

Blood Donation Portal using Twitter

Abstract: Blood is the most precious gift that anyone can give to another person the gift of life. Blood Donation is definitely a noble act. Many clinics & hospitals constantly require blood for several purposes. More than 38 thousand blood donations are needed every day! India faces a shortage of 3 million units of blood currently. Many patients die due to lack of blood, the reason is common people can't get proper information of blood donation notifications.

I. INTRODUCTION

The project entitled BLOOD DONATION MANAGEMENT is a pilot project for new Blood bank to be start soon in the city. A blood donation occurs when a person voluntarily has blood drawn and used for transfusions and/or made into biopharmaceutical medications by a process called fractionation (separation of whole-blood components). Donation may be of whole blood, or of specific components directly (the latter called apheresis). Blood banks often participate in the collection process as well as the procedures that follow it.

II. EXISTING IDEA

In existing system, not all users can get access to the information because of the low working of the application or is not able to access any site. Sometimes the information is not updated or available for a particular place. Existing system the security is less and latest updates and uploads are not so frequent.

III. PROPOSED IDEA

Our idea is to create web portal and interactive webpage using Django where blood donor can register them. Patients can upload required blood information via 2 methods, website form and twitter! Patients can upload blood details which is required on our website. If any person tweet regarding blood requirements. Tweet should contain Person name, contact details, city name, and blood group name. Our machine will read that tweet, analyze that tweet, and search for city name. If any city found in that tweet, then server will send SMS to blood donors of the same city.

Interested blood donor may contact the patient and give blood (life) to him/her. Patients can send details through twitter, website. It's not required to have internet connection on donor side.

IV. TECHNICAL OVERVIEW:

1. Blood Donor side:

➤ Blood Donor will register themselves on portal through Website with data:

- Name
- Blood Group
- Mobile Number
- Email Address
- City

2. Blood Receiver side:

There are two ways for requesting blood.

- Through Twitter:



Fig 1.1: Snapshot of tweet.

- Through Website

Relative/Friend/Doctor will send blood data via website with the data:

- Name
- Blood Group
- Hospital name
- Mobile Number
- Email Address
- City

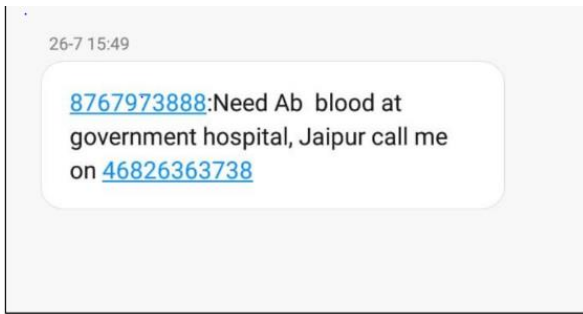


Fig 1.2 Sample of SMS received by Blood Donor.

V. PROJECT FLOW

Portal is consisting of 3 stages as shown in fig 3.

1. Blood receiver will tweet the Blood requirements.
2. Our Portal will extract the tweet and find the City name.
3. SMS will be sent to all the citizens of that particular city.

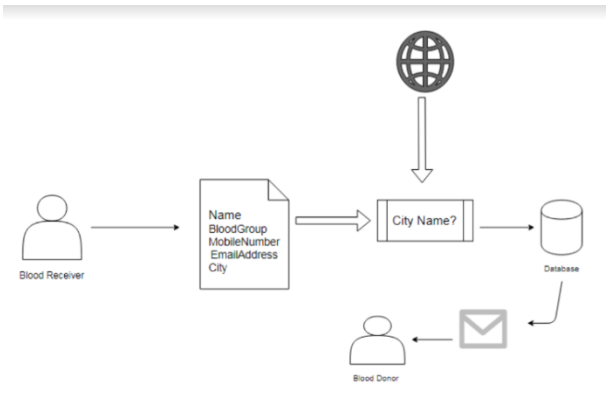


Fig 3: Flow Diagram

VI. TECHNOLOGY USED

Developer Side:

- Language:
 - Python (Django)
 - HTML/CSS /JavaScript.
- Software Requirements:
 - Interactive Development Environment (IDE) for Python (Recommended Spyder)
 - Database (MySQL)
- Hardware Requirements:
 - Computer System with any OS

User Side:

- Blood receive side:
 - Internet connectivity
 - Browser/Twitter
- Blood Donor side:
 - Only Cell phone with Active Sim Card!
(Internet Connectivity not Required)

Why Django?

Django is a web development framework that assists in building and maintaining quality web applications. Django helps eliminate repetitive tasks making the development process an easy and time saving experience. This tutorial gives a complete understanding of Django.

Twitter API: The API class provides access to the entire twitter RESTful API methods. Each method can accept various parameters and return responses.

VII. ADVANTAGES:

1. One of the best ways for communicating with the donors as well as receivers.
2. it saves the energy of the person for searching the blood group needed.

VIII. CONCLUSION

The blood you donate gives someone another chance at life. One day that someone may be a close relative, a friend, a loved one or even you. Being a human, we must help other humans and tell other humans for the humanity. We must make a loud message for the whole world that "Humanity still exists in us! And our Project will help you for the same!"

IX. References

- [1] Use for twitter API: <https://pypi.org/project/twitter/>
- [2] Twitter API Documentation: [https://tweepy.readthedocs.io/en/v3.5.0/getting_star ted.html#introduction](https://tweepy.readthedocs.io/en/v3.5.0/getting_started.html#introduction)
- [3] Use for twitter API help: [https://stackoverflow.com/questions/3577399/pyth on-](https://stackoverflow.com/questions/3577399/python-)
- [4] twitter-library-which-one
- [5] SMS API used in project: <https://docs.fast2sms.com/>
- [6] Documentation of SMS API: [https://medium.com/@prathamanchan22/send-text- message-sms-in-python-using-fast2sms- a1399e863552](https://medium.com/@prathamanchan22/send-text-message-sms-in-python-using-fast2sms-a1399e863552)
- [7] Django used for website: <https://docs.djangoproject.com/en/2.1>
<https://www.djangoproject.com/>
- [8] Tkinter used for user interface. <https://docs.python.org/3/library/tk>.