

Regional Coordination Center of Organ Donation & Procurement

UNDERGRADUATE PROJECT

*Submitted in partial fulfillment of the requirements of software
Development Project 2 for the degree of B. ScEngg. in CSE By
GROUP no - 04*

UNDER SUPERVISION OF:

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Regional Coordination Center of Organ Donation & Procurement

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Declaration of Authorship

From Group 04, We, Farzana Akter Mily, Mahia Yasmin Bushra, Puspita Chowdhury Nuha, UmmeSumaiya Riya, Sanjida Ahmed give announced that this project titled, "Regional Coordination Center of Organ Donation & Procurement" and the work presented in it are our own.

We, hereby declare that this submission is entirely our own work, in our own words, and that all sources used in researching it are absolutely acknowledged and all quotations acknowledged and all quotations properly identified. We are alert that this desktop-based project of ours' published in digital form can be favourable for everyone through using the internet. It has not been submitted in whole by us to obtain any other credit or grade. We understand the ethical implications of our research and this work meets the requirements of the Faculty of Computer Science Engineering.

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Dedication

Dedicated to our parents for all their modest love and inspiration.

Abstract

A Regional Coordination Center for organ donation aims to bridge the gap between organ availability and waitlists. This project would focus on increasing donation rates within a specific region by educating the public and collaborating with hospitals. The center would streamline the process by creating a system for organ allocation, transportation, and potentially implementing best practices for identification and referral. This could significantly increase the number of organs available for transplant, saving lives and reducing wait times.

Acknowledgments

First of all, we are thankful and expressing our gratefulness to Almighty Allah who offers us His divine blessing, patient, mental and physical strength to complete this project work. We are deeply indebted to our project supervisor, Partho Ghosh, Lecturer, Department of Computer Science and Engineering (CSE), Bangladesh University of Business and Technology (BUBT). His scholarly guidance, important suggestions, work for going through our drafts and correcting them, and generating courage from the beginning to the end of the research work has made the completion of this report possible. A very special gratitude goes out to all our friends for their support and help to implement our works. The discussions with them on various topics of our works have been very helpful for us to enrich our knowledge and conception regarding the work. Last but not the least; we are highly grateful to our parents and family members for supporting us spiritually throughout writing this report and our life in general.

Approval

This project “ Regional Coordination Center of Organ Donation & Procurement” was Submitted by team members’ of Group 04 , named Farzana Akter Mily, Mahia Yasmin Bushra, Puspita Chowdhury Nuha, UmmeSumaiya Riya, Sanjida Ahmed, ID No- 22234103341, 22234103291, 22234103382, 21225103148, Department of Computer Science and Engineering (CSE), Bangladesh University of Business and Technology (BUBT) under the supervision of Partho Ghosh; Lecturer, Department of Computer Science and Engineering has been accepted as satisfactory for the partial fulfillment of the requirement for the degree of Bachelor of Science (B.Sc. Engg.) in Computer Science and engineering and approved as to its style and contents.

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Chapter 1

Introduction

1.1 Project Objective

Project Objective:

This project provides details functional requirements for the existence of a Regional Coordination Center of Organ Donation and Procurement that suggests a centralized system for managing organ transplants within a region or state. This centralized system develops and implements standardized protocols for organ donation across all hospitals existing in the region. This will streamline the process, raise public awareness, and ultimately increase the number of organs available for transplant. This project establishes a national system for matching donated organs with compatible recipients based on medical urgency and other critical factors and also ensures fair distribution and maximizes the utilization of lifesaving organs. The center can set guidelines and monitor practices to ensure the quality and viability of donated organs throughout the procurement, transportation, and allocation process. This project also provides developing a centralized system for collecting and analyzing data on organ donation activity, waiting lists, and transplant outcomes. This data will be used to identify areas for improvement and track the effectiveness of organ donation initiatives. Overall, the goal of this project is to create a more efficient, equitable, and successful organ transplantation system within the country.

1.2 Key Features

Features:

- **Modular Design:** The system will be designed with well-defined modules for Donor Management, Hospital Integration, OAO (Organ Allocation Organization) Management, Transplant Center Management, Matching & Allocation. This allows for easier maintenance, modification, and future expansion.
- **Centralized Database:** All data related to donors, hospitals, organs, patients, and waitlists will be stored in a single, secure database. This facilitates efficient data retrieval and minimizes redundancy.

- **Data Integrity:**
 - Implement constraints and validation rules within the database to ensure data accuracy and consistency.
 - Prevent SQL injection vulnerabilities to protect the system from malicious attacks.
- **Data Migration:** Develop a process to migrate data, including sequences or equivalent mechanisms, during database changes.
- **User Management:** Implement a secure user authentication system with role-based access control. This restricts access to sensitive data based on user roles (e.g., donor, hospital staff, OPO worker, transplant center personnel).

Chapter 2

Technologies

2.1 Software

2.1.1 Visual Studio 2022

Visual Studio 2022 is Microsoft's first 64-bit integrated development environment (IDE), enhancing performance by handling larger projects and complex workloads without memory constraints. This version supports the latest .NET 6 and C# 10, improving developer efficiency with features like IntelliCode for AI-assisted code suggestions and Live Share for real-time collaboration. The IDE also boasts an updated user interface, advanced debugging tools, and enhanced diagnostics for streamlined problem-solving. Additionally, it supports cross-platform development across Windows, Linux, macOS, and mobile platforms, while integrating seamlessly with GitHub and Azure for collaborative and cloud-based development projects. Visual Studio 2022 caters to a broad spectrum of developers by facilitating a highly customizable and extensible development environment, alongside significant accessibility improvements, making it a comprehensive toolset for modern software development challenges.



Fig 2.1.1: Visual Studio 2022

2.1.2 Microsoft Word

Microsoft Word is a word processor developed by Microsoft. It was first released on October 25, 1983, under the name Multi-Tool Word for Xenix systems. Subsequent versions were later written for several other platforms including: IBM PCs running DOS (1983), Apple Macintosh running the Classic Mac OS (1985), AT&T UNIXPC (1985), Atari ST (1988), OS/2 (1989), Microsoft Windows (1989), SCO Unix (1990), macOS (2001), Web browsers (2010), iOS (2014) and Android (2015). Using Wine, versions of Microsoft Word before 2013 can be run on Linux. Commercial versions of Word are licensed as a standalone product or as a component of Microsoft Office suite of software, which can be purchased either with a perpetual license or as part of a Microsoft 365 subscription.



Fig 2.1.2 Microsoft Word

Microsoft Word is a graphical word processing program that users can type with. Its purpose is to allow users to type and save documents and it has helpful tools to make documents. In this project Microsoft word 2016 was used to develop the system.

2.2 Programming Language:

2.2.1 C# Language

C#, pronounced "C-Sharp", is a versatile and popular programming language created by Microsoft. It's known for being beginner-friendly due to its clear structure and similarities to other languages like Java. C# is object-oriented, which means programmers can organize code into reusable blocks. This language is a powerful tool for building a wide range of applications, including web apps, mobile apps, games, and more.



Fig 2.2.1: Programming Language C#

Chapter 3

System Analysis & Architectural Design

3.1 Methodology

3.1.1 System Analysis

System analysis is a critical process for the Regional Coordination Center of Organ Donation & Procurement. It involves a comprehensive evaluation of the center's processes, technologies, and workflows to identify areas for improvement and enhance overall efficiency. By conducting system analysis, the center can identify bottlenecks, inefficiencies, and potential risks within the existing framework. It enables targeted improvements to streamline processes, improve communication and collaboration, enhance data management and reporting, and refine public awareness and education initiatives. The ultimate goal is to ensure fair and equitable distribution of organs to patients in need, saving more lives and improving outcomes for both donors and recipients.

3.1.2 Algorithm

❖ Log in

- Patients, doctors, hospitals, users, and registered users can all log in to our website and change or update their data after doing so.
- Anyone who is new to the center can register by clicking the registration icon on the log-in page.

❖ Registration for the new users

- User information that needs to be entered into the registration form includes Id, name, date of birth, Gender, medical insurance, medical history, address, blood type, and phone number& organ requirement.
- The registration form is filled out, and then the submit button is clicked.
- Subsequently, the newly registered users can access the center by entering their assigned username and password.

❖ **Enrolled as a Patient**

- A user who has already registered and has a patient ID is referred to as a registered patient. All required information has already been provided.
- A patient can get the information of the doctor who gives the treatment.
- A patient can also view the list of the registered patient by clicking the 'view more' button.

❖ **Hospital Details**

- Hospitals' data is entered into our database, and if we search using the location following the user's address, a list of the preferred hospitals will appear.
- The database contains information such as the hospital's name, ID, location, and government approval.

