DESIGN AND DEVELOPMENT OF E-DONATION INFORMATION SYSTEM

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This Report Presented in Partial Fulfillment of the Requirements for the Degree of Masters of Science in Computer Science & Engineering

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APPROVAL

This Project titled **"E-donation Information System**", submitted by Abdiladif Dahir Mohamud to the Department of Computer Science and Engineering, Daffodil International University, has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of M.Sc. in Computer Science and Engineering and approved as to its style and contents. The presentation has been held on 21 April 2015.

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DECLARATION

I hereby declare that, this project has been done by me under the supervision of **Dr Syed Akhter Hossain Professor and Head** Department of Computer Science and Engineering Faculty of Science & Information Technology Daffodil International University.

I also declare that neither this project nor any part of this project has been submitted elsewhere for award of any degree or diploma.

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DEDICATION

I would like to dedicate this Book to my parents, especially my mother and father, for their love, encouragement and help throughout the study and without their love and support this study would not have been made possible.

I also like to dedicate especially for my brothers and sisters.

Lastly, I offer a regards and blessings to all of those who support me in any respect during the completion of the book.

ACKNOWLEDGEMENT

First I express my heartiest thanks and gratefulness to almighty ALLAH for His divine blessing makes me possible to complete the final year Project successfully.

I also thanking to my family who supported me emotionally and financially as long as i learning the whole life and my classmates and individuals who helped me directly or indirectly.

its great pleasure to send special thanks to my Supervisor Dr. Sayid Akhter Hossain, Professor and Head**,** Department of CSE, for his kind help to finish my Project, Deep Knowledge & keen interest of my supervisor in the field of E-donation information system and also to other faculty members and the staff of CSE department of Daffodil International University.

Finally, I would like to thank my entire course mate in Daffodil International University, who took part in this discuss while completing the course work.

ABSTRACT

In the name of Allah the creator and peace is upon Mohamed the prophet of Allah.

Donation Information System is a system with a database which can be used for managing Donors information. E-donation allows Donors to store almost all of their Donation information easily, including information on Donors, and citizenship.

E-Donation is Campaign Solutions' exclusive, custom designed online fundraising solution. It's more than just a way to take donations online; it's a complete online fundraising solution. In fact, more online money has been raised through e-Donation for candidates, non-profits, and public affairs campaigns than any other system.

E- Donation captures online contributions in a fully automated and secure environment in a simple, one click process.

It's a complete financial package managing everything from merchant accounts to credit card authorization and banking fees.

A payment page on your website allows visitors to select and define what they are paying for, instigate the payment process, and then enter credit card numbers and the other information necessary to validate payments.

The project will facilitate the Process of Donation information system by using simple process.

In short, e-Donation captures and processes your donation, surveys the donor, thanks him for the contribution, and delivers the information to you in a elegant database

I'm preparing this project to reduce the complexity of the current system from Desktop to online Application.

After implementation of all functions, the system is tested in different stages and it works successfully as a prototype.

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CHAPTER ONE

INTRODUCTION

This study attempts to scrutinize E-donation Information System

This chapter consists of six sections First section presents background of the study followed by problem statement. To justify the study, the third section provides purpose of the study In section four the study presents research objectives then research question To guide the reader section six, provides the significance of the study.

1.1 Background Of The Study

E-donation Information system (EIS) it's useful of every Organization that giving contribution is a common activity for many individuals; for instance giving charity is an integral part of people. It's also an occasion to make a special donation to the poor.

All Muslims who have enough money to take care of the hungry, poor people who needs make donation. The amount of donation is the same regardless of their income On the other hand, the Internet changing individual lives considerably. The Internet excels at facilitating the exchange of information and goods, and what better use for this exchange than giving to those in need.

this phase starts when a donor visits a charity web site and decides to donate through this contribution. After browsing through the available e-donation a sign provided by participating stores, he selects the a sign that satisfy his requirements For value, donation type (e.g. food or Money), validity period, and location Where the e-donation will be spent Then the donor sends an e-donation request To the charity

Ummah welfare trust is one of the most prominent Organization works in the world; it has number of donors and employees who are increasing day after day, Since ummah welfare trust is one of the largest Organizations That work in Somalia, many Donors are joining to it and their information are needed to be processed with the use of online donation information system. We now examine each of the participants in an electronic payment scheme for charitable

donations. It is important that you provide your Donors with the tools and resources to easily navigate the registration process.

