Every drop counts

Blood Bank Management System

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Submitted to : Prof. Rajesh Bhatia

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Problem Statement

- The major problem in old Blood Banks was that, they don’t follow the actual needs of users.
- Time consuming.
- Consumes lot of manpower to better results.
- Lacks of data security.
- Retrieval of data takes lot of time.
- Percentage of accuracy is less.
- Less awareness among people about blood donation.

Proposed Solution:

- Easier and flexible.
- Provides security.
- User- friendly interface.
- Faster and more precise.

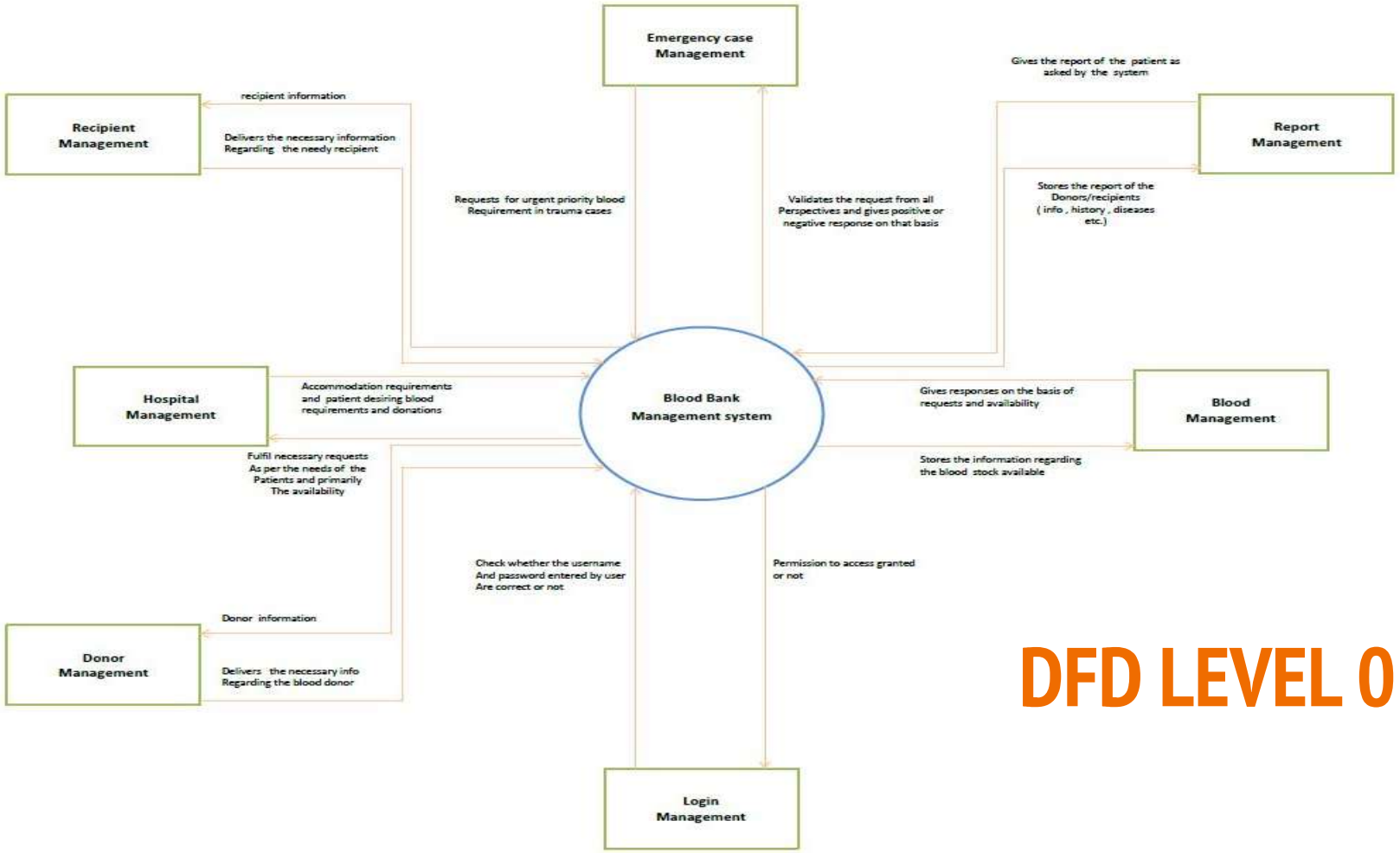
Aims & Objectives:

- To bridge the gap between blood banks, hospitals, volunteer donors and needy people, through this system.
- To facilitate the search process for needy people and make it easier than before.
- To reduce the data entry process.

Technologies used:

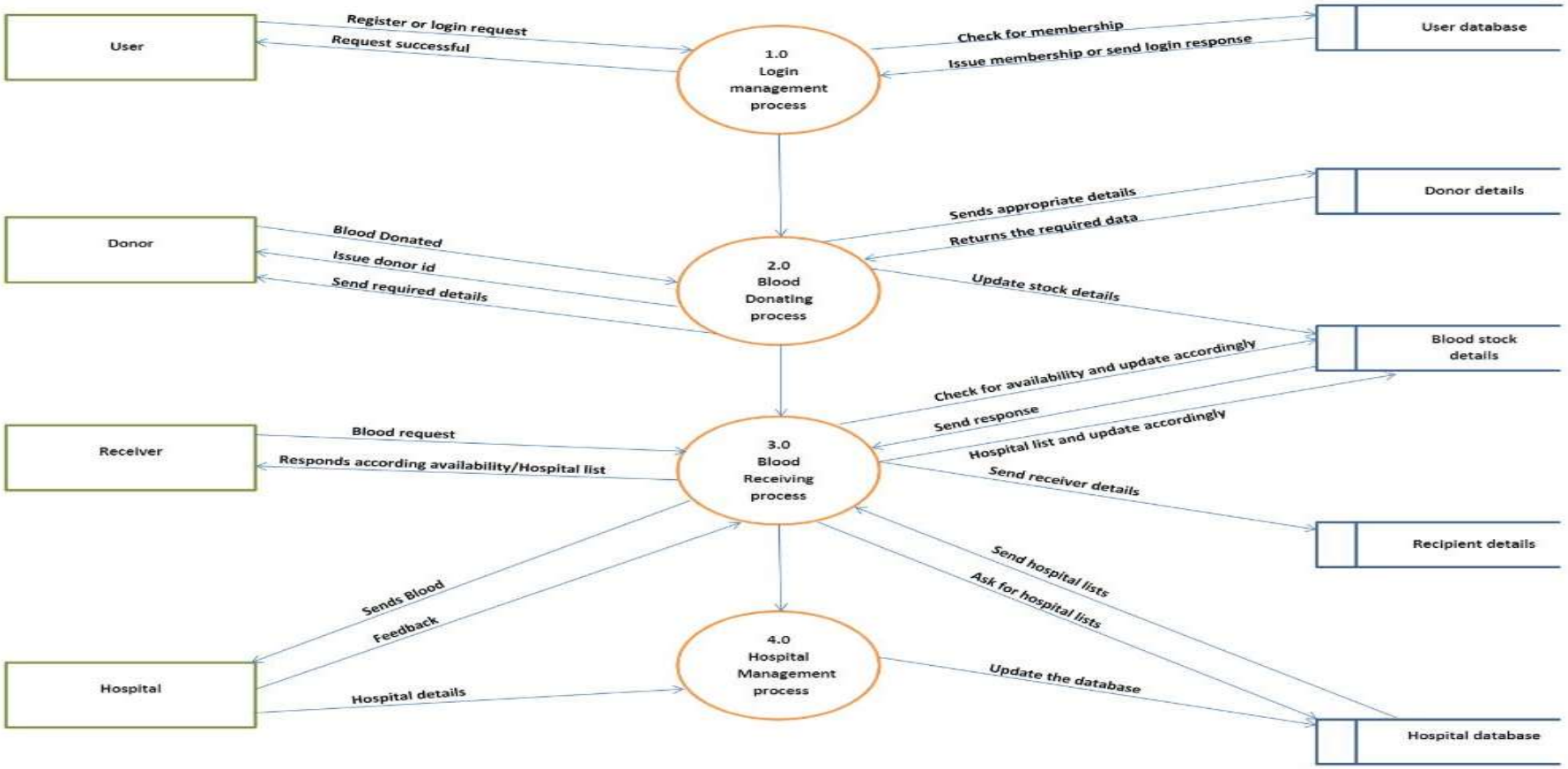
- HTML.
- CSS.
- JavaScript.
- Bootstrap.
- PHP
- MySQL Database.

