



# **PES UNIVERSITY**

(Established under Karnataka Act No. 16 of 2013)

## **Object Oriented Analysis and Design using Java (UE20CS352)**

### **Mini Project**

#### **TOPIC:**

### **DISASTER RELIEF MANAGEMENT SYSTEM**

#### **TEAM MEMBER DETAILS:**

NAME	SRN
Kamal Sab	PES1UG20CS653
Likhith R	PES1UG20CS659
Mahesh Shripad Bhat	PES1UG20CS661
Pranav K Hegde	PES1UG20CS672

#### **PROBLEM STATEMENT:**

The Problem Statement is to develop a mechanism for managing disaster assistance that can assist with aiding impacted families and facilitating the distribution of NGOs and relief supplies to people in need.

With an emphasis on providing humanitarian help during the crisis, this project creates a Disaster Relief Management System. Search and rescue, evacuation, the supply of shelter, food and medication, first aid, and money are all potential forms of assistance during a disaster.

Government agencies, well-established NGOs that focus on disaster aid, and regular citizens may all provide these essentials.

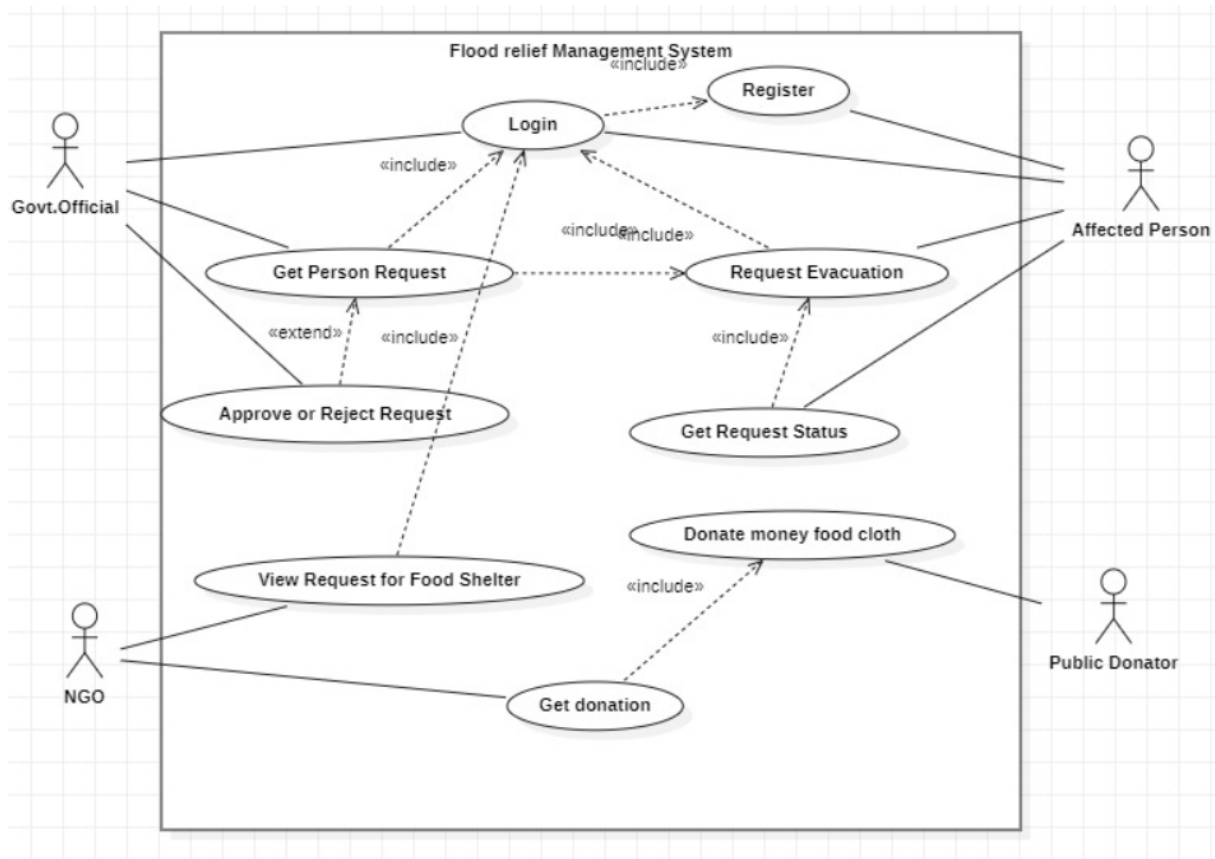
Making sure that effective channels are open for these goals will help all parties concerned to make serviceable requests and receive prompt replies.

