



**LIBYAN INTERNATIONAL UNIVERSITY
FACULTY OF INFORMATION TECHNOLOGY**

ELECTRONIC BLOOD DONATION PORTAL

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Certification

This project entitled electronic blood donation portal prepared by Amal Attia Jai, under supervision Mr. Ehab elfallah has been approved for submission to the department of health informatics, faculty of information technology in a partial fulfillment for the certification of bachelor in information technology.

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Declaration

This is to declare that I have not submitted the research/project work embodied in this project electronic blood donation portal to any other university before.

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Acknowledgement

I am thankful to all the faculty members, providing their valuable time and guidance in elaborating view of studying the project details and getting the right vision for its implementation. I also thank my Supervise Mr.Ehab ElfAllah and all other faculty members who are directly or indirectly associated with my project . I am also pleased with the support and co-operation of the One of the centers dedicated to donating blood to make use of the website.

Dedication

I dedicate this work to my lovely father Dr. Atia Altaher Jai & To the great women in the world my mother Mrs. Gazala Boker with deepest gratitude whose love and prayers have always been a source of strength for me. To my brother's and my sweaty nephew & all relatives, friends and others who in one way or another shared in their continued support.

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Chapter I

INTRODUCTION

1.1 Background

Blood donation is a noble humanitarian act that contributes to saving the lives of many patients and sufferers. There are often those who are in need of a blood drop from a generous donor. The time here is a crucial factor. The delay in obtaining blood in time may lead to death.

The current manual systems used to record the personal and medical data of blood donors, is having difficulties in managing donor data and lack of coordination between blood donors on one hand and the blood donation centers on the other hand. Under these regulations, the donor must register his data at a blood donation center. The personal transfer to the headquarters of the center will cost him his time and his potential, and his personal transfer will be repeated whenever additions or modifications to his previous statements are made. This problem weakens his desire to donate, since donating blood is voluntary in principle.

As for blood donation centers, the prevailing manual systems used are currently exposed to overlapping registration and classification processes and the likelihood of recurrence, not to mention the difficulty of searching and accessing them when needed.

1.2 Problem Statement

According to what our country and our city specially suffer from the wars conditions also the need of rare blood groups of blood is increasing. Usually the patient who require a blood transfusion request from blood donation centres. There are four multiple donation centres available in Benghazi-city. Therefore, if the patient seeking a special blood group someone has to physically go and ask in each centre for required blood group which could be time consuming and also unavailability of blood during emergency may lead to deaths due to lack of blood during operations. In other hand, the donor who wants to donate a blood may want to know in which centres there is lake of special blood group, so he/she can go and donate in that centre.

1.3 Aim and Objectives

Despite the bad conditions of our city Benghazi, it still teaches us how to continue and try to find new solutions by using technology which helps all citizens inside and outside the city. It is important to connect between the donors and receivers by easy technological way without any more pains and additional costs to achieve this humanism purpose. In this way to give anyone who is in need of any blood group the chance to know where and when he can find what he needs and in which blood donation centre exactly. This project aims to develop a website to provide information about blood donation and blood group availability in each registered centre.

1.4 Scope and Limitation

This project aims to register all donation centers operated in Benghazi city. Besides that, the intended website developed will be available daily for users who have an internet access and user can't access by mobile apps

CHAPTER II

INITIATION

2.1 Feasibility study

The importance of the preliminary investigation is the determination of whether the system requested is feasible or not. There are three aspects of feasibility study which should be checked in preliminary investigation.

2.1.1 Technical feasibility:

This feasibility determines whether it is possible to develop the project with available equipment, available software, technology and the manpower. An investigation of present procedure is needed in order to identify the volumes, trends, frequencies that will specifically affect the design of any computer based system. Based on finding of the investigation we designed Input screen, output report, tables showing list of input field with possibility of validation.

2.1.2 Operational feasibility:

Our input screens are designed as per requirements. (One or two-hour training is sufficient to the staff managing the system.) the staff members will be involved into system development; system operation will be easy for the staff.

2.1.3 Economic feasibility:

In the economic evaluation with comparing the cost of doing things in a particular way to the benefits since organization will be Required to implement this project. So, comparing with the investment needed, advantage of computerization is definitely important. So, organization will be definitely benefited.

2.2 Requirements Gathering

The method of collecting information was done in central blood donation in Benghazi- Al laithy Branch. Where through an interview has made with the receptionist and with the doctor to take the necessary information to understand the current system and collect all information through voice record.

CHAPTER III

ANALYSIS

3.1 Software Requirement Specification

- Operating system Windows XP and above.
- Visual Basic.Net.
- Microsoft SQL Server.

3.2 Functional requirement

The functions of the system describe any tasks that online blood donation system provides to users during usage situations.

Through the usage status chart, the functions of the system are as follows:

- 1-Register and manage (update, delete and Edith) the basic manager data.
- 2-Register and manage (update, delete and Edith) the basic centers data.
- 3-Register and manage (update, delete and Edith) the basic donor data.
- 4-Registering and manage (update, delete and Edith) the data of the available blood group.
- 5-Search for blood group.
- 6- Register and manage (update, delete and Edith) the basic blood group data.
- 7- They can inquire about and contact us.
- 8- printing report (donor data, center data) .

3.3 Non-functional requirement

This is a description of system characteristics, such as response, speed, and storage requirements, and classified into:

3.3.1 Performance Requirements

Is a measurement of system efficiency and implementation (which is how fast the system gets work done) in which the system's response rate must be during a short period of time as well as the system having the ability to host multiple users.

3.3.2 Safety Requirements

The purpose is to preserve the system from abusive hands for example following the program of protecting and methods of preserving data such as periodic backups and data retrieval

3.3.3 Security Requirements

Protect your data by logging into the system with your username and password in order to prevent unauthorized access.

3.4 Introduction to analysis

Defines system analysis as "the process of studying a procedure or business in order to identify its goals and purposes and create systems and procedures that will achieve them in an efficient way". Another view sees system analysis as a problem-solving technique that breaks down a system into its component pieces for the purpose of the studying how well those component parts work and interact to accomplish their purpose

3.4.1 Objectives of the analysis

- System analysis helps in discovering means to design systems where sub-system may have apparently conflicting objectives.
- It helps in understanding and comparing functional impacts of sub-systems to the total system.
- It helps in achieving inter compatibility and unity of purpose of sub-systems.

3.4.2 Methodology used in building the system

We used, the waterfall model is a linear sequential (non-iterative) design approach for software development, in which progress flows in one direction downwards (like a waterfall) through the phases of conception, initiation, analysis, design, construction, testing, deployment and maintenance.

The waterfall development model originated in the manufacturing and construction industries: highly structured physical environments in which after-the-fact changes are impossible or at least prohibitively expensive. At the time it was adopted for software development, there were no recognized alternatives for knowledge-based creative work

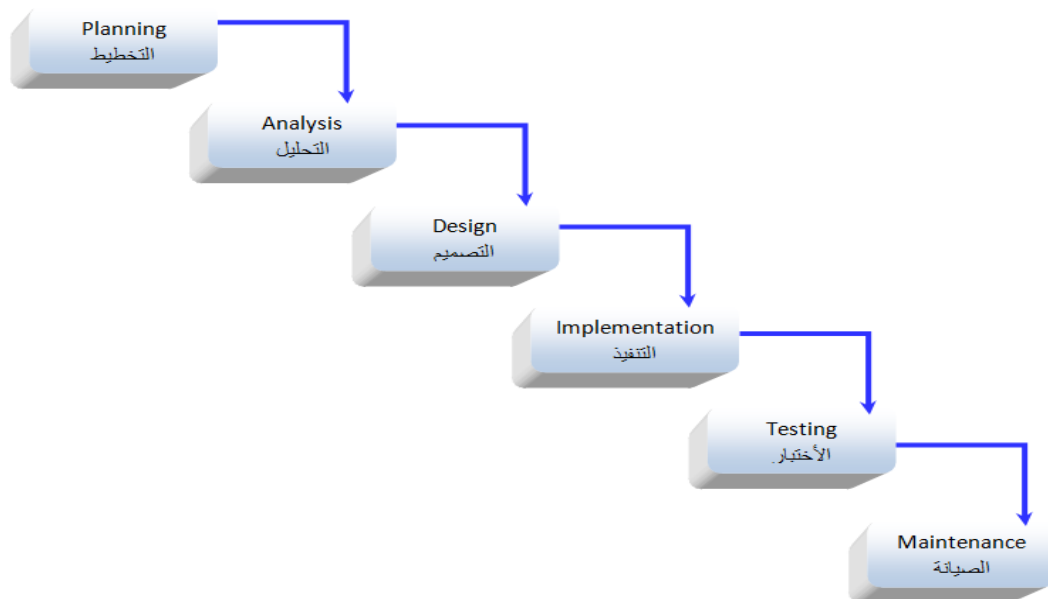


Figure (1) show waterfall model

3.5 System scenario

Blood donation is medical conducting embodies in devolving blood from healthy person to ill one who needs blood. This project presents a web site for blood donation.

This project is about a website for blood donations. After recording centre information (centre number, centre name, phone number, work hours and address, etc.) the centre registers the donors on the website and checks if they're eligible for blood donations by running medical examinations on them, they can then donate at any time if and only if they're eligible.

If the website is visited by a web surfer or someone in need of blood, they can search for the required blood type and will be given the names of centres (where the desired blood type is available) that have already registered it's data on the website. If the blood type is not available then a list of donors and their data (donor number, name and blood type, etc.) will be presented to him/her and they may choose as they need.


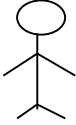
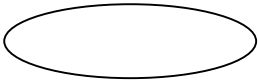

The system manager may also control the whole website and know which blood type is insufficient as well as making advertisements concerning this blood type so that citizens may donate to the centres.

3.6 Use case Diagram

Use case describes the interaction between the system and other external systems or the active users, in other words, it graphically describes the functional behavior of the system from the perspective of the actors.

A use case itself might drill into a lot of detail about every possibility, a use-case diagram can help provide a higher-level view of the system and the simplified and graphical representation of what the system must actually do.

Table (1) show symbols used in use case diagrams

Symbol	Meaning
	A system boundary is a rectangle that you can draw in a use case diagram to separate the use cases that are internal to a system from the actors that are external to the system. A system boundary is an optional visual aid in the diagram; it does not add semantic value to the model.
	Actor An actor is anything outside the system, that interacts with the system to complete a task. It may represent a user or another system that will interact with system
	Use case is a list of steps, typically defining interactions between an actor and a system, to achieve a goal.
	Relationships depict how actors relate to use case, or how one-use case relates to another use case.

3.6.1 Diagram of EBDP

After reviewing the system scenario, the use case used to show the action and function requirement of the system.

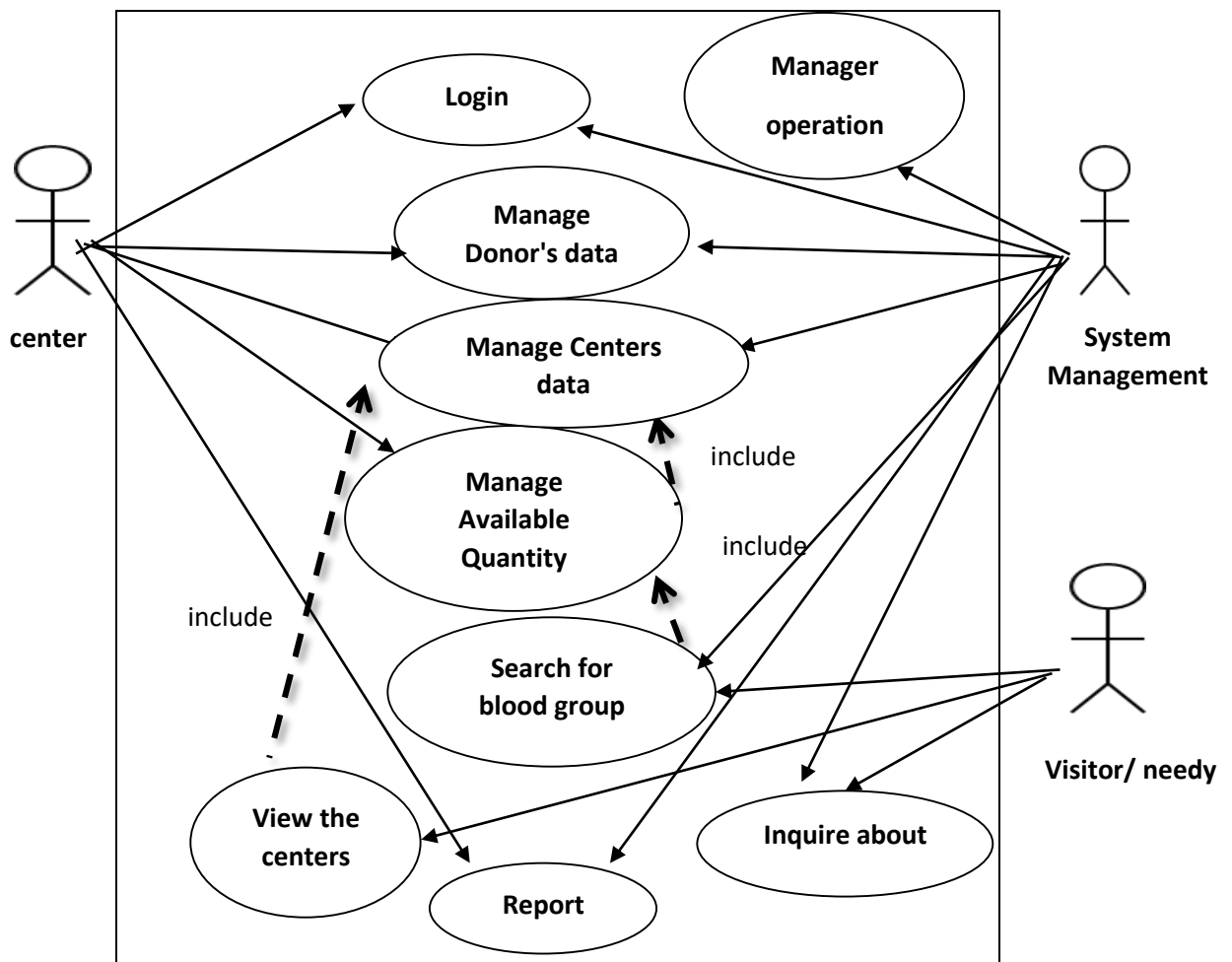



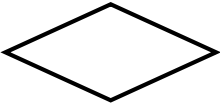



Figure (2) Project Use case diagram

3.7 Activity Diagram

Activity diagrams are graphical representations of workflows of stepwise activities and actions with support for choice, iteration and concurrency. In the Unified Modeling Language, activity diagrams are intended to model both computational and organizational processes (i.e. workflows). Activity diagrams show the overall flow of control. Some of the symbols used in activity diagram are shown in the following table.

Table (2) shows the shapes used in the activity chart

Symbol	Meaning
	Start
	Data flow
	Input and output
	Data validation
	End

3.7.1 Activity name: login

Start of activity: login.

1-The user logs on enter user name and password.

2- The system examines the data.

3-If the data is incorrect, a message is sent that the user name or password is incorrect

Please try again.

4-if the data is valid, the main screen is displayed, and the other system screens are built

On user privileges and logged on to the system.

5 - End of activity: Login to the system.

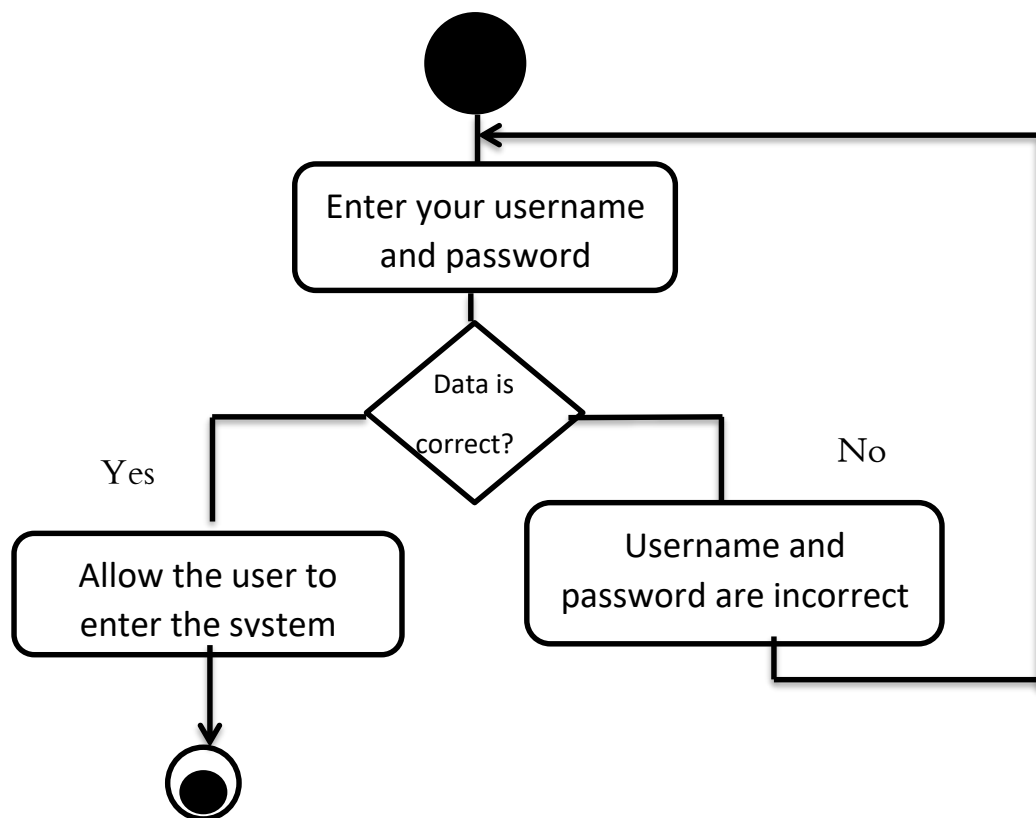


Figure (3) shows the activity diagram of the login

3.7.2 Activity name: Manage donor's data

Start of activity: donor's data

1- Access to website.