❖ **Doctor Details**

- Doctors' data is entered into our database, and if we search using the hospital ID following the user's address, a list of the preferred doctors will appear.
- The database contains information such as the doctor's name, ID, department name, and hospital ID.

❖ **Donor Details**

- Donors' data is entered into our database, and if we search using the required organ of the patient, a list of the preferred donors will appear.
- The database contains information such as the donor's name, ID, donor's blood group, user ID, and hospital ID.

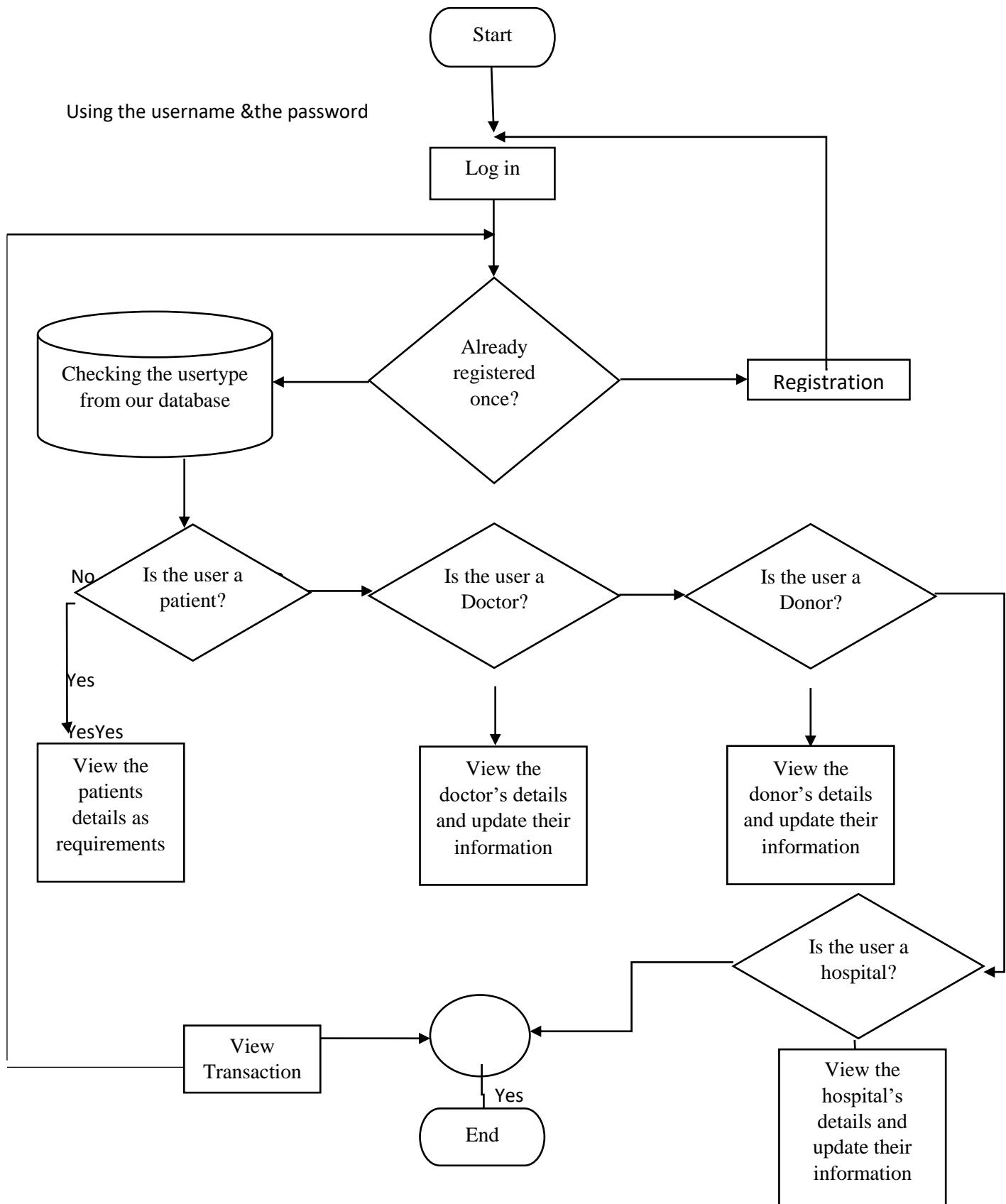
❖ **Organ details**

- Organs' data is entered into our database, and if we search using the organ name following the user's requirement, a list of the preferred organs will appear.
- The database contains information such as the organ's name, ID, and donor ID.

❖ **Transaction**

- A user or patient can see how the donation and procurement system works on their own by visiting the transaction area.
- The database contains information such as the user ID, the patient ID, the hospital ID, the doctor ID, the organ ID, the donor ID, and status (if the treatment is possible or not).

3.1.3 Flowchart



Chapter 4

Access System

Description:

By reading this chapter users will know about each step of this system and how to operate this system. They will also know who can manage the system and all the restrictions of the system.

❖ Entry Page:

- At first run the system. You can see a page like figure (4.1). This is entry page. First the user need to give their's username & password to log in.



Fig: 4.1

- If the user has not registered before, the user needs to register and provide all required information in the form shown below.

| | |
|---------------------|-----------|
| Name : | S |
| Date_of_Birth : | 5/19/2024 |
| Medical_Insurance : | |
| Medical_History : | |
| Street : | |
| City : | |
| State : | |
| Blood_Group : | |
| Phone_Number : | |
| Password : | |
| Confirm_Password : | |

Fig: 4.2

- If the user's password does not match with confirm password, so registration is not done. So they need to recheck their password and enter the same password.

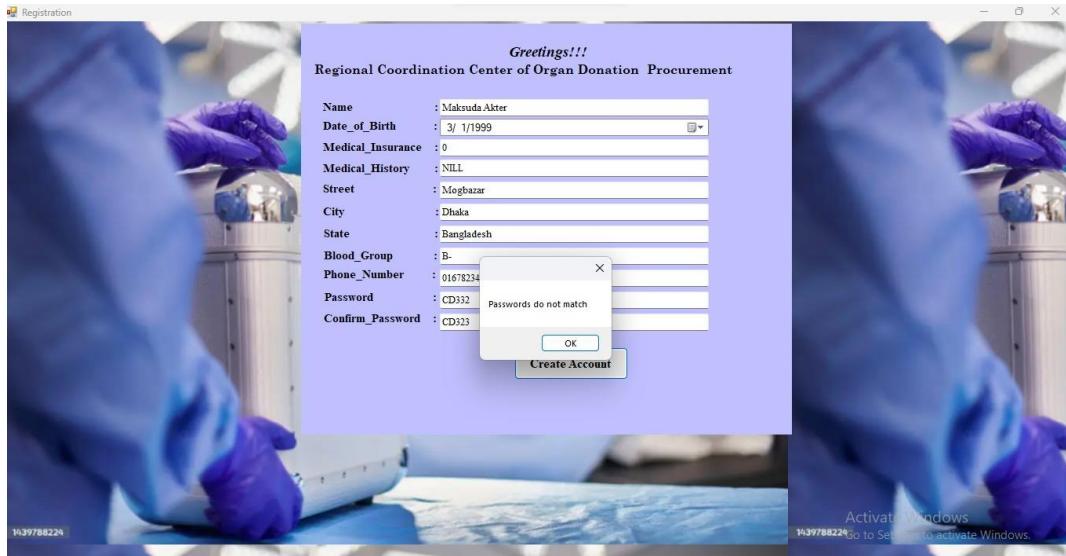


Fig: 4.3

- After entering all their information they need to click on “Create Account”

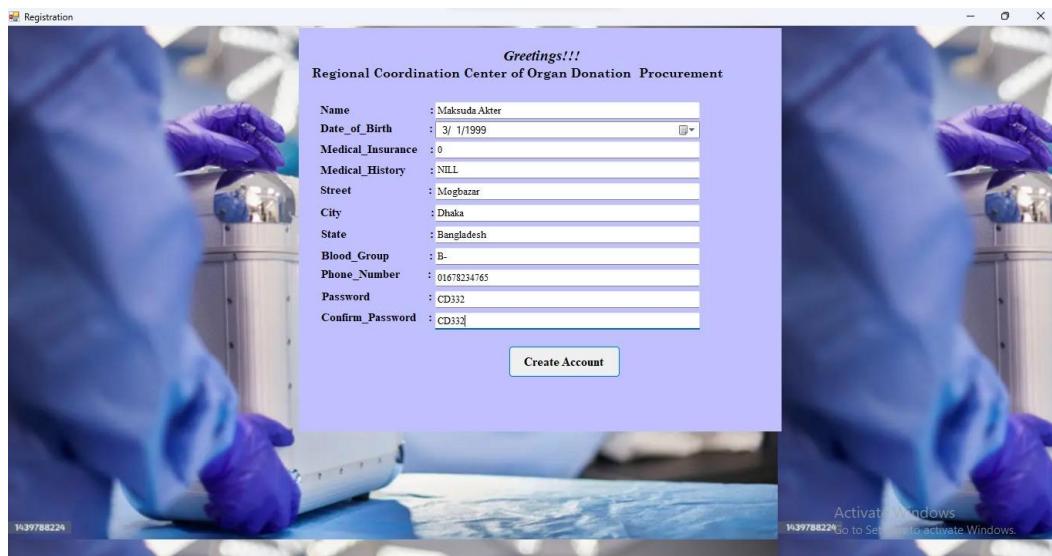


Fig: 4.4

- After registration, login is required with the username and the password.