Data Flow Diagram

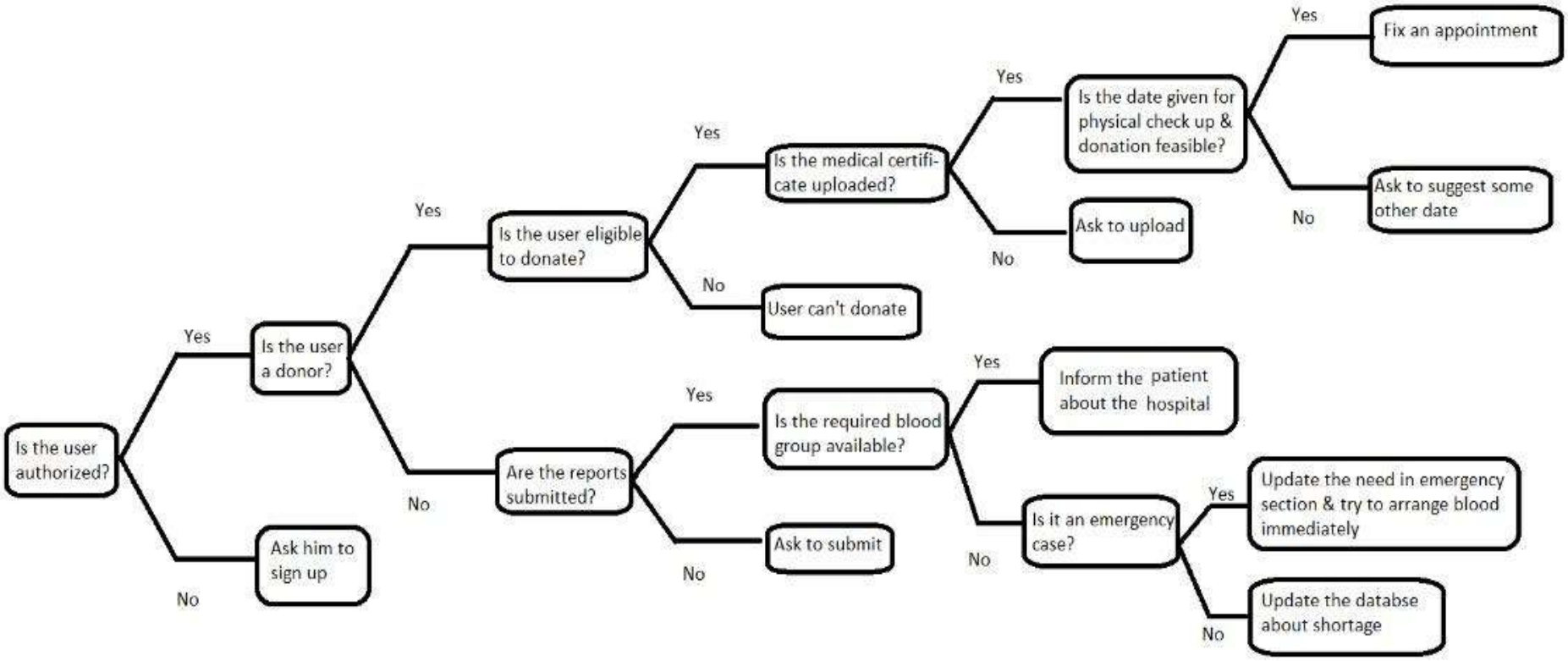

Emergency case Management
Gives the report of the patient as asked by the system
recipient information
Recipient Management
Delivers the necessary information Regarding the needy recipient
Report Management
Requests for urgent priority blood Requirement in trauma cases
Validates the request from all Perspectives and gives positive or negative response on that basis
Stores the report of the Donors/recipients (info , history , diseases etc.)
Hospital Management
Accommodation requirements and patient desiring blood requirements and donations
Blood Bank Management system
Gives responses on the basis of requests and availability
Blood Management
Fulfil necessary requests As per the needs of the Patients and primarily The availability
Stores the information regarding the blood stock available
Check whether the username And password entered by user Are correct or not
Permission to access granted or not
Donor information
Donor Management
Delivers the necessary info Regarding the blood donor
Login Management

DFD LEVEL 0

DFD LEVEL 1


User
Register or login request
Request successful
1.0
Login
management
process
Check for membership
Issue membership or send login response
User database
Donor
Blood Donated
Issue donor id
Send required details
2.0
Blood
Donating
process
Sends appropriate details
Returns the required data
Donor details
Update stock details
Blood stock
details
Receiver
Blood request
Responds according availability/Hospital list
3.0
Blood
Receiving
process
Check for availability and update accordingly
Send response
Hospital list and update accordingly
Send receiver details
Recipient details
Sends Blood
Feedback
Send hospital lists
Ask for hospital lists
Hospital
Hospital details
4.0
Hospital
Management
process
Update the database
Hospital database

DECISION TREE



Data Dictionary

PROCESSES

Process 1.0

Process Name :login Management Process

Description : If the user has an already existing account on our website then he will be asked for login credentials otherwise for sign up

Inbound Data Flows: user name and password
Outbound Data Flows: profile creation

Process 2.0

Process Name :Blood Donating Process

Description :current details of the donor will be taken and donor id will be issued to the donor and necessary updates will be performed on stock and databases

Inbound Data Flows: details of donor, amount and type of blood donated

Outbound Data Flows: generates donor id

Process 3.0

Process Name :Blood Receiving Process

Description : takes details of the receiver and check for availability of blood and update stock database accordingly. Then returns the list of hospitals available with the required blood.

Inbound Data Flows: Recipient details along with blood request

Outbound Data Flows: list of hospitals

Process 4.0

Process Name :Hospital Management Process

Description : updates the Hospital Database according to the details of the hospitals which have blood stocks available

Inbound Data Flows: hospital details

Outbound Data Flows: updated hospital list

DATA FLOW NAMES

Name : Login Info
Description: user enters Username and Password
From Processes :
To Processes: login Management Process
Data Structures : users

Name : Issue Membership
Description: If user has an already existing account then he will be able to access the portal otherwise issue a new membership.
From Processes : login Management Process
To Processes:
Data Structures : user

Name: Donor details
Description: All details of the donor will be asked including all details of the type of blood donated.
From Processes:
To Processes: Blood Donating Process
Data Structures:

Name: Send appropriate details(donor)
Description: Donor details are added to donor database
From Processes: Blood Donating Process
To Processes:
Data Structures: Donor

Name: Issue Donor id
Description: A Donor id is issued to the donor
From Processes: Blood Donating Process
To Processes:

Name: Returns the required data(donor)
Description: Donor id is retrieved from the donor database if already exists otherwise new donor id is issued
From Processes:
To Processes: Blood Donating Process
Data structures : donor

Name: Update stock details(blood donated)
Description: details of blood donated are updated in stock database
From Processes: Blood donating Process
To Processes:
Data Structures: donor details

Name: Blood request(recipient)
Description: recipient asks for the blood required and enter his/her details
From Processes:
To Processes: Blood Receiving Process
Data Structures:

Name: Check for availability and respond accordingly (blood required)
Description: checks in the stock database for the blood required by recipient
From Processes: Blood Receiving Process
To Processes:
Data Structures: blood stock

Name: Send receiver details
Description: recipient details are added to the Recipient database
From Processes: Blood Receiving Process
To Processes:
Data Structures: recipient database

Name: Send hospital list
Description: List of hospitals will be sent to the receiver.
From Processes
To Processes: Blood receiving process
Data Structures: hospital database

Name: responds according availability / hospital list
Description: receiver gets its response according to availability of blood and if the blood is available a hospital list is given to the recipient
From Processes: Blood Receiving Process
To Processes:
Data Structures:

Name: asks for hospital list
Description: hospital database is checked for the availability of blood required and a hospital list is fetched
From Processes: Blood Receiving Process
To Processes:
Data Structures: hospital database

Name: update the database (Hospital)
Description: hospital database to be updated according to the blood stock available in hospitals
From Processes: Hospital Management process
To Processes:
Data Structures: Hospital database

Name: Hospital details
Description: details of the hospital
From Processes:
To Processes: Hospital Management process
Data Structures:

DATA STRUCTURES :

1.Users

- User_id
- Username
- Password
- Date

2.Donor

- Donor_id
- Name
- Address
- Age
- Gender
- Phone
- H_id
- Blood
- Rh
- Certificate

3.Recipient

- P_id
- Name
- Email
- Age
- Phone Address
- Gender
- Blood
- Rh
- Emergency
- Date required before

4.Hospital

- H_id
- H_name
- H_address
- H_phone
- H_email

5.Inventory

- Bloodbag_id
- H_id
- Blood_type
- Blood_volume
- Receive_date
- Type_rh

DATA STORES

1.Users

User : Contains general information of a User

user_id(PK)	INT(11)	Unique key to identify each user	1
password_hash	Varchar(255)	generate hash for password	$2y$13$QtBx5UYoH3Fg9Slp2X8d7eHpxswuy4zZ/VWfHgs2kXDnr8HXhZoBC
username	Varchar(60)	email address that user use for register to system	abc@gmail.com
created_at	datetime	Date and time of new username created	01/03/2017 13:05:23

Hospital

Hospital: Contains general information of the Hospital

h_id(PK)	Int(10)	Unique key to identify hospital	1234985600
h_name	Varchar(50)	Hospital name	Indraprastha Apollo hospital
h_addr	Varchar(255)	Address of hospital	Sarita vihar,, Delhi - mathura road , New delhi
h_phone	varchar(15)	Contact number of hospital	029561335-3213
h_email	Varchar(50)	Contact email to hospital	apollohospital@gmail.com

Inventory: Contains the inventory information

Column	Type	Description	Example
bloodbag_id (PK)	int(11)	generate id to identify blood bag	1109746001
h_id(Fk)	int(10)	key to identify hospital	1234567890
blood_type	Varchar(3)	blood type of donor	AB
blood_volume	int(3)	Amount of blood in each bag	150 (cc)
receive_date	Datetime	Date of receive blood	28/04/2019
type_rh	text	Identify special type of blood	Rh positive, Rh negative