2- when the user chooses donor's data option from the list

3- The system will then view donor's data in a new screen.

4 - End of activity: view donor's data successfully.

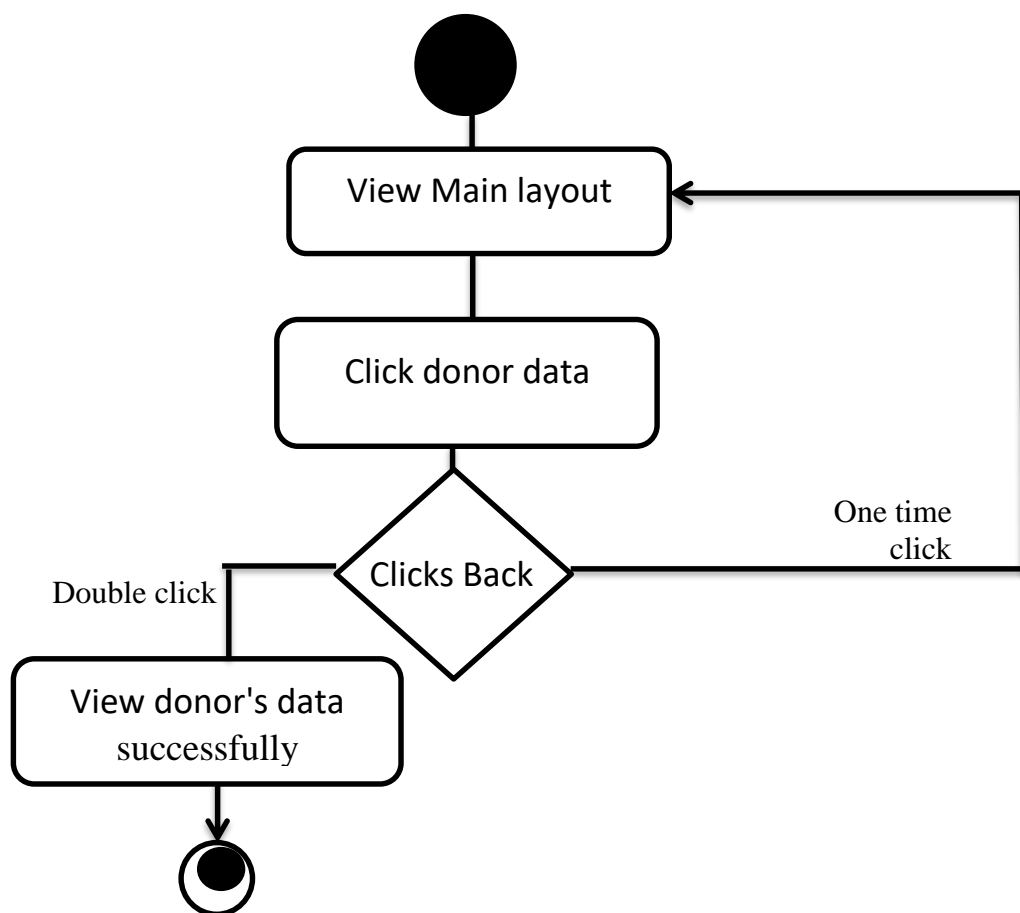


Figure (4) shows the activity diagram of the donor's data

3.7.3 Activity name: Add donor's

Start of activity: Add donor's.

1-The user enter the donors number and data.

2- The system examines the data entered

3-If the number is available data will be saved.

4-if the data is unavailable, Please try again and choose another number

5 - End of activity: Add donor's data successfully.

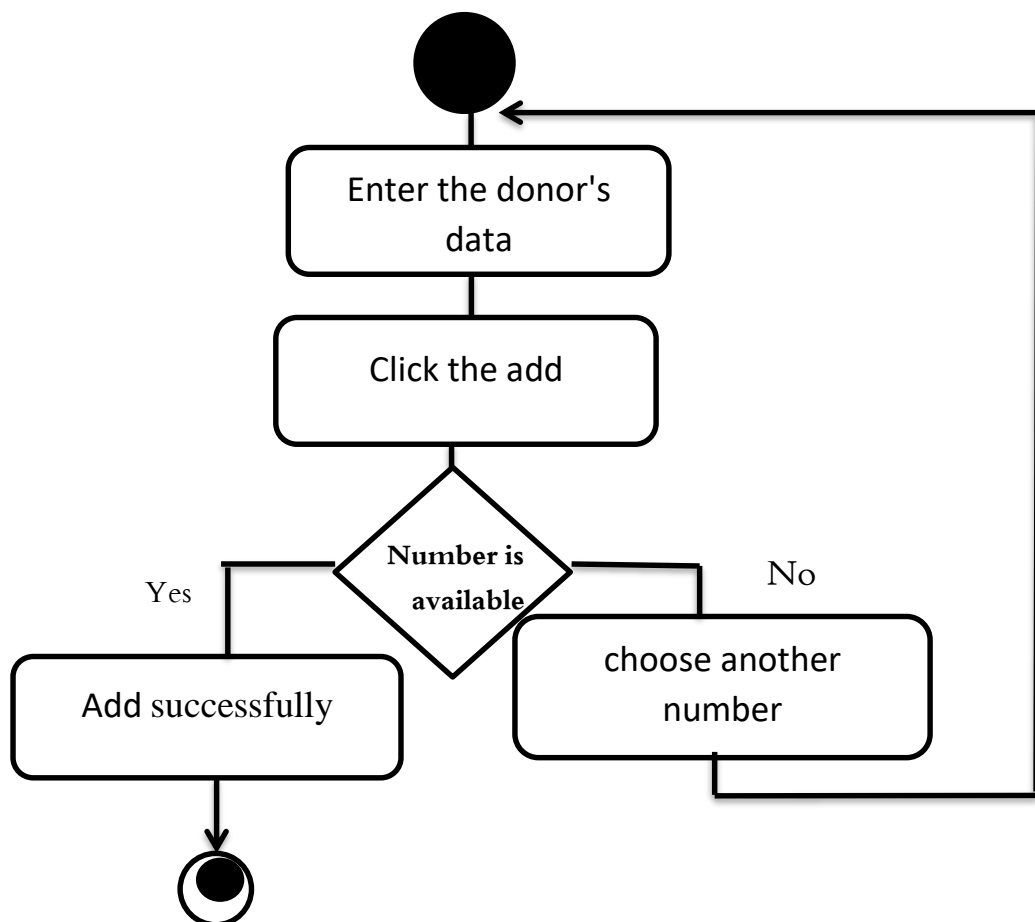


Figure (5) shows the activity diagram of the Add donor's

3.7.4 Activity name: Delete donor's

Start of activity: delete donor's data.

- 1- Access to website
- 2- open the donor screen
- 3- Enter the donors number.
- 4- Presses the delete button .
- 5- Decide if you want to delete or cancel.
- 6 - End of activity: delete donor's data successfully.

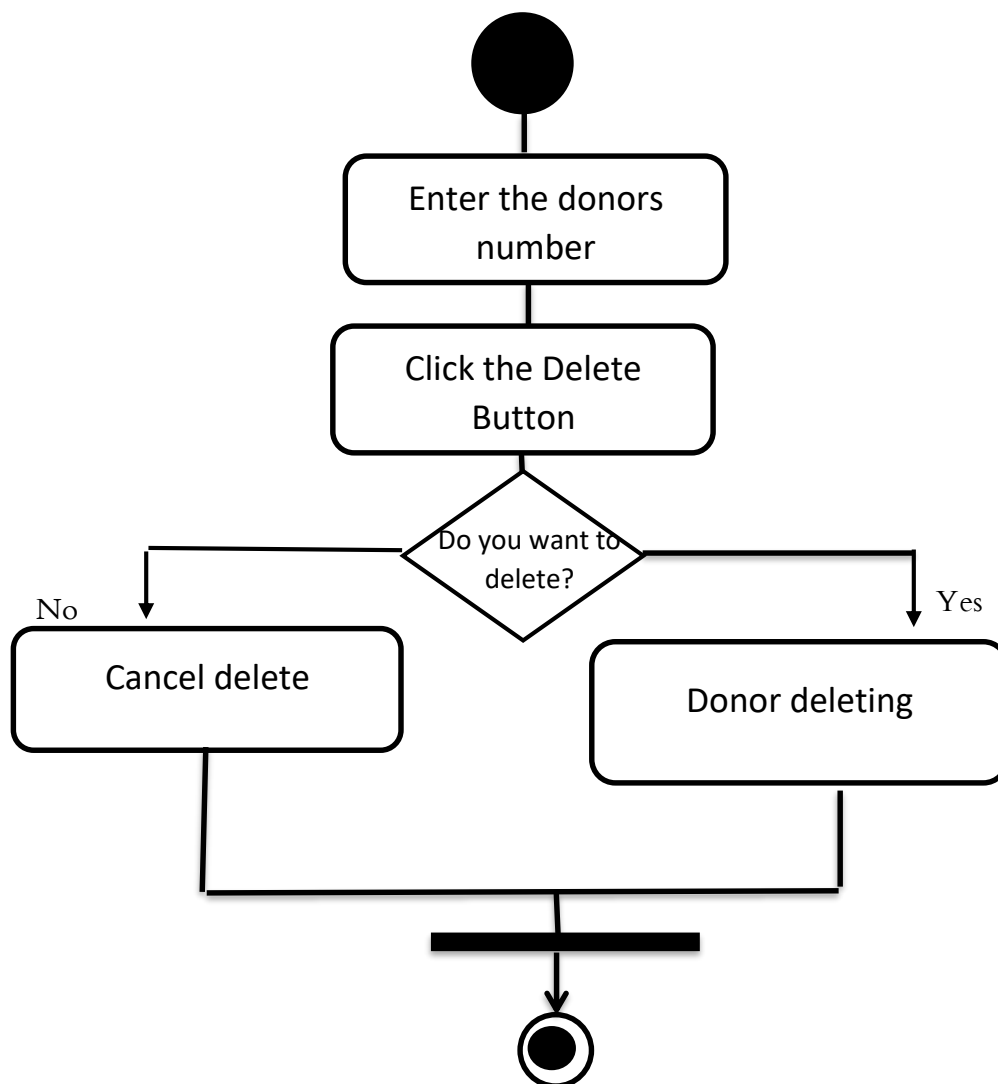


Figure (6) shows the activity diagram of the Delete donor's

3.7.5 Activity name: Edit donor's

Start of activity: Edit donor's data.

- 1- Access to website
- 2- open the donor screen
- 3- Enter the donors number.
- 4-Edit the donor data .
- 5- After the edit save the data
- 6 - End of activity: Edit the donor's data successfully

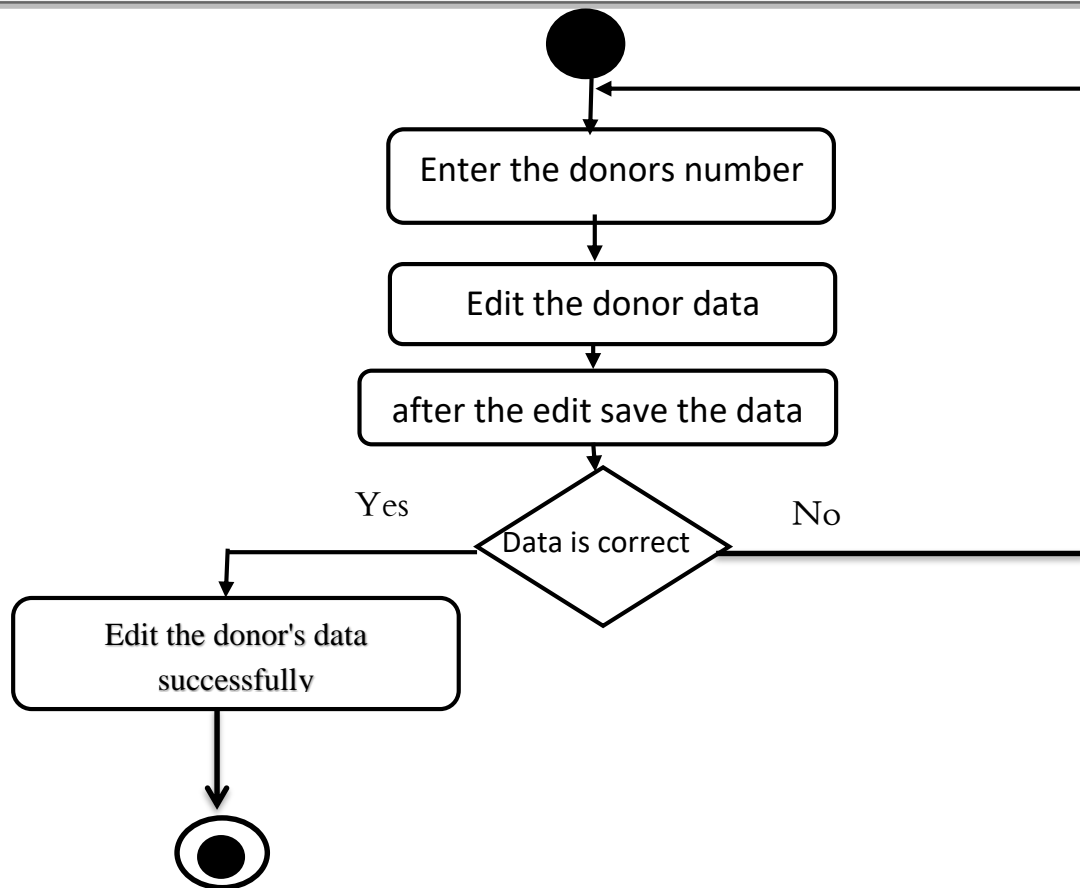


Figure (7) shows the activity diagram of the Edit donor's

3.7.6 Activity name: Manage center's data

Start of activity: Center's data

1- Access to website.

2- when the user chooses Center's data option from the list

3- The system will then view Center's data in a new screen.

4 - End of activity: view Center's data successfully.

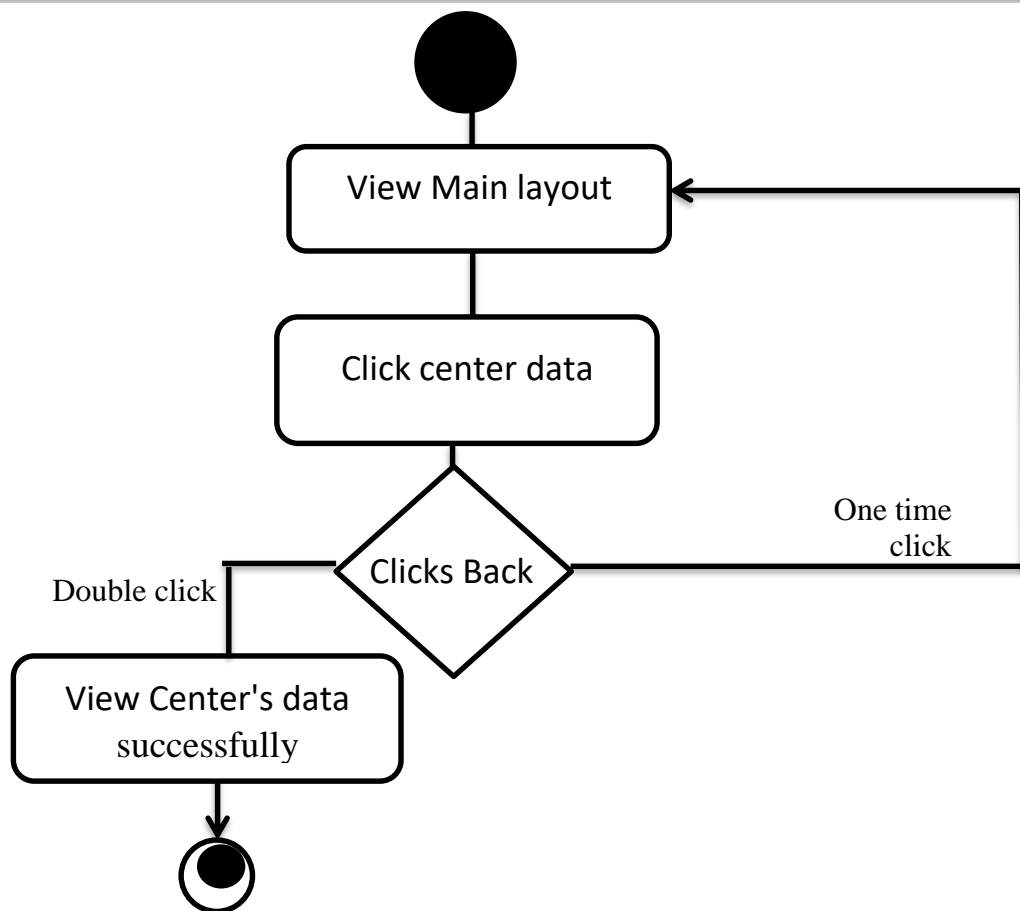


Figure (8) shows the activity diagram of the Center's data

3.7.7 Activity name: Add Center's

Start of activity: Add Center's.

1-The user enter the Centers number and data.

2- The system examines the data entered .

3-If the number is available data will saved data.

4-if the data is unavailable, Please try again and choose another number

5 - End of activity: Add Center data successfully.