Fig: 4.5

- We can see that due to providing wrong password, login is not completed.

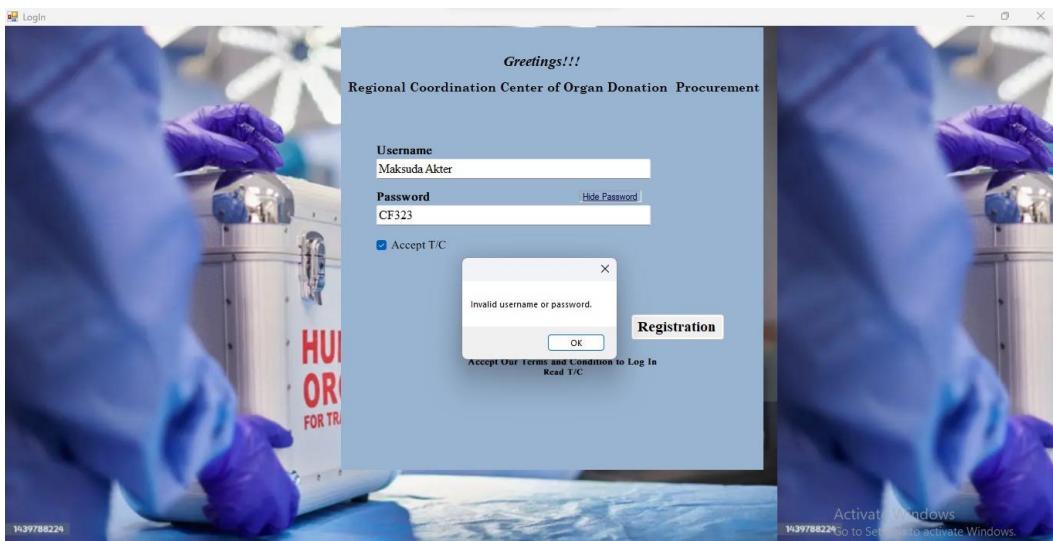


Fig: 4.6

- After entering the username and The password properly, the dashboard shows successfully registration is done!

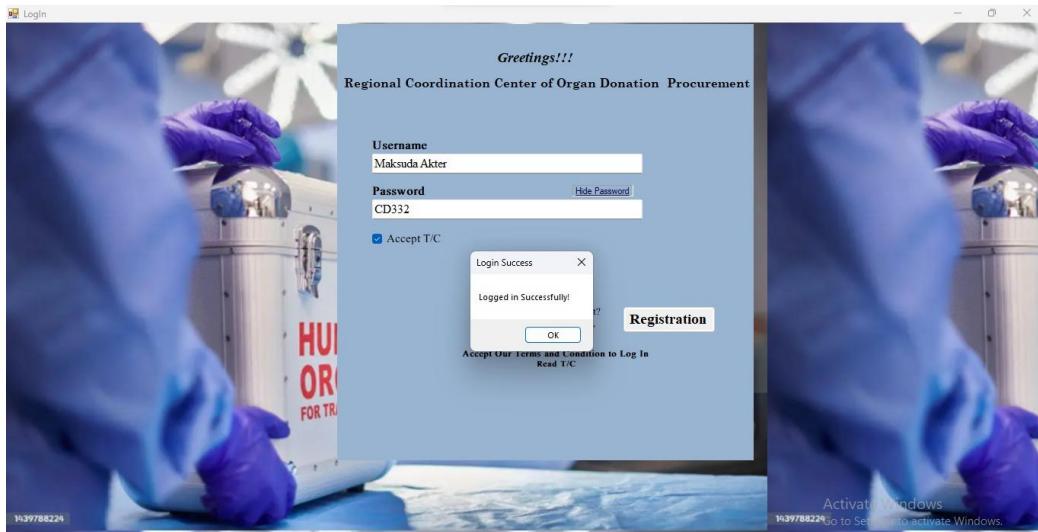


Fig: 4.7

❖ DASHBOARD SECTION:

If a user can successfully log in, our project brings him/her to this dashboard. And they need to select their type of user.

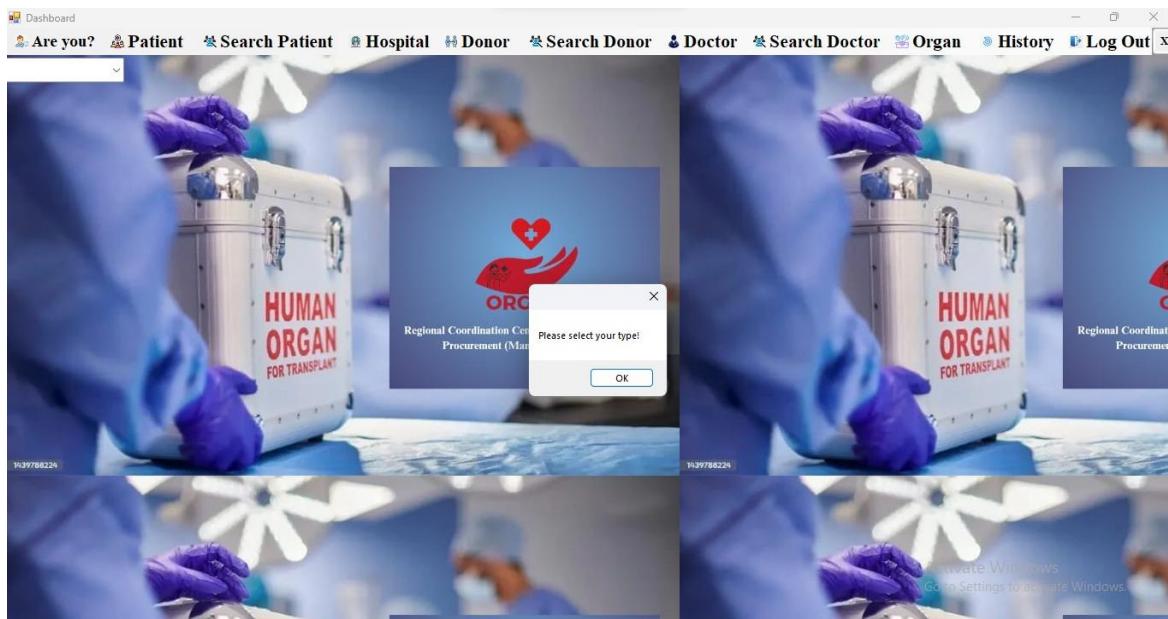


Fig: 4.8

- The image is a screenshot of a dropdown menu from a software dashboard interface. The heading "Are you?" suggests that the user is prompted to identify their role. The dropdown menu provides four options: "Patient", "Donor", "Doctor", "Admin".

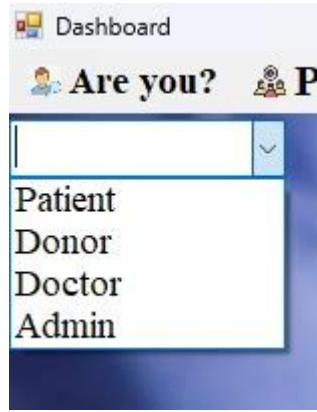


Fig: 4.9

- A pop-up dialog box appears with the following details: Title: "Patient Selected" Message: "Dear User, Go to 'Patient'" Button: "OK" After clicking "OK," the application will likely redirect the user to the "Patient" section, where they can access patient-specific features such as medical records, appointments, and other relevant information.