the online Donor registration system are very vital the donation Information System, Online donation Information system consists of registering Donors by recording their complete information, processing registration payments and generating reports e-Donation is Campaign Solutions' exclusive, custom designed online fundraising solution. It's more than just a way to take donations online it's a complete online fundraising solution. In fact, more online money has been raised through e-Donation for candidates, non-profits, and public affairs campaigns than any other system. E-Donation captures online contributions in a fully automated and secure environment in a simple, one click process. It's a complete financial package managing everything from merchant accounts to credit card authorization and banking fees.When visitors select the "Donate Now" option they're connected to a web server that securely processes your transaction. The donor information writes to searchable database, available to you online 24hrs and it's exportable into commonly used software such as Excel. After the transaction is completed, e-Donation generates an automatic e-mail thank you letter to your contributor. it also gives you the option to survey your donor. E-Donation can even notify you via email whenever a new donation or event registration is processed. Through our "Email-a-Friend" feature, donors can send event invitations, store links, or donation pages along with a personal note to their contacts. This function virally expands your donor list and reach. In short, e-donation captures and processes your donation, surveys the donor, thanks him for the contribution, and delivers the information to you in an elegant database all without additional keypunching. There is no simpler or more robust system to use. It's a seamless, automated system from beginning to end that helps you raise money. Giving to charity online is now established with dozens of giving sites scattered across the web. The idea behind most of these giving websites is to enable all types of donors, however deep or shallow their pockets, to quickly and conveniently find worthy causes to support just by clicking and using their credit cards, Giving sites aggregate many charities in one place so a potential donor does not have to hop around looking for individual charitable sites. And charities, whatever their size, can find a home where

donors congregate. Besides accepting donations, many online giving sites provide an easy way for supporters to set up their own fundraising campaigns for particular causes; and even for volunteers to find opportunities where they can provide sweat equity instead of a donation or in addition to donating.

1.2 Statement Of The Problem

When donation people increase we need to handle or manage donation people in the world so since the current system is totally based on Desktop so there is a need to move from the Desktop to Online the People who wish to donate Contribution using the internet.

1.3 Purpose Of The Study

The main aim of this study is to develop E-Donation Information System that will help the process of Donation the people in Ummah Welfare Trust. The project will help the Donation affairs office to make the Donation Information Process easily.

1.4 Research Objectives

The objectives of this system are:

-To investigate the online donation information system

-To analyze, design and implement a web based donation system

- To determine the importance of online Donation information system

1.5 Research Question

What is the Advantage of E-Donation Information System?

What is the interaction of donation information system?

What is the Challenge of E-Donation Information System?

What is the Factors of influence of E-Donation Information System ?

1.6 Significance Of The Study

The attempt to make the application of Online Donation Information System is very vital because it reduces the required time and cost, and this can make easy access to the Donors payment and get the required information, the new system will simplify the tasks of the Ummah office and makes the access of the Donors information easy and reliable.

The research focused on the contribution of how to build strong and effective online Donation information system.

To build online Donation Information System

Reduce cost

Easy access donors Payment

Get Required Information.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter provides the literature review of the past work for E-donation Information System. It comprises many types of E-donation each type covers different topics. We focus on our attention to importance of E-donation, advantage of E-donation, Interactions, Challenges of E-donation . Understanding how organization can accept online credit card payments.

donation Information System is a system with a database system which can be used for managing Donors information. E-donation allows Donors to store almost all of their Donation information easily, including information on Donors, and citizenship information of Donors, this information can be easily shared with authorized Donors, and reports can be easily generated.

Different Donation systems are used in the web based Applications and internets, some of them support the online registration features and some do not. Some of these systems were purchased by local or international software companies, and some are developed internally by the software development teams in the computer centers each in the relevant Organization.

2.2 Advantage of E-Donation Information system

The main important of E-Donation Information System is to the help the hungry, the Poor and the homeless in the world.

When we see these people, our first reaction is to judge and look away. While we may feel bad for these people, often times we do nothing. We judge the poor, hungry, for their situation and think or even say it is their own fault. Reality is these people are hungry, poor, and homeless for many different reasons, which may not be under their control. And also E-donation helps to the poor people and jobless who live in the world.

some advantages of Online Donation include the following points

Speedup Settlement of Transaction: online Donation speedup settlement of transaction either national or international level where the Organization stand as paying money to the people.