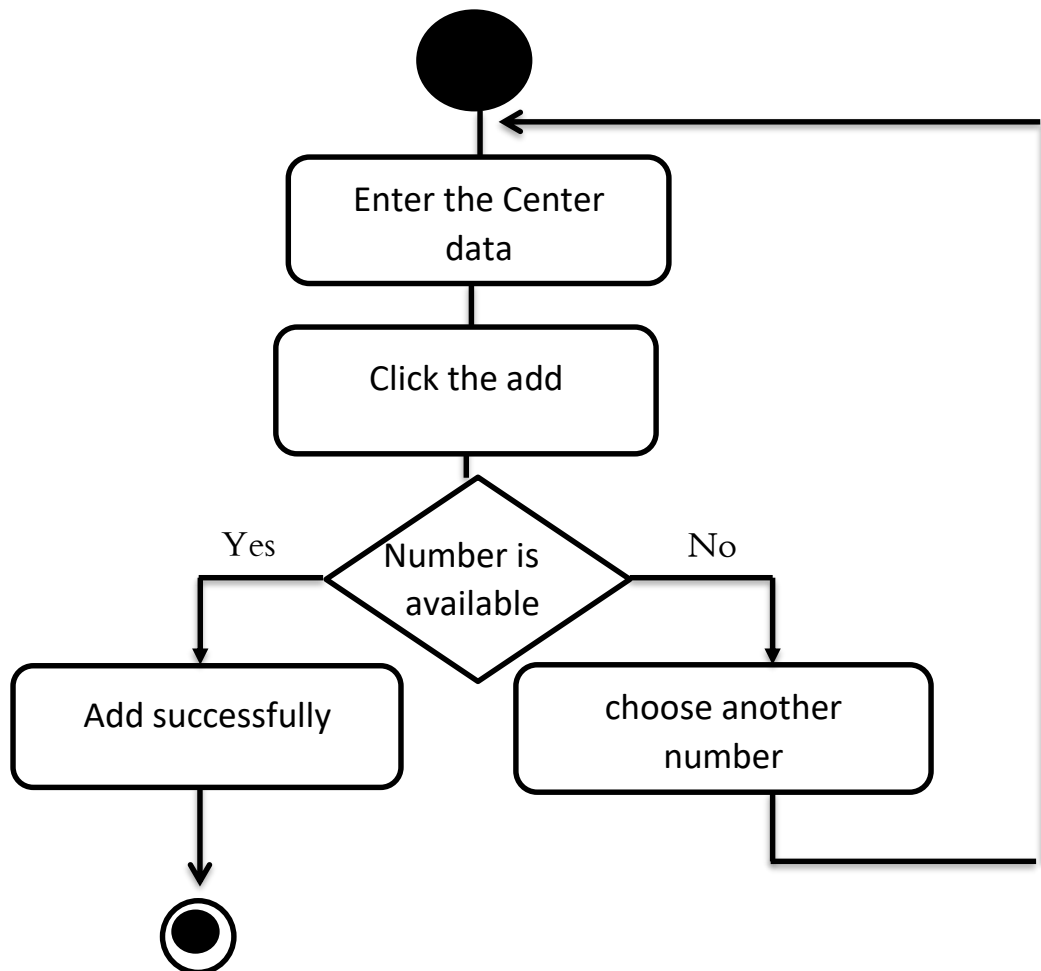


Figure (9) shows the activity diagram of the Add Centers

3.7.8 Activity name: Delete Center's

Start of activity: delete Center's data.

- 1- Access to website
- 2- open the Center screen
- 3- Enter the Center number.
- 4- Presses the delete button .
- 5- Decide if you want to delete or cancel.
- 6 - End of activity: delete Center data successfully.

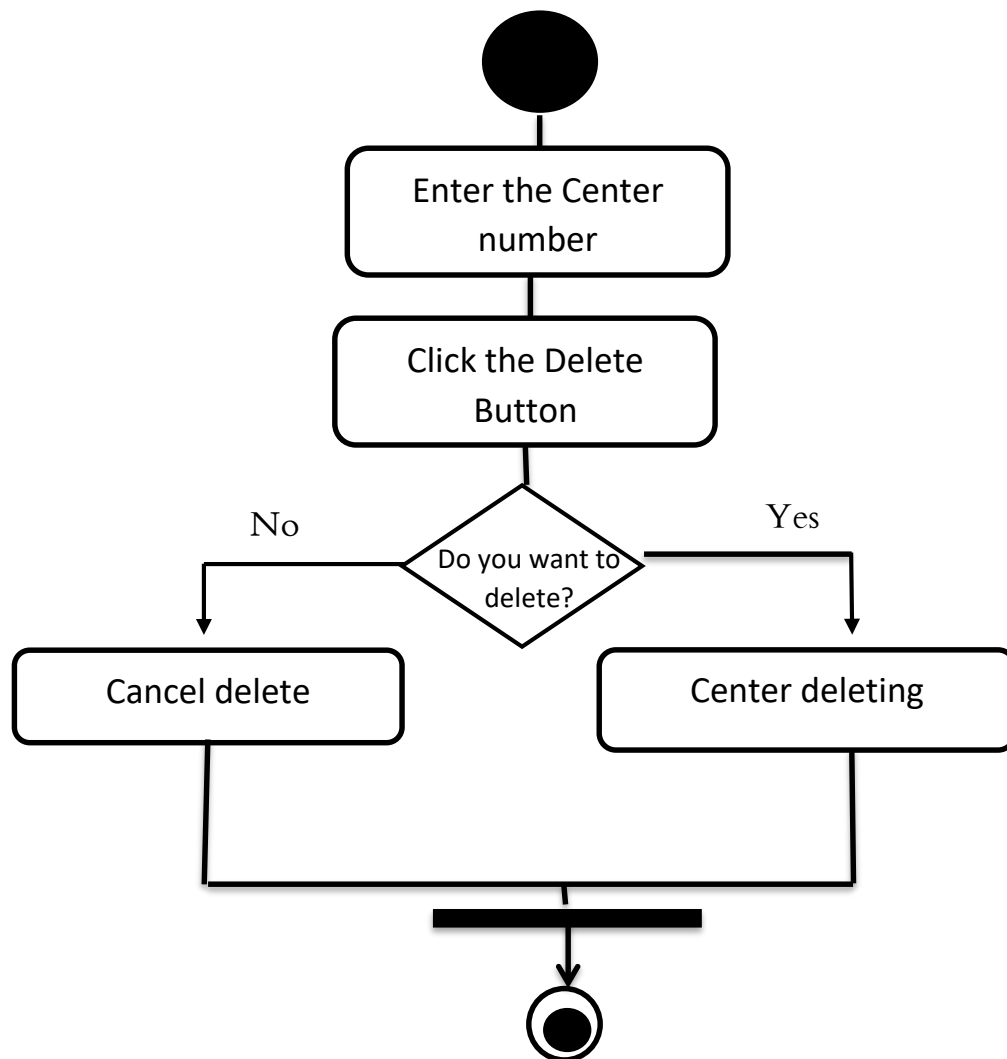


Figure (10) shows the activity diagram of the Delete Centers

3.7.9 Activity name: Edit Center's

Start of activity: Edit Center data.

1- Access to website

2- open the Center screen

3- Enter the Center number.

4-Edit the Center data .

5- After the edit save the data

6 - End of activity: Edit the Center data successfully

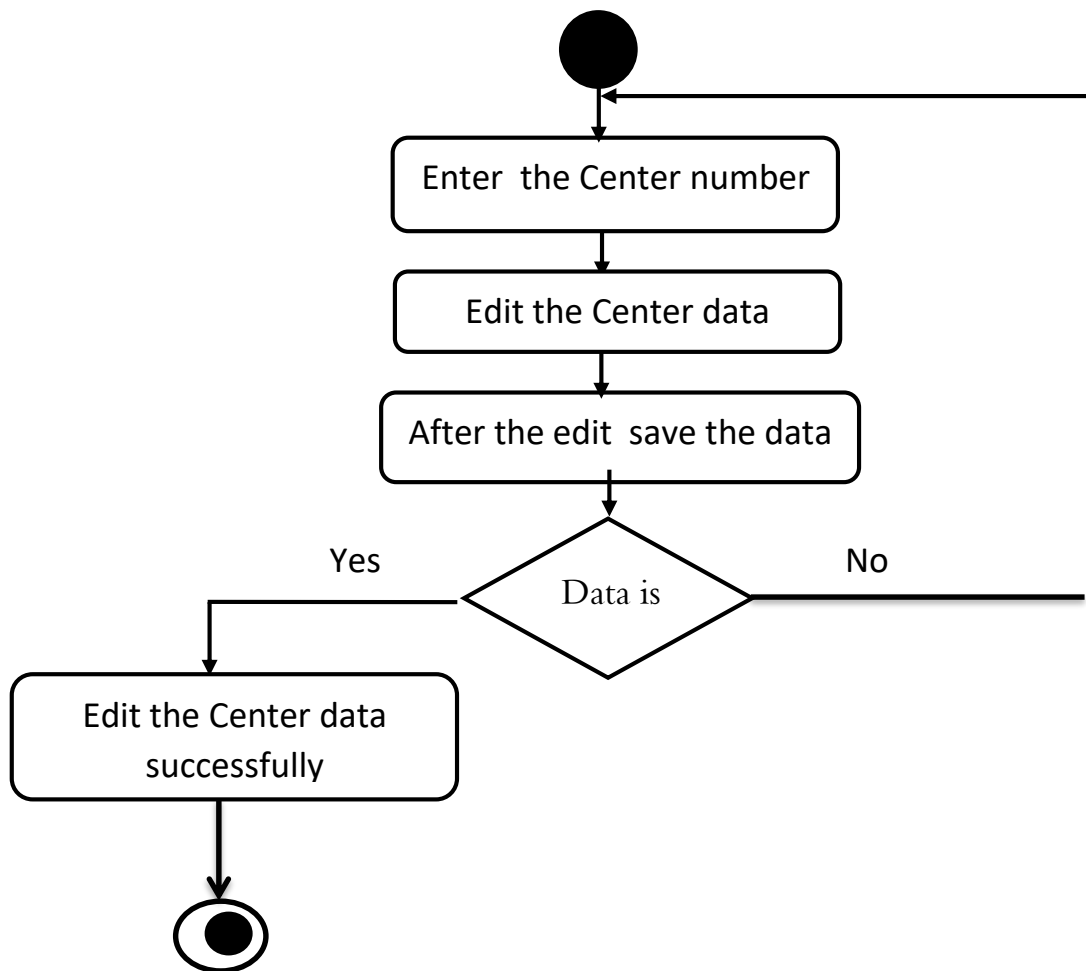


Figure (11) shows the activity diagram of the Edit Center's

3.7.10 Activity name: manager operation

Start of activity: view manager operation

- 1- Access to website.
- 2- when the user chooses manager operation option from the list
- 3- The system will then view manager operation data in a new screen.
- 4 - End of activity: view manager operation successfully.

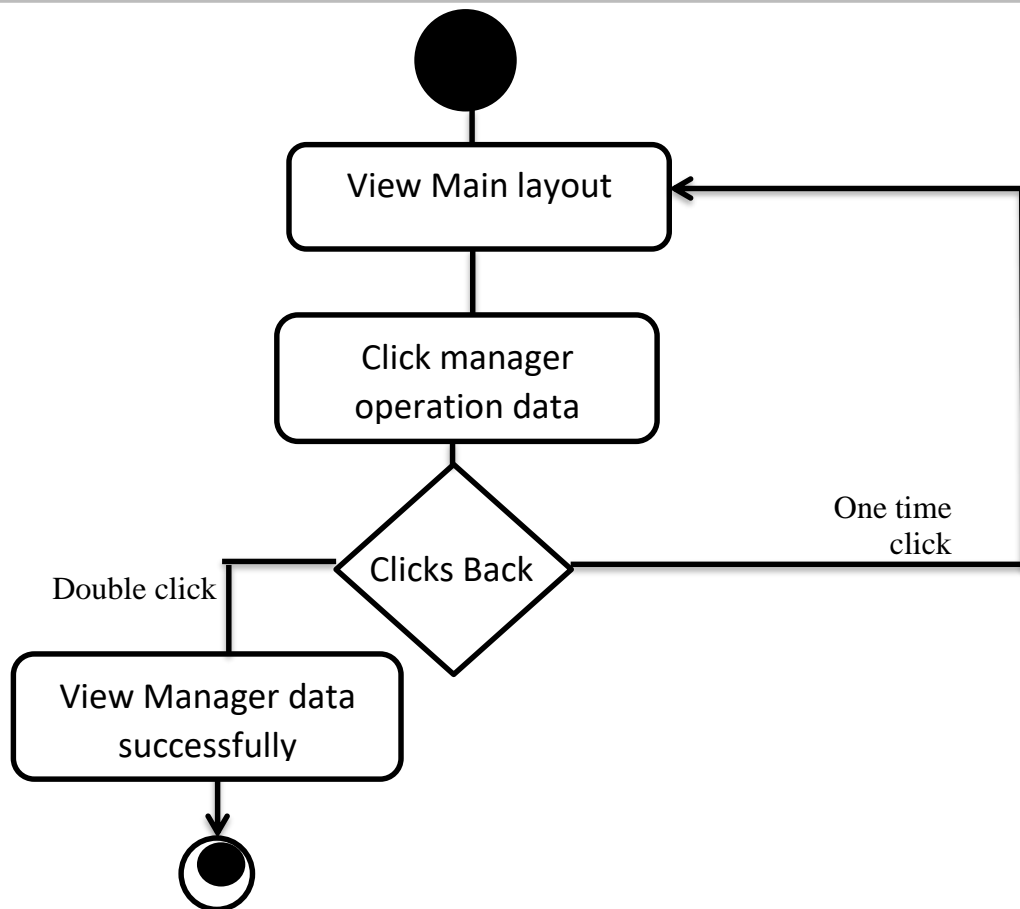


Figure (12) shows the activity diagram of the Manager Operation data

3.7.11 Activity name: Add manager

Start of activity: Add manager.

1-The user enter the manager number and data.

2- The system examines the data entered

3-If the number is available data will be saved.

4-if the data is unavailable, Please try again and choose another number

5 - End of activity: Add manager data successfully.

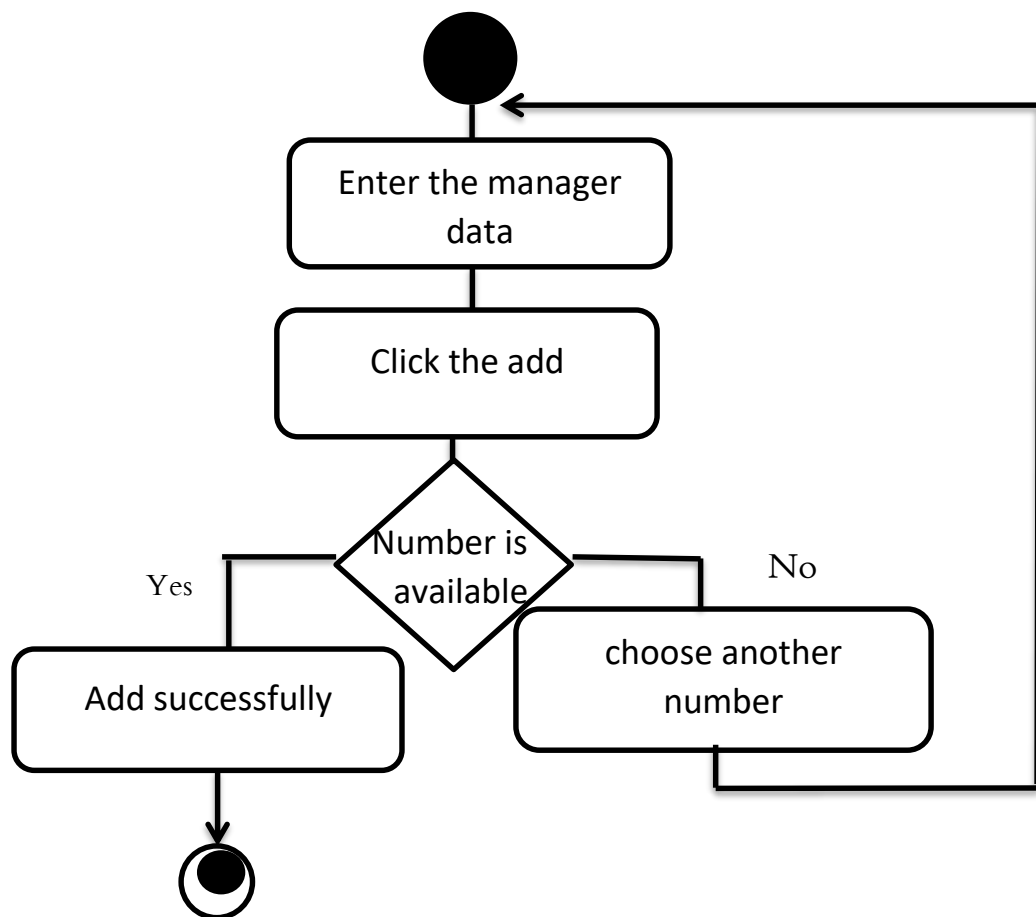


Figure (13) shows the activity diagram of the Add manager

3.7.12 Activity name: Edit manager

Start of activity: Edit manager data.