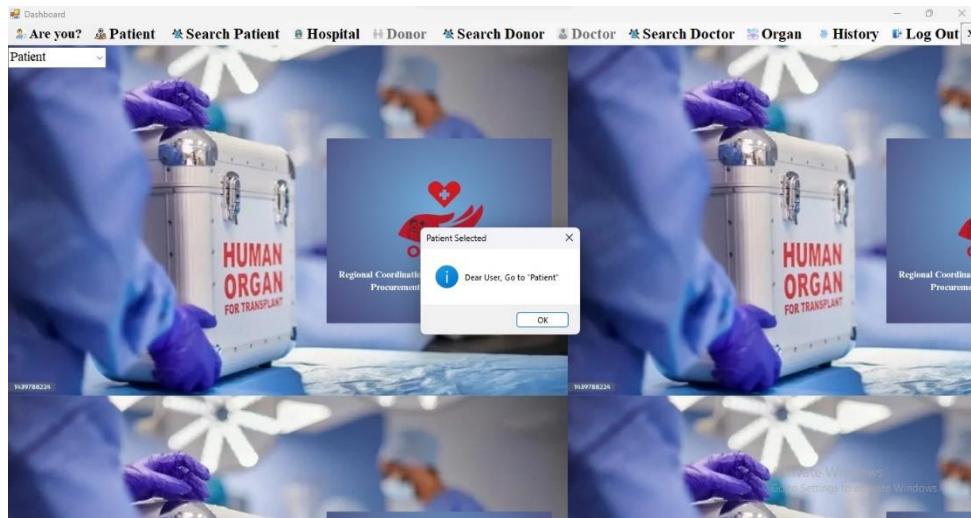


Fig: 4.10

- If a user enters as a patient, the donor section, the Doctor section , the Record section will be invisible to them.



Fig: 4.11

- There is a section titled “Donor Selected” with text that reads “Dear User, Go to ‘Donor’ to view the medical history of the selected donor.”



Fig: 4.12

- If a user enters as a donor, the patient section, the Doctor section, the Record section will be invisible to them.



Fig: 4.13

- There is a section titled “Doctor Selected” with text that reads “Dear User, Go to ‘Doctor’ to view the medical history of the selected doctor.”



Fig: 4.14

- If a user enters as a doctor, the patient section, the Donor section, and the Record section will be invisible to them.



Fig: 4.15

- There is a section titled “Admin Selected” with text that reads “Dear Admin, Greetingsr’ to view the medical history of the selected users record.”



Fig: 4.16

- If a user enters as a admin, the patient section, Doctor section, Record section will be invisible to them.

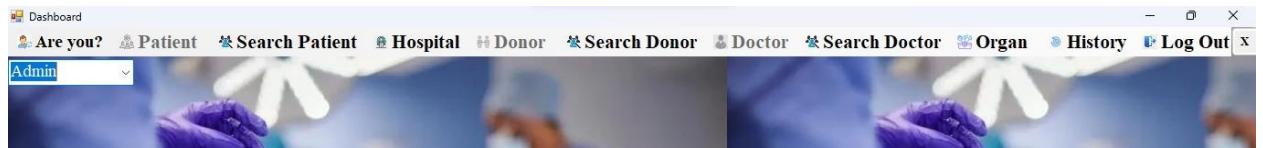


Fig: 4.17

❖ PATIENT SECTION:

- **Add New Patient:** Clicking this button would likely open a form to enter information for a new patient record.

Update Details: This option is likely for searching for and updating information in existing patient records.

All Patient Details: This could be a function to view a list of all patients in the system.

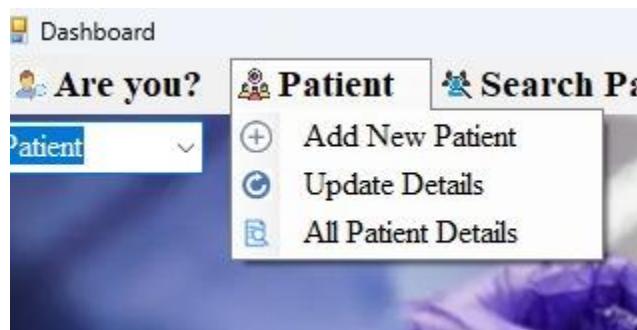


Fig: 4.18

- Then patient have to fill up the form and follow some rules.

Fig: 4.19

- After entering updated information of user, she/he need to click on “save” option.



Fig: 4.20

- After clicking on “save”, there will be seen a dashboard calling “data saved successfully”



Fig: 4.21

- Now if anyone need to change or update any information of him he/she have to enter his/her ID first

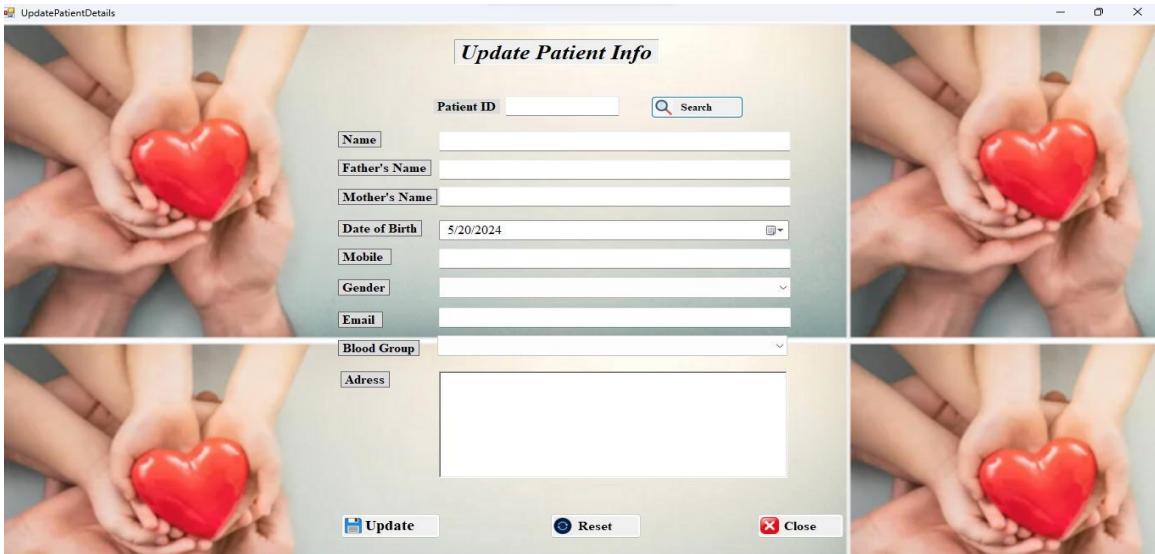


Fig: 4.22

- By entering patients ID, their all information will be shown like below



Fig: 4.23

- Then patient will update or change their information. After entering updated information of user, she/he need to click on “save” option.

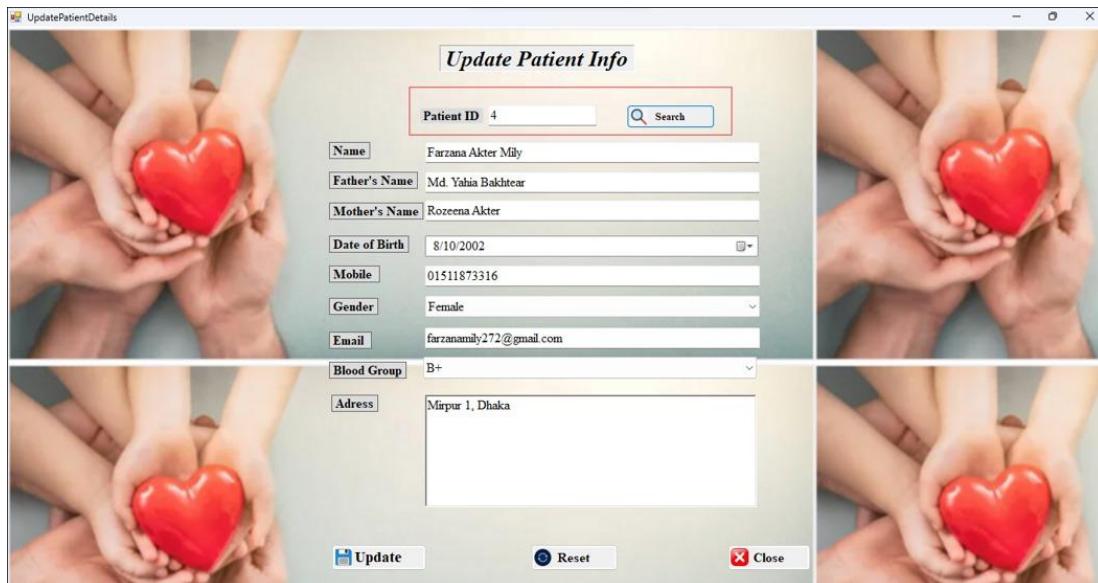


Fig: 4.24

- After clicking on “save”, there will be seen a dialogbox calling “Data saved successfully”