#### **LINK TO GITHUB REPOSITORY:**

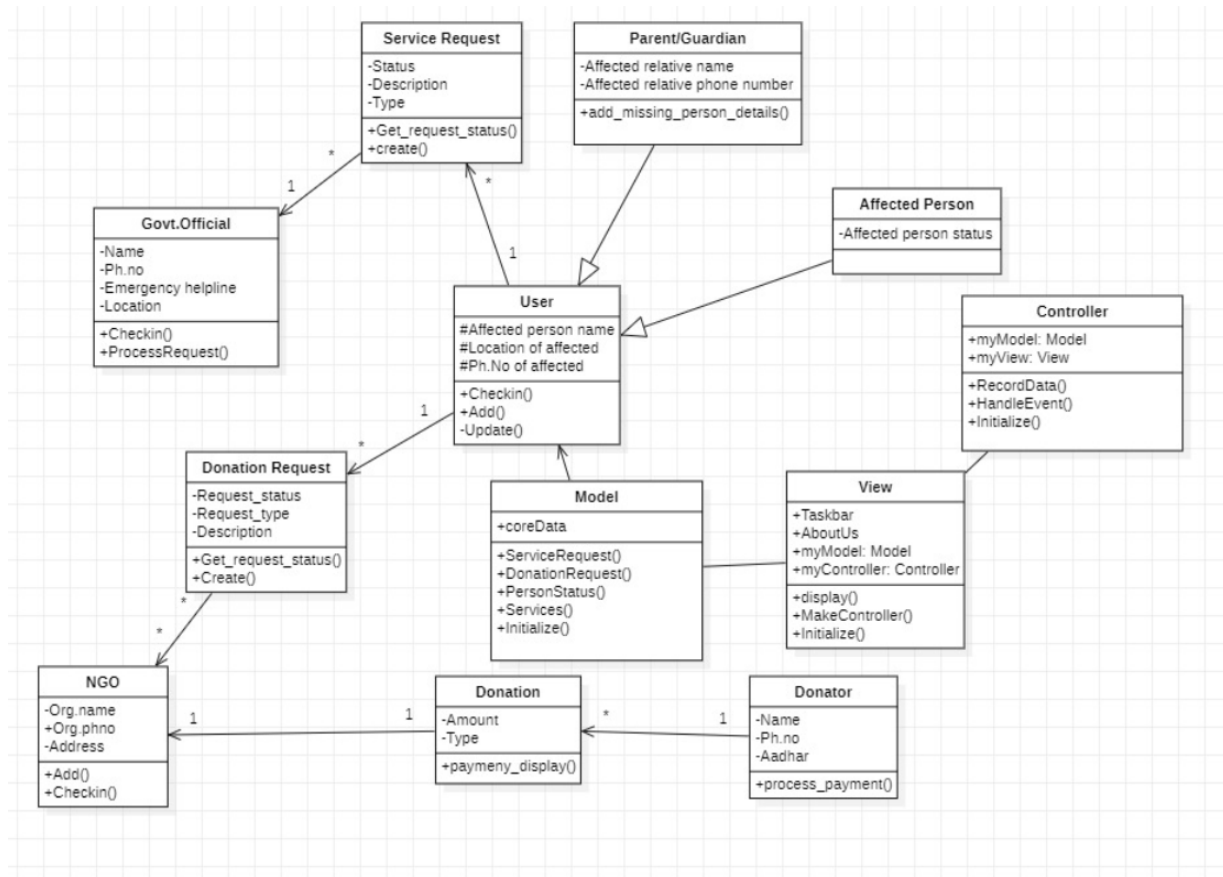
[https://github.com/mahesh727/OOADJ\\_653\\_659\\_661\\_672](https://github.com/mahesh727/OOADJ_653_659_661_672)