- 1- Access to website
- 2- open the manager screen
- 3- Enter the manager number.
- 4-Edit the manager data .
- 5- After the edit save the data
- 6 - End of activity: Edit the manager data successfully

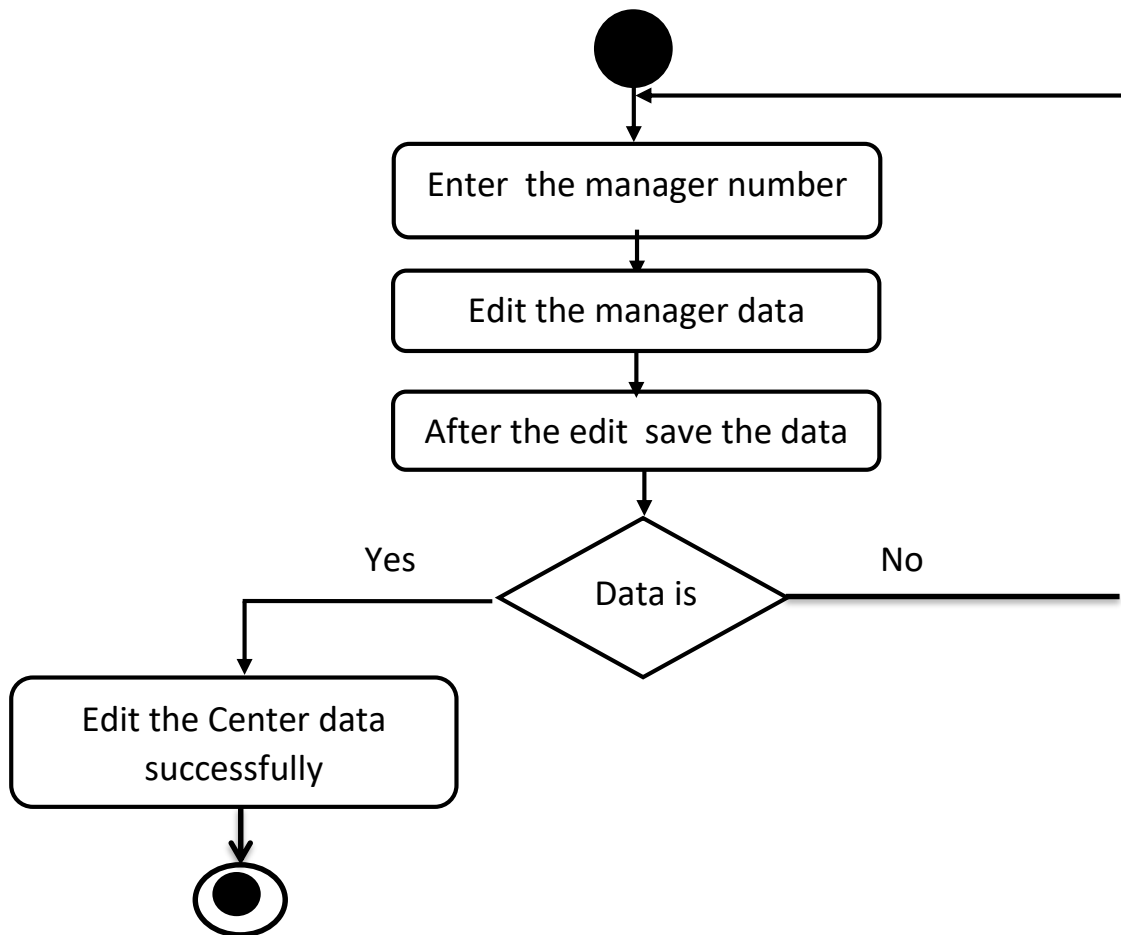


Figure (14) shows the activity diagram of the edit manager data

3.7.13 Activity name: Delete manager

Start of activity: delete manager data.

- 1- Access to website
- 2- open the manager screen
- 3- Enter the manager number.
- 4- Presses the delete button .
- 5- Decide if you want to delete or cancel.
- 6 - End of activity: delete manager data successfully.

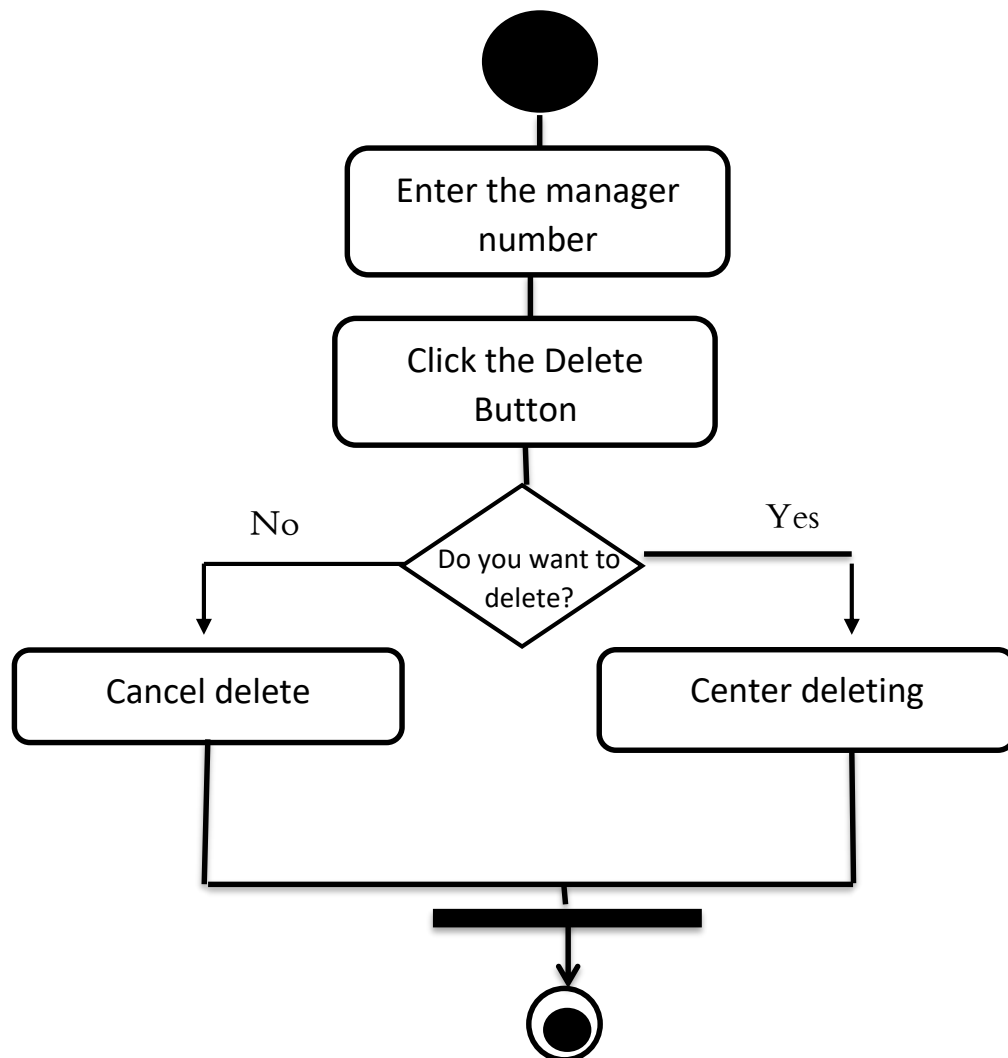


Figure (15) shows the activity diagram of the Delete manager

3.7.14 Activity name: Manage Available Quantity

Start of activity: Determines quantities available or unavailable.

1- open the Center screen

2- enter user name and password .

3- The system examines the data.

4- If the data is notExist, you are not eligible to enter and if existing, Enter the type of blood group.

5-If the type of group is not exist, you should add the data and if existing, Edit the data .

6 - End of activity: Edit the data blood group successfully

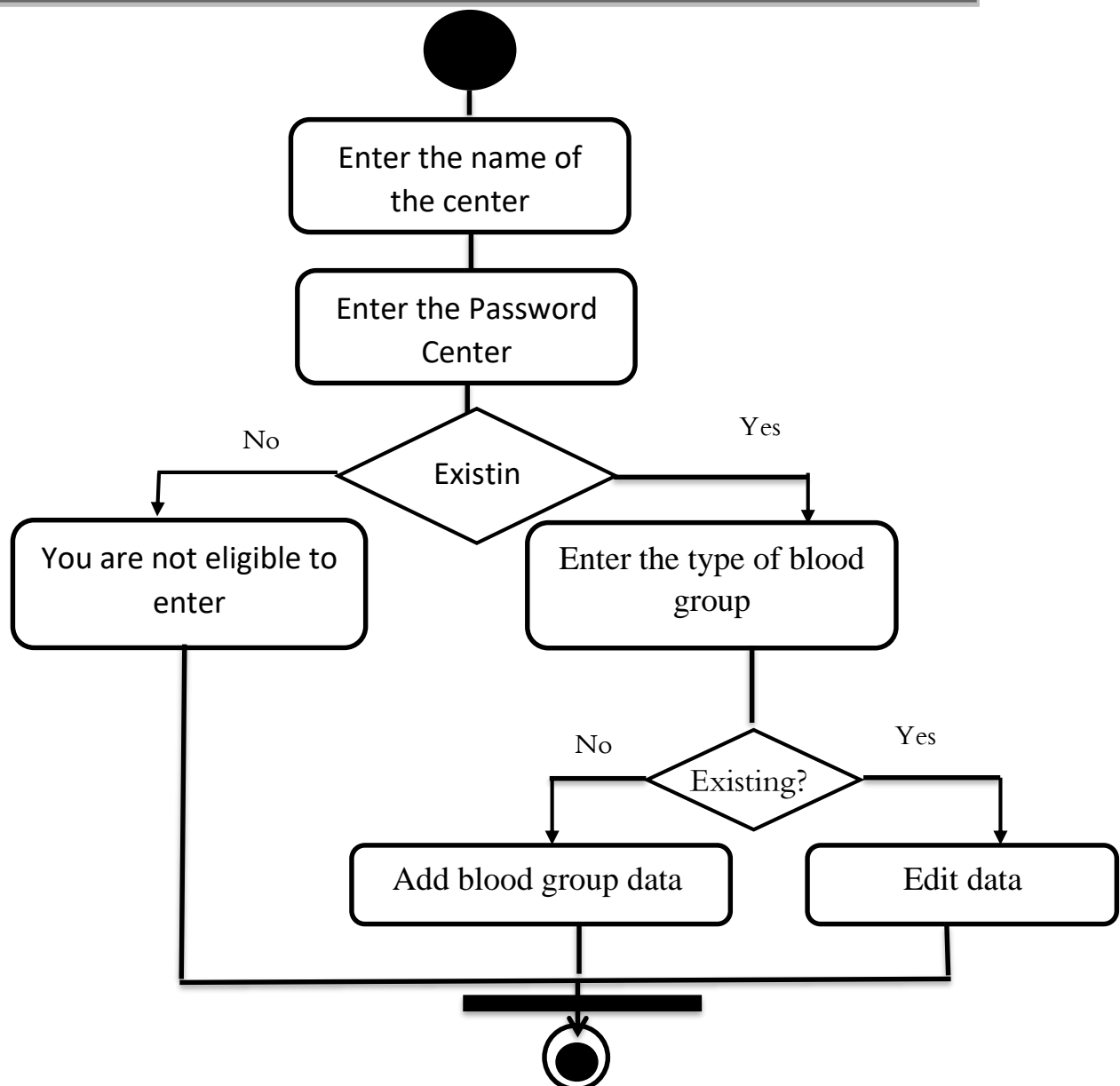


Figure (16) shows the activity diagram of the Manage Available Quantity

3.7.15 Activity name: Search for blood group.

Start of activity: Search for blood group.

1- Access to website

2- Enter the type of blood.

Check the type of blood 3-

3- If you data is exist you will display the quantities if available or unavailable and centers name.

4- If you do not exist it displays the names of donors

5 - End of activity: Search for blood group successfully.

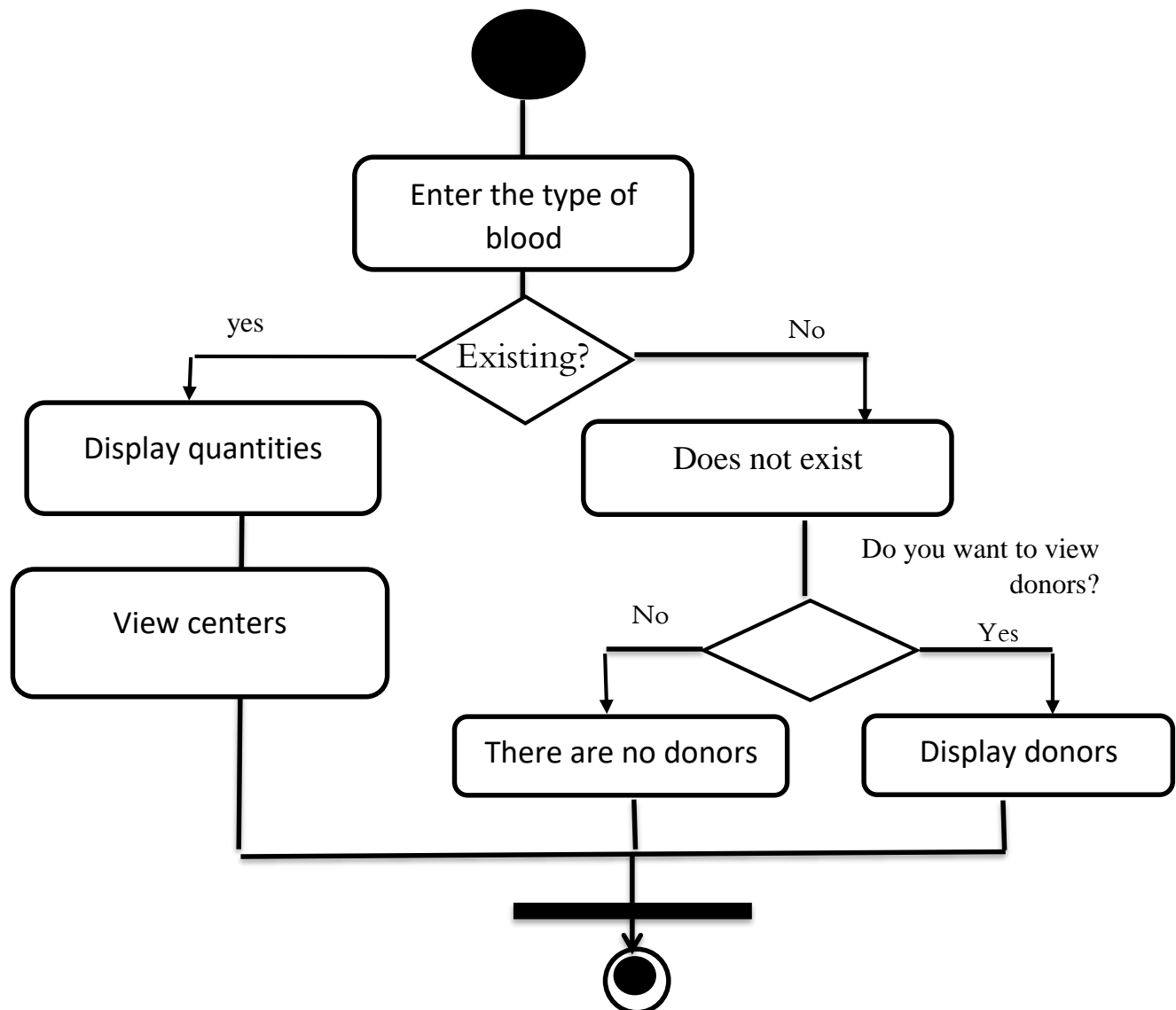


Figure (17) shows the activity diagram of the Search for blood group

3.7.16 Activity name: Inquire about.

Start of activity: Inquire about.

1- Access to website

2- The visitor or needy enter the data the data.

3- The system examines if enter all the data is can be send and if not cant send until fill all the data.

4- End of activity: send successfully .

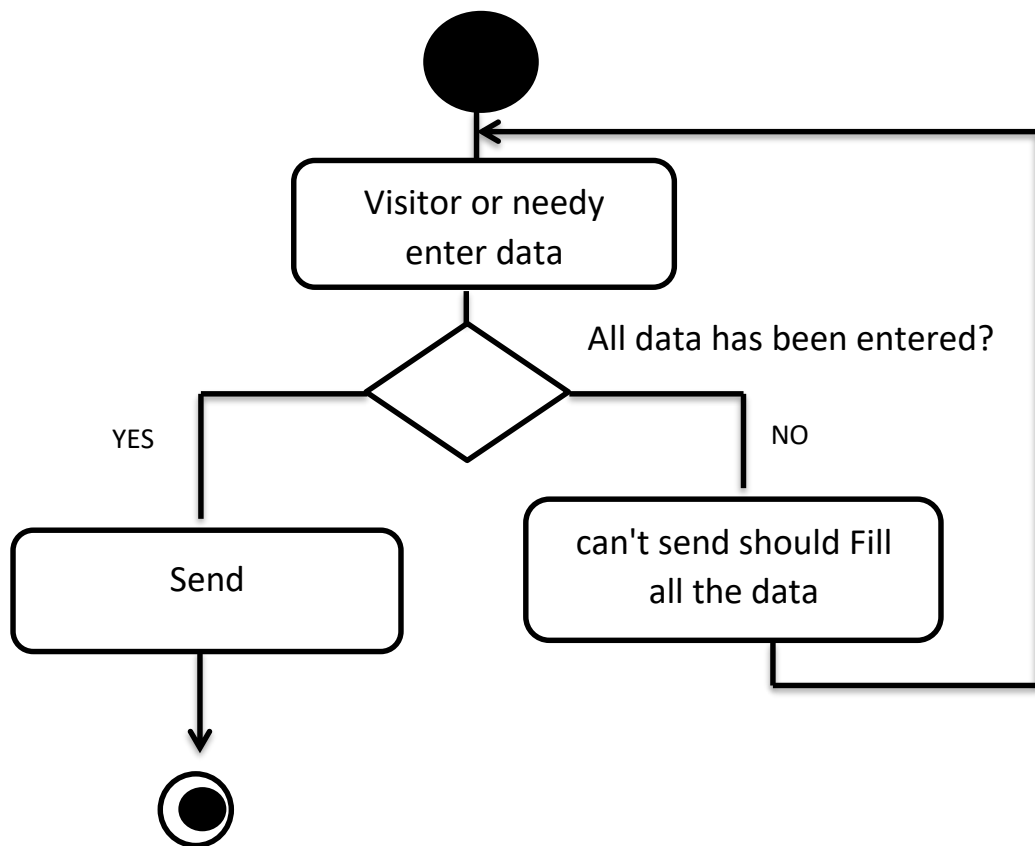


Figure (18) shows the activity diagram of the Inquire about

3.7.17 Activity name: Views the centers

Start of activity: views the centers data.

1- Access to website

2- Enter the type of blood.

3- Check the type of blood

3- If you data is exist you will display the centers data.

