

Donation Management System

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1. Introduction

1.1 Overview

Public welfare crisis has a long history in developing countries like Bangladesh. Multiple negative occurrences in the donation and charity collection scenario has caused a trust crisis among beneficiaries. Moreover, there is often reported asymmetry observed in the distribution of charity and donations when it comes to generalized donation campaigns. There is a huge gap in people in need and the people willing to help with very few trust-worthy and efficient organizations to bridge the gap. “Bidyanondo”, a leading charity organization in Bangladesh has faced a major burn of widespread negative news about their unfair and asymmetric distribution of donation. Which led to major trust-crisis towards the organization. The seemingly prevalent lack of communication and connection between the beneficiaries and the charity seekers also is a major reason donors go through the dilemma of trusting the right organization and making sure their help reaches the right group of people.

1.2 Motivation

After comparing all the donation management systems; we have found that there is no appropriate solution to solve the transparency issue and inefficiencies necessary to establish a fair donation management system. There is a huge lack of co-ordination among these management systems. And our main focus was to connect the donor and the donee directly so that they could know the amount they were getting as a donation. Most of the donors stays in a dilemma whether they are donating to a trust worthy organization or not. So it is important to make sure that a needy person got benefited by the donation. . So from our potential solutions we have tried to perform the following things, given below:

1. Use of decentralized applications, so that the donor and the donee connect directly and the donor can easily see the information of

the donee. By developing this, there will be less pressure on the administration; this will be a real time communication between donor and donee fostering transparency.

2. Verification system is one of the key point of this project. A donee must need to be verified by the organization. This will include the identity verification, background checking of a donee. So there will be less trust issues between donor and donee.

1.3 Objective

The main objective of this donation management system is to develop a trustworthy, user-friendly, easy and efficient solution of donation for both donor and donee which makes the donation process easier through technology. Sometimes, both donor and donee face difficulties during the donation process. By this project, donor and donee may get rid of any obstacles of the donation process. In many cases, donor cannot get information about their donation. Our donation management project will provide transparency to donors about how their donation goes on. This system helps to make connections between donor and donee. Another feature of this project is that an admin will organize the whole donation management tasks to make the donation process efficient.

2. Literature Review

2.1 Report Overview

In a 2019 paper titled “Web-Based Orphanage Fundraising Information System” focuses on building a blueprint that orphanages from developing countries like Indonesia could use to increase their donation collecting efficiency by building their own donation collecting website. But the suggested system is not a third party donation site but an open source system to be used by the orphanages themselves which can be tough to execute since many of these orphanages lack people who are well-versed in technology to manage a site.[1] In 2021, a paper was published named “REDUCTION OF FOOD WASTAGE THROUGH DONATION USING ONLINE FOOD MANAGEMENT

SYSTEM FOR ORPHANAGE". The main theme of this paper was to explore the development of donation. But the drawbacks of this paper is graphical limitations and privacy concerns. [2] A paper titled "MODERN DONATION HUB" was published in 2022. This paper represents a donation management system for the orphanages. This system includes admin, user and donator. This system has limitations such as verifying orphanages legitimacy. [3] The study titled "Donation Management System Sri Lanka Institute of Information Technology, Malabe, Sri Lanka" investigates the effectiveness of a food donation system for underprivileged educational institutions in Sri Lanka. But there is a certain limitation, the system's accessibility is confined to sri lanka, lacking global scalability. [4] A paper named "ADVANCEMENT IN ORPHANAGE SYSTEM Orphanage Management System Research" here they have investigated a digital network that connects donors with orphanages and retirement homes like organization with the goal of facilitating donations and support while also addressing long-term consequences and sustainable support mechanism. [5] Waste Management App: Donate Food, Clothing, and Books Research paper on an internet-based mobile application for food donation. The study focuses on establishing an app to distribute extra food and clothing, alleviating food waste in India, however it ignores cultural and practical challenges in diverse areas. [6] The literature analysis emphasizes the need for a comprehensive solution for Bangladesh's food waste management utilizing web-based apps that addresses unique concerns and fills a vacuum in effective solutions caused by the rise of web-based donation applications. [7] The paper "DONATIONS USING ANDROID APPLICATION" published in 2023 indicates an Android donations app development. This app offers the development of charitable giving and donations to orphanages basic needs such as food, clothing etc .The main objective of this project is to make a connection between donee and donors and get rid of difficulties in the

donation process through technology. However, this system has a user friendly interface but those who have limited access to smartphones or internet connectivity are unable to connect in this network. So, there are some challenges in ensuring widespread adoption of the app. [8] "Developing a Reliable Service System of Charity Donation During the Covid-19 Outbreak" is a paper that focuses on using blockchain to develop a donation management system that would alleviate the asymmetry and trust crisis that comes with donation collection, specially during natural disasters. The paper, however, predominantly focuses on the technological application and lacks considerations of societal reforms and how much community participation can be expected with this overemphasis and reliance on technology, as donation collection relies heavily on community. [9]

2.2 Existing Solutions

There are multiple organizations around the world that are trying to connect people willing to help to people in need through websites and apps. "Bidyanondo" is one of the major names when it comes to charity organizations in Bangladesh. There are also websites for global charity organizations such as Save the Children, World Food Programme under WHO that collect funds for their humanitarian work globally. "Go Fund Me" is one of the leading third party fund raising sites in the world that works as a reliable site for people in need of donation and people willing to donate.