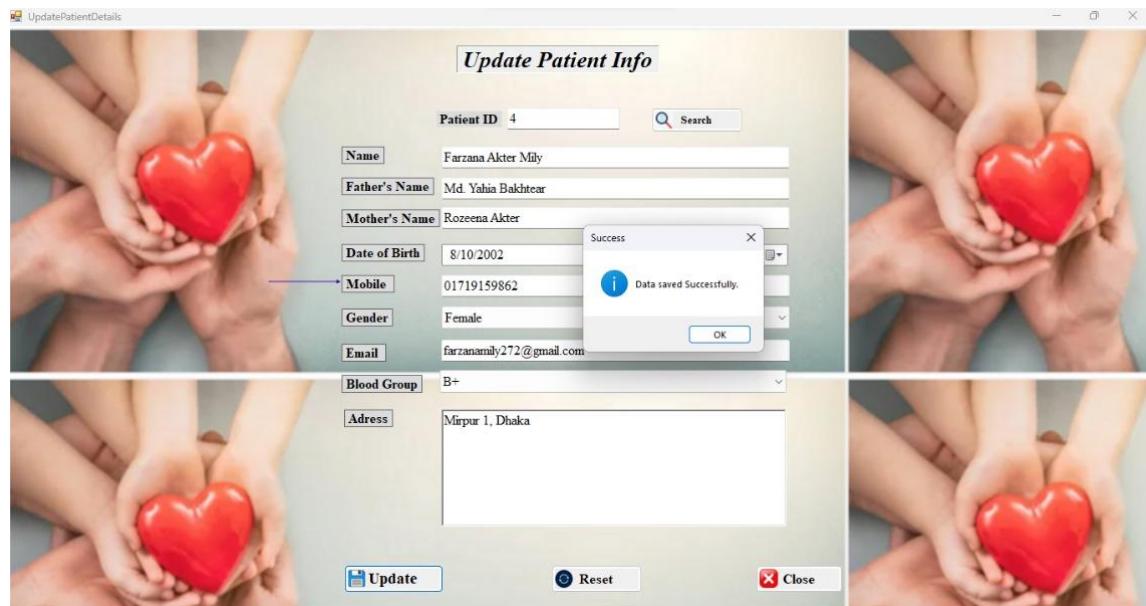


Fig: 4.25

- After clicking on “Reset”, there will be seen a empty clear form to update the data newly & also the user can back to the dashboard after clicking “Close” button

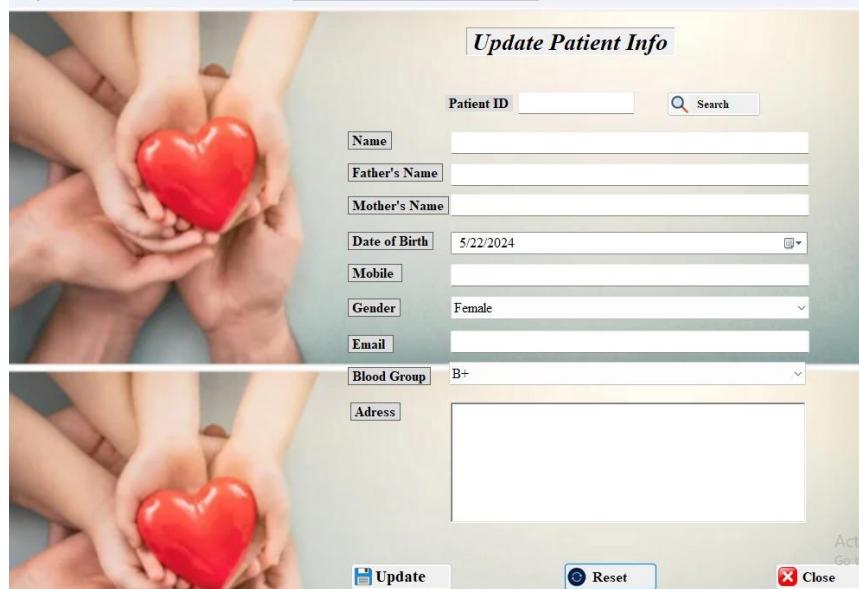


Fig: 4.26

- To see all patients' details , The user can do it by clicking “All Patients’ details” .

The screenshot shows a window titled "All Patient Details" with a table of patient records. The background is a photograph of several hands holding a single red heart. The table has columns: PId, PName, PFathername, PMothername, PDOB, PMobile, and PGender. The table contains the following data:

| PId | PName | PFathername | PMothername | PDOB | PMobile | PGender |
|-----|-------------------|-------------------|---------------|-----------|-------------|---------|
| 4 | Farzana Akter Mly | Md. Yana Bakht... | Rozena Akter | 8/10/2002 | 01719159862 | Female |
| 5 | Makouda Akter | Manifur Rahman | Rashida Akter | 3/1/1999 | 01716987456 | Female |
| 6 | Md. Ibrahim | Md. Islam | Nargis Ara | 5/21/1997 | 01817654987 | Male |
| * | | | | | | |

At the bottom are buttons for Print and Close.

Fig: 4.27

❖ SEARCH PATIENT SECTION:

This section is for searching patient to get the data easily within the few time.

- All patients details are stored in our database. So the user can see the information of himself/herself by searching with Patient ID.



Fig: 4.28

- In the another way, the user can see the information of himself/herself by searching with Blood Group.

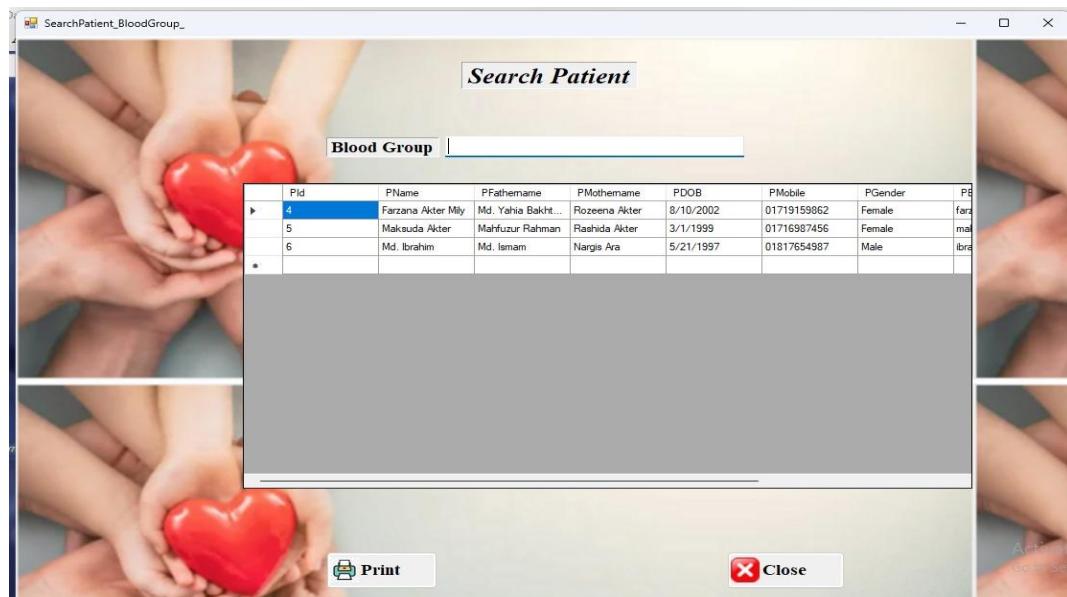


Fig: 4.29

❖ HOSPITAL SECTION:

- All hospital's Info in Dhaka City who give treatment of the organ transplantation are stored in our database. The user can see the list from the "Hospital" segment & can search the hospital info searching by Location.

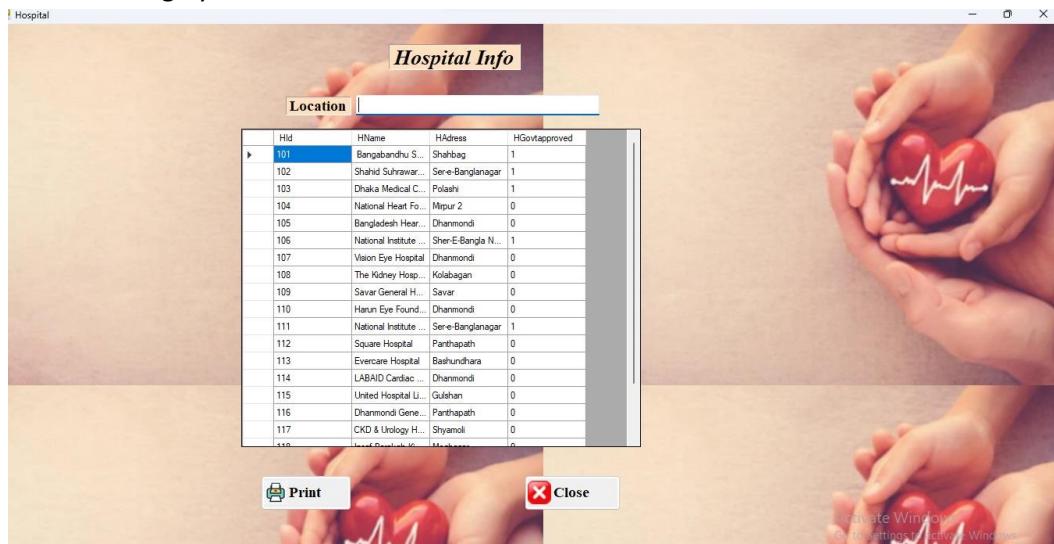


Fig: 4.30

- All hospital's hotline Info in Dhaka City who give treatment of the organ transplantation are stored in our database. The user can see the list from the "Hotline" segment under "Hospital" segment & can search the hospital info searching by Hotline.

