria University Islamabad**

## ABSTRACT

Blood Donors Database Website is developed for those who need a Blood Donor in a critical time when every single minute counts. This website will facilitate the Blood Donors as well as the Blood Receivers. To make website more efficient in finding a Donor, Google maps Technology and SMS generation API are used to find out the nearest Donor. User requesting will broadcast an SMS to all the available Donors. Website will also facilitate the staff of Blood Banks to use system to find Blood Donors in a specific area.

Website will have the Database of all the willing Donors who voluntarily wants to Donate Blood. Blood Donors website will have a separate registration facility for the Donors where they will be registered with all the mandatory details so that finding them in case of emergencies would be easy. System will ask the donors for their basic information like Name, Blood Group, cellphone numbers, Location etc. to track them down easily in time of need.

Fully automated system will find the desired Blood Group Donor by searching the online database of donors and it will contact the Donor through a default text message asking whether he or she is willing to donate the Blood. If the Donor is willing and available then he or she will reply back to the Requester and decide the location where they can meet up. All of this will be free of cost and the Blood Donors will be working voluntarily.

## Table of Contents

<b>Chapter 1: Introduction</b> .....	4
1.1 Purpose:.....	5
1.2 Project Scope .....	6
1.3 Product Perspective .....	7
1.4 Product Features .....	7
1.5 User Classes and Characteristics .....	8
1.5.1 Donor and recipient: .....	8
1.5.2 Administrator:.....	8
1.6 Operating Environment.....	9
1.6.1 Software Tools: .....	9
1.6.2 Application Server Model .....	9
1.6.3 Database .....	9
1.6.4 Browsers .....	9
1.7 Software Requirements: .....	9
1.8 Hardware Requirements .....	10
1.9 User Environment .....	10
1.10 Design and Implementation Constraint .....	10
1.11 Assumptions and Dependencies.....	10
<b>Chapter 2: System Requirements And Specifications</b> .....	11
2.1 Old System:.....	12
2.2 Proposed System: .....	12
2.3 Administration Module .....	13
2.4 Donor Requirements.....	15
2.5 Recipient Requirements.....	20
2.6 Non-Functional Requirements .....	22
2.6.1 Software Quality .....	22
2.6.2 Performance .....	22
2.6.3 Robustness .....	22
2.6.4 Quality of Design.....	23

2.6.5 Information Reliability.....	23
2.6.6 Help for User.....	23
2.6.7 Security.....	24
2.6.8 Maintainability.....	24
2.6.9 Backup.....	24
2.6.10 Extensibility.....	24
<b>Chapter 3: System Design</b> .....	<b>25</b>
System Design: .....	26
3.1 Data Flow Diagram.....	26
<b>Chapter 4: System Implementation</b> .....	<b>30</b>
4.1 Security and Accounts Module:.....	31
4.2 Admin Module.....	31
4.3 Donor Search .....	31
4.4 Blood Bank Information Module .....	31
4.5 APIs Used.....	32
4.5.1 Google Maps .....	32
4.1.1.1 Example .....	32
4.1.1.2 Result:.....	33
4.5.2 Generating SMS .....	34
4.5.2.1 Send a message using API of PHP.....	34
4.5.2.2 Receive a message using PHP API .....	35
<b>Chapter 5: System Testing</b> .....	<b>36</b>
5.1 Test Cases .....	37
5.1.1 Test case #1: User Authentication.....	37
5.1.2 Test case #2: Send SMS .....	39
5.1.3 Test case #3: Check A Donor Location on Google Map.....	41
<b>Chapter 6: Conclusion</b> .....	<b>43</b>
6.1 Project Benefits.....	44
6.2 Future Enhancements .....	44
<b>Appendix A: User Manual</b> .....	<b>45</b>
A.1 Security and Accounts Module: .....	46
A.2 Admin Module.....	47

A.3 Donor Search.....	48
A.4 Blood Bank Information Module.....	49
<b>Appendix B: Database Tables.....</b>	<b>50</b>
<b>References .....</b>	<b>53</b>