We will be looking into the method of operation of two of the major donation sites-

1. Bidyanondo
2. GoFundMe

2.2.1 Bidyanondo Foundation

2.2.1.1 Organization profile

Website	https://www.bidyanondo.org/
Aim	Provide support to people in distress
Founded	2013

Organization Overview

Bidyanondo is one of the major humanitarian organizations in Bangladesh. They started



Figure 1. Bidyanondo Foundation

out as an organization to provide necessary education and educational support to the unprivileged. With time, the organization has conducted successful campaigns that focuses on providing educational, financial and physical support to people in need adopting ways that fight the stigma of receiving aid. “Ak takay Ahar”, that provided meals in exchange of one tk, is one of their major campaigns. These campaigns operate with the help of donations and volunteers. Bidyanondo has a website that features their current campaigns that people can donate to. The campaigns on the website mainly collect donation with an overall goal in mind. There is a individualistic donation campaign for children under their educational institutions, but it is fairly small.

2.2.2 GoFundMe

2.2.2.1 Organization profile

Website	https://www.gofundme.com/
Aim	Cater as a reliable crowdfunding platform
Founded	2010

Organization Overview

GofundMe is one of the biggest and most trusted platform for crowdfunding. It is a third party fundraising platform that people can start a fundraiser on. The platform charges a 2.9% payment-processing fee on



Figure 2. Go Fund Me

each donation, along with 30 cents for every donation.[10]

The platform operates via both website and an app. GofundMe is one of the biggest and most trusted platform for crowdfunding. It is a third party fundraising platform that people can start a fundraiser on. The platform charges a 2.9% payment-processing fee on each donation, along with 30 cents for every donation.[10]

The platform operates via both website and an app.

2.2.2.2 Overview of technology used:

Server side language: JavaScript, PHP, Ruby

Client side language: JavaScript

Libraries: jQuery, Moment.js, GSAP, Vue.js
[11]

3. Data Collection

3.1 Survey Questions

1. What is the institution name?
2. Who is the director of this institution?
3. How many students are there who need donations?
4. What is Donee's name?
5. What is donee's father's name?
6. What is donee's mothers name?
7. Address of donee's hometown?
8. Occupations of his parents?

3.2 Table of data

Name	Father's Name	Mother's Name	Address
Shifat Shikder	Late Nur Alam Shikder	Hena Begum	West Gonderdia Faridpur
Tanjil Ahad	Minhajur Rahman (Driver)	Ferdousi Sultana	Faridpur
Siyam Musolli	Late Shahid Musolli	Jomila Khatu	West gerakhola madhukhali Faridpur
Ariyan Mollik	Late Riyajul Mollik	Aklima Begum	West gerakhola madhukhali Faridpur
Sakibul Hassan	Late Jewel Biswas	Jamila khatun(maid)	West gerakhola madhukhali Faridpur
Mehedi Hassan	Late Shahadat Hossain	Asma Begum (Housewife)	Kamarkhali Faridpur

Table 1. Personal Information

Name of the institute: "Gonderdia daros salam koumi madrash o atim khana".

Number of members: 123.

Address: Madhukhali, Faridpur.

Number of people needed donation: 18.

4. Designing the System

4.1 Features of the proposed system

This system have three main categories: admin, donor and donee. all the user can either login to the system if they have an account or can sign up to create a new profile. after login as a doner the user can donate or view updates from the donee. when a use enter the system as a donee he/she can add campaign or post update about campaign. finally the admin can view transactions from the donor, also admin can either accept or reject campaigns. all the users (admin, donor, donee) can log out from the system which will take them to hope page.

4.2 Features in details

This management system has three main factors- 1. Donors 2. Donees and 3. Admin.

Here donors can sign up with a username and password, and donees can use their existing credentials or they can create a new account. The donation management system also has a Donate Now option, which allows the donors to donate to specific campaigns, view updates, and log out. The Admin functionality lets administrators to log in with predefined credentials and view the campaign approval requests. Here the Campaign List Code enables the administrators to view donation transactions made by the donors. The system's aim is to provide a user-friendly and efficient donation management solution.

4.3 Use Case

A use case diagram helps map out and visualise how the actors will interact with the system. It helps defining the system requirements in order to cater to all the actor-system interaction requirements.

The donation management system involves three actors with separate use cases.

- 1) Donor:
The donor mainly interacts with the system by viewing campaigns, donating and receiving updates from the donee
- 2) Donee:
The donee or the recipient mainly creates, updates campaigns and receives donation.
- 3) Admin:
The admin fundamentally monitors the campaign requests and also the donation that are being made.