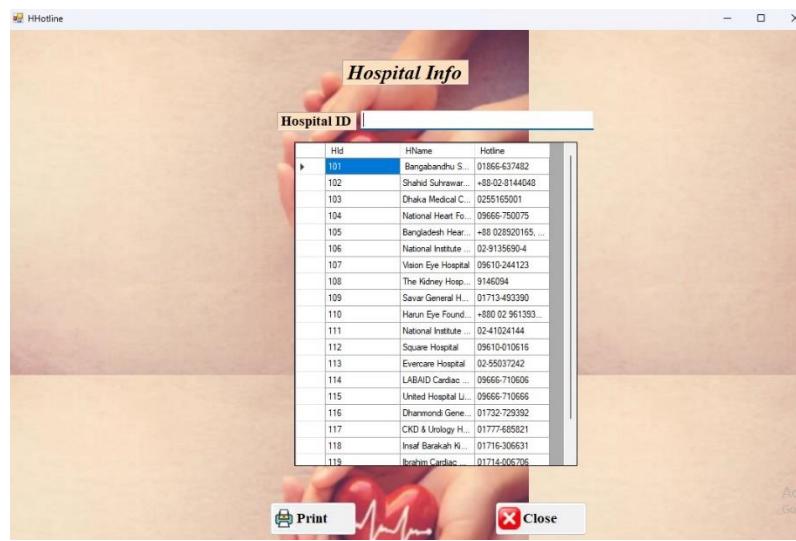


Fig: 4.31

❖ DONOR SECTION:

- The Same process like the selection type of user is valid for selecting as a donor. The user gets a Donor ID and fills up the form according to the requirements. So the user must enter the "Donor" segments with the sub-segment "Add New Donor".
- According to "Patient" section, after clicking on "save", there will be seen a dialogbox calling "Data saved successfully".
- After clicking on "Reset", there will be seen a empty clear form to update the data newly & also the user can back to the dashboard after clicking "Close" button.

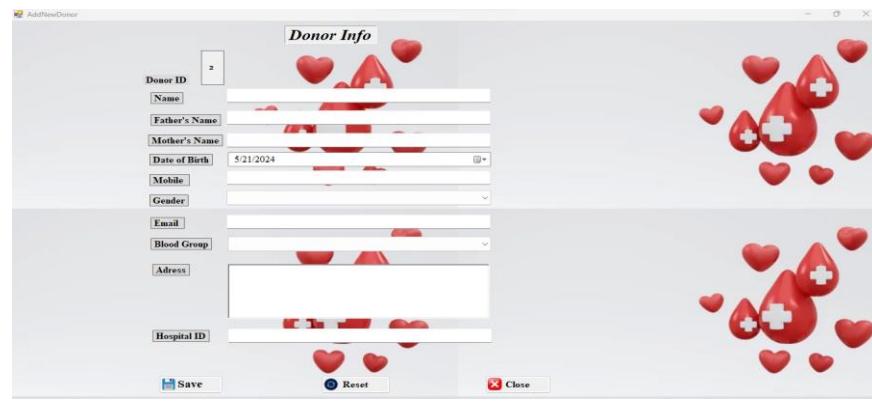


Fig: 4.32

- If the donor user wants to update his/her any information , it is possible to do that & so the user must enter the "Donor" segments with the sub-segement "Update details" & can search by "Donor ID" which is provided to him/her.



Fig: 4.33

- The donor user can see the details of the all registered donor's Info.

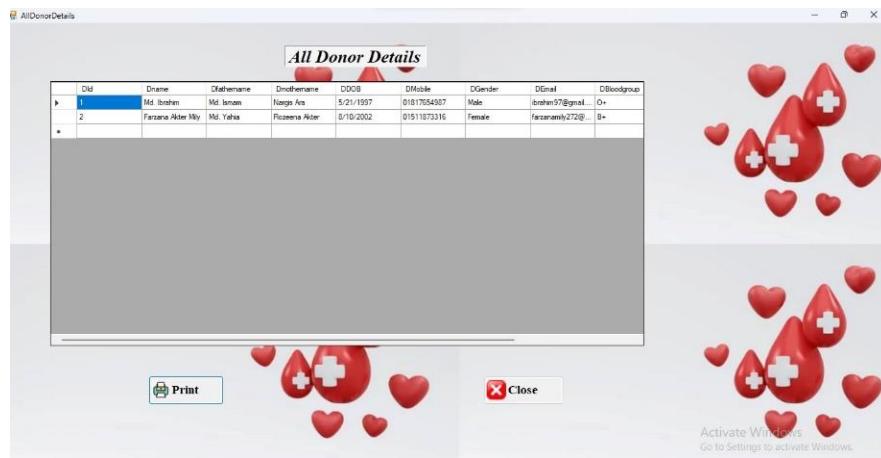


Fig: 4.34

❖ SEARCH DONOR SECTION:

- All donor details are stored in our database. So the user can see the information of himself/herself by searching with Donor ID. So the user must enter the "Search Donor" segments with the sub-segment "Donor ID" & can search by donor id which is provided to him/her.

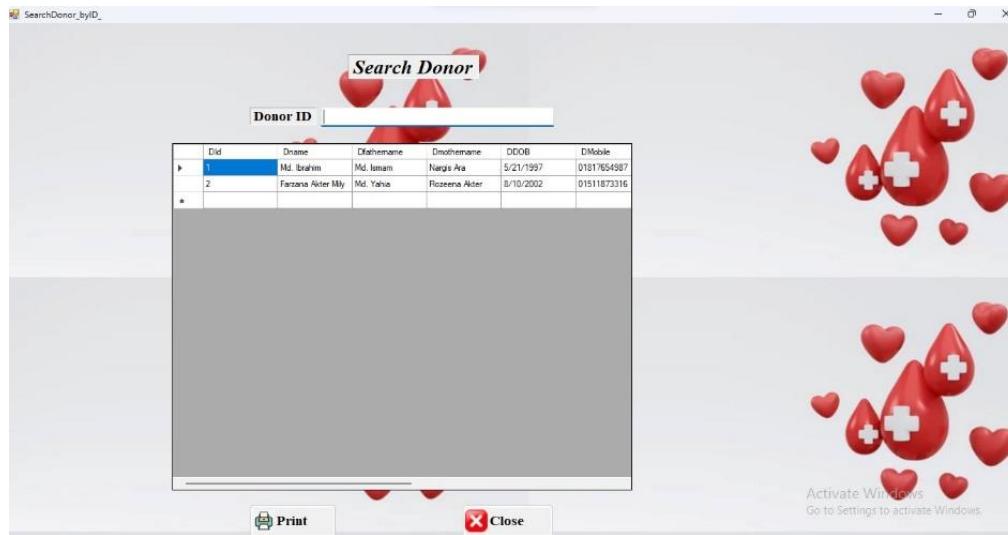


Fig: 4.35

- All donor details are stored in our database. So the user can see the information of himself/herself by searching with Blood Group . So the user must enter the "Search Donor" segments with the sub-segment "Blood Group" & can search by blood group.

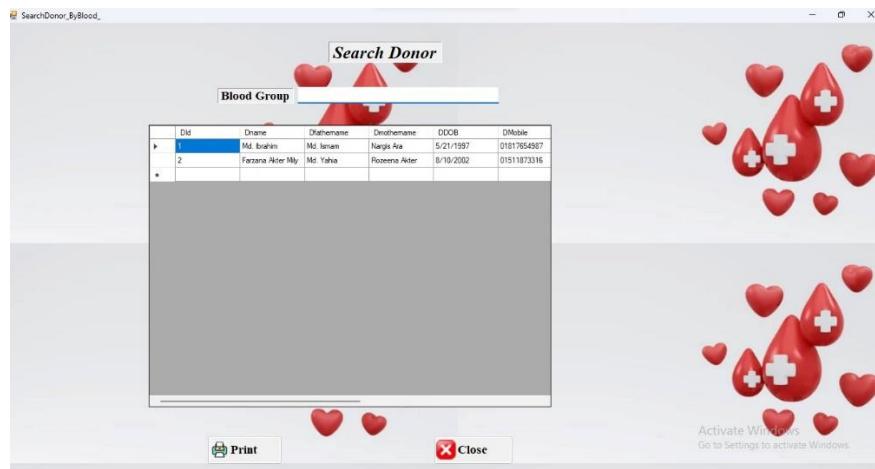


Fig: 4.36

❖ DOCTOR SECTION:

- The same process like the selection type of user is valid for selecting as a doctor. The user gets a Doctor ID and fill up the form according to the requirements. So the user must enter the "Doctor" segments with the sub-segment "Add New Doctor".