Donor: Contains general information of a Donor

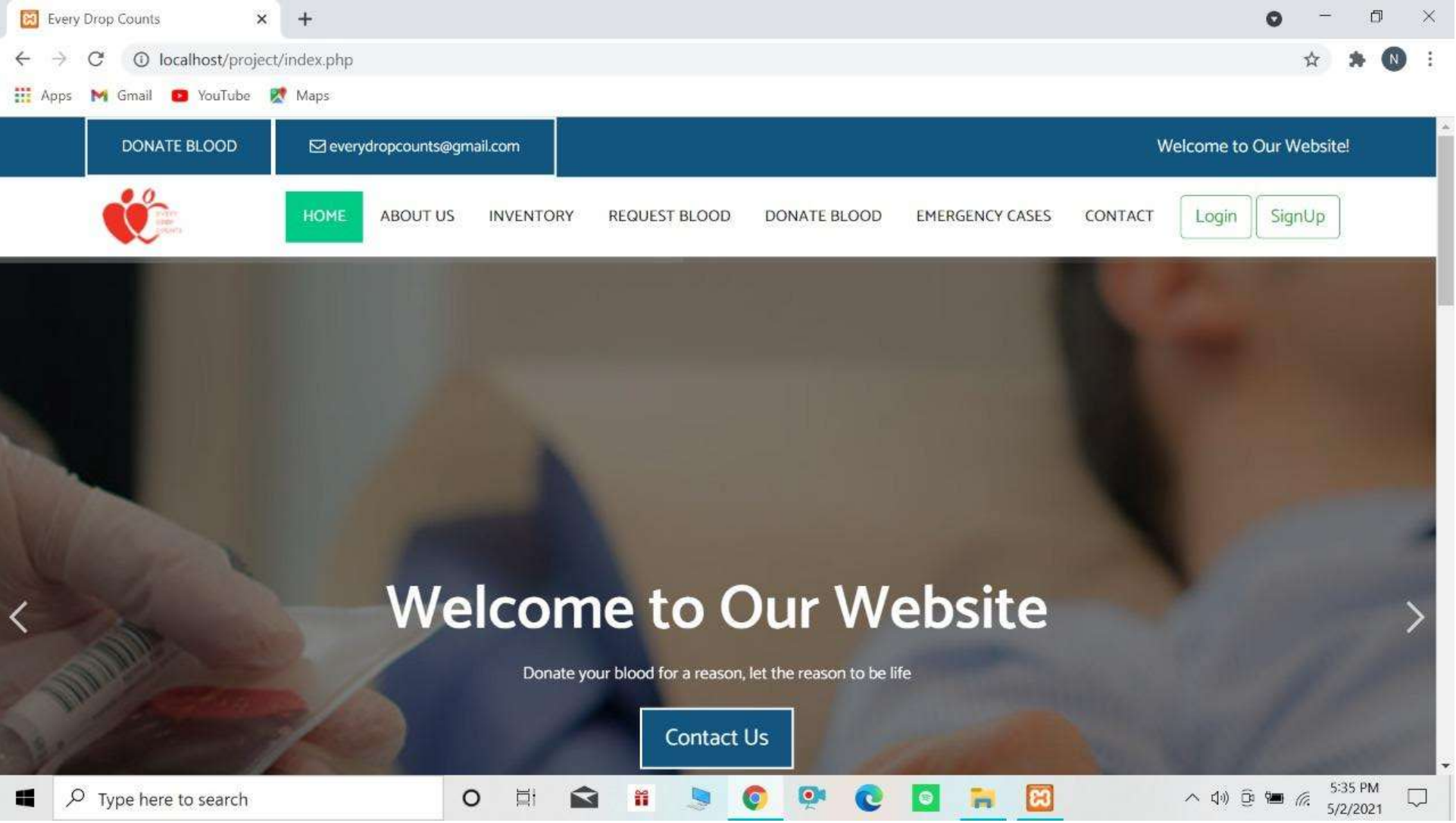
Column	Type	Description	Example
d_id(PK)	Int(11)	Unique key to identify donor	1
d_name	Varchar(50)	Name and username of donor	Alexander washington
d_age	Int(11)	Donor's age	25
d_addr	Varchar(200)	Address od donor	424 trapha bkk 1200025
d_gender	Varchar(6)	Gender of donor	Male,female
d_phone	text	Contact number of donor	9438227836
h_id(FK)	int(10)	Key to identify each hospital	1234985600
blood_type	varchar(3)	Blood type of donor	AB
type_rh	Varchar(10)	Identify special type of blood	Rh positive ,Rh negative
Medical_certificate_submitted	varbinary(100)	Has the donor Submitted his/her medical certificate	report.pdf

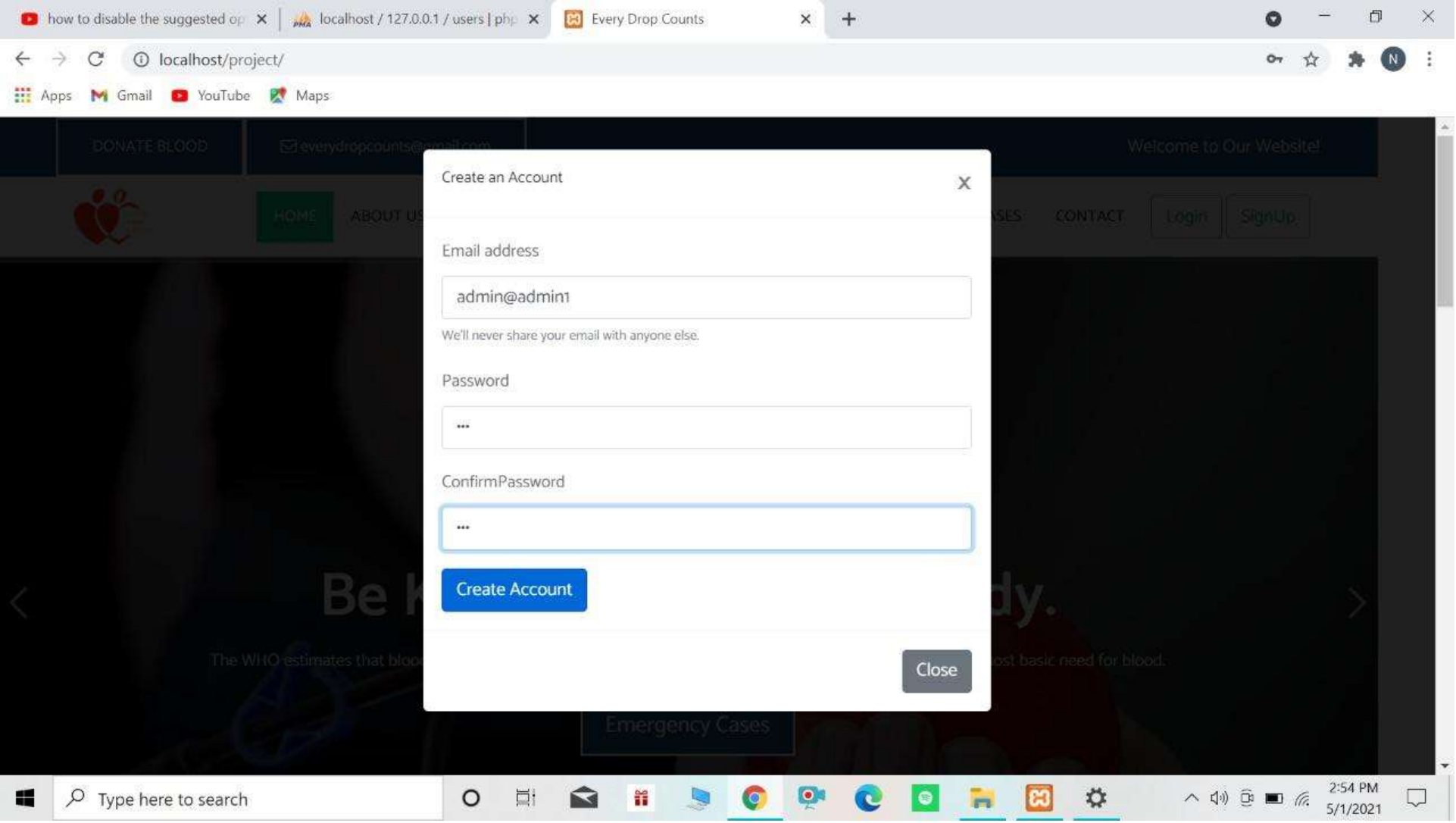
Recipient

Recipient : contains all the information of patient

Column	Type	Description	Example
p_id(PK)	Int(11)	Unique identity given to the patient	55665652354
p_name	Varchar(50)	Name of the patient	Mohit kumar
p_age	Int(10)	Age of the patient	30
p_contact	text	Contact number of the patient	9468127389
p_addr	Varchar(50)	Address of the patient	9, friends market , opp SBI , Chandni chowk, delhi
p_email	Varchar(50)	Email of the patient	xyz@gmail.com
require_date	text	On which day he requires blood	28/05/2020
req_blood_group	Varchar(3)	Blood group that is required	AB
rh_type	Varchar(20)	Special type of blood required	Rh positive , Rh negative
Emergency_case	Varchar(5)	is this an urgent case	'YES' or 'NO'