## ANALYSIS AND DESIGN MODELS:

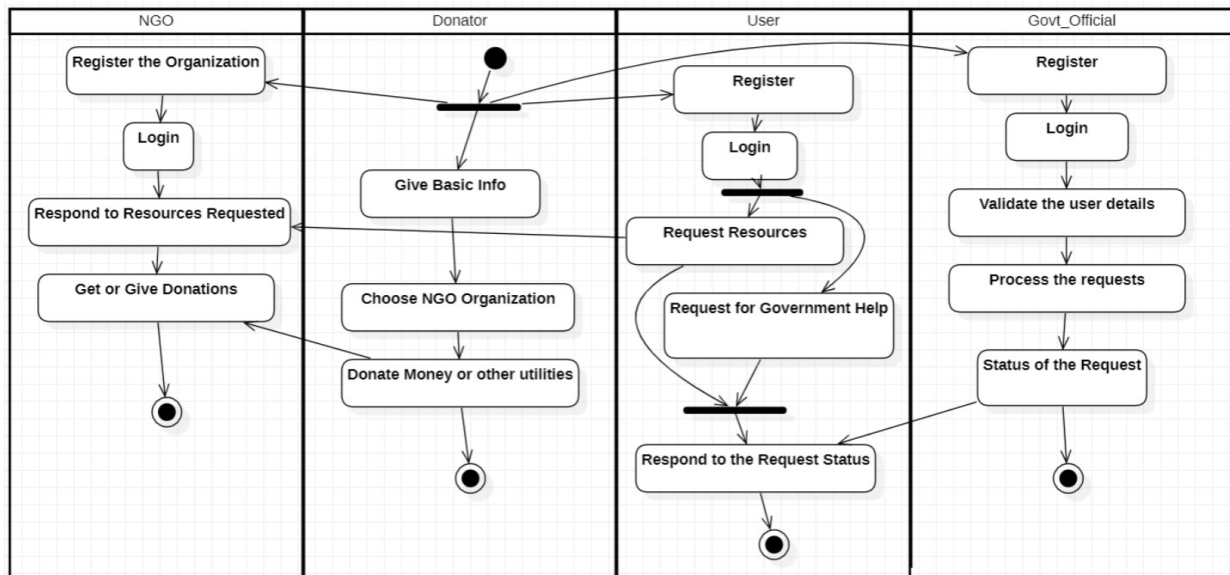
### USE CASE DIAGRAM:



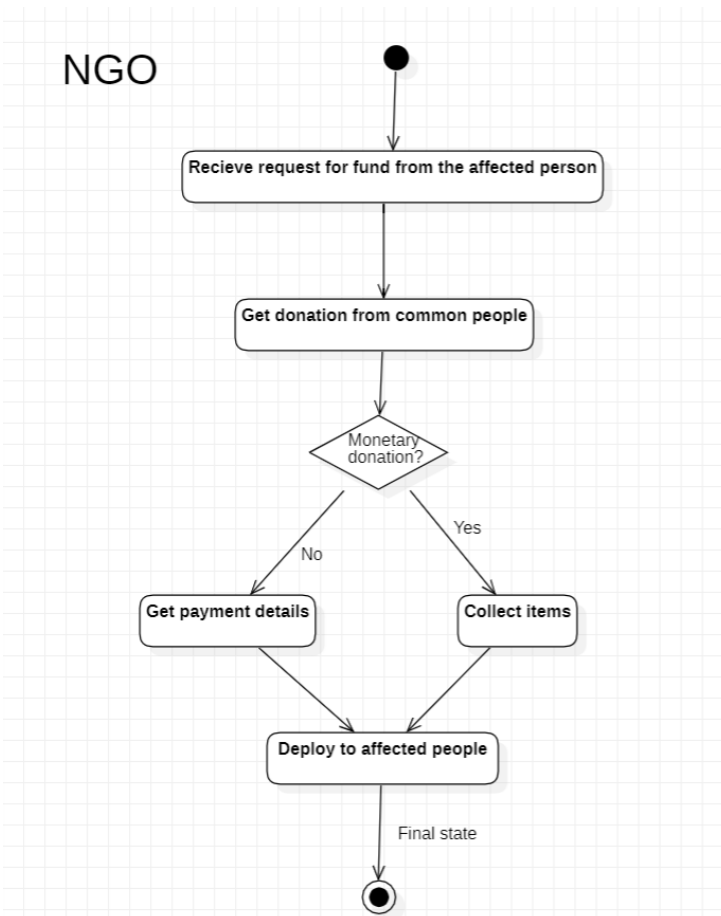
### CLASS DIAGRAM:

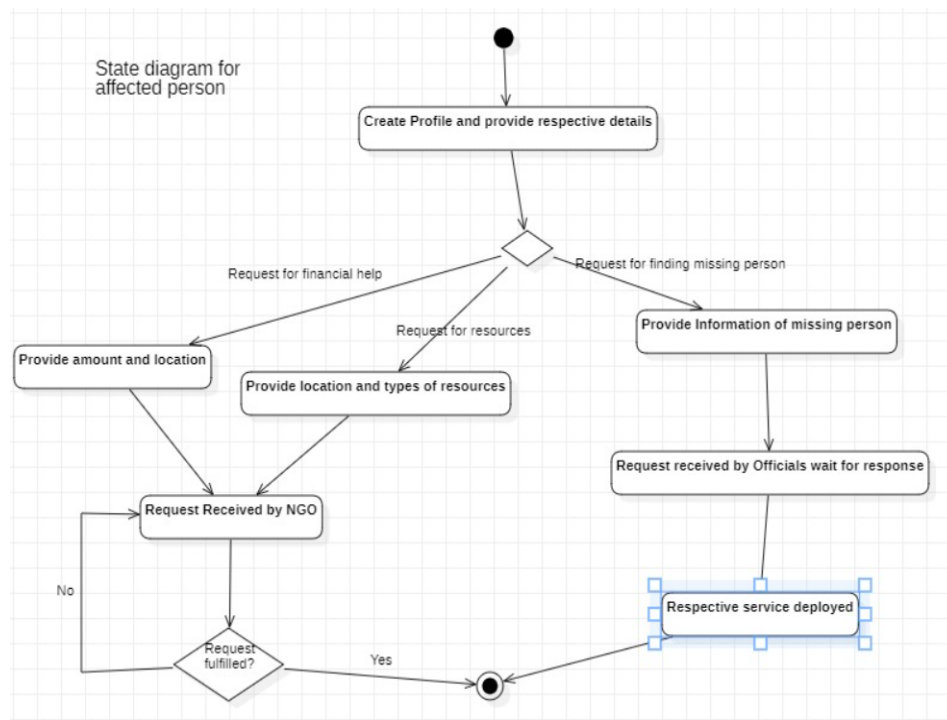


## ACTIVITY DIAGRAM:



## STATE DIAGRAM:





## TOOLS AND FRAMEWORKS USED:

1. The “javax.swing” for the GUI.
2. Mysql database backend, using a JDBC Mysql driver to connect it to the JRE.
3. “java.awt” for events and triggers.
4. “java.sql” for the database backend connection, exception and querying.

## DESIGN PRINCIPLES AND DESIGN PATTERNS APPLIED:

### SINGLETON DESIGN PATTERN:

The Singleton design pattern is a creational pattern that ensures only one instance of a class is created and provides a global point of access to that instance. For a government official, the Singleton design pattern can be used to ensure that there is only one instance of that official in the system.