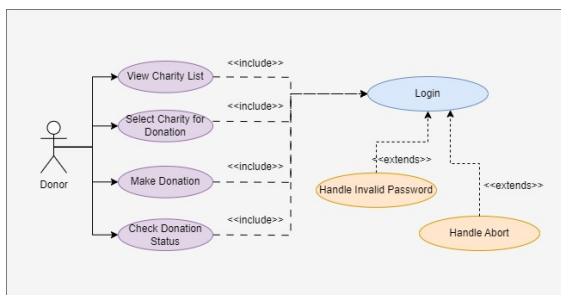


Figure 3. Donor Use Case

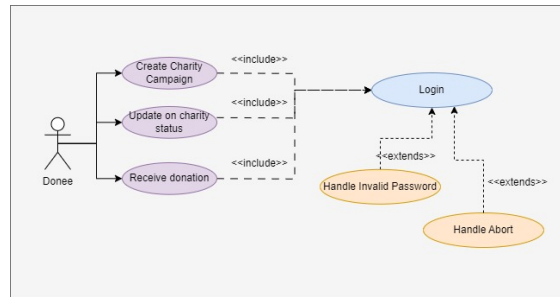


Figure 4. Donee/Recipient Use Case

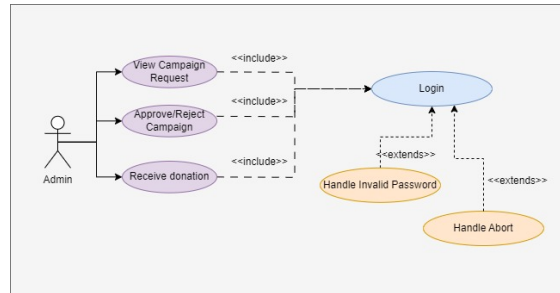


Figure 5. Admin Use Case

4.4 Entity Relationship Diagram

The entity relationship diagram shows how the real life item/concept interacts with each other.

The entities involved in the proposed donation management system are:

- Donor
- Donee
- Admin
- Campaign
- Donation

4.5 Data Flow Diagram

A data flow diagram is a visual representation of the flow of data through the system along with the scope and boundaries of the processes and entities involved.

Out of the four levels of DFDs we designed the level 0 DFD and the level 1 DFD for the system.

The flow of data for the proposed system at a basic level involves:

- Admin, Doner and Donee can login. however Doner and Donee can sign up also.

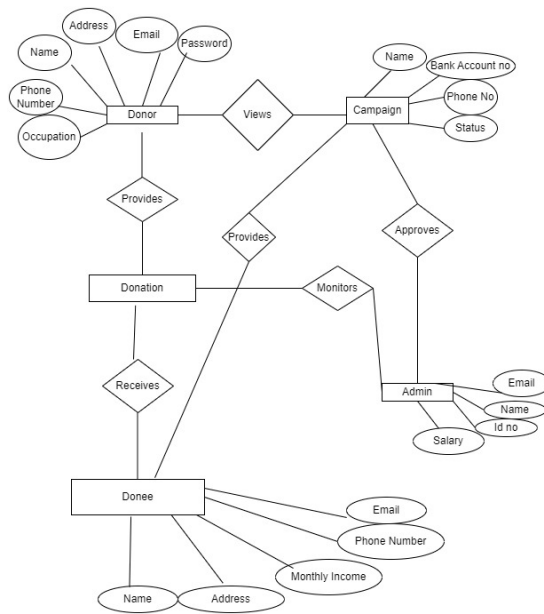


Figure 6. Entity Relationship Diagram

- Both donor and donee has to login first to access any service.
- Donor can view updates concerning the campaign they donated to, which are provided by the specific donee
- Donee receives notification of any reception of donation to maintain transparency on both sides.
- Donee provides progress updates for the campaign so reliability and transparency is ensured for the benefactors involved.
- Admins can see the transaction made by donors.
- Admin will verify new campaigns applied to the platform.

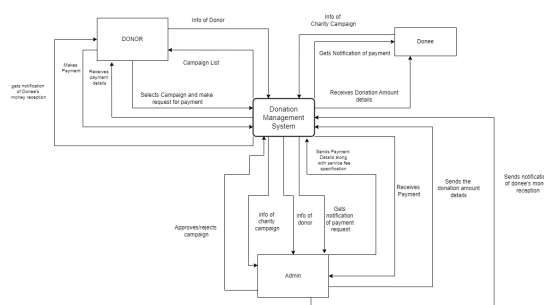


Figure 7. Level 0 DFD

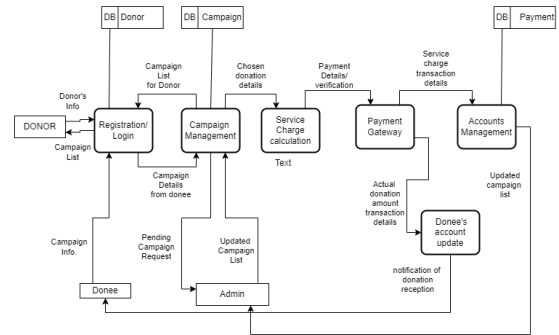


Figure 8. Level 1 DFD

4.6 Activity Diagram

Activity Diagrams are used to illustrate the flow of a control in a system, it represents the workflows of step wise activities and actions with support for choice, iteration and concurrency. It also helps visualize how the system will progress to the next process after each decision making process.

The proposed system's activity diagram focuses on the three main actors. All three of the entity/actors have to log in first in order to progress with other processes. The main three actors as the diagram shows:

- 1) Donor:
- 2) Donee:
- 3) Admin:

and how they go through each process..