Reduction of Theft: The online Donation system has reduced the rate of theft stealing in the society. That due to endemic corruption in official transaction and incessant robbery attacks on bullion van and organization vaults which made the federal government to direct immediate automation of government fiscal operations through a system known as electronic payment (e-payment).

Reduces the Rate at Which Donors Visit Organization: The introduction of this system has bridge the gap between donor and his Organization, where the Donor can easily go any branch of the organization close to him and pay money from the Online

Move into a Cashless Society: The introduction of the electronic machine has reduced the use of raw cash thereby moving the country into a cashless economy. The settlements of financial obligations are now done by the use of electronic gadgets such as computer, facsimile and telex, instead of currency notes and coins. He went on to say that individuals can pay their donations by using credit cards or even pressing some buttons that transfer money from one account to another.

The perfection of this system is what he described as a move into cashless society.

2.3 Interactions of donation information system

E-donation will provide a recipient of charity with the digital representation of a right to claim goods of a specified type from a participating store. A participating store will first need to decide which types of goods it will make available for distribution via charitable means for each such item it will generate an E-donation sign.

Each such sign is a simple data structure containing a description of the goods to be purchased. Associated with each sign will also be the cost for a donor to purchase a right for a recipient to receive the goods specified in the sign. The charity publishes this e-donation sign s via its web site.

When a donor wishes to donate, he first gets electronic cash Coin which can only be used to donate to a charity, and an anonymous identity(author) used when communicating with a charity. After selecting the kind of donation he wishes to make at a charity web site, the donor makes the donation using the electronic cash coin received earlier from the PS. In response the Charity generates an e-donation that satisfies the donor requirements and keeps it in a database. When the charity decides to issue an e-donation to a recipient, it retrieves. this e-donation from the database and loads it into the recipient's smart card. The recipient collects the goods from a participating store in exchange for the E-donation contained in the smart card. At a later stage, the store sends all the Redeemed e-donations to their respective charities for clearing.

a great advantage of our scheme is transparency, i.e. the donor knows that recipient will receive goods exactly as specified by the donor. Moreover, the Charity does not need to be contacted during each redemption.

2.4 Donor Anonymity

When it comes to charity donations, donor privacy is important. This is especially important in an internet environment where information may travel through network segments that are not necessarily trusted. The donor wants anonymity for his donation; neither the charity nor the recipient should be able to learn the donor's real identity.

there is many reasons why anonymity might be required in a payment system. In this case, the donor might not wish charities to be able to link different donations together and

build a profile of his/her behavior. However, there are situations where anonymous payments can be misused furthermore, there may be regulatory and legal constraints limiting anonymous donations. In order to make an anonymous electronic charity payment system acceptable to both donors and governments, a mechanism for limiting donor anonymity may also be needed.

2.5 Challenge of E-donation Information System.

A challenge to money donation is the donor or theirs family has no say in who receives the donated money. Money may be donated to recipients who have very different religious or political views or to people the donor may not have considered deserving.

The biggest Challenges are the following stage:

- Lack of internet
- Power Failure and Communication Link: Constant electric failure leads to deficiencies in infrastructures such as ATMs computers etc which slows down the rate of electronic transactions and also failure links in consistent electronic power supply.
- Lack of computer backup**:** As a result of lack of computer backup when the donation system is corrupt there will be a loss of information about a donors, and this may lead to misappropriation of donors account, therefore the organization should have a manual backup (ledger) containing all data about the donors.

2.6 Understanding how online payment processing works

Accepting credit card payments is getting easier, but the system for processing those payments remains complex. These illustrations will help you understand how to accept online or mobile credit card payments and, once you do, where the money goes and how it gets there.

Figure 1 Understanding how online payment processing works

It can be hard to understand how online payment processing works. Many different steps and a lot of jargon make it seem more complicated than it is. To help you see the big picture, we've laid out a typical payment process in diagrams.

2.6 .1 The Visitor Front End

Let's start by considering the payment pages that your visitors see. A payment page on your website allows visitors to select and define what they are paying for, instigate the payment process, and then enter credit card numbers and the other information necessary to validate payments. For mobile payments, such as those through apps like Square or PayPal Here, the payment page is the app itself you enter the information as the party accepting the payment instead of the visitor.