6 - End of activity: views the centers data successfully

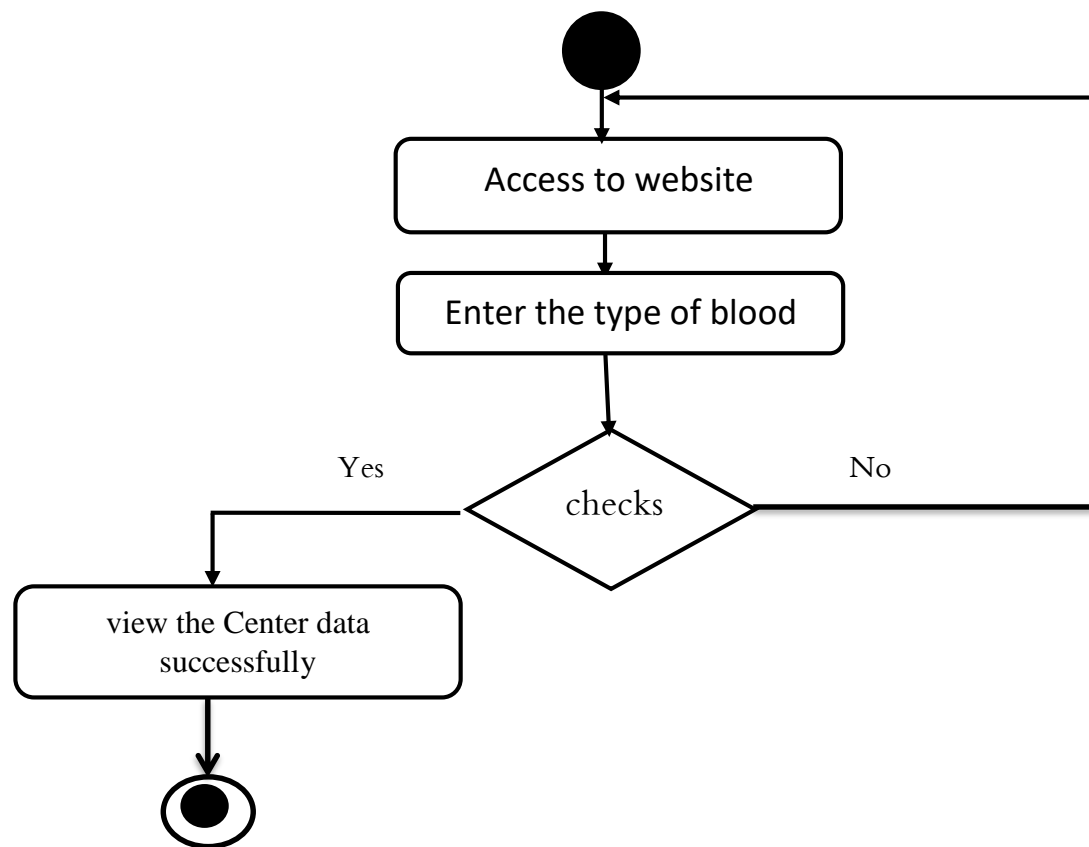


Figure (19) shows the activity diagram of the views the centers data

3.7.18 Activity name: Report data

Start of activity: view report

- 1- Access to website.
- 2- when the user chooses report data option from the list
- 3- The system will then view report data in a new screen.
- 4 - End of activity: view report data successfully.

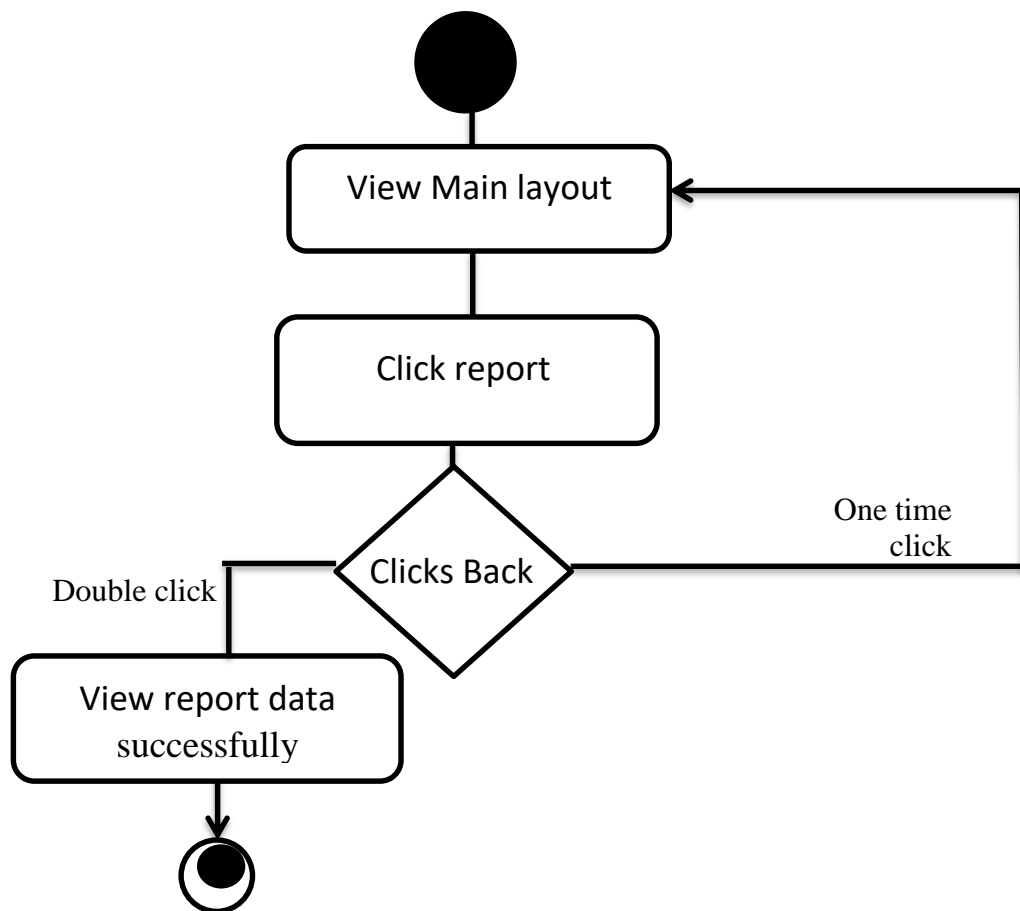


Figure (20) shows the activity diagram of the report data

CHAPTER IV

DESIGN

4. Preface.

After completing the analysis phase I will complete the rest of the system building steps, now I will talk about the system design stage.

System design can be defined as a series of organized practices and procedures that are used to rearrange the components of the system in a manner consistent with the interests of the system. like (Class Diagram, Sequence Diagram, Component model, Deployment Diagram)

4.1 Class Diagram.

A class diagram in the Unified Modeling Language (UML) is a type of static structure diagram that describes the structure of a system by showing the system's classes, their attributes, operations (or methods), and the relationships among objects.

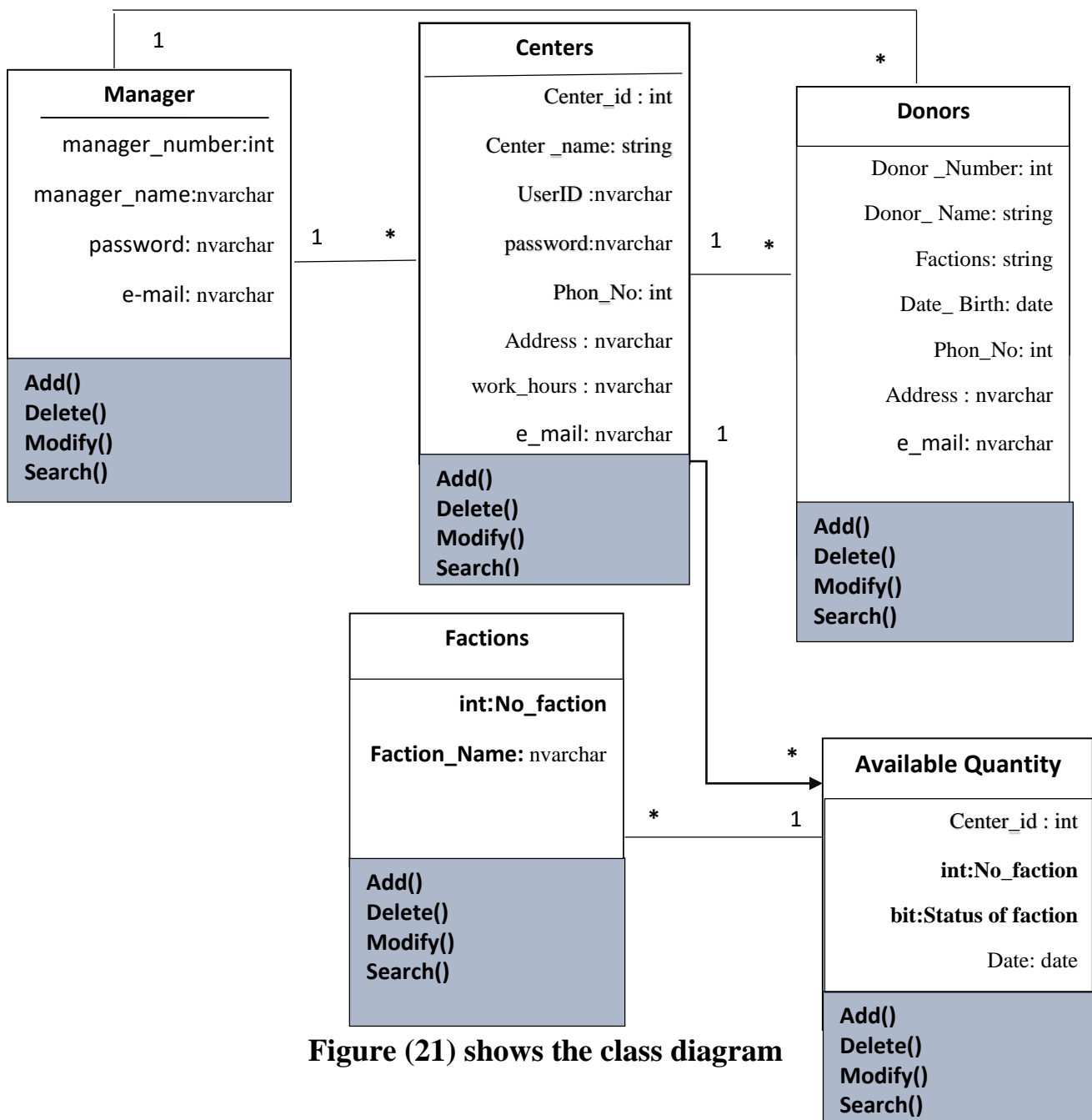


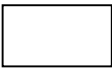


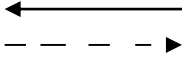

Figure (21) shows the class diagram

4.2 Sequence Diagram.

A sequence diagram is an interaction diagram that shows how objects operate with one another and in what order. It is a construct of a message sequence chart.

A sequence diagram shows object interactions arranged in time sequence. It depicts the objects and classes involved in the scenario and the sequence of messages exchanged between the objects needed to carry out the functionality of the scenario. Sequence diagrams are typically associated with use case realizations in the Logical View of the system under development. Sequence diagrams are sometimes called event diagrams or event scenarios. Some of the symbols used in Sequence diagram are shown in the following table.

Table (3) shows the shapes used in the Sequence Diagram

Notation	Meaning
	Objects are model elements that represent instances of a class or of classes.
	Lifeline represents each instance in an interaction (vertical dashed lines)
	Activate is used to denote participant activation. Once a participant is activated, its lifeline appears.
	Message is an element that defines a specific kind of communication between instances in an interaction.
	Actor specifies a role played by a user or any other system that interacts with the subject.

4.2.1 Sequence Diagram: Login

When the user clicks on the login button to the website, user enter the user name and password then the system will Check them.

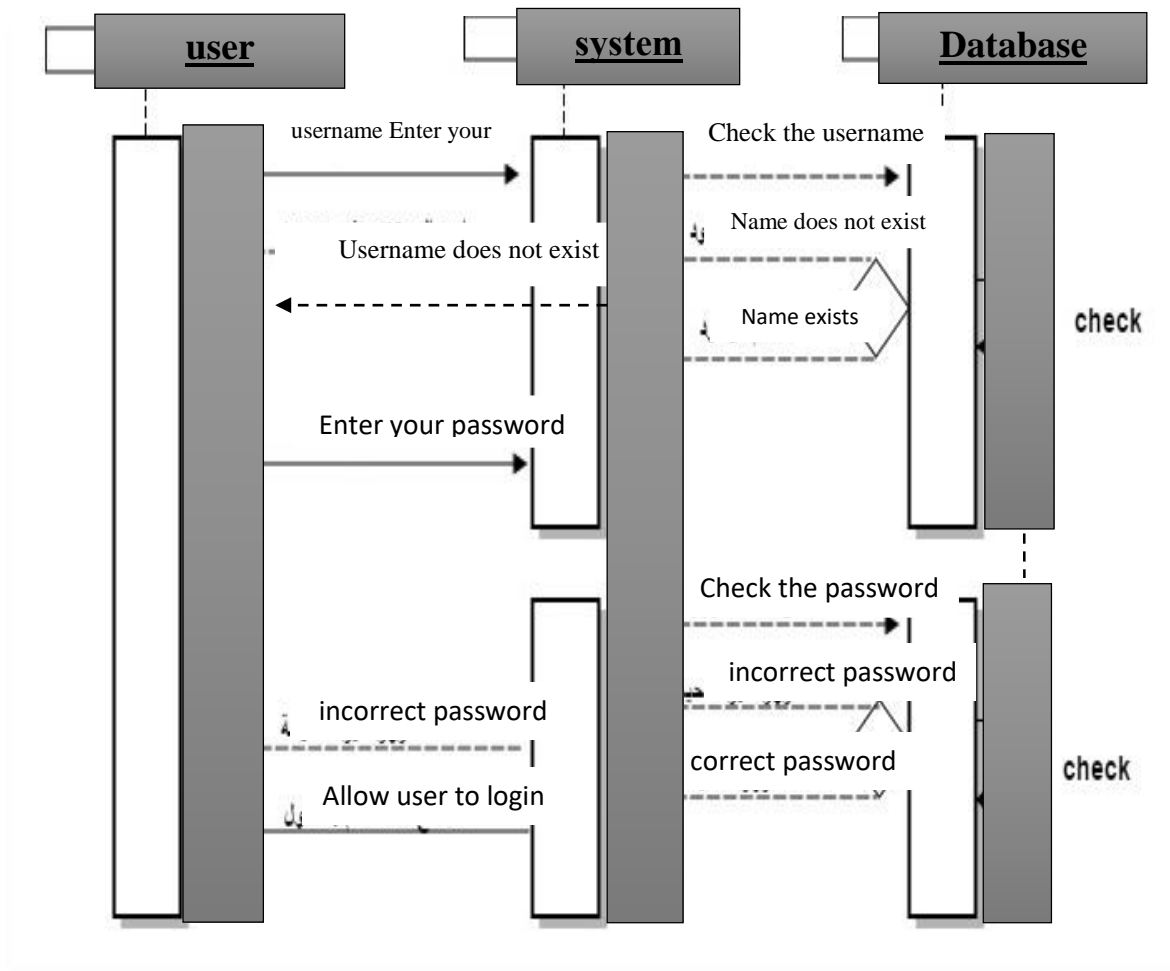
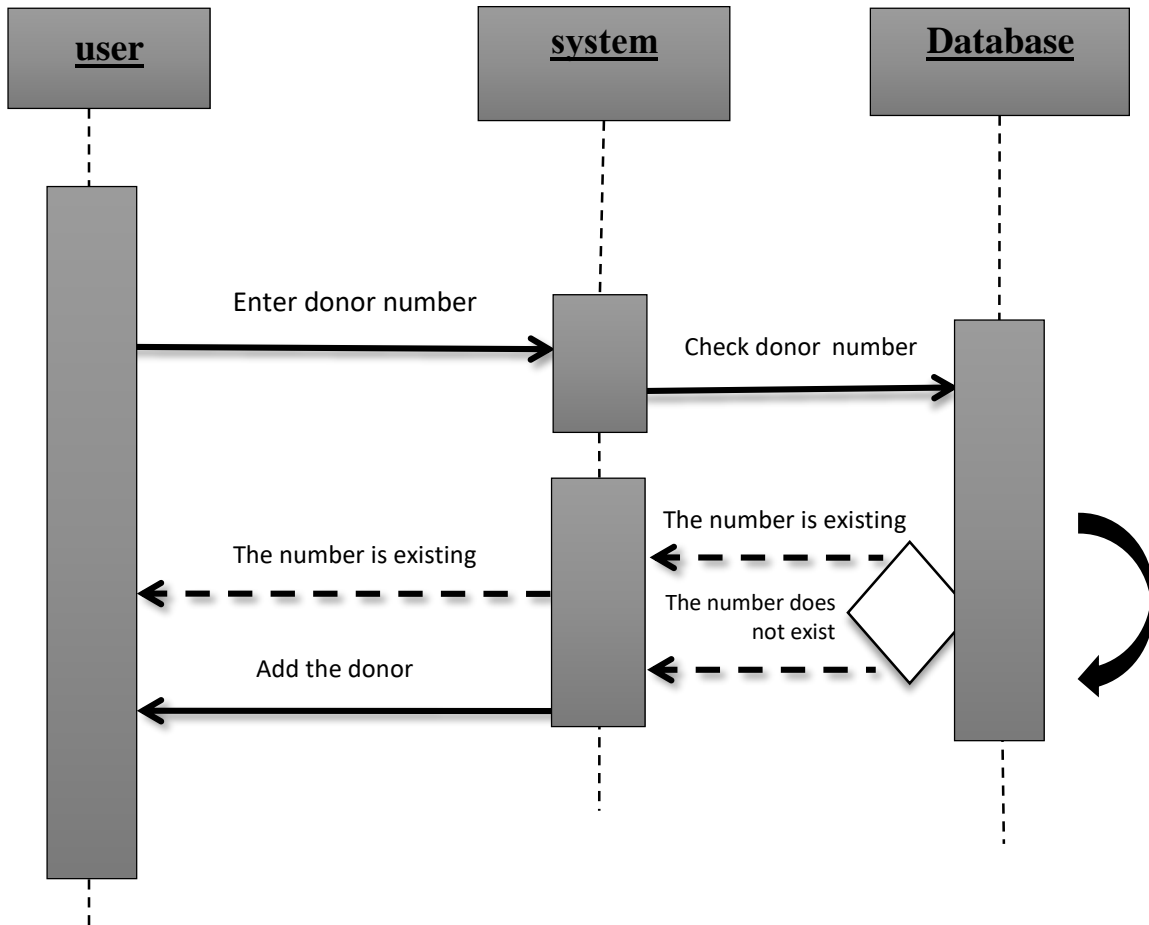


Figure (22) shows the sequence diagram of the login

s'4.2.2 Sequence Diagram: Add Donor

When the user wants to added donors to the website after check process to become as donating has the ability to give blood at any time, then user enters the donation number and personal data to the system.



s'Figure (23) shows the sequence diagram of the add donor

4.2.3 Sequence Diagram: Delete donor

When the user wants to delete donor from system, enter donor number then click button delete.