Website Screenshots


Every Drop Counts
localhost/project/index.php
Apps
Gmail
YouTube
Maps
DONATE BLOOD
everydropcounts@gmail.com
Welcome to Our Website!
HOME
ABOUT US
INVENTORY
REQUEST BLOOD
DONATE BLOOD
EMERGENCY CASES
CONTACT
Login
SignUp
Welcome to Our Website
Donate your blood for a reason, let the reason to be life
Contact Us
Type here to search
5:35 PM
5/2/2021


how to disable the suggested op
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Every Drop Counts
localhost/project/
Apps
Gmail
YouTube
Maps
DONATE BLOOD
Welcome to Our Website!
HOME
ABOUT US
CONTACT
Login
SignUp
Create an Account
Email address
admin@admin1
We'll never share your email with anyone else.
Password
ConfirmPassword
Create Account
Close
Emergency Cases
Type here to search
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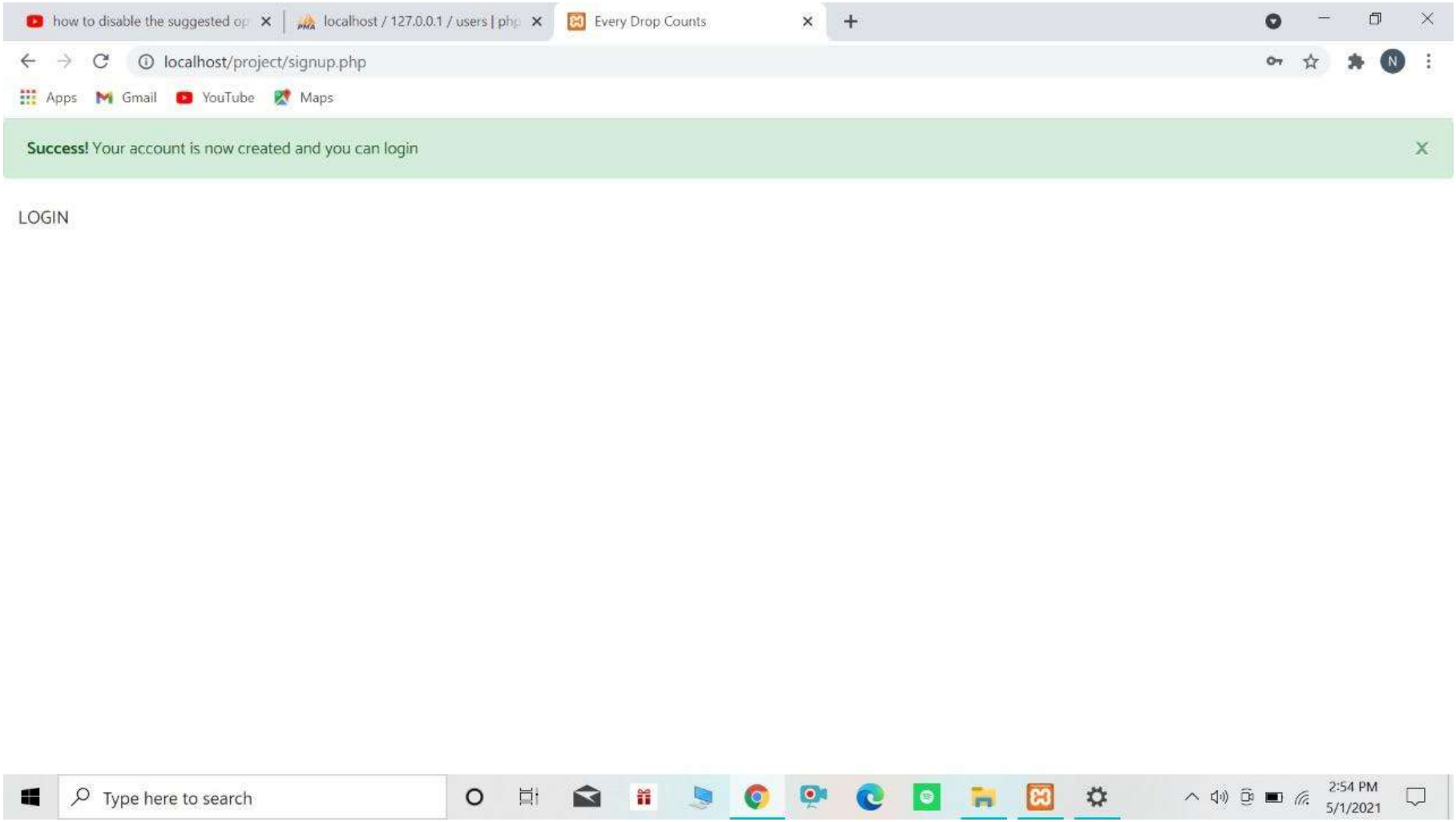
5/1/2021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Every Drop Counts
localhost/project/signup.php
Apps
Gmail
YouTube
Maps
Success! Your account is now created and you can login
LOGIN
Type here to search
2:54 PM
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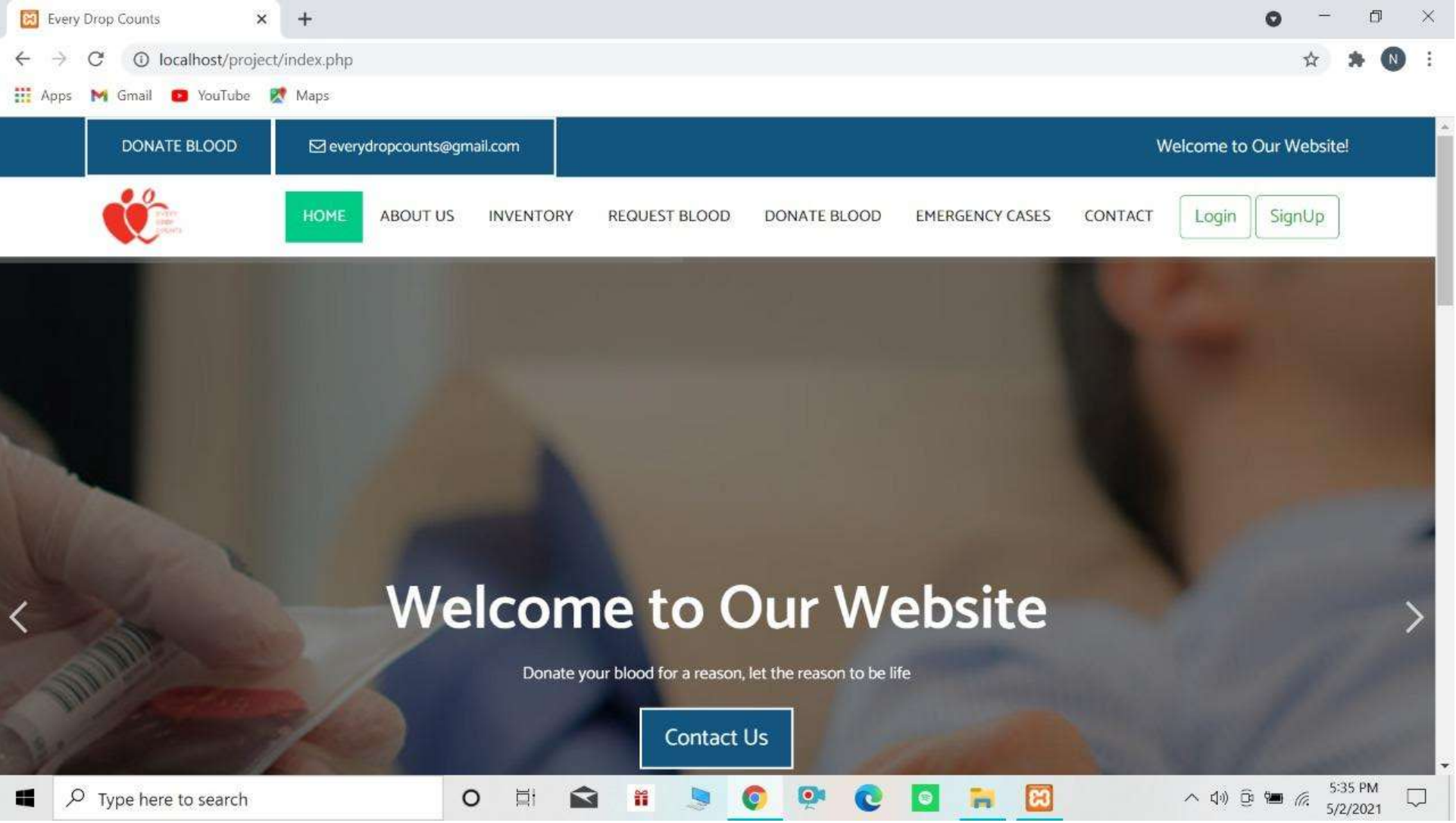
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Apps