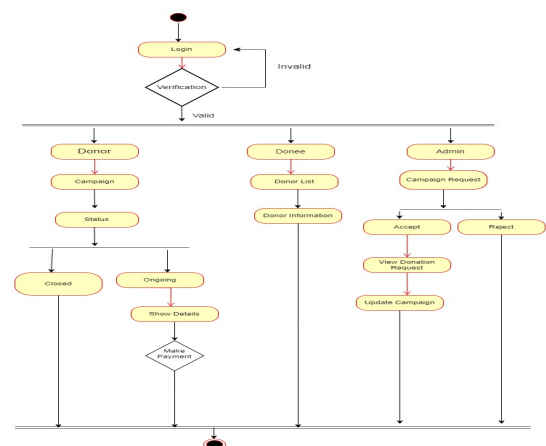


Figure 9. Activity Diagram

5. Implementation of the System

5.1 Software Requirements

1. Java Development Kit JDK 17 has been used for compilation.
2. Netbeans IDE has been used.

5.2 Home page

Here we have tried to give the demonstration of the system and we also have tried to show the categories, sub categories and how they will be maintained. The complete overview of our project is given with snaps here:

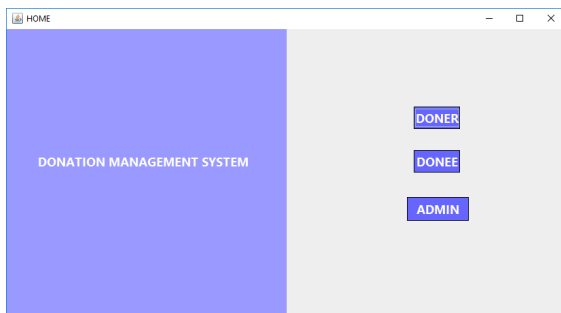


Figure 10. Home Page

This is the home page of our Donation Management System. It mainly contains the separate categories for the three different groups of actors that will be interacting so that each of their details and records can be stored and dealt with separately.

```
private void DoneeActionPerformed(java.awt.event.ActionEvent evt) {  
    Login LoginFrame = new Login();  
    LoginFrame.setVisible(true);  
    LoginFrame.pack();  
    LoginFrame.dispose();  
}  
  
private void AdminActionPerformed(java.awt.event.ActionEvent evt) {  
    AdminLogin AdminFrame = new AdminLogin();  
    AdminFrame.setVisible(true);  
    AdminFrame.pack();  
    AdminFrame.dispose();  
}  
  
private void DonerActionPerformed(java.awt.event.ActionEvent evt) {  
    DonerLogin DonerFrame = new DonerLogin();  
    DonerFrame.setVisible(true);  
    DonerFrame.pack();  
    DonerFrame.dispose();  
}
```

Figure 11. Home Page Code

5.3 Donee Features

Donee login

A Donee can login with previously created account or can sign up for a new account if they are new to the system. The system ensures that only users with a valid email address and password can access their account.

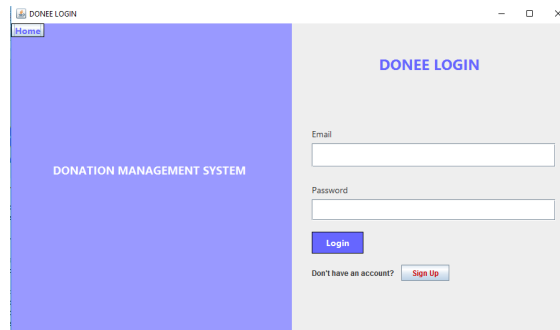


Figure 12. Donee Login Page

```
private void DoneeLoginActionPerformed(java.awt.event.ActionEvent evt) {  
    String loginEmail = email.getText();  
    String loginPassword = password.getText();  
    if (loginEmail.isEmpty() || loginPassword.isEmpty()) { JOptionPane.showMessageDialog(null, message: "Fill in all the boxes", title: "Error", messageType: JOptionPane.ERROR_MESSAGE); }  
    else {  
        boolean loggedIn = User.loginUser(loginEmail, loginPassword);  
        if (loggedIn) { JOptionPane.showMessageDialog(null, message: "Login successful", title: "Success", messageType: JOptionPane.INFORMATION_MESSAGE); }  
        Homepage hp = new Homepage();  
        hp.setVisible(true);  
        hp.pack();  
        hp.setLocationRelativeTo(null);  
        this.dispose();  
    }  
    else { JOptionPane.showMessageDialog(null, message: "Invalid email or password", title: "Error", messageType: JOptionPane.ERROR_MESSAGE); }  
    email.setText("");  
    password.setText("");  
}
```

Figure 13. Donee Login Code

Donee Sign Up

To sign up into the system the donee has to provide a list of personal information.

Figure 14. Donee Sign Up Page

```
private void signUpActionPerformed(java.awt.event.ActionEvent evt) {
    String name = jTextField1.getText();
    String address = jTextField2.getText();
    String email = jTextField3.getText();
    String phoneNumber = jTextField4.getText();
    String monthlyIncome = jTextField5.getText();
    String password = jPasswordField1.getPassword();
    if (name.isEmpty() || address.isEmpty() || email.isEmpty() || phoneNumber.isEmpty() || monthlyIncome.isEmpty() || password.isEmpty()) {
        JOptionPane.showMessageDialog(null, "Please fill in all the fields", "Error",
            JOptionPane.ERROR_MESSAGE);
    }
    String[] userInfo = {name, address, email, phoneNumber, monthlyIncome, password};
    try (FileWriter fw = new FileWriter("donee_info.txt", append: true);
        BufferedWriter bw = new BufferedWriter(fout.fw);
        PrintWriter pw = new PrintWriter(fout.fw)) {
        for (String info : userInfo) {pw.println(info + " "); } pw.println();
        JOptionPane.showMessageDialog(null, "Sign-up successful",
            "Success", JOptionPane.INFORMATION_MESSAGE);
    } catch (Exception e) {
        Login JFrame = new Login();
        LoginFrame.setVisible(true);
    }
}
```

Figure 15. Donee Sign Up Code

Donee Home Page

After logging in the donee can access three features.