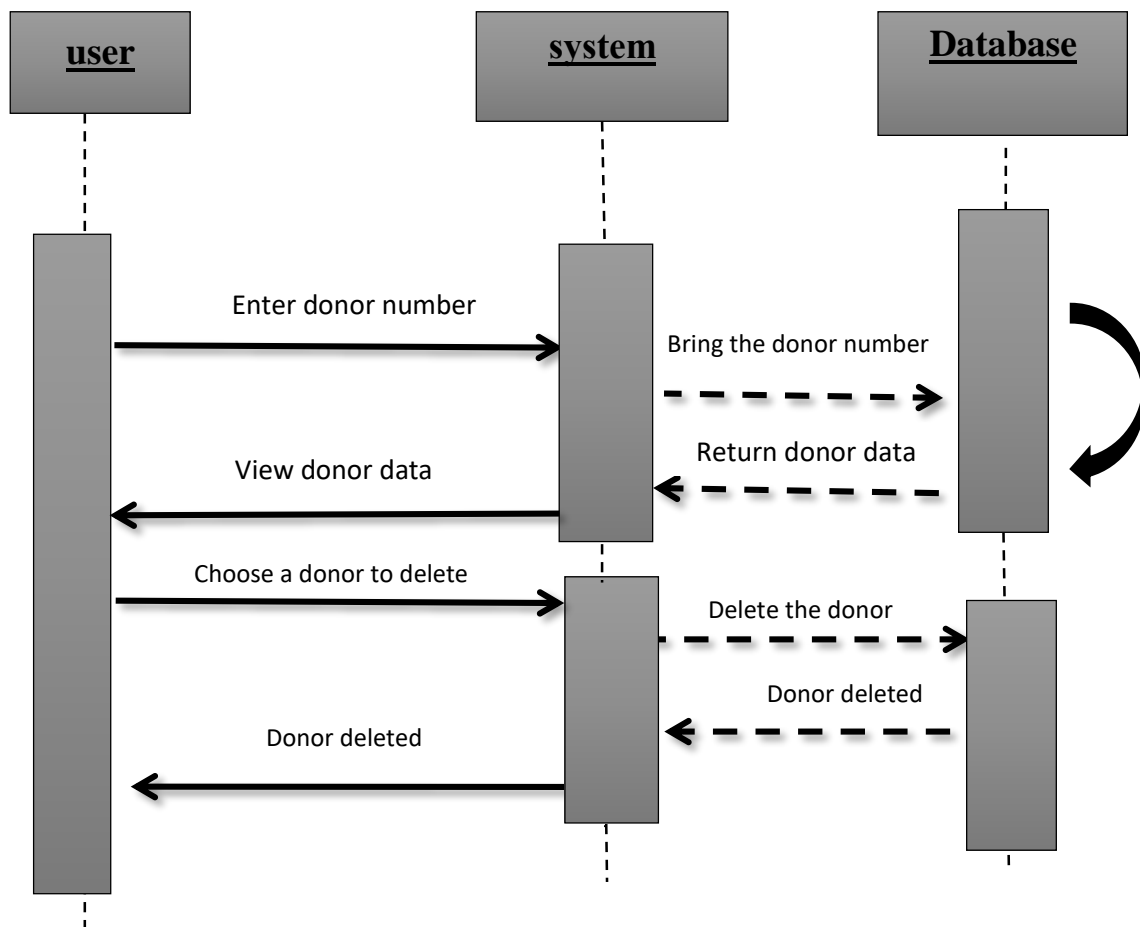
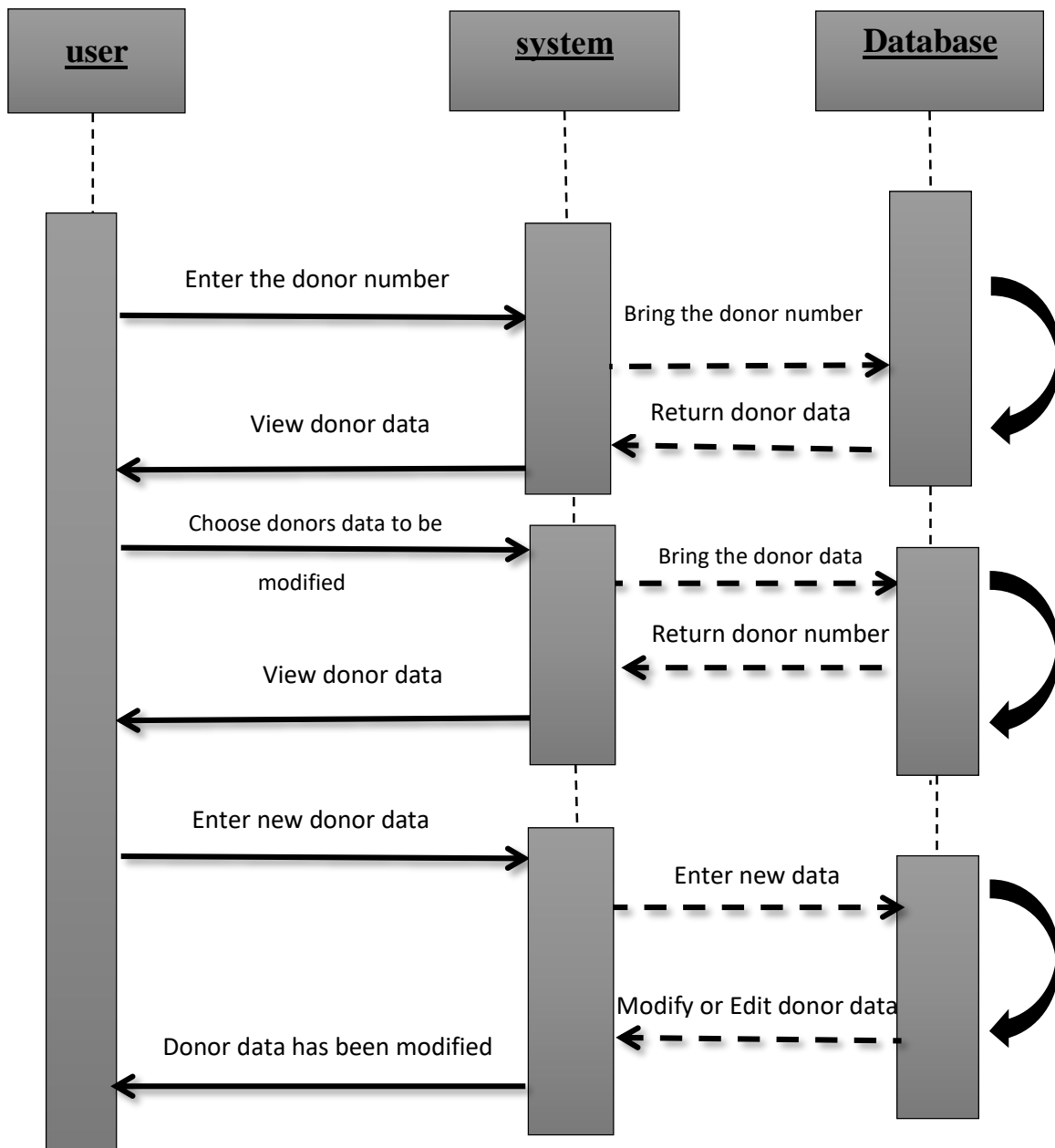


Figure (24) shows the sequence diagram of the delete donor

s Data'Edit donor Sequence Diagram: 44.2.

when the user wants to edit donor information from system, enter donor number then click button edit.



s'donor Figure (25) shows the sequence diagram of the edit

s' Sequence Diagram: Add center54.2.

When the manager of the system wants to added center to the website, enters the center number and personal data to the system.

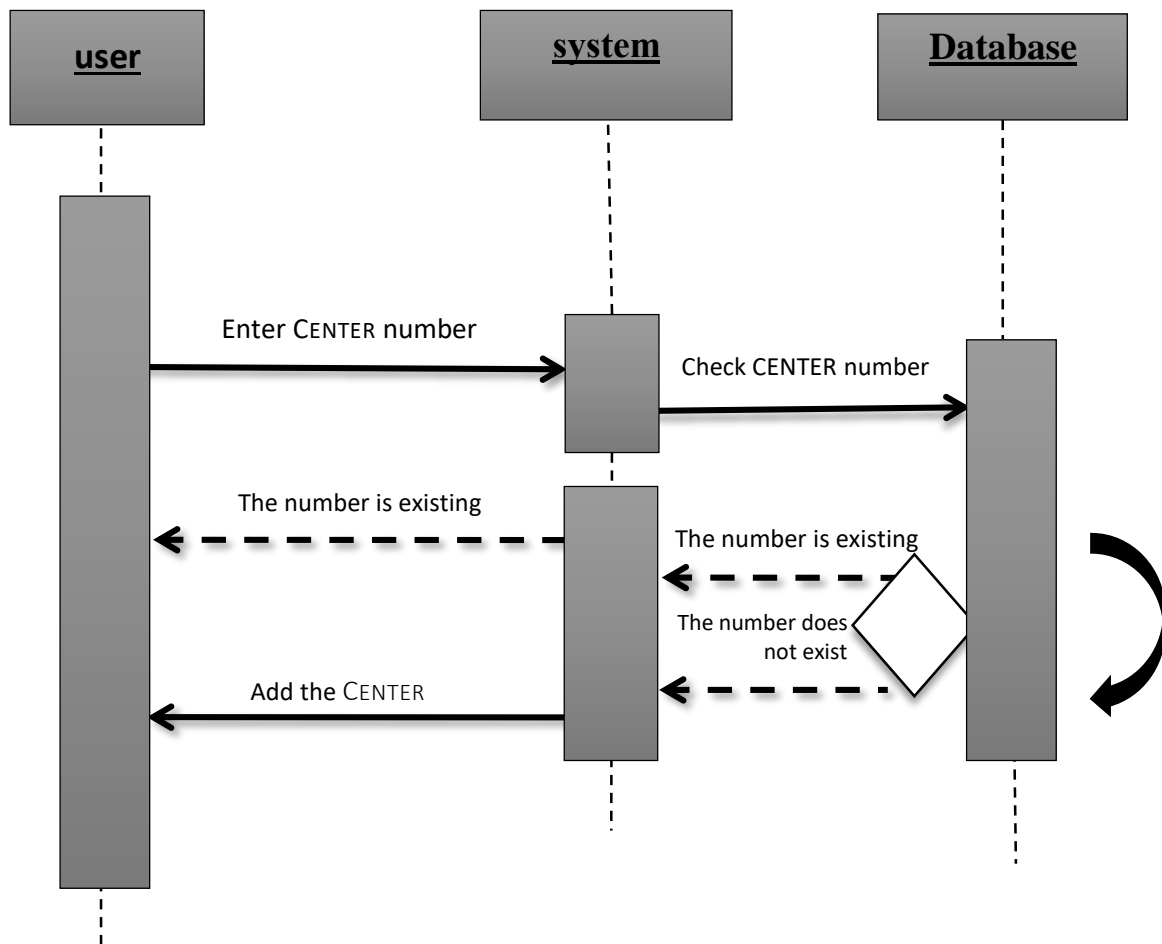


Figure (26) shows the sequence diagram of the add Cente

4.2.6 Sequence Diagram: Search for blood group

when the needy want to search for blood group Enter the type of blood then Check if exist will display quantities and the centers Which has blood and if not exist can Display donors if they need.

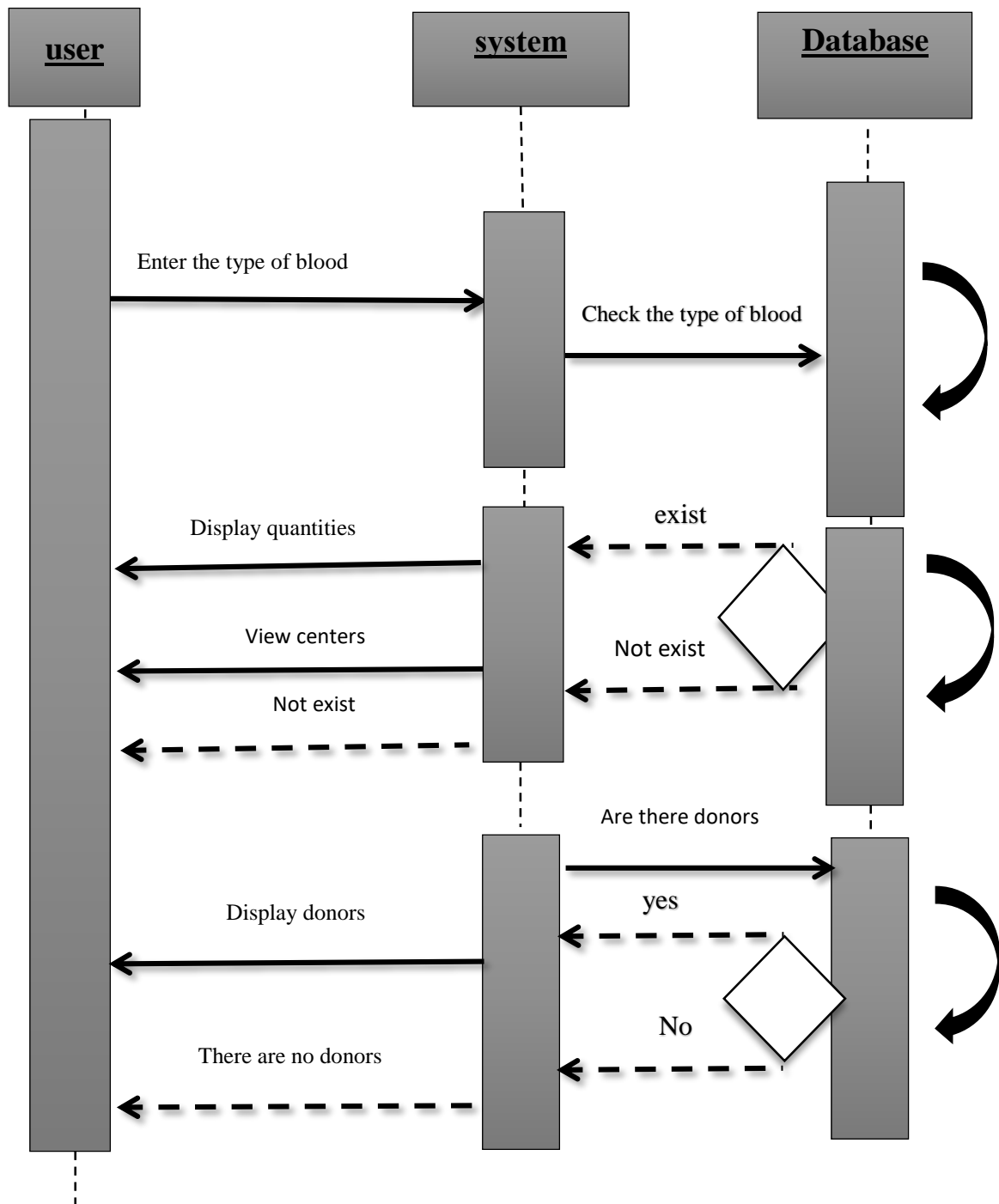


Figure (27) shows the sequence diagram of the Search for blood group

4.2.7 Sequence Diagram: Determines quantities

when the center need to Determines quantities of blood, first should enter user name and password if correct they can add, delete or edit the type blood and if not correct they are not eligible to enter.

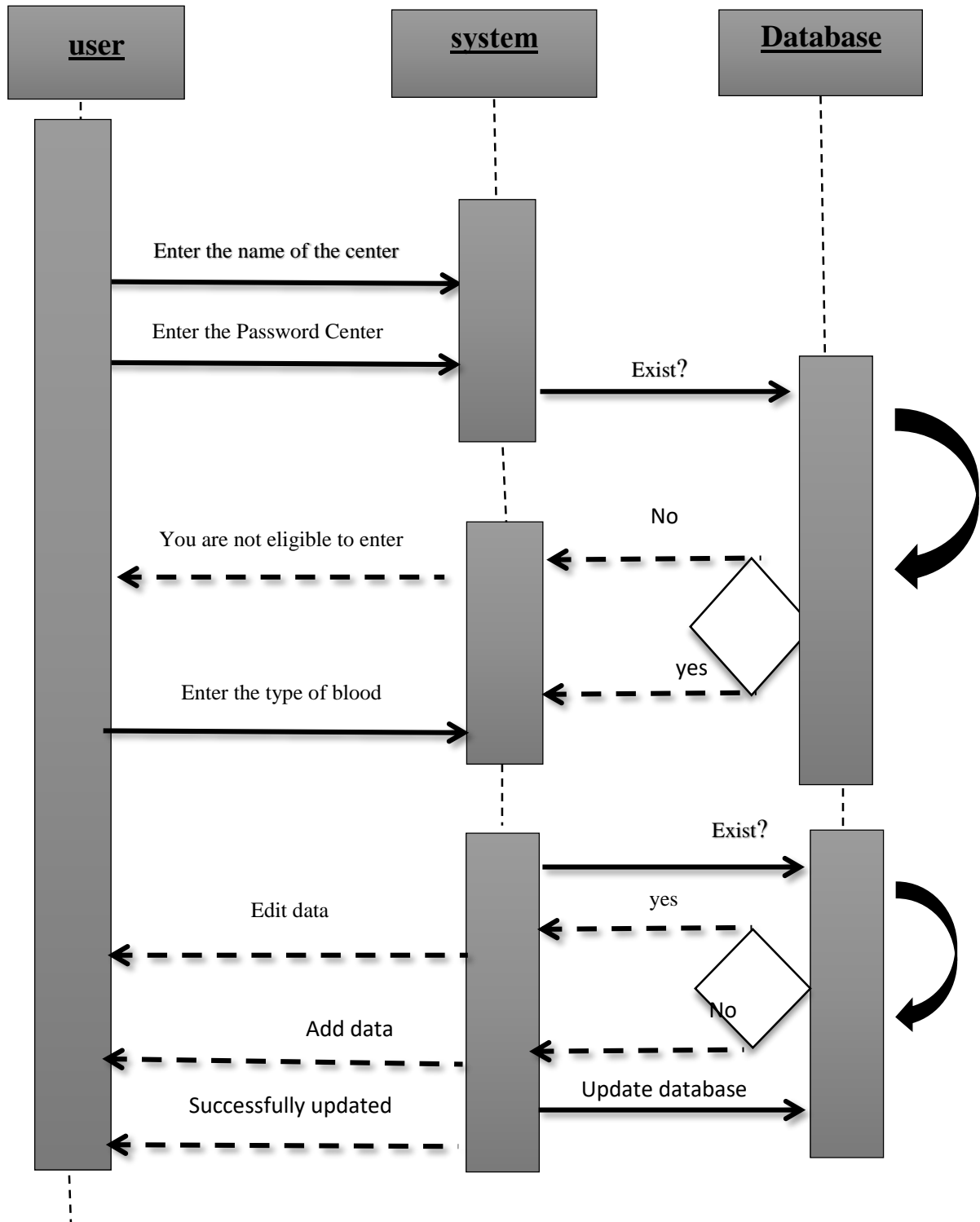


Figure (28) shows the sequence diagram of the Determines quantities

4.2.8 Sequence Diagram: Inquire about

When the (visitor) of the website or (needy) needs blood entering the site its can submit a complaint or query or thanks for the service, the purpose of inquiry to improve site services.