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YouTube
Maps
DONATE BLOOD
everydropcounts@gmail.com
Welcome to Our Website!
HOME
ABOUT US
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REQUEST BLOOD
DONATE BLOOD
EMERGENCY CASES
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SignUp
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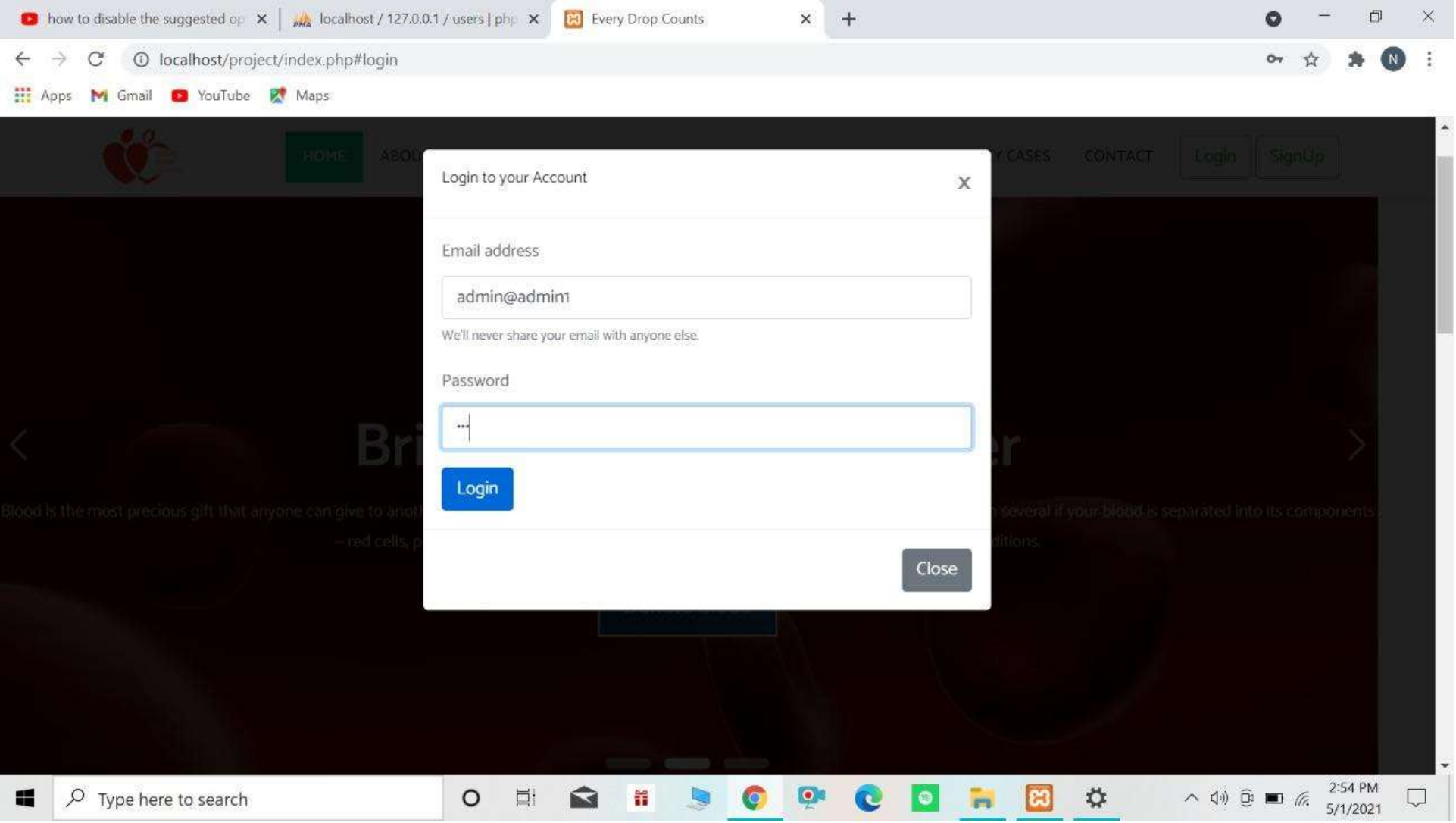
5/2/2021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localhost/project/index.php#login
Apps
Gmail
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Maps
HOME
CONTACT
Login
SignUp
Login to your Account
Email address
admin@admin1
We'll never share your email with anyone else.
Password
Login
Close
Type here to search
2:54 PM
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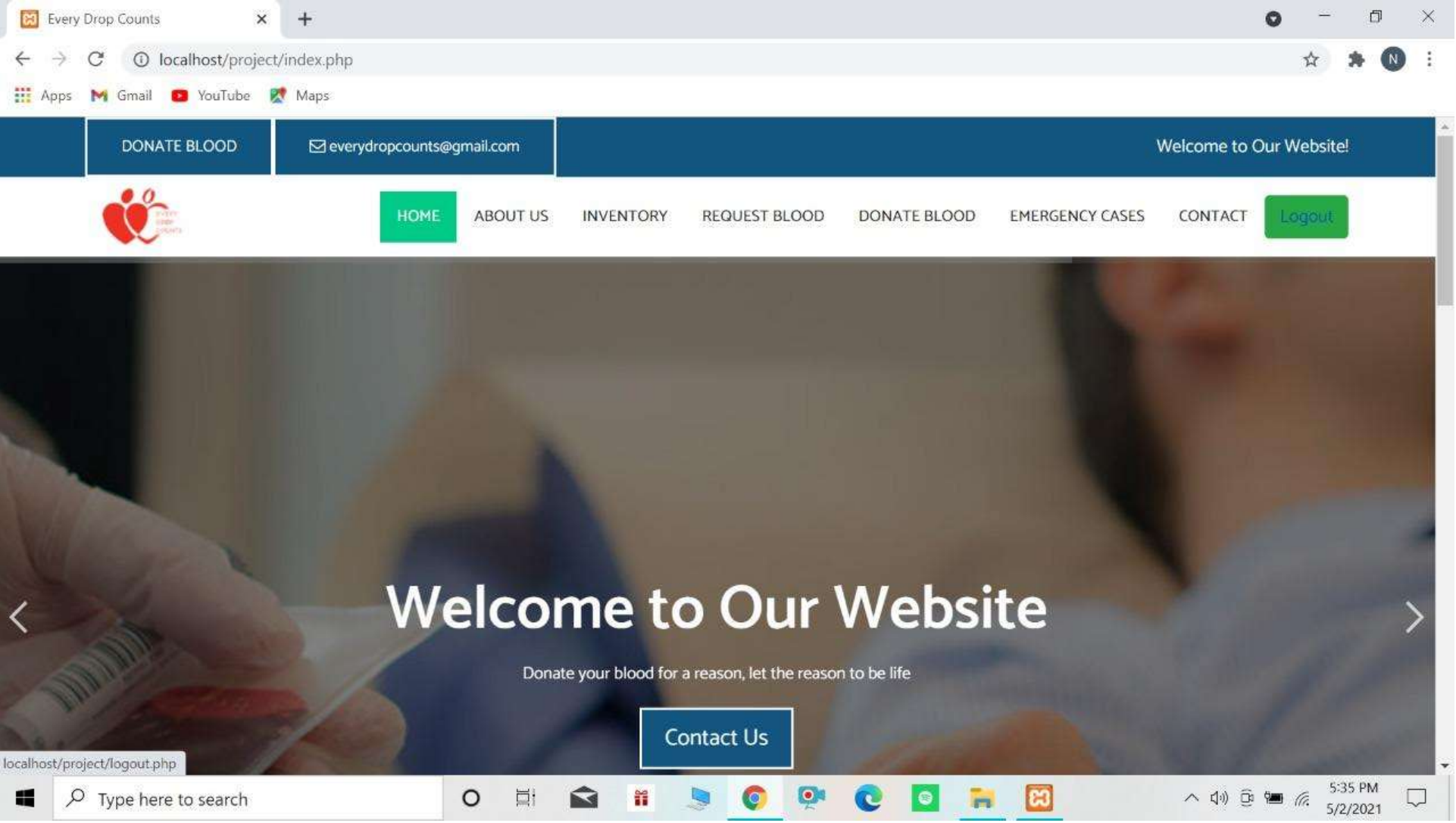
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YouTube
Maps
DONATE BLOOD
everydropcounts@gmail.com
Welcome to Our Website!
HOME
ABOUT US
INVENTORY
REQUEST BLOOD
DONATE BLOOD
EMERGENCY CASES
CONTACT
Logout
Welcome to Our Website
Donate your blood for a reason, let the reason to be life
Contact Us
localhost/project/logout.php
Type here to search
5:35 PM
5/2/2021