Figure 16. Donee Home Page

Add Campaign(Donee)

To create a campaign the donee first has to create a campaign request by providing a thorough details of the fundraiser. This is the request submission part as for a campaign to fully publish it has to be approved by the admin.

Figure 17. Add Campaign

```
private void AddCampaignActionPerformed(java.awt.event.ActionEvent evt) {
    String Name = name.getText();
    String Des = description.getText();
    String Amount = amount.getText();
    String Date = ((JTextField) date.getDateEditor().getUiComponent()).getText();
    String phoneNo = phone.getText();
    String bankAccount = bank.getText();
    if (Name.isEmpty() || Des.isEmpty() || Amount.isEmpty() || Date.isEmpty() || phoneNo.isEmpty() || bankAccount.isEmpty()) {
        JOptionPane.showMessageDialog(null, "Fill in all the boxes", "Error", JOptionPane.ERROR_MESSAGE);
    } else {
        try {
            FileWriter fw = new FileWriter("campaign_info.txt", append: true);
            BufferedWriter bw = new BufferedWriter(fout.fw);
            bw.write(Name + " " + Des + " " + Amount + " " + Date + " " + phoneNo + " " + bankAccount + " Inactive");
            JOptionPane.showMessageDialog(null, "The campaign will be reviewed by Admin.", "Info",
                JOptionPane.INFORMATION_MESSAGE);
            Name.setText("");
            description.setText("");
            amount.setText("");
            date.setDate(null);
            phone.setText("");
            bank.setText("");
        } catch (Exception e) {
            //
        }
    }
}
```

Figure 18. Add Campaign Code

Post Update(Donee)

The post update part is there to provide a way for the donee to upload progress updates. It can be pictures, videos or other progress details. To post an update Donee can select a file or image to upload and can also provide a message along with it.

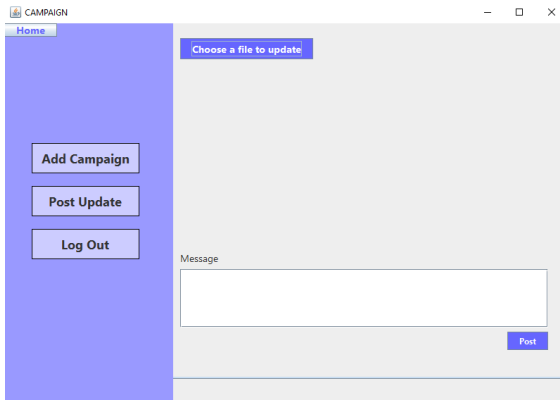


Figure 19. Post Update

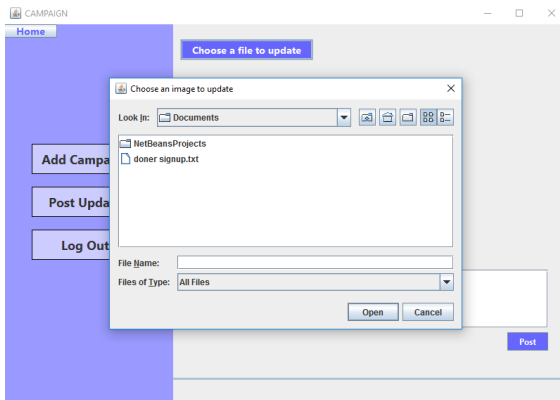


Figure 20. Choose a file

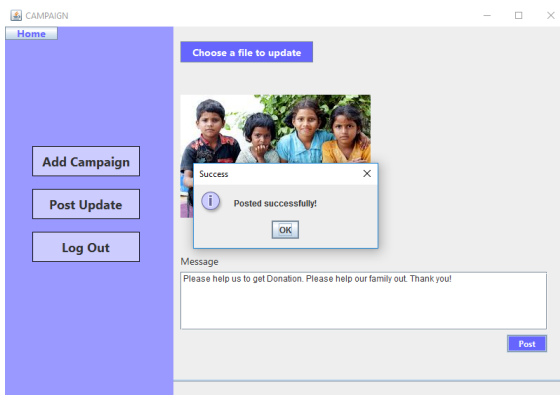


Figure 21. Post an update

```
1 private void FileChooseActionPerformed(java.awt.event.ActionEvent evt) {
2     JFileChooser fileChooser = new JFileChooser();
3     fileChooser.setDialogTitle("Choose an image to update");
4     fileChooser.setFileSelectionMode(JFileChooser.FILES_ONLY);
5
6     int result = fileChooser.showOpenDialog(this);
7
8     if (result == JFileChooser.APPROVE_OPTION) {
9         File selectedFile = fileChooser.getSelectedFile();
10        String filePath = selectedFile.getAbsolutePath();
11        ImageIcon imageIcon = new ImageIcon(filePath);
12        JLabel19.setIcon(imageIcon);
13
14        try (BufferedWriter writer = new BufferedWriter(new FileWriter("updated_data.txt", append: true))) {
15            writer.write(filePath + " ");
16        } catch (Exception e) {
17            // TODO add your handling code here:
18        }
19    }
20 }
```

Figure 22. Choose a file (code)

```
private void PostActionPerformed(java.awt.event.ActionEvent evt) {
    if (jTextArea2.getText().isEmpty() || jLabel19.getIcon() == null) {
        JOptionPane.showMessageDialog(this, "Fill in all the boxes", "Error",
            JOptionPane.ERROR_MESSAGE);
    } else {
        String message = jTextArea2.getText();
        try (BufferedWriter writer = new BufferedWriter(new FileWriter("updated_data.txt",
            append: true))) {
            writer.write(message);
            JOptionPane.showMessageDialog(this, "Posted successfully!",
                "Success", JOptionPane.INFORMATION_MESSAGE);
        } catch (Exception e) {
            // TODO add your handling code here:
        }
        jLabel19.setIcon(null);
        jTextArea2.setText("");
    }
}
```

Figure 23. Post an update (code)

5.4 Donor Features

Donor Login From the donor's side logging in requires valid set of user name and password.