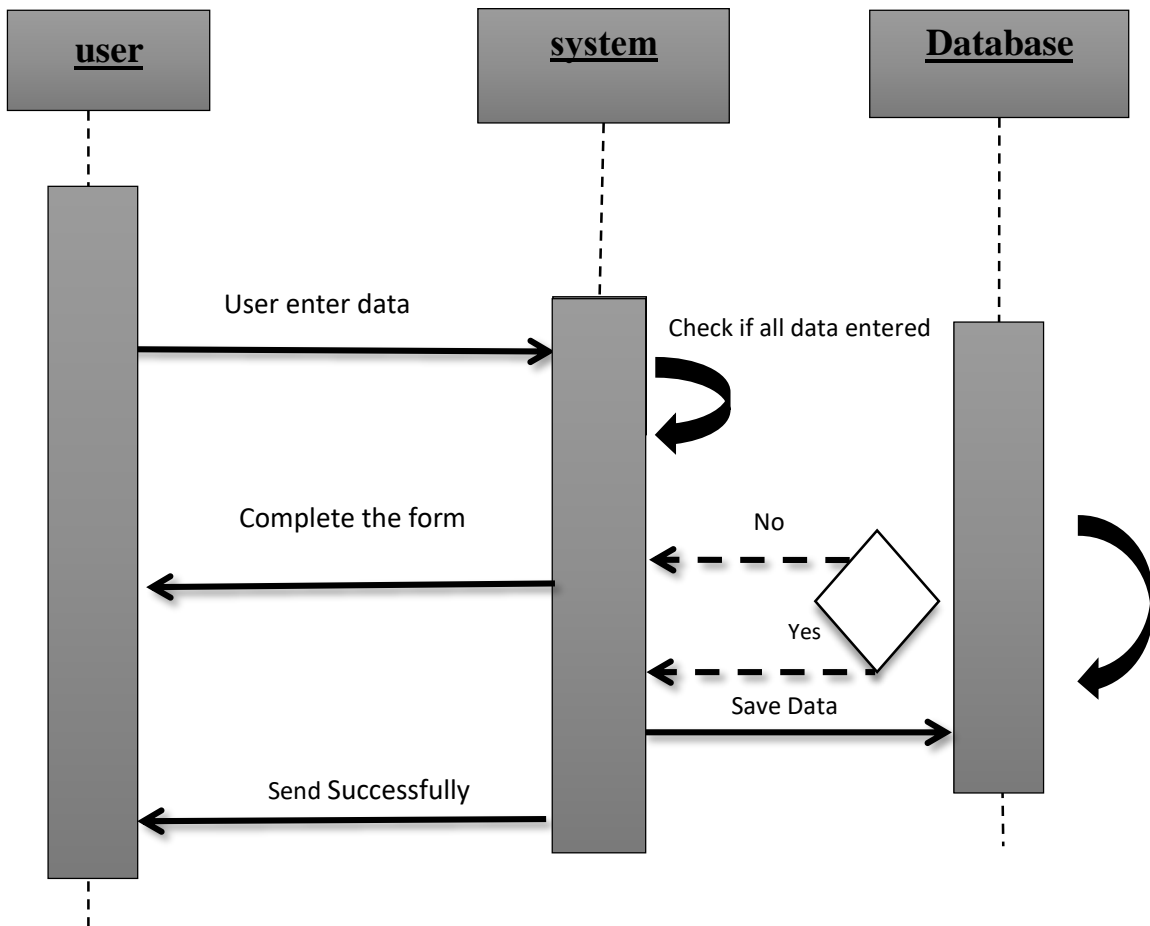


Figure (29) shows the sequence diagram of the Inquire about

4.3 Component model.

The component diagram shows the relationship between software components, their dependencies, communication, location and other conditions.

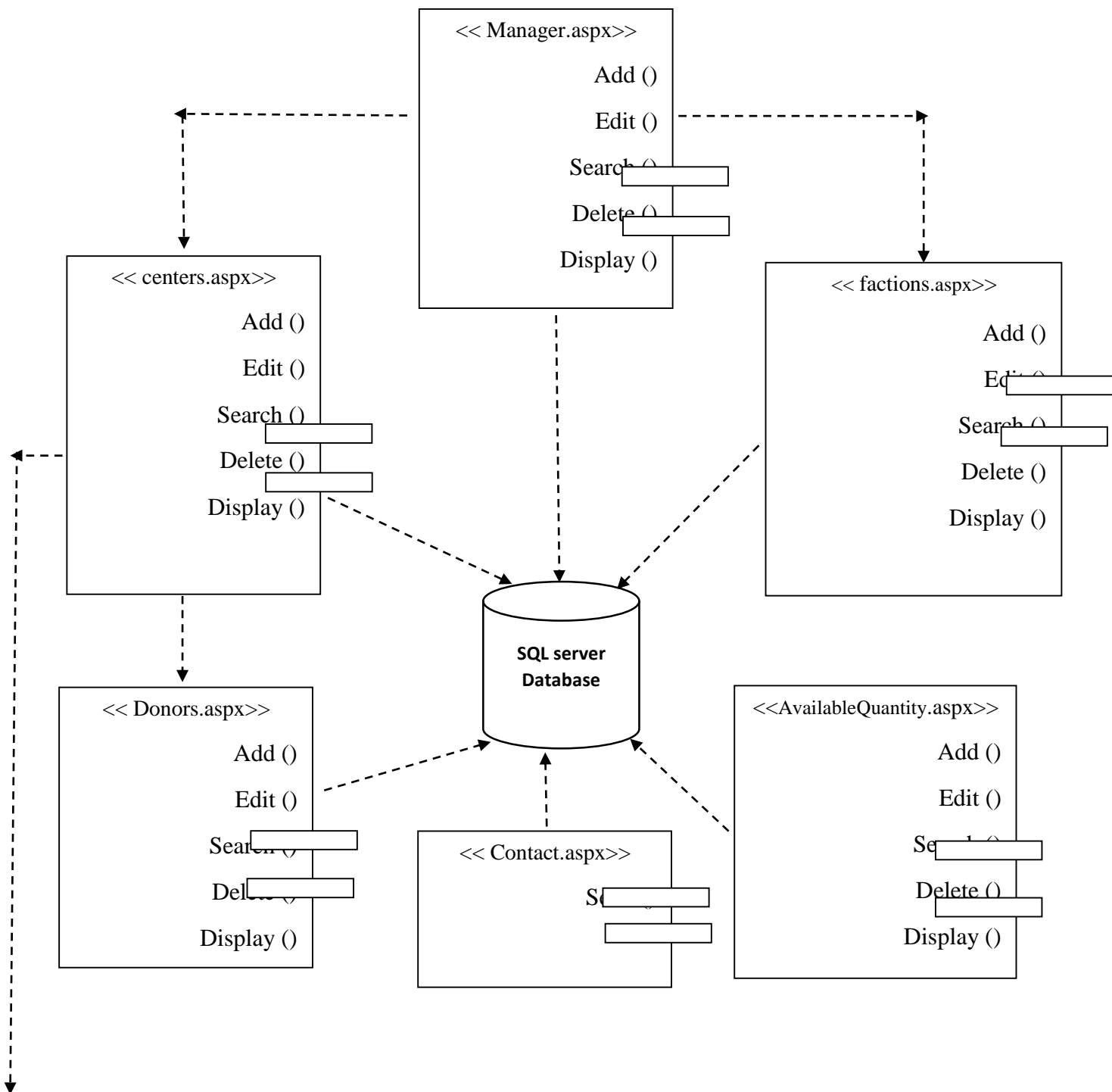




Figure (30) Component model

4.4 Deployment Diagram.

Deployment diagrams are used to visualize the topology of the physical components of a system, where the software components are deployed. Deployment diagrams are used to describe the static deployment view of a system. Deployment diagrams consist of nodes and their relationships.

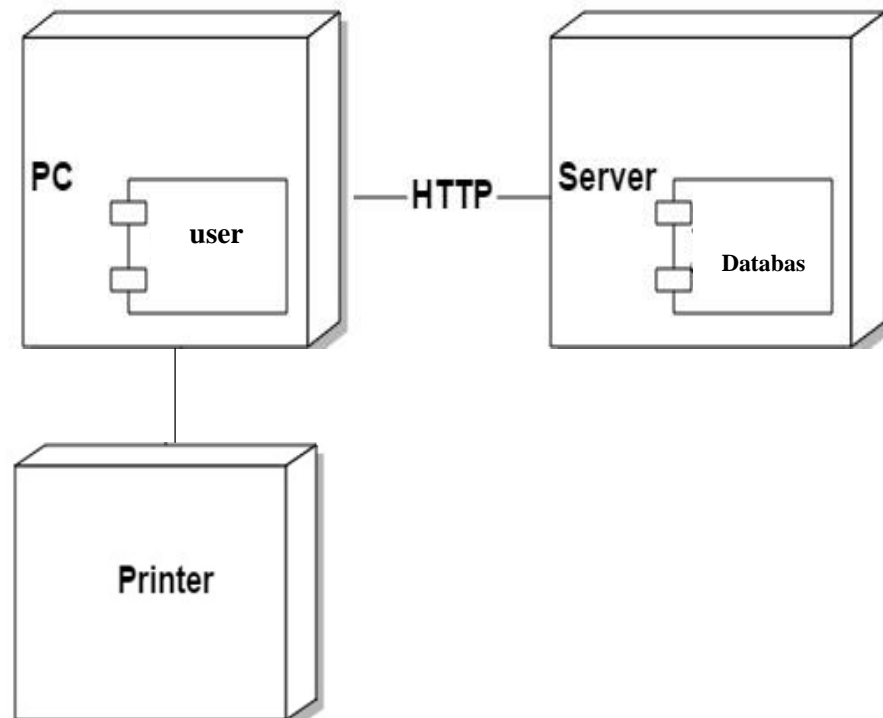


Figure (31) Deployment Diagram

CHAPTER V

IMPLEMENTATION

AND TESTING

5.Preface

In this chapter, we will address two important phases of the project: the two phases of the application of the test. The stage of application is parallel to the design stage. It is a transformation of what was understood in the analysis phase and what was processed in the design phase into reality. The test journey is also a very important stage in the implementation of any software project, as this phase is a guarantee of the effectiveness of the system.

.1 Database Creation5

In this section, the fields used in the database are clarified and we have used a Microsoft SQL Server 2008 database with tables as follows:

1-Manager data table

Is used to save information about manager who is using the system.

Manager Table (4)

Field name	Description	Field Type	Notes
manager number	number User	int	--

manager_name	name User	nvarchar	-
password	-----	nvarchar	-
E-mail	Electronic mail	nvarchar	-

2- Centers Data table.

Centers table it is used to save information about centers needed in the system.

Center Table (5)

Field name	Description	Field Type	Notes
Center_id	number Center	int	-
Center_name	Center name	nvarchar	-
UserID	User name	nvarchar	-
password	-----	nvarchar	-
Phon_No	-----	int	-
Address	-----	nvarchar	-
work_hours	Working times at the center	nvarchar	-

E_mail	Electronic mail	nvarchar	
--------	-----------------	----------	--

3- Blood Group Data table.

Is used to save information about blood group which's needs in the system.

Blood group Table (6)

Field name	Description	Field Type	Notes
No_faction	No_faction	int	
Faction_Name	Faction_Name	nchar	-

4- Donor Data table.

Is used to save information about donors who have been added in the system

Donor Table (7)

Field name	Description	Field Type	Notes
Donor_Number	Donor Number	int	
Donor_name	Donor name	nvarchar	-
Factions	Blood group	nchar	-
Date_birth	Date of birth	Date	-
Phon_No	-----	int	-
Address	-----	nvarchar	

E_mail	Electronic mail	nvarchar	
gender	-----	nchar	

- Available Quantity Data table.5

Is used to save information about available quantity of blood group in each center.

Available Quantity Table (8)

Field name	Description	Field Type	Notes
Center_id	Number of center	int	-
No_faction	Number of blood group	int	-
Status_faction	Status of faction	nvarchar	-
Date	-----	Date	-

6- Contact Data table.

Is used to save information about (Inquire about) site and submit a complaint or query or thanks for the service, to improve the system and content.

Contact Table (9)

Field name	Description	Field Type	Notes
c_name	Number of visitor or needy	nvarchar	-
c_email	-----	nvarchar	-

c_type	Type of message if (complaint, query, thanks)	nvarchar	-
c_note	-----	varchar(MAX)	-

5.2 System development.

After the analysis and design of the system we began one of the basic stages of the project phase is the implementation phase, and at this stage will be the actual planning and scientific parts of the main system.

Programming language used in the website visual basic 2010(ASP.net) and also used a Microsoft SQL Server 2008 database and they are popular among the other operating systems, and focus on low cost and easy to use.

Project Main screen5.2.1

When the user enters to the website this screen shows up, which a list of login and search for a blood group and brief about blood donation and inquiries about and brief about site and also contains contact information.



Select Blood Group
 261661 BLOOD GROUP

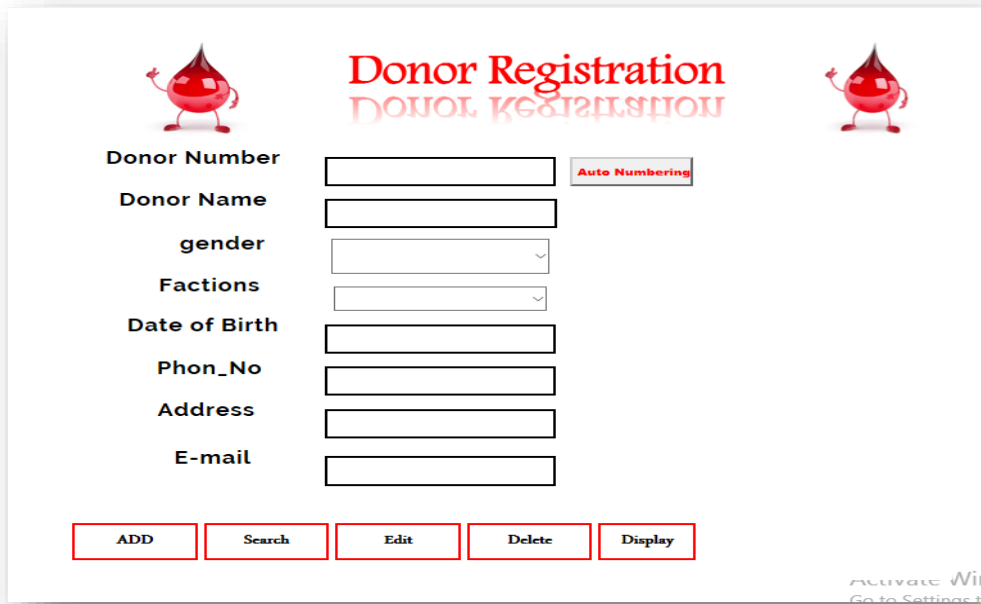
Center Data			
Center_name	Faction_Name	Status	faction_Date
Benghazi medical center	A+	Available	12/12/2017 12:00:00 AM
aljala hospital	A+	Available	11/9/2017 12:00:00 AM
Blood Donation center (602)	A+	Available	11/9/2017 12:00:00 AM
Red crescent	A+	unavailable	11/10/2017 12:00:00 AM

Donor Data						
Donor_name	gender	Faction	Date_birth	Phon_No	Address	e_mail
Amal Atia	female	A+	11/28/1994 12:00:00 AM	912983749	vanesa street	amal.atia@yahoo.com
sondos faraj	female	A+	1/12/1999 12:00:00 AM	912946749	alhawari	sondos@yahoo.com

Figure (32) Main screen of the site

.2 Donor's Screen 5.2

In the Donor registration screen, center user can Add new donor or Edit, Search, Delete, Display the Donor data.