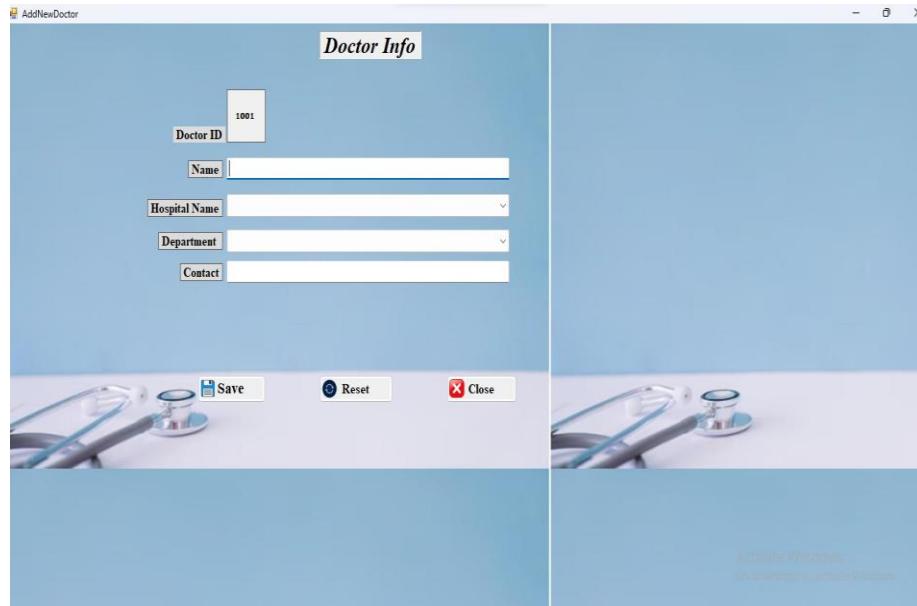


Fig: 4.37

- If the doctor user wants to update his/her any information , it is possible to do that & so the user must enter the "Doctor" segments with the sub-segement "Update details" & can search by "Doctor ID" which is provided to him/her.

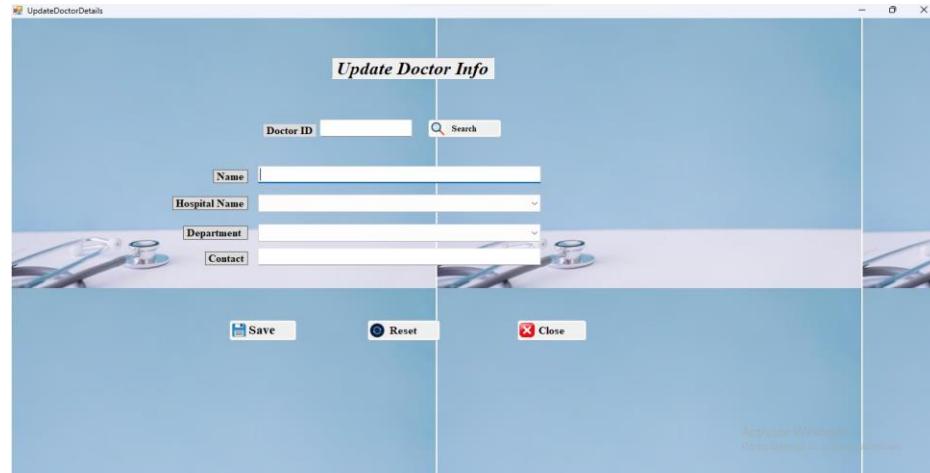


Fig: 4.38

- The doctor user can see the details of all registered doctor's Info.

The screenshot shows a Windows application window titled 'All Doctor Details'. It contains a table with 15 rows of data. The columns are labeled: DocId, DocName, DocHospitalName, DocDepartment, and Contact. The data includes various doctors from different hospitals and their contact numbers. At the bottom are 'Print' and 'Close' buttons.

| DocId | DocName | DocHospitalName | DocDepartment | Contact |
|-------|----------------------|-----------------------|--------------------|-----------------|
| 1 | Prof. Dr. Shamm.. | National Institute .. | Department of N... | +9809613767801 |
| 2 | Prof. Dr. Dip Ku... | National Institute .. | Department of N... | +9809613767803 |
| 3 | Dr. Jameed Farid | Vision eye Hospit... | Department of O... | +9809610244123 |
| 4 | Dr. Siddiqu | Vision eye Hospit... | Department of O... | +98091988815702 |
| 5 | Dr. Ayub Ali | National Institute .. | Department of N... | +98096100010615 |
| 6 | Prof. Dr. Fark... | Square Hospital (... | Department of H... | +9801974656799 |
| 7 | Dr. Mahmuda Za... | Square Hospital (... | Department of N... | +9801719456676 |
| 8 | Dr. AHM Abu Not... | Square Hospital (... | Department of N... | +9801654345123 |
| 9 | Dr. Nazam Uddi... | Square Hospital (... | Department of N... | +980178964234 |
| 10 | Prof. Dr. Shah Asem | Square Hospital (... | Department of O... | +9801763967456 |
| 11 | Dr. Abu Zafar | Evercare Hospital .. | Department of H... | +9801010670088 |
| 12 | Prof. Dr. Md. Mas... | Evercare Hospital .. | Department of N... | +9801987345623 |
| 13 | Dr. Neemra Naher | Evercare Hospital .. | Department of O... | +9801765967456 |
| 14 | Dr. Tariqul Muquith | United Hospital U... | Department of H... | +98 02 8836000 |
| 15 | Prof. Dr. Faridul .. | United Hospital U... | Department of O... | +98 02 8836000 |

Fig: 4.39

❖ SEARCH DOCTOR SECTION:

- All doctor details are stored in our database. So the user can see the information of himself/herself by searching with hospital name . So the user must enter the "Search Doctor" segments with the sub-segement "Hospital" & can search by hospital name.

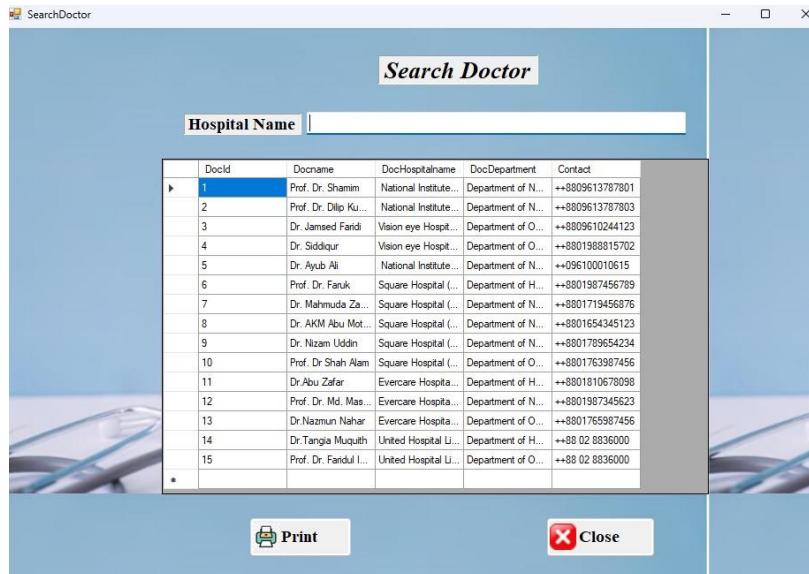


Fig: 4.40

❖ ORGAN SECTION:

- Those organs which available on any particular hospital are stored in our database.