Figure 24. Donor Login Page

```
private void loginActionPerformed(java.awt.event.ActionEvent evt) {  
    String name = jTextField1.getText();  
    String loginPassword = jPasswordField1.getPassword();  
    if (name.isEmpty() || loginPassword.isEmpty()) { JOptionPane.showMessageDialog(null, "Fill in all the boxes", "Error", JOptionPane.ERROR_MESSAGE); }  
    else { boolean loggedIn = Donor.loginDonor(jTextField1.getText(), loginPassword);  
        if (loggedIn) { JOptionPane.showMessageDialog(null, "Login successful!", "Success", JOptionPane.INFORMATION_MESSAGE);  
            try { FileWriter fw = new FileWriter("stone_info.txt", true);  
                BufferedWriter bw = new BufferedWriter(fw);  
                PrintWriter pw = new PrintWriter(bw);  
                for (String info : userInfo) { pw.println(info); }  
                pw.close();  
                JOptionPane.showMessageDialog(null, "Sign-up successful", "Success", JOptionPane.INFORMATION_MESSAGE); }  
            catch (Exception e) { }  
            Login loginFrame = new Login();  
            loginFrame.setVisible(true);  
            LoginFrame.pack();  
            this.dispose();  
        }  
        else { JOptionPane.showMessageDialog(null, "Invalid email or password", "Error", JOptionPane.ERROR_MESSAGE);  
            jTextField1.setText("");  
            jPasswordField1.setText("");  
        }  
    }  
}
```

Figure 25. Donor Login Code

Donor Sign Up

To sign up the donor has to provide their personal details.

Figure 26. Donor Sign Up Page

Donor Home page

```
private void signUpActionPerformed(java.awt.event.ActionEvent evt) {  
    String name = jTextField1.getText();  
    String address = jTextField2.getText();  
    String email = jTextField3.getText();  
    String phoneNo = jTextField4.getText();  
    String monthlyIncome = jTextField5.getText();  
    String loginPassword = jPasswordField1.getPassword();  
    if (name.isEmpty() || address.isEmpty() || email.isEmpty() || phoneNo.isEmpty() || monthlyIncome.isEmpty() || loginPassword.isEmpty()) {  
        JOptionPane.showMessageDialog(null, "Please fill in all the fields", "Error", JOptionPane.ERROR_MESSAGE);  
    }  
    String[] userInfo = {name, address, email, phoneNo, monthlyIncome, loginPassword};  
    try { FileWriter fw = new FileWriter("stone_info.txt", true);  
        BufferedWriter bw = new BufferedWriter(fw);  
        PrintWriter pw = new PrintWriter(bw);  
        for (String info : userInfo) { pw.println(info); }  
        pw.close();  
        JOptionPane.showMessageDialog(null, "Sign-up successful", "Success", JOptionPane.INFORMATION_MESSAGE); }  
    catch (Exception e) { }  
    Login loginFrame = new Login();  
    loginFrame.setVisible(true);  
    LoginFrame.pack();  
    this.dispose();  
}
```

Figure 27. Donor Sign Up Code

The donor can access three features after logging into the system:

- 1) Donate Now(to donate to selected campaign)
- 2) View Update(to view the updates provided for the campaigns they have donated to)
- 3) Log out

Figure 28. Donor Home Page

Select Campaign for Donation

The donor selects a campaign of their choice from the list of available fundraisers.

Campaign Name	Description	Amount Needed	Bank Details	Status
Child support	need money	9000	88798man	Approved

Figure 29. Select a campaign to donate

Make Payment

After selecting campaign the donor is directed to a payment gateway to make the donation.

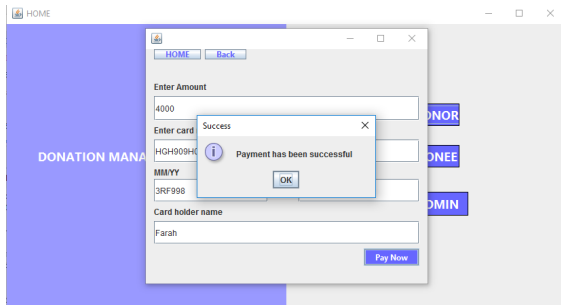


Figure 30. Payment Gateway

View Campaign Progress(Donor)

After making a donation the donor can view campaign progress updates provided by the donee.