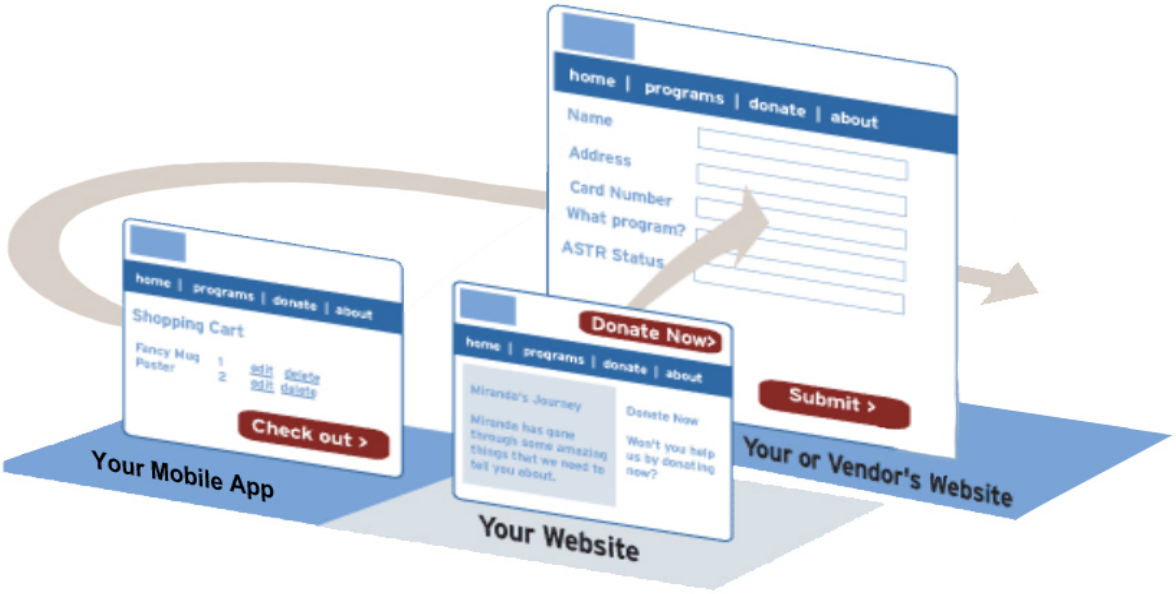


Figure 2 The Visitor Front End

First, visitors need to choose what they are paying for example, a donation, product, or registration for an event. For donations, this might be as straightforward as providing a "Donate" button.

With a price defined, the next step is for them to fill in a payment form with their information: name, credit card information, and address, at a minimum. Once they've entered their information and clicked "Submit," a number of back-end processes kick off. Payments made with mobile apps work more like cash registers than online forms. You'll typically enter the item or event being paid for and swipe the person's card, and they'll sign and approve the payment. Then, the back-end processes begin.

2.6 .2 The Payment Gateway And Fraud Prevention

The first process is a check to try to verify that the credit card and the charge are valid.

Figure 3 the Payment Gateway and Fraud Prevention

When your visitors click "Submit," a processor called the Payment Gateway takes over. The Payment Gateway the little man in red in the diagram handles the actual back-end communications and transactions: contacting the bank, reporting back on the results, and moving the money.

The Payment Gateway starts by checking to make sure that the credit card number is valid. To decrease the possibility of fraud, it may also check to make sure that the address, name, and card security code the three-digit code on the back next to the name strip match. Unfortunately, fraud is common even if you're just processing donations, so these verification checks are an important step in the process.

If the card is rejected, the Payment Gateway sends word to your website or mobile device so you can notify the visitor. If it is verified, the process continues.

2.6 .3 Merchant Account

In the next step, when the charge is accepted as valid, the Payment Gateway initiates a process to transfer money from the credit card company to a type of specialized bank account called a Merchant Account.