To implement the Singleton design pattern for a government official, we create a class that represents the official and ensure that only one instance of that class can be created.

```

public class govt_Form extends javax.swing.JFrame {

    private static govt_Form instance;

    private govt_Form()
    {
        initComponents();
        setLocationRelativeTo(c:null);
        show_user_request();
        showUser();
    }

    public static govt_Form getInstance()
    {
        if (instance == null)
        {
            synchronized (govt_Form.class)
            {
                if(instance==null)
                {
                    // if instance is null, initialize
                    instance = new govt_Form();
                }
            }
        }
        return instance;
    }
}

```

## FACTORY DESIGN PATTERN:

For creation of each instance in the landing page;

We have created an interface called Factoryint, which acts as the abstract class to create an object. Each subclass, all of whose methods are called in Factory.java, which is responsible for a specific functionality, is responsible for its relevant instantiation.

```

public class Factory {
    public static void init_type(int usertype) {
        System.out.println("UserType****"+usertype);
        switch(usertype) {
            case 1: {

                User.UserController uCont = new User.UserController();
                uCont.initRegController();

                break;
            }
            case 2: {

                NGO.Donator.MoneyPage fil = new NGO.Donator.MoneyPage();
                fil.setFocusable( focusable:true);
                fil.show();
                break;
            }
            case 3: {
                Govt.Official.loginForm fil = new Govt.Official.loginForm();
                fil.setFocusable( focusable:true);
                fil.show();
                break;
            }
            case 4: {

                NGO.registerForm fil = new NGO.registerForm();
                fil.setFocusable( focusable:true);
                fil.show();
                break;
            }
            default: ;
        }
    }
}

```

## OPEN-CLOSE PRINCIPLE:

Instead of adding condition check value in fetch\_all() and modifying it, we make a new function get\_from\_db() so that each function can be used to get rows from the database based on whether we need to get rows on condition or not.

```

public String get_from_db(String table, String cond, String val, String fetch){
    query = "SELECT " + fetch + " FROM " + table + " WHERE " + cond + " = '" + val + "'";
    ExecutedBQ exec = new ExecuteDBQ();
    result = exec.fetch_execute(query,fetch);
    return result;
}

public String[] fetch_all(String table,int n){
    query = "SELECT * FROM " + table + ";";
    query.toString();
    ExecutedBQ exec = new ExecuteDBQ();
    arr_res = exec.fetch(query,n);
    return arr_res;
}

```

## Single RESPO PRINCIPLE FROM SOLID:

The database.java class is responsible only for executing queries related to the database and does not perform any other function.

```
package databaseConnection;

import java.sql.DriverManager;
import java.sql.Connection;

/**
 * @author CSC
 */
public class database {
    public static Connection connectDB()
    {
        try{
            Class.forName( className: "com.mysql.jdbc.Driver");
            Connection con = DriverManager.getConnection( url: "jdbc:mysql://localhost/java_proj_1", user: "root", password: "");
            return con;
        }catch(Exception e){e.printStackTrace();}
        return null;
    }
}
```

## INDIVIDUAL CONTRIBUTIONS:

**Mahesh Shripad Bhat (PES1UG20CS661):** Register and Login functionality for User, UserDashBoard where he/she can request for help.

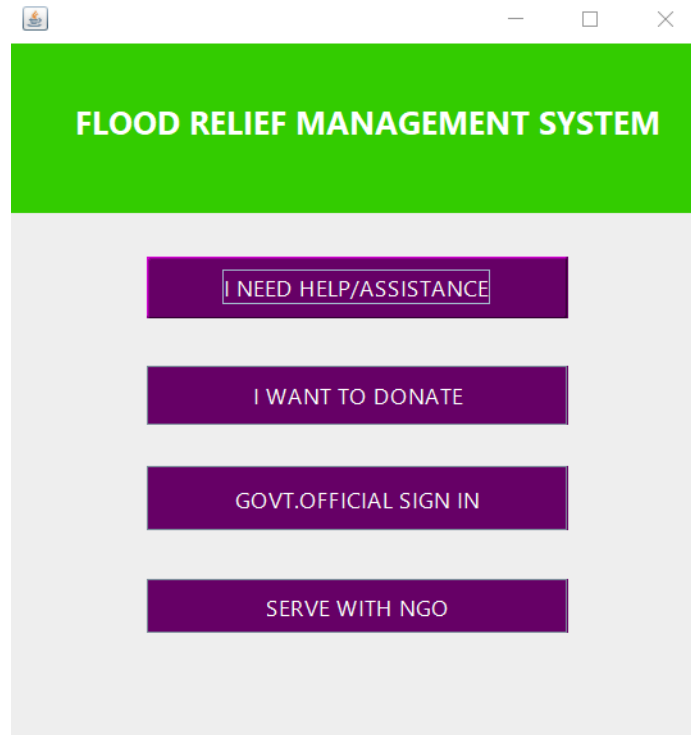
**Kamal Sab(PES1UG20CS653):** Donator form where people can choose the NGO , and donate to them.