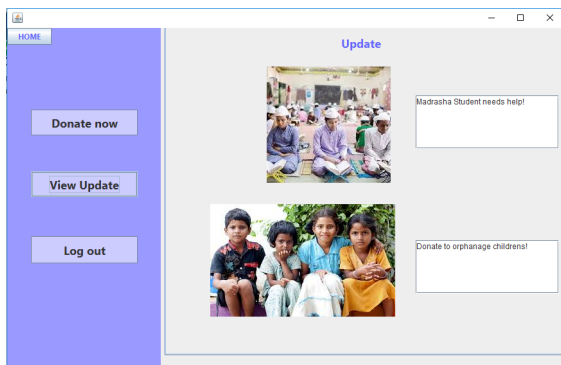


Figure 31. View update

```
private void DonateNowActionPerformed(java.awt.event.ActionEvent evt) {
    JTabbedPane.setSelectedIndex(index: 1);
    try {
        FileReader f = new FileReader(fileName: "approved_campaign.txt");
        BufferedReader br = new BufferedReader(in: f);
        DefaultTableModel d = (DefaultTableModel) jTable1.getModel();
        d.setRowCount(rowCount: 0);
        String line;
        while ((line = br.readLine()) != null) {
            String[] parts = line.split(regex: " ");
            String name = parts[0];
            String des = parts[1];
            String amount = parts[2];
            String date = parts[3];
            String phone = parts[4];
            String bank = parts[5];
            String status = parts[6];
            d.addRow(new Object[] {name, des, amount, bank, status});
        }
    } catch (Exception e) {
    }
}
```

Figure 32. Donor Homepage code

```
private void paymentActionPerformed(java.awt.event.ActionEvent evt) {
    String cardNum=textField1.getText();
    String new=textField2.getText();
    String cc=textField3.getText();
    String holder=textField4.getText();
    String donateAmount=textField5.getText();
    if(cardNum.isEmpty()||mm.isEmpty()||cc.isEmpty()||holder.isEmpty()){
        JOptionPane.showMessageDialog(parentComponent: null, message: "Please fill in all the fields", title: "Error", messageType: JOptionPane.ERROR_MESSAGE);
    }
    else{
        try{
            FileWriter fw = new FileWriter(fileName: "payment.txt", append: true);
            BufferedWriter bw = new BufferedWriter(out: fw);
            bw.write(cardNum+" "+donateAmount);
            bw.close();
        } catch (Exception e) {
        }
    }
    JOptionPane.showMessageDialog(parentComponent: null, message: "Payment has been successful", title: "Success", messageType: JOptionPane.INFORMATION_MESSAGE);
    textField1.setText("");
    textField2.setText("");
    textField3.setText("");
    textField4.setText("");
    textField5.setText("");
}
```

Figure 33. CDonor Homepage code

```
private void ViewUpdateActionPerformed(java.awt.event.ActionEvent evt) {
    JTabbedPane.setSelectedIndex(index: 2);
    try {
        (BufferedReader reader = new BufferedReader(new FileReader(fileName: "updated_data.txt"))) {
            String line;
            while ((line = reader.readLine()) != null) {
                String[] parts = line.split(regex: " ");
                if (parts.length >= 4) {
                    String imagePath = parts[0];
                    String message = parts[1];
                    String imagePath1 = parts[2];
                    String message1 = parts[3];
                    try {
                        ImageIcon imageIcon = new ImageIcon(fileName: imagePath);
                        ImageIcon imageIcon1 = new ImageIcon(fileName: imagePath1);
                        JLabel4.setIcon(icon: imageIcon);
                        JTextArea4.setText(text: message);
                        JLabel5.setIcon(icon: imageIcon1);
                        JTextArea5.setText(text: message1);
                    } catch (Exception ex) {
                    }
                }
            }
        }
    } catch (Exception e) {
    }
}
```

Figure 34. Donor Homepage code

A donor has three options Donate now, View Update and log out. if donor chooses to donate the system will take the user in the payment gateway. if the donor chooses view update option the system will show all the updates provided by the donee.

5.5 Admin Features

An admin can only login with the previously given data, an admin can either accept or reject a campaigns. Admin can also view the transactions that were made by the donor.

Login(Admin)

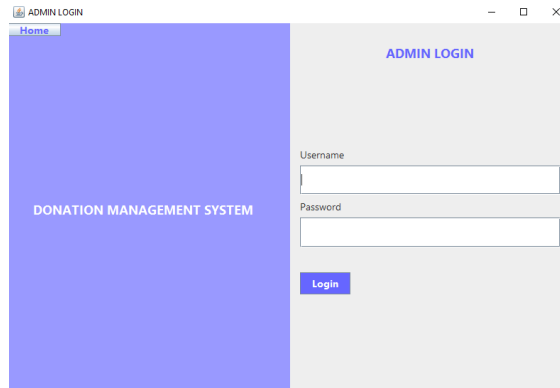


Figure 35. Admin Login page

The admin can access three features upon logging in:

- 1) View Campaign list(to see any pending campaign list for approval or rejection)
- 2) Transaction(to view transaction records)
- 3) Log out(to log out of the system)

Home Page(Admin)

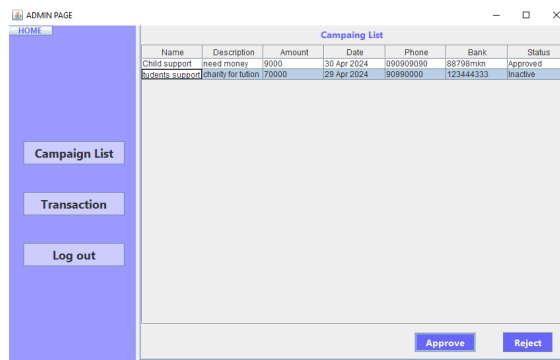


Figure 36. Admin Home page

Campaign Approve/Reject

The admin views the requests from the donee. They manually check the details before approving/rejecting it for donors to see.