Every Drop Counts

localhost/project/index.php

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HOME ABOUT US INVENTORY REQUEST BLOOD DONATE BLOOD EMERGENCY CASES CONTACT Logout

Emergency Cases

Every day 12,000 people in India die due to the sheer lack of donated blood. India collects 11 million units of blood but needs 15 million units, so there's a deficit of 4 million units.

Over 40 districts in India don't have a single blood bank.

Kevin

Age:47

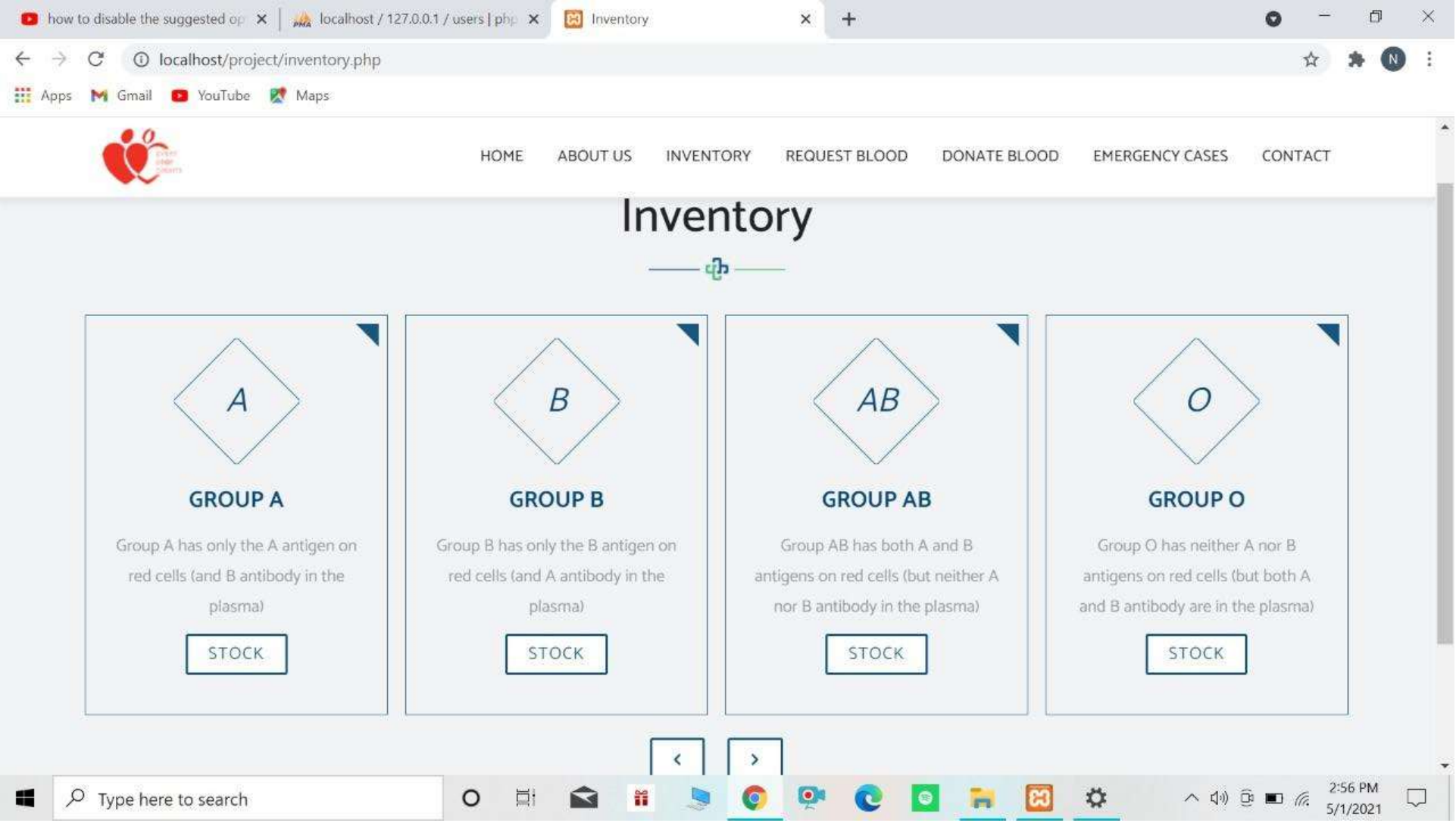
Pgimer Sector-12

Blood:B+

Contact:98989999

Type here to search

4:53 PM
5/2/2021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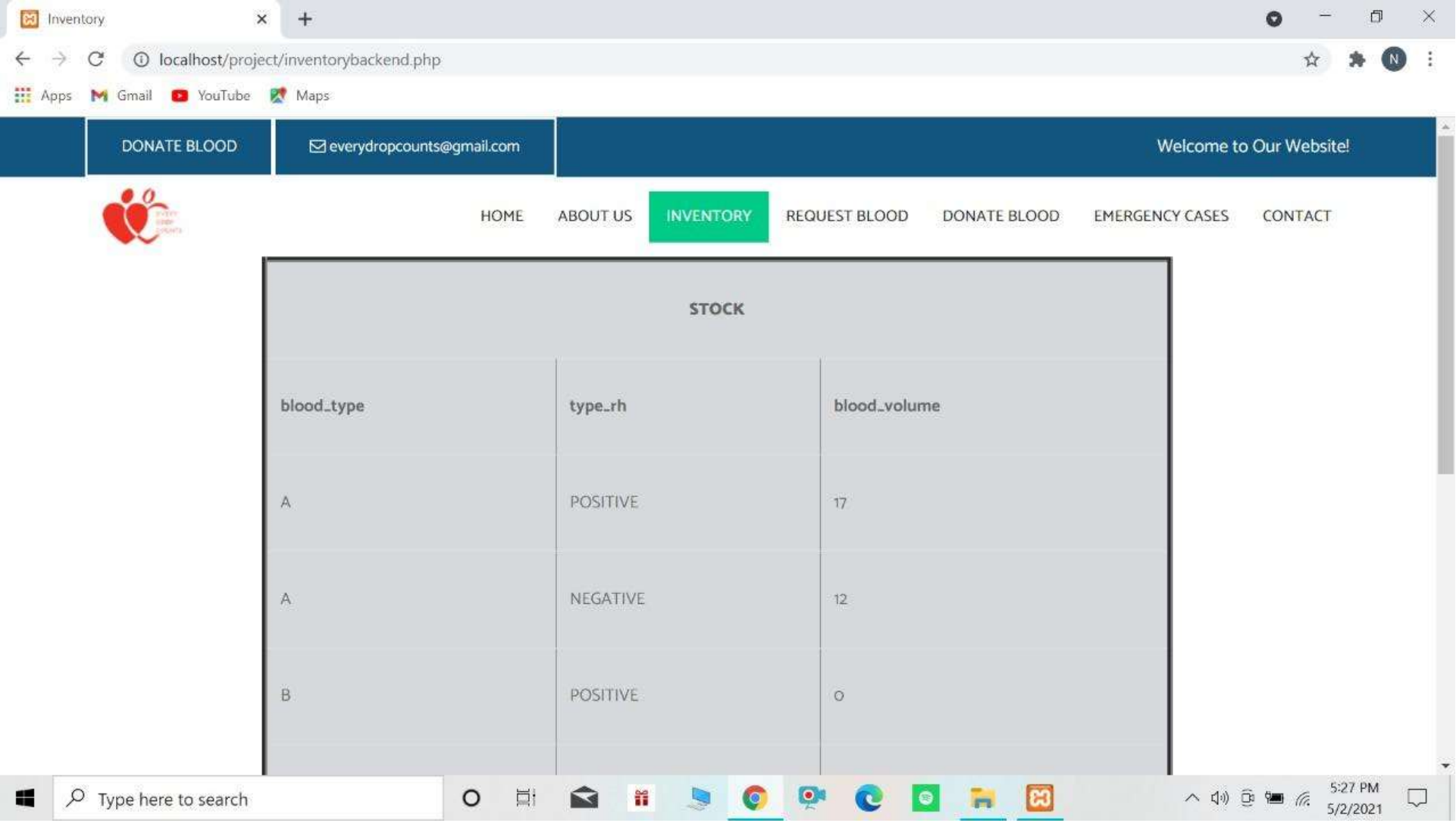
YouTube
Maps
HOME
ABOUT US
INVENTORY
REQUEST BLOOD
DONATE BLOOD
EMERGENCY CASES
CONTACT
Inventory
A
GROUP A
Group A has only the A antigen on red cells (and B antibody in the plasma)
STOCK
B
GROUP B
Group B has only the B antigen on red cells (and A antibody in the plasma)
STOCK
AB
GROUP AB
Group AB has both A and B antigens on red cells (but neither A nor B antibody in the plasma)
STOCK
O
GROUP O
Group O has neither A nor B antigens on red cells (but both A and B antibody are in the plasma)
STOCK
Type here to search
2:56 PM
5/1/2021


Inventory
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Maps
DONATE BLOOD
everydropcounts@gmail.com
Welcome to Our Website!
HOME
ABOUT US
INVENTORY
REQUEST BLOOD
DONATE BLOOD
EMERGENCY CASES
CONTACT
STOCK
blood_type
type_rh
blood_volume
A
POSITIVE
17
A
NEGATIVE
12
B
POSITIVE
0
Type here to search
5:27 PM
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Donate Blood

localhost/project/donate.php

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Donate Blood

Name

vageesh

Address

jammu

Age

20

Phone number:

6004593495

Hospital

Pgimer Hospital

Blood Type

A

Rh Type

Positive

Gender

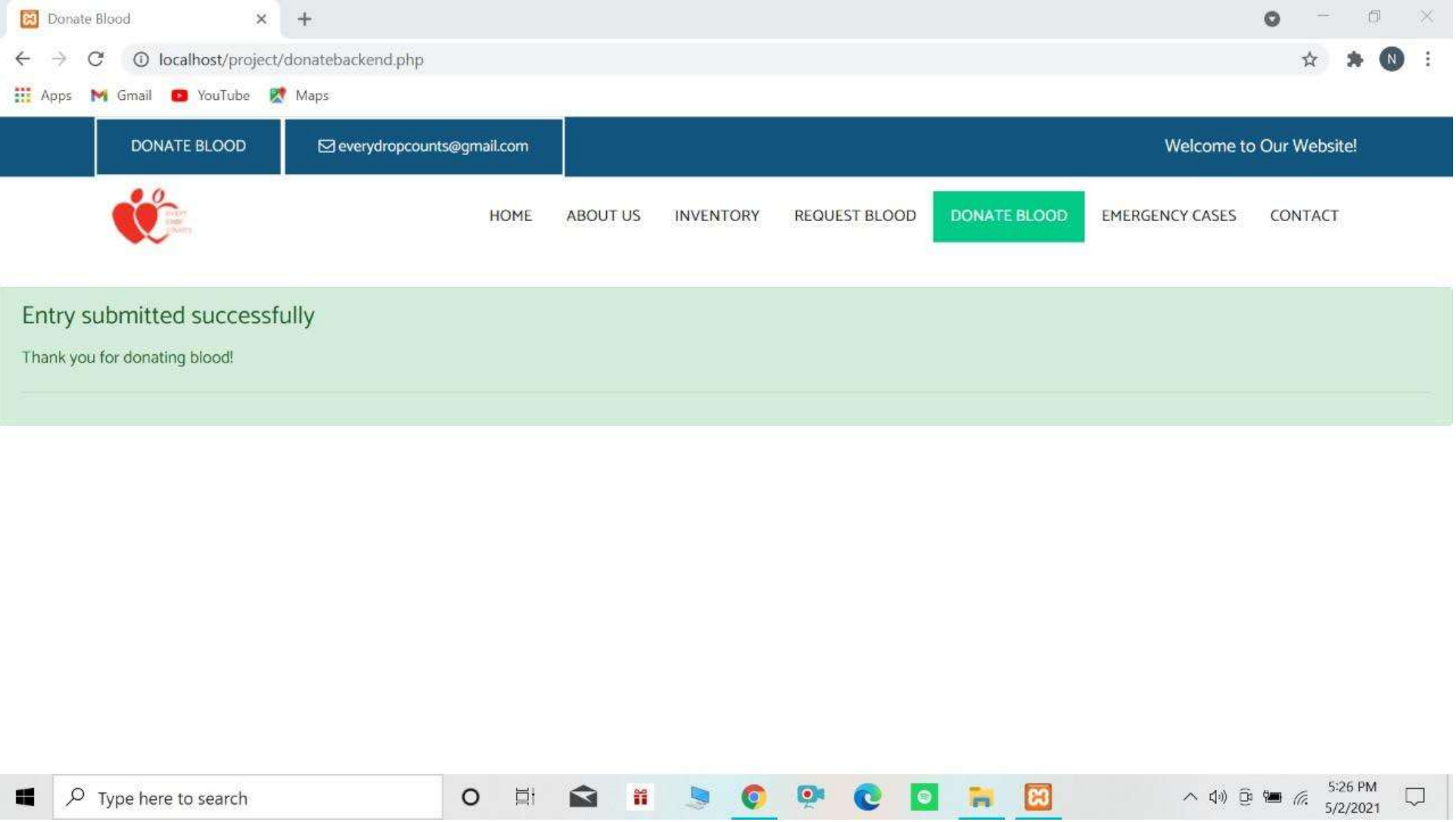
Male

Upload Your Report Choose File Data Dictionaries.docx

What happens to Blood you donate?

Type here to search

4:56 PM
5/2/2021


Donate Blood
localhost/project/donatebackend.php
Apps
Gmail
YouTube
Maps
DONATE BLOOD
everydropcounts@gmail.com
Welcome to Our Website!
HOME
ABOUT US
INVENTORY
REQUEST BLOOD
DONATE BLOOD
EMERGENCY CASES
CONTACT
Entry submitted successfully
Thank you for donating blood!
Type here to search
5:26 PM
5/2/2021

Request Blood

localhost/project/request.php

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HOME ABOUT US INVENTORY REQUEST BLOOD DONATE BLOOD EMERGENCY CASES CONTACT

Name

Nischal

Email

nischal@abc

Address

sector 8 kkr

Age

19

Phone number:

9728465535

Date Required Before(dd-mm-yyyy)

23-05-2021

Gender

Male

Emergency

Yes

Blood Type

O

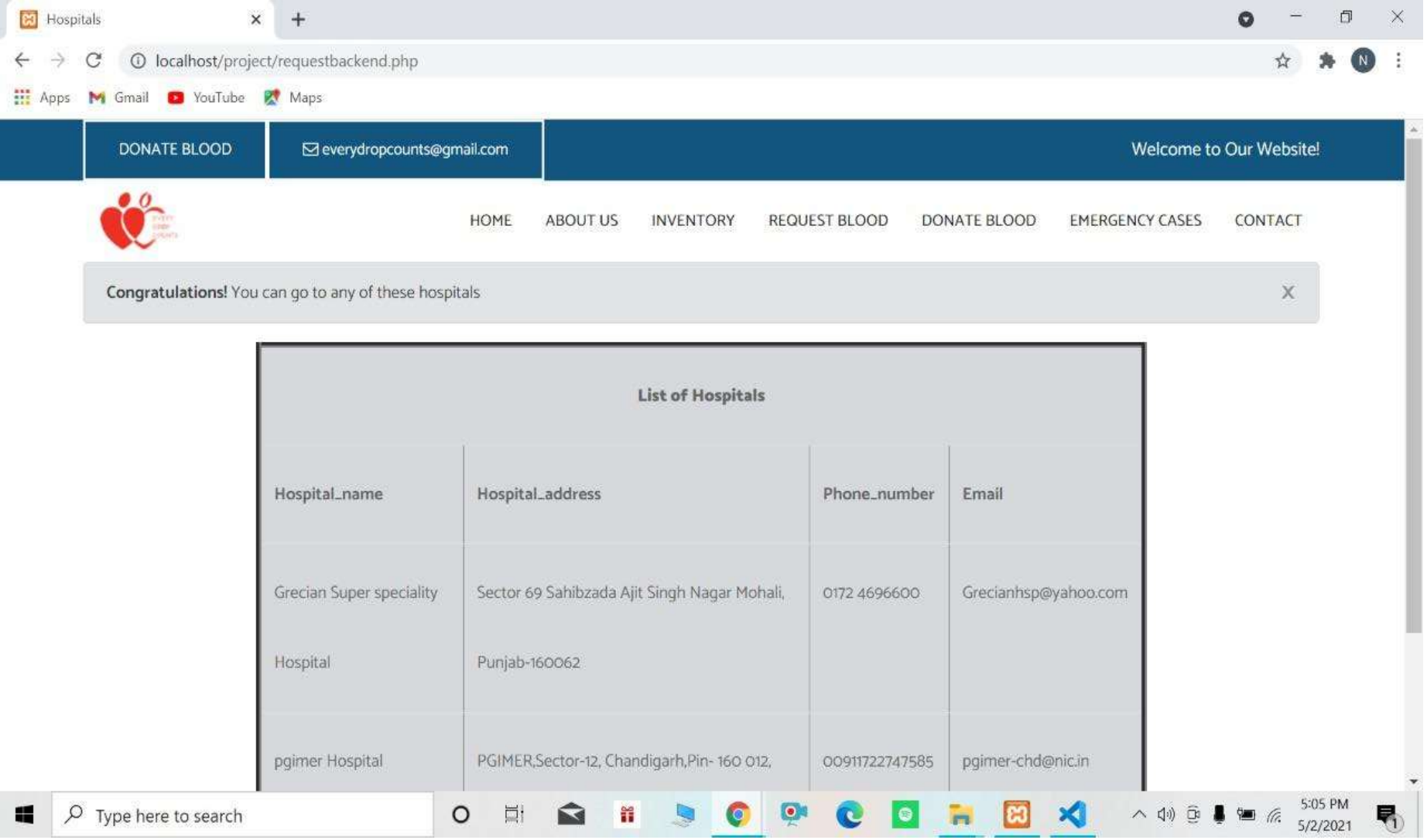
Rh Type

Positive

https://www.youtube.com/watch?v=FvG7MyDsEjg&feature=emb_imp_woyt

Type here to search

5:04 PM
5/2/2021


Hospitals
localhost/project/requestbackend.php
Apps
Gmail
YouTube
Maps
DONATE BLOOD
everydropcounts@gmail.com
Welcome to Our Website!
HOME
ABOUT US
INVENTORY
REQUEST BLOOD
DONATE BLOOD
EMERGENCY CASES
CONTACT
Congratulations! You can go to any of these hospitals
List of Hospitals
Hospital_name
Hospital_address
Phone_number
Email
Grecian Super speciality Hospital
Sector 69 Sahibzada Ajit Singh Nagar Mohali, Punjab-160062
0172 4696600
Grecianhsp@yahoo.com
pgimer Hospital
PGIMER,Sector-12, Chandigarh,Pin- 160 012,
00911722747585
pgimer-chd@nic.in
Type here to search
5:05 PM
5/2/2021