**Pranav K Hegde(PES1UG20CS672):** Govt.Official Login page, Govt.Official Dashboard where he/she can view User requests and processing requests.

**Likhith R(PES1UG20CS659):**Register as NGO,Login page for NGO,NGO dashboard where the donation details for respective organization can be accessed

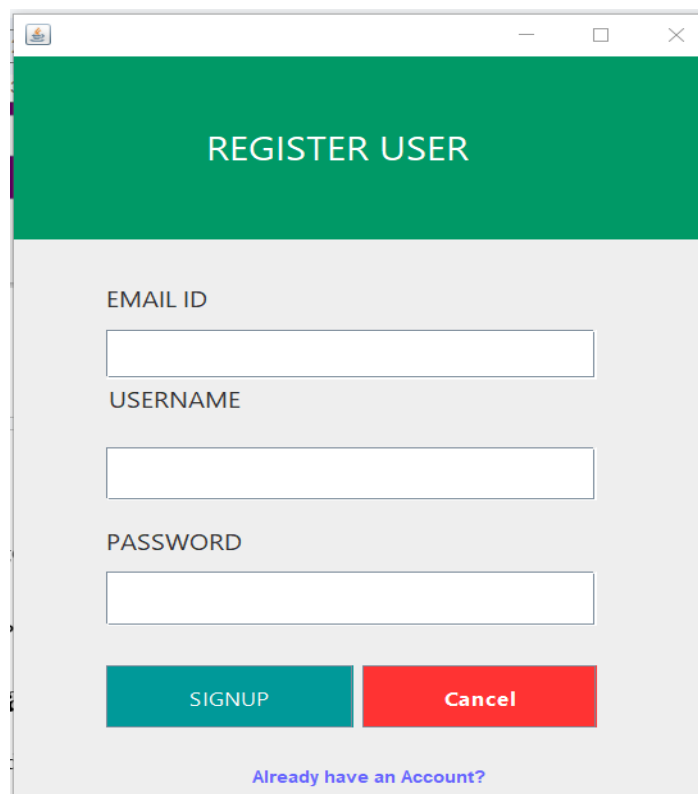
## APPLICATION SCREENSHOTS:

### 1. LANDING PAGE (INITIAL PAGE)



A screenshot of a web application window titled "FLOOD RELIEF MANAGEMENT SYSTEM". The window has a green header bar with the title in white. Below the header, on a light gray background, there are four purple rectangular buttons stacked vertically. The buttons contain the text: "I NEED HELP/ASSISTANCE", "I WANT TO DONATE", "GOVT.OFFICIAL SIGN IN", and "SERVE WITH NGO".

### 2. USER REGISTER PAGE



A screenshot of a web application window titled "REGISTER USER". The window has a green header bar with the title in white. Below the header, on a light gray background, there are three input fields for "EMAIL ID", "USERNAME", and "PASSWORD". Below the input fields, there are two buttons: a teal "SIGNUP" button and a red "Cancel" button. At the bottom of the form, there is a link that says "Already have an Account?" in blue text.



REGISTER USER

EMAIL ID

user@yahoo.com

USERNAME

User

PASSWORD

.....

SIGNUP Cancel

Already have an Account?

Information Message

Successfully created a new Account!

OK

### 3. USER LOGIN PAGE

LOGIN USER

USERNAME

PASSWORD

LOGIN

Not Registered? Create an Account

LOGIN USER

USERNAME

User

PASSWORD

.....

LOGIN

Not Registered?[Create an Account](#)

Information Message

Successfully Login!