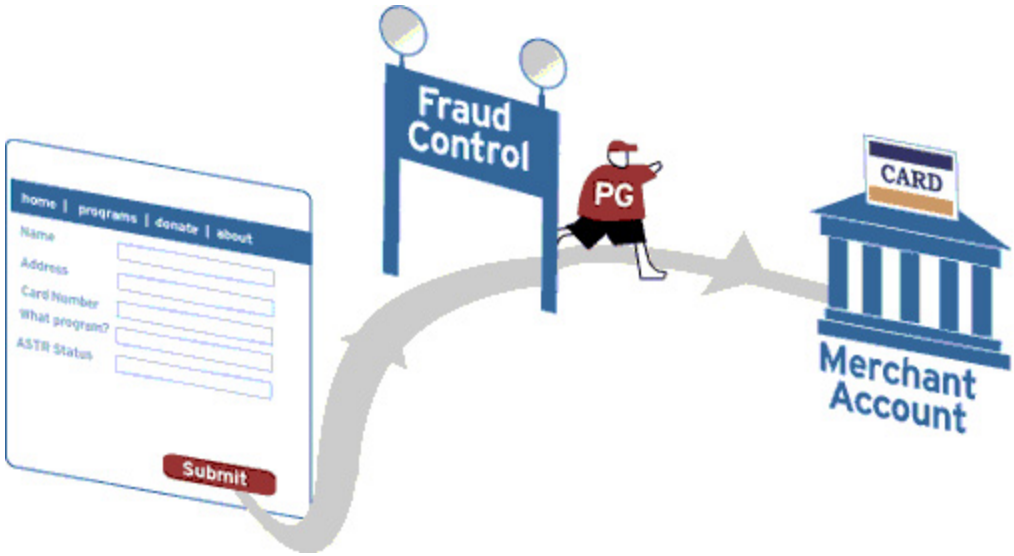


Figure 4 Merchant Account

A Merchant Account does nothing but hold credit card payments, but you can't accept credit cards without one. Even if you have one for accepting credit card payments by phone, you may need a different one for online payments.

You can open your own Merchant Account through your bank or one recommended by your payment processor, or you can use a vendor's. For instance, if you accept payments via PayPal, you are relying on PayPal's Merchant Account. Like any bank account, you'll want to shop around rates vary. These accounts define the base amount you'll pay for each transaction. You'll need a Merchant Account whether you are accepting payments online or through a mobile app, but in the case of a mobile app, you'll typically use the vendor's.

2.6 .4 Thanks, Receipt, and Reports

With the payment successfully processed, the visitor is notified that their payment went through, and the transaction is viewable in reporting tools.

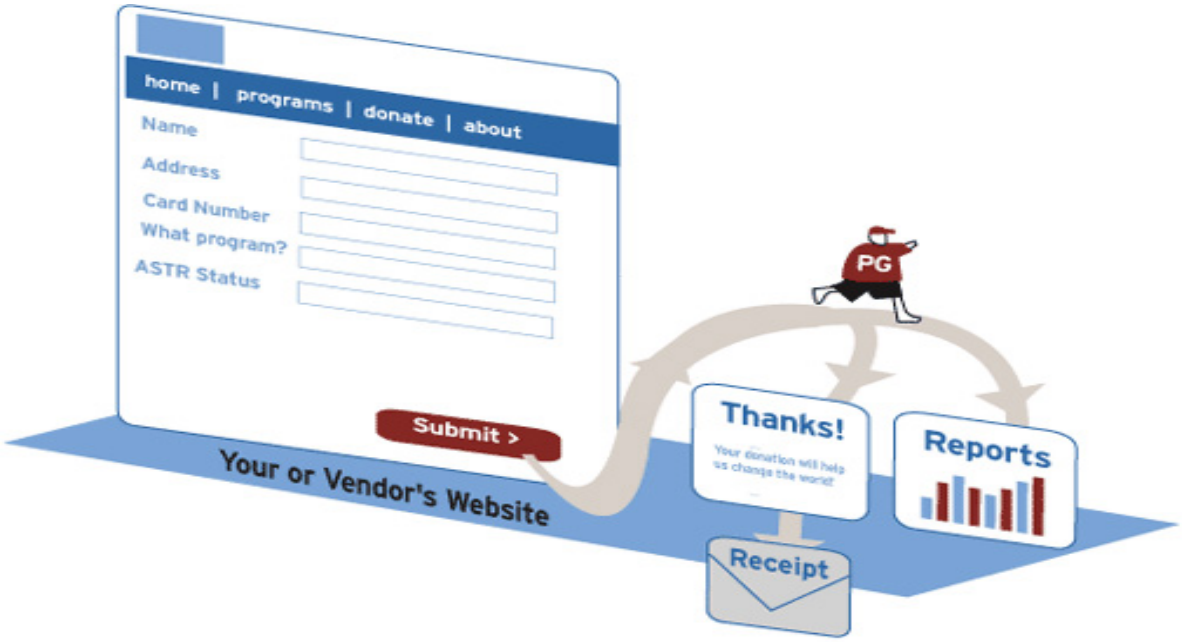


Figure 5 Thanks, Receipt, and Reports

When the payment gateway reports back that the card has been charged, visitors are shown a confirmation screen confirming that everything went through successfully. They are also typically emailed receipts at this point. Usually, any reports are updated in real time to let you see within seconds that a payment was made.