Request Blood

localhost/project/request.php

Apps Gmail YouTube Maps

HOME ABOUT US INVENTORY REQUEST BLOOD DONATE BLOOD EMERGENCY CASES CONTACT

Ankit

ankit@abc

Address

Sunam

Age

19

Phone number:

9729191331

Date Required Before(dd-mm-yyyy)

05-05-2021

Gender

Male

Emergency

Yes

Blood Type

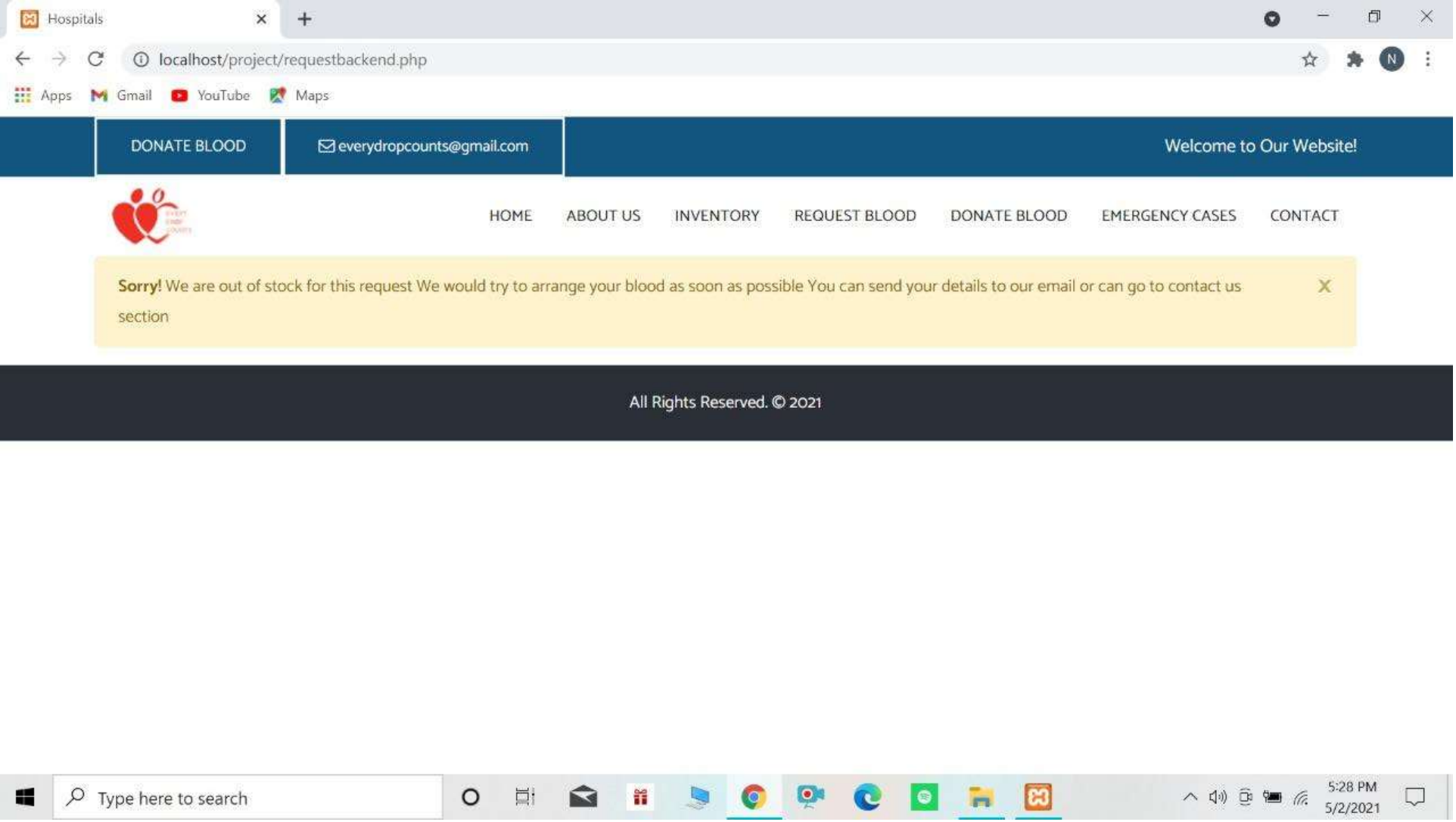
B

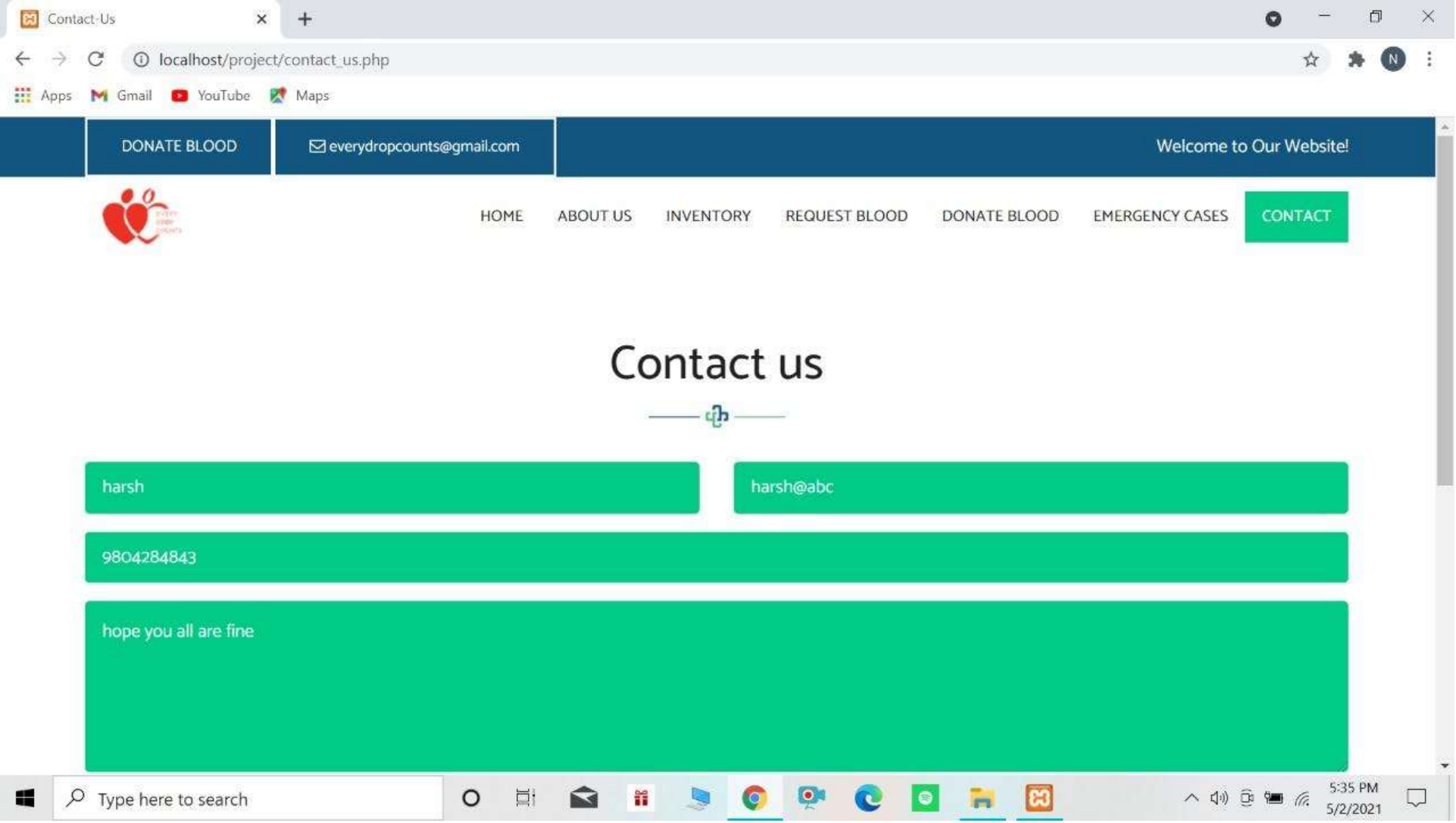
Rh Type

Positive

Type here to search

5:28 PM
5/2/2021


Hospitals
localhost/project/requestbackend.php
Apps
Gmail
YouTube
Maps
DONATE BLOOD
everydropcounts@gmail.com
Welcome to Our Website!
HOME
ABOUT US
INVENTORY
REQUEST BLOOD
DONATE BLOOD
EMERGENCY CASES
CONTACT
Sorry! We are out of stock for this request We would try to arrange your blood as soon as possible You can send your details to our email or can go to contact us section
All Rights Reserved. © 2021
Type here to search
5:28 PM
5/2/2021


Contact Us
localhost/project/contact_us.php
Apps
Gmail
YouTube
Maps
DONATE BLOOD
everydropcounts@gmail.com
Welcome to Our Website!
HOME
ABOUT US
INVENTORY
REQUEST BLOOD
DONATE BLOOD
EMERGENCY CASES
CONTACT
Contact us
harsh
harsh@abc
9804284843
hope you all are fine
Type here to search
5:35 PM
5/2/2021

Future Scope

- Set Appointments between Donors and hospitals automatically on convenient dates.
- To extend the perimeter of hospitals covered.
- Priority based management of emergency cases.

THANK YOU