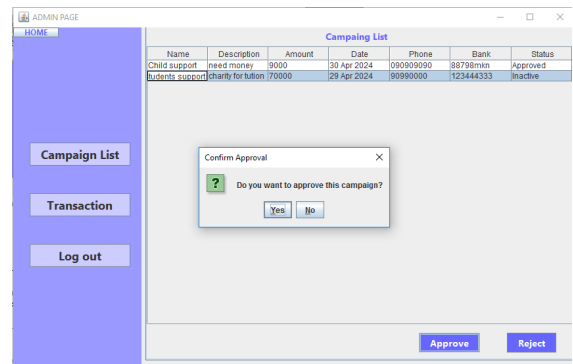


Figure 37. Accept or Reject a Campaign

```
private void CampaignListActionPerformed(java.awt.event.ActionEvent evt) {  
    JTabbedPane1.setSelectedIndex(1);  
    try {  
        FileReader f = new FileReader(fileName: "campaign_info.txt");  
        BufferedReader br = new BufferedReader(in: f);  
        DefaultTableModel d = (DefaultTableModel) jTable1.getModel();  
        d.setRowCount(0);  
        String line;  
        while ((line = br.readLine()) != null) {  
            String[] parts = line.split(regex: " ");  
            String name = parts[0];  
            String des = parts[1];  
            String amount = parts[2];  
            String date = parts[3];  
            String phone = parts[4];  
            String bank = parts[5];  
            String status = parts[6];  
            d.addRow(new Object[] {name, des, amount, date, phone, bank, status});  
        }  
    } catch (Exception e) { }  
}
```

Figure 38. Campaign List (code)

The admin can also view the transaction record of the donations being made under a campaign.

Monitor Transaction

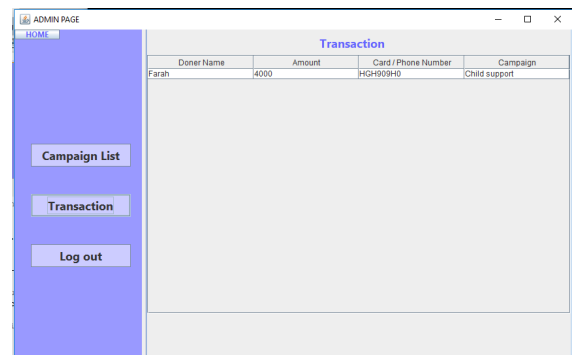


Figure 39. Transaction

5. Conclusion

The aim of this donation management system is to address the trust issues and asymmetry in donation distribution in Bangladesh, namely Bidyanondo. Though Bidyanondo is doing great at their field but still there are some issues that the people who are donating are in concern. Our donation management system ensures the fairness and efficiency by various applications; real time communication and transparency. This system prioritizes the accessibility, effectiveness, and long-term implications while tackling bigger societal issues. Here we have discuss about the use cases, entity relationship diagram, data flow diagram, and activity diagram which exemplifies the transparency, accountability, and usability of this donation management system. This system has the ability to transform charity organizations in Bangladesh by ensuring that donations reach individuals in need effectively and have a beneficial influence on our society.

5.1 Project Boundaries

Our project Donation management system has been developed based on Bangladesh, tackling trust issues and disparities in donation distribution among needy people. It also engages stakeholders, such as donors, donees, and the administrators, to ensure the efficiency of this system. To develop this system, we have used certain tools, such as the - Java Development Kit JDK 17 and the Netbeans IDE. In our system, donors can view campaigns, donate, and receive the updates through the functional scope, while donees can create and also manage the campaigns. Here, data flow diagrams describe how data moves. The system mainly categorizes users into donor, donee, and administrator groups. Future plans include perhaps expanding outside geographical bounds.

5.2 Constraints

Due to limited internet connection, the proposed donation management system has some difficulties in gaining widespread use. It also has some graphical constraints, privacy concerns, and a lack of focus on societal improvements and community participation. Future objectives include increasing financial transparency, addressing security concerns, and tackling the environmental constraints. So, these limitations underline the importance of further developing and implementing the donation management system.

1. Addressing financial constraints and resource

access issues.

2. Improving manual donation management.

3. Addressing disparities in resource distribution.

5.3 Future Goals

One of the future goals of our project is to spread it worldwide. For this, this system will be updated to have more user-friendly interfaces, offer multiple payment methods, and so on. The project will enhance financial transparency. Besides these, this project will increase security issues in order to protect donor information, financial transactions, and sensitive data from cyber threats and breaches. This project will address long-term social, economic, and environmental challenges. Finally, our ultimate goal is to overcome all constraints and introduce our trustworthy donation management project.

5.4 Discussion

Donation management system demonstrate the development of a fair donation management system to overcome the distribution inequalities, particularly in developing country such as Bangladesh. In 2022, 18.7 percent of Bangladesh's population lived below the national poverty line, while 5.8 percent of workers earned less than 2.15 Dollar a day. 29 babies died before their fifth birthdays. The primary objective is to create a system that connects donors and donees directly, so, it will increase transparency and decreasing administrative burden. The proposed solutions include decentralized applications and verification systems that allow donors and donees to connect directly. The system main goals are transparency, ease of donating, and excellent communication between donor and the donee. Implementation challenges include limited internet connectivity for a donation management. Future objectives include global expansion, improving user interfaces, multiple payment options, and solving long-term social, economic, and environmental issues.

5.5 References

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