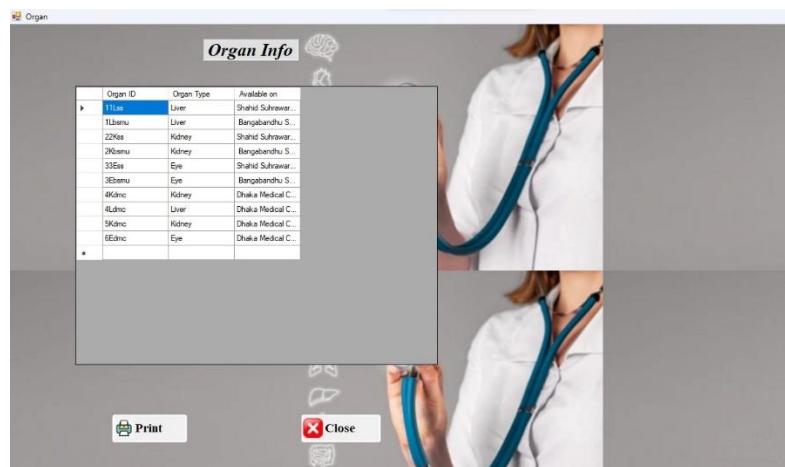


Fig: 4.41

❖ HISTORY SECTION:

- There are two categories such as Fill up & Record. Every categories are divided into three segments such as "Patient", "Donor" & "Doctor".
 - In the "Patient" segment , the patient users must fill up their requirements according to his/her history.

History of Patient

Patient ID: [Input Field]
 Diseases: [Dropdown]
 Hospital ID: [Input Field]
 Doctor ID: [Input Field]
 Donor ID: [Input Field]
 Organ ID: [Input Field]
 Issue Date: 5/23/2024 [Input Field]
 Status: [Dropdown]

Submit

Fig: 4.41

- In the "Donor" segment , the donor users must fill up their requirements according to his/her history.

History of Donor

Donor ID: [Input Field]
 Organ Donated: [Dropdown]
 Hospital ID: [Input Field]
 Doctor ID: [Input Field]
 Patient ID: [Input Field]
 Organ ID: [Input Field]
 Issue Date: 5/23/2024 [Input Field]
 Status: [Dropdown]

Submit

Fig: 4.42

- In the “Doctor” segment , the doctor users must fill up their requirements according to his/her history.

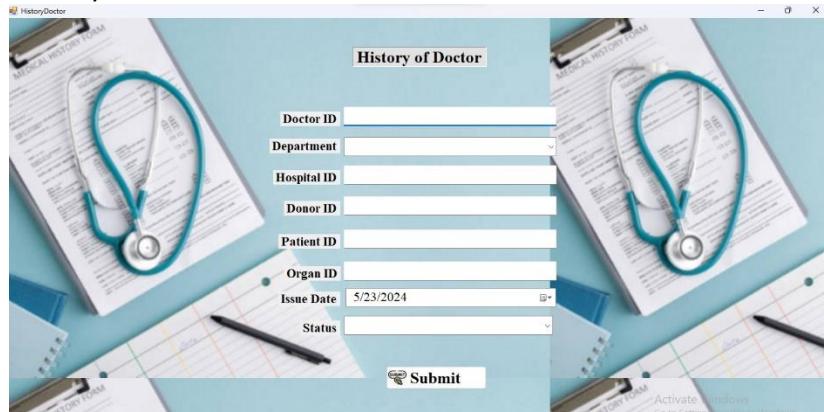


Fig: 4.43

- In the “Patient” segment , the patient users data are recorded in our database. It is seen in our “record” sub segment under the segment “History”.

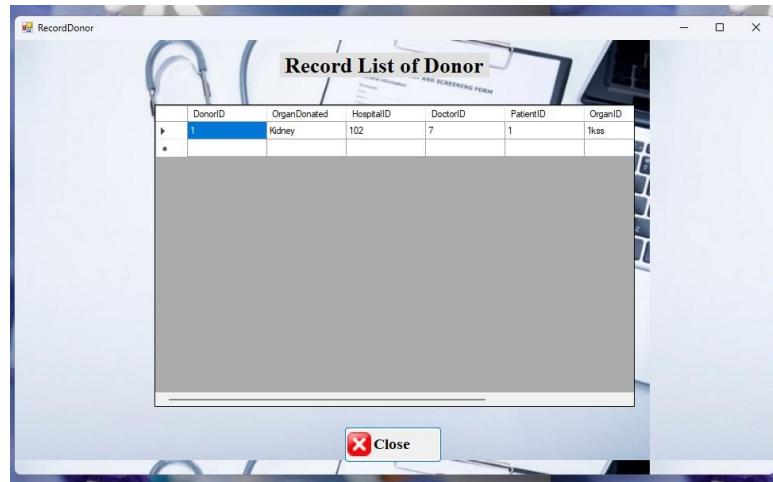
The screenshot shows a Windows application window titled "RecordPatient". The main title bar has a red close button, a white maximize/minimize button, and a black minimize button. The window contains a table titled "Record List of Patient" with the following data:

| PatientID | Diseases | HospitalID | DoctorID | DonorID | OrganID |
|-----------|----------------|------------|----------|---------|---------|
| 1 | Eye damaged | 118 | 7 | 1 | 2Kcms |
| 6 | Kidney Damaged | 117 | 7 | 2 | 1Kcms |
| * | | | | | |

A "Close" button is located at the bottom center of the application window. The background features a blue clipboard with a white medical history form and a stethoscope. A watermark in the bottom right corner says "Activate Windows".

Fig: 4.44

- In the “Donor” segment , the donor users data are recorded in our database. It is seen in our “record” sub segment under the segment “History”.



The screenshot shows a Windows application window titled "RecordDonor". The main title bar is "Record List of Donor". Below the title bar is a header section with the text "Record List of Donor" and "Donor Record". The main content area is a table with the following columns: DonorID, OrganDonated, HospitalID, DoctorID, PatientID, and OrganID. There is one visible row with data: DonorID 1, OrganDonated Kidney, HospitalID 102, DoctorID 7, PatientID 1, and OrganID 1kas. A "Close" button is located at the bottom right of the table area.

| DonorID | OrganDonated | HospitalID | DoctorID | PatientID | OrganID |
|---------|--------------|------------|----------|-----------|---------|
| 1 | Kidney | 102 | 7 | 1 | 1kas |
| * | | | | | |

Fig: 4.45

- In the “Doctor” segment , the donor users data are recorded in our database. It is seen in our “record” sub segment under the segment “History”.



The screenshot shows a Windows application window titled "RecordDoctor". The main title bar is "Record List of Doctor". Below the title bar is a header section with the text "Record List of Doctor" and "Doctor Record". The main content area is a table with the following columns: DocID, Department, HospitalID, DonorID, PatientID, and OrganID. There is one visible row with data: DocID 1, Department null, HospitalID null, DonorID null, PatientID null, and OrganID null. A "Close" button is located at the bottom right of the table area.

| DocID | Department | HospitalID | DonorID | PatientID | OrganID |
|-------|------------|------------|---------|-----------|---------|
| 1 | | | | | |
| * | | | | | |

Fig: 4.46

Chapter 5

Future Plan

To build on the foundation laid by the initial implementation of the Regional Coordination Center for Organ Donation and Procurement, the following future plans aim to expand, optimize, and sustain the system's operations and impact:

Expansion to Additional Regions:

- Evaluate the success and challenges of the initial implementation to refine the model.
- Plan for phased expansion to other regions or states, adapting to specific regional needs and regulations, ensuring a broader national impact.

Integration with National Health IT Systems:

- Collaborate with national health information exchanges to integrate the center's database with other health data systems. This would streamline data sharing and improve the speed and accuracy of organ matching and allocation processes.

Enhanced Public Education and Engagement:

- Develop and deploy more comprehensive, culturally-tailored public awareness campaigns to educate different demographics on the importance and benefits of organ donation.
- Partner with community organizations, schools, and influencers to reach a wider audience and normalize organ donation across diverse communities.

Policy Advocacy and Government Partnerships:

- Work with policymakers to advocate for supportive legislation and policies that promote organ donation and protect donor and recipient rights.
- Engage with international organ donation organizations to align standards and share best practices, aiming for global improvement in organ donation systems.

Training and Education Programs for Medical Personnel:

- Regularly update training modules based on the latest medical advancements and feedback from ongoing operations.
- Establish a certification program for organ procurement coordinators and other related roles to standardize the expertise required across hospitals in the region.

Chapter 6

Conclusion

In conclusion, the Regional Coordination Center for Organ Donation and Procurement represents a pivotal step forward in the management and enhancement of organ transplantation systems within the region. By establishing a centralized, standardized approach to organ donation and transplantation, this initiative promises to streamline processes, enhance public awareness, and increase the availability of vital organs, ultimately saving more lives. The outlined future plans aim to expand the project's reach, integrate advanced technologies, and strengthen collaborations with various stakeholders, ensuring the sustainability and effectiveness of the organ donation system. Through continuous improvement, rigorous research, and community engagement, the project is set to evolve into a robust national model that could potentially influence global standards in organ donation. The commitment to enhancing the quality of life through improved medical practices stands as a testament to the progressive vision behind the Regional Coordination Center, making it a beacon of hope and innovation in healthcare.