Donor Registration
DONOR REGISTRATION

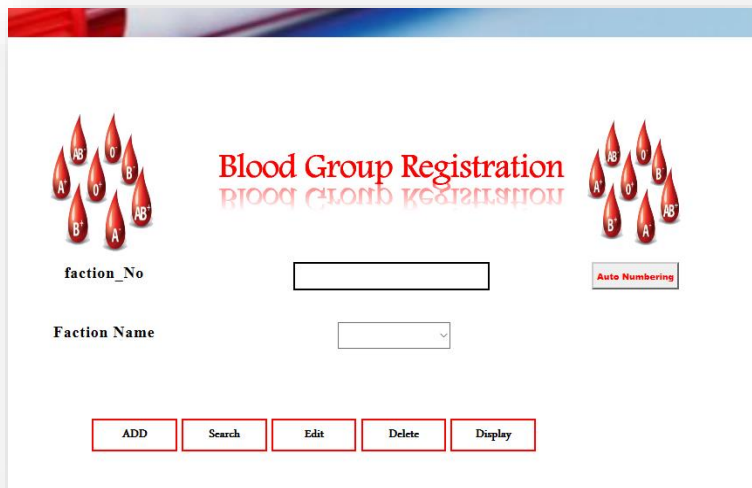
Donor Number Auto Numbering
 Donor Name
 gender
 Factions
 Date of Birth
 Phon_No
 Address
 E-mail

Activate Win
Go to Settings

Figure (33) Donor Screen of the site

.3 Blood group Screen 5.2

In the blood group registration screen, manger can add the type of blood group and also can Edit, Search, Delete, Display the blood group data.



Blood Group Registration
BLOOD GROUP REGISTRATION

faction_No Auto Numbering
 Faction Name

Figure (34) blood group Screen of the site

.4 Quantity Screen 5.2

In the Quantity registration screen, center user can Add the type of blood group if available or unavailable in each center and also can Edit, Search, Delete, Display the Quantity data.

Quantity Registration

Number Quantity Auto Numbering

Center Name

Faction Name

Status of Factions

Date

Activate W
Go to Settings

Figure (35) Quantity Screen of the site

.5 Manager Screen 5.2

In the manager registration screen, manager can Add more than manager or Edit, Search, Delete, Display the manager data.



Manager Number Auto Numbering

Manager Name

Password

E-mail

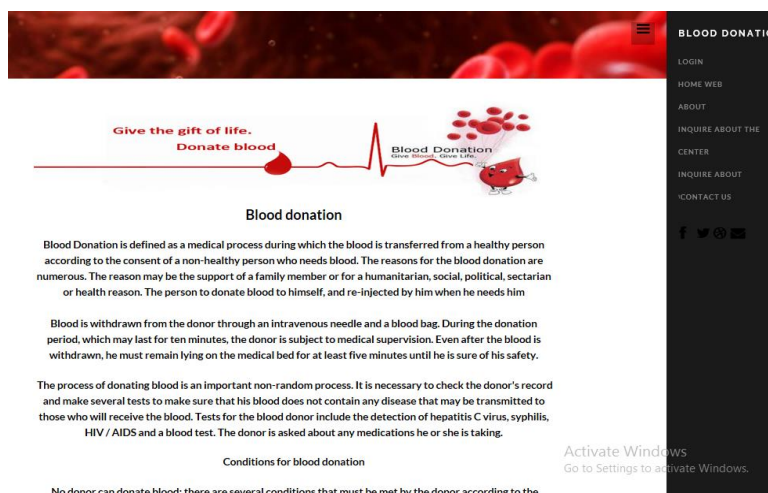
ADD Search Edit Delete Display

Activate Windows
Go to Settings to activate Windows.

Figure (36) Manager Screen of the site

.6 About blood donation Screen 5.2

The About blood donation show the general information about blood donation like Conditions for blood donation and the importance of blood donation.



Give the gift of life.
Donate blood

Blood donation

Blood Donation is defined as a medical process during which the blood is transferred from a healthy person according to the consent of a non-healthy person who needs blood. The reasons for the blood donation are numerous. The reason may be the support of a family member or for a humanitarian, social, political, sectarian or health reason. The person to donate blood to himself, and re-injected by him when he needs him

Blood is withdrawn from the donor through an intravenous needle and a blood bag. During the donation period, which may last for ten minutes, the donor is subject to medical supervision. Even after the blood is withdrawn, he must remain lying on the medical bed for at least five minutes until he is sure of his safety.

The process of donating blood is an important non-random process. It is necessary to check the donor's record and make several tests to make sure that his blood does not contain any disease that may be transmitted to those who will receive the blood. Tests for the blood donor include the detection of hepatitis C virus, syphilis, HIV / AIDS and a blood test. The donor is asked about any medications he or she is taking.

Conditions for blood donation

No donor can donate blood; there are several conditions that must be met by the donor according to the

BLOOD DONATION

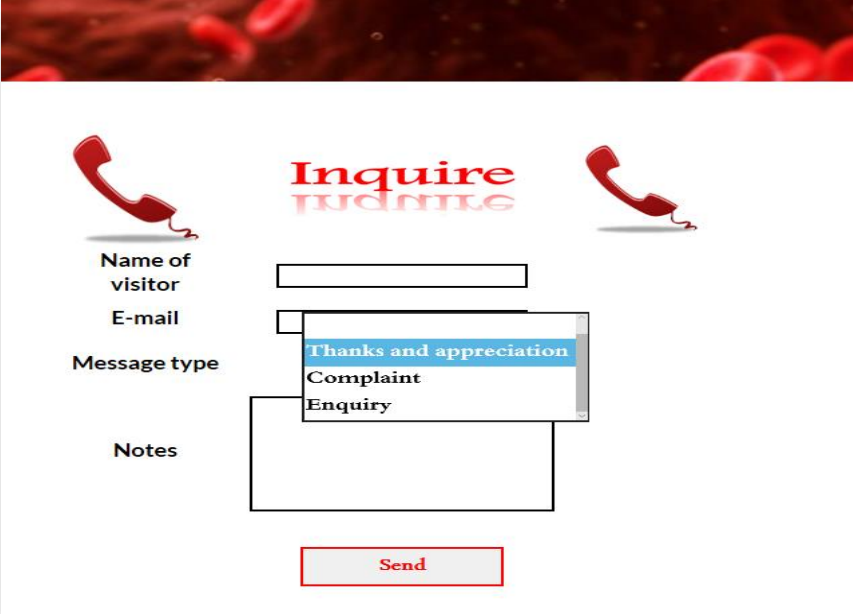
LOGIN
HOME WEB
ABOUT
INQUIRE ABOUT THE CENTER
INQUIRE ABOUT
CONTACT US

Activate Windows
Go to Settings to activate Windows.

Figure (37) About blood donation Screen

.7 Inquire about Screen 5.2

In the Inquire about screen, the visitor or needy can send message to manager to inquiry or complaint or thanks and appreciation about the services of the site.



The screenshot shows a web form titled "Inquire" with a red header and two red telephone icons. The form contains the following fields and options:

- Name of visitor:** A text input field.
- E-mail:** A text input field.
- Message type:** A dropdown menu with three options: "Thanks and appreciation" (highlighted in blue), "Complaint", and "Enquiry".
- Notes:** A large text area for additional comments.
- Send:** A red button at the bottom of the form.

Figure (38) Inquire about Screen of the site

.8 About Site Screen 5.2

About site shows the information about website (Electronic Blood Donation portal) what achieve this project and what services is provided here.

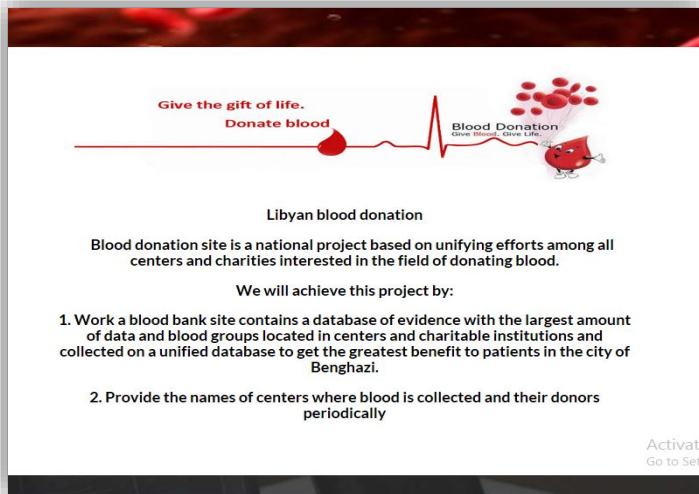


Figure (39) About Site Screen

.9 Donor reports Screen 5.2

The donor reports show the general information about donor that have been added in the system.

Donor Number	Donor name	Factions	Date birth	Phon No	Address	e mail	gender	id
1	Amal Atia	A+	25/06/15 12:00:00	912983749	vanesa street	amal.atia@yahoo.com	female	
2	Ahmed Ali	A-	07/07/10 12:00:00	92973873	Dubai Street	Ahmed.Ali@yahoo.com	male	
3	Fatma jai	B+	15/08/08 12:00:00	91929440	Alhadayiq	Fatma.jai@yahoo.com	female	
4	Gazala abdalsalam	B-	27/09/10 12:00:00	912983749	Alfawayhat	Gazala.abd@yahoo.com	female	
5	Ayoub farag	AB+	22/05/20 12:00:00	912946749	vinisia Street	Ayoub.farag@yahoo.com	male	
6	Atia Altaher	AB-	13/02/00 12:00:00	92973647	Alnahr street	Atia.Altaher@yahoo.com	male	
7	Talia Anas	O+	21/01/13 12:00:00	929738324	Haji salam	Talia.Anas@yahoo.com	female	
8	Hajer Abdalsalam	O-	14/10/06 12:00:00	91929765	Buhdimih	Hajer.Abd@yahoo.com	female	
9	sondos faraj	A+	25/09/19 12:00:00	912946749	alhawari	sondos@yahoo.com	female	
10	Hamed ali	A-	12/05/08 12:00:00	912946749	Alfawayhat	Hamed.a@yahoo.com	male	

Figure (40) Donor reports Screen

.10 center reports Screen 5.2

The center reports show the general information about center that have been added in the system.

Center ID	Center name	Phon No	Address	work hours	E-mail	User ID	password
1	Benghazi medical center	91309554	Pohademia	24/hour	center@yahoo.com	amal atia	12345
4	aljala hospital	91309554	Salmani	24/hour	Ahmed.a@yahoo	Ahmed	4444
2	Blood Donation center (602)	928386947	Alleity	12/hour	center@yahoo.com	sara Ali	6789
3	Red crescent	928386947	vanesa	24/hour	Red crescent@yahoo.com	fatma Atai	1994
1	Benghazi medical center	91309554	Pohademia	24/hour	center@yahoo.com	amal atia	12345
4	aljala hospital	91309554	Salmani	24/hour	Ahmed.a@yahoo	Ahmed	4444
2	Blood Donation center (602)	928386947	Alleity	12/hour	center@yahoo.com	sara Ali	6789
3	Red crescent	928386947	vanesa	24/hour	Red crescent@yahoo.com	fatma Atai	1994
1	Benghazi medical center	91309554	Pohademia	24/hour	center@yahoo.com	amal atia	12345
4	aljala hospital	91309554	Salmani	24/hour	Ahmed.a@yahoo	Ahmed	4444

Figure (41) Center reports Screen

.11 Contact us Screen 5.2

After click from main screen show up the contact us a list of contact numbers and emails is provided.

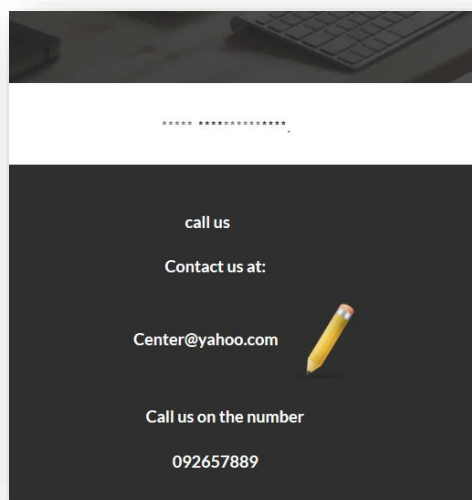


Figure (42) Contact us Screen

5.3 Testing Plan

We test the system for two purposes. The first purpose is to make sure that the system is doing the required functions, and it does not do other things that are not required, and the second purpose is to detect and correct errors, prevent errors as much as possible, ensure that the system performs the required functions and Ensure that the data is stored correctly.

5.3.1 Methods of testing.

There are two methods of testing the white box and the black box.

5.3.1.1 Method of testing the white box.

White box testing: also known as "glass box testing", because the behavioral part or the structural part is tested here which is visible from the outside. It is used to check that the required specification has been met by the designed system or not. This type of test is a test carried out by the person with the examination of the internal details of the system and to ensure that the processes are done in the form that was programmed, the laboratory is entering the values and be aware of the expected results, and the correct way the process and then compare the expected results with actual "real".

5.3.1.2 Method of testing the black box.

Black box testing here only the internal coding part is tested, so also known as "Functional testing". As we know that the code is written it is first of all tested by the developer to check whether it does the prescribed job or not. it is named as black box testing because only the hidden part is tested here. This type of test is a test done by the person who is tested the tester enters the two numbers without considering the internal details and compares the actual result to the expected outcome without knowing how this process "occurs".

5.4 Testing

and) Test to) There are two basic tests to test the system) Test to Pass . Due to the large number of test cases we will review some of them) Fail

5.4.1 Test to Pass

The purpose of this test is to make sure that the system performs its functions in the situations it is supposed to perform. For example, the system adds center data, and we do this testing for some functions of the center data screen through the following test cases:

Center Registration
Center Registration

Center_ID Auto Numbering

Center Name

UserID

password

Phon_No

Address

Work_Hours

E-mail

Figure (43) Test to Pass for adds center data

Test case number	1
Purpose of test case	Add data center
Test Steps	<ol style="list-style-type: none"> 1. Login 2. Access to the front of the center 3. Fill in the Center's data 4. Click the Add button
Prerequisite	Enter to the system
Expected test result	Done
Actual test result	Done
Result of test case	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <input checked="" type="checkbox"/> T False </div> <div style="text-align: center;"> <input type="checkbox"/> True </div> </div>

Table (10) shows a test case for the success of adding new center data

5.4.2 Test to Fail

The purpose of this test is to make sure that the system does not perform its functions in cases where it is not supposed to do so, for example, the

user enters a password, if the password is wrong, we do this test for the system login screen through test cases.

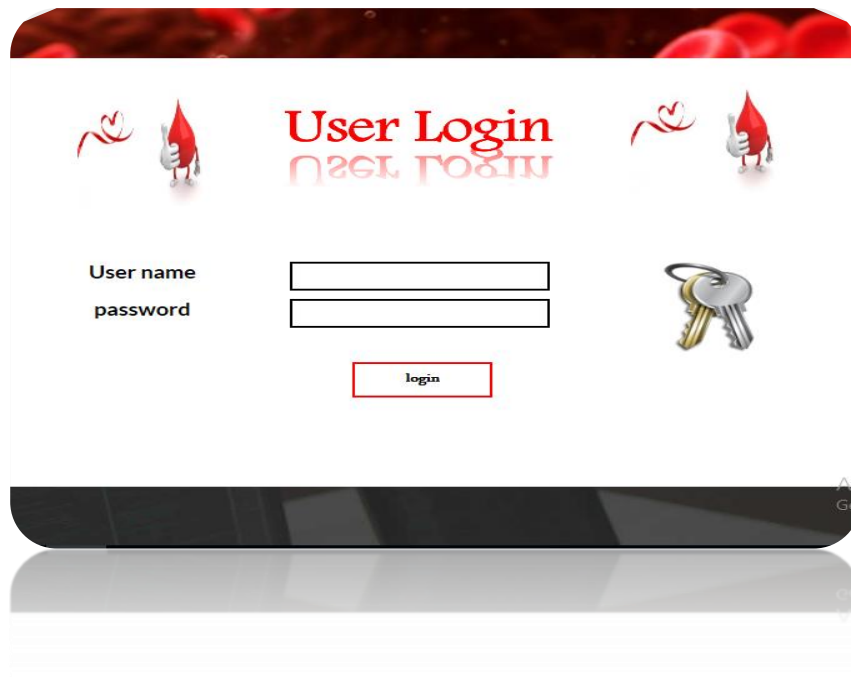


Figure (44) of a login failure test

Test case number	2
Purpose of test case	Login to the site
Test Steps	1. Enter the "system interface" 2. Enter your username and password. 3. Click the login button
Prerequisite	Enter to the system
Expected test result	Done
Actual test result	Please check your name and password
Result of test case	<input type="checkbox"/> False <input checked="" type="checkbox"/> True

Table (11) shows the status of a login failure test

CHAPTER VI

CONCLUSION

6.1 Summary

The organization of blood donation and transfusion differs throughout the world. Regardless of organization, what is important is cooperation, communication, care and safety for donors and patients.

In general, the problem is when there is a lack of blood, the needy wants to know where the blood fictions are available. Therefore, it is difficult to get the blood easily. Moreover, in an emergency surgery process it is very hard to get some rare fictions. For instance, the needy will go to many centers to get its fiction which he needs. Even though, the nearest point may have the blood fiction which he wants. To solve this problem, we establish a web site to know where we can find the place where it has blood fiction and if it is available or not in any center. Also, he can know the contributors who they have the same fiction to reduce searching time.

However, to establish the web site we collect information from the interviews in the center. Then we put functional requirements and do a system scenario about site function. Next, we do analysis by using Unified modelling language which is united measured language that has multi functions. Finally, we establish data base by using SQL Server 2010 while to create the site we used Visual 2010 program.

The main aim of developing this system is to provide blood to the people who are in need of blood. The number persons who are in need of blood are increasing in large number day by day. Using this system user can search blood group if available in the city and he can also get contact number of the donor who has the same blood group needs. In order to help people who are in need of blood, the electronic Blood donation portal can be effectively used to get any available center and available blood group. Besides that, the portal shows the donors and their data and blood groups in a way makes it easier for the needy to get contact number of the blood donors having the same blood group blood in the shortest possible time.

6.2 Conclusion

In conclusion all function requirement raised from the objective to solve the proposed problem has been developed in this project. Further steps should be carry on to activate this implemented solution such as entering real data about centres and donation. It is important to connect between the donors and centres by easy technological way without any more pains and additional costs to achieve this humanism purpose and minimize the time consuming.

6.3 Suggestion

Now the site work with a little range but in the future the site will contain more elements to make it more comprehensive. For instance, the donor can register himself in the site. Also, he can do many choices like fill their questionnaire paper online, book from his home, search, ask for blood car which Reveal and to pull blood and the needy can register and book the blood he needs. As a result, in this technique we simplify the case on the needy and encourage the contributor to donate in progress.

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