OK

#### 4. USER DASHBOARD

User DashBoard

1

Evacuation Request

Full Name

Mahesh

Mob.No

7353463423

Age

25

Gender

Male

Location

Linden Avenue,Raichur,Karnataka,584101,India

Id	Location	Date	Time	Request Status
1	Linden Avenue,...	2023-04-09	11:10:54	Accepted
7	Linden Avenue,...	2023-04-14	16:22:15	Pending
10	No. 30/2, 1st Fl...	2023-04-13	16:06:30	Pending
11	Bangalore	2023-04-26	11:43:48	Pending

Create Request

Update Request

Clear Request

Delete Request

Logout

## 5. DONATOR FORM

### MONEY DONATION FORM

Cancel

Organization you have chosen :

Path Of Sunshine

Your Name

Maresh

Enter Amount in Rupees

50000

Enter Debit Card Details

728198371465

Your Pin

....

Phone number

9819283795

DONATE

Choose Organization

Id	Organization
1	PeopleHelp
2	Path Of Sunshine
3	Help

### MONEY DONATION FORM

Cancel

Organization you have chosen :

Path Of Sunshine

Your Name

Maresh

Enter Amount in Rupees

50000

Enter Debit Card Details

728198371465

Your Pin

....

Phone number

9819283795

DONATE

Choose Organization

Id	Organization
1	PeopleHelp
2	Path Of Sunshine
3	Help

Information Message

Successfully Donated Account, Thank You!

OK

## 6. GOVT. OFFICIAL DASHBOARD

Govt.Official DashBoard

Logout

Process Pending Requests

View Users

Pending

Id	Location	Name	Date	Time	Mob.No
2	Olive Street,Raich...			2:52:19	3745362243
7	Linden Avenue,R...			5:22:15	7353463423
10	No. 30/2, 1st Flo...			5:06:30	5824375295
11	Bangalore			4:43:48	9481952619

Confirmation Message

Are you sure you want to submit

YesNo

Request Id:

7

Accept

Submit

Govt.Official DashBoard

Logout

Process Pending Requests

View Users

Id	Email	Username	Date Of Registration
1	maresh@gmail.com	Mahesh	2023-03-22
2	vinayak@gmail.com	Vinayak	2023-03-30
3	pranav1806@gmail.com	ProPranav	2023-04-06
4	Likhithrk@gmail.com	Likhbhai	2023-04-06
5	kingkamal@gmail.com	kingkamal	2023-04-06
6	rajesh@gmail.com	Rajesh	2023-04-12
8	karthik@gmail.com	Kartik	2023-04-12
9	sehag@gmail.com	Sehag	2023-04-12
10	raghu@gmail.com	Raghu	2023-04-26
19	guru@gmail.com	Guru	2023-04-26
20	likhith@gmail.com	Likhith	2023-04-26
21	rohit@gmail.com	Rohit	2023-04-26
22	girish@gmail.com	girish	2023-04-26
23	gowri@gmail.com	gowri	2023-04-26
24	arvind@gmail.com	Arvind	2023-04-26
25	pranav@gmail.com	Pranav	2023-04-26

## 7. REGISTER NGO

### REGISTER NGO

Cancel

Open

Look In: OOADJ

Inventory-For-Drug-Store-1

lab\_9&10

Lab\_code

Labs

ooad

PES1UG20CS661

Project

project\_backup\_beforefactory

Register-Your-Book-MVC-Archit

Spring\_FullStack

Spring\_mvc

Sublit\_assignments

unit 3

unit\_1

File Name:

Files of Type: PDF Files

Open

Cancel

NGO Name

World Vision

Contact N

7394238429

Email

vision@gmail

Password

.....

SIGNUP

Already have an Account?

### REGISTER NGO

Cancel

NGO Name

World Vision

Contact Number

7394238429

Email

vision@gmail.com

Password

.....

SIGNUP

Already have an Account?

Address

Bangalore

ID Proof (PDF Files only)

er\OOADJ\Labs\PES1UG20CS661\_lab4.pdf

Choose File

## 8. NGO DASHBOARD

NGO DashBoard

Logout

Donations

Donator Name	Amount Donated	Phone Number
Mahesh	10000	2456789638
Hari Prasad	20000	1234567890
Likhith	48000	9876543210
rama	20	9872345907
Sathish	3000	9481952161
Sathish	4000	9481952619
Tony	4000	9481952619
Raghu	3500	9481952619
Mahesh	5554	9481952619