2.6 .5 Synching Data

Now you'll need to determine how to get the payment data from the payment processor into your own database.

Figure 6 Synching Data

The reporting tools that automatically show the payment information are not likely to be the same application you use to track constituent information, so in order to synch the two sources, you should be able to at least manually export a text file from the payment processing application and load that into your database. If you plan to process many transactions, it's worth looking into ways to automatically synch the two data sources with the help of a programmer.

2.6 .6 Receiving the Money

Last but not least, the money needs to be moved from the Merchant Account to your bank account.

Figure 7 Receiving the Money

While it's in the Merchant Account, the payment isn't accessible to you. If the Merchant Account is in your name, however, rather than a vendor's, the money will automatically be deposited into your bank account within a couple of days. If the Merchant Account is in a vendor's name, that vendor needs to pay you , they typically make payments once or twice monthly, either via check or by wire transfer.

2.6 .7 Putting It All Together

Here's the complete diagram again showing the entire process.

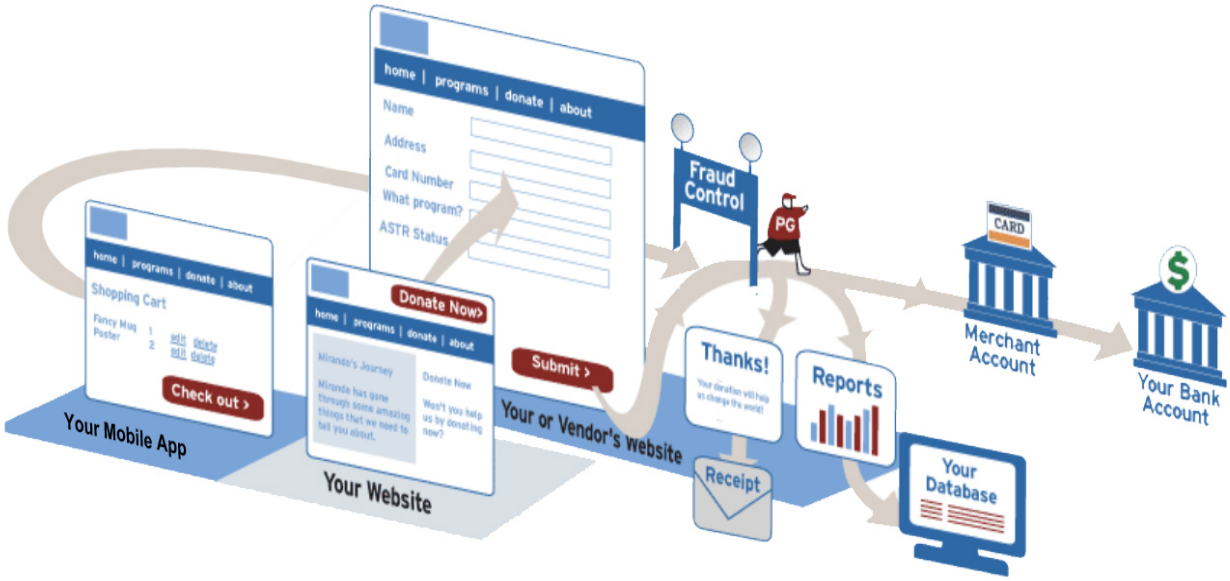


Figure 8 Putting it All Together

While payment processing is not a simple, straightforward procedure, it doesn't have to be baffling. None of the steps are particularly technical or complicated, and they're all within reach of even the smallest nonprofit. You just need a sense of the big picture.

CHAPTER THREE

REQUIREMENT SPECIFICATION

3.1Use Case Model

In software and engineering, a use case is a list of steps, typically defining interactions between a role and a system, to achieve a goal. The actor can be a human, an external system, or time.

Use cases describe how external entities will use a system. These external entities can be human or other systems (called actors in UML terminology). The description emphasizes the users' view of the system and the interaction between the users and the system. Use cases help to further define system scope and boundaries. They are usually in the form of a diagram, along with a textual description of the interaction taking place. Figure 9 shows a generic diagram that consists of two actors represented by stick figures, the system represented by a rectangle, and use cases depicted by ovals inside the system boundaries.

An actor represents a user or another system that will interact with the system are modeling. A use case is an external view of the system that represents some action the user might perform in order to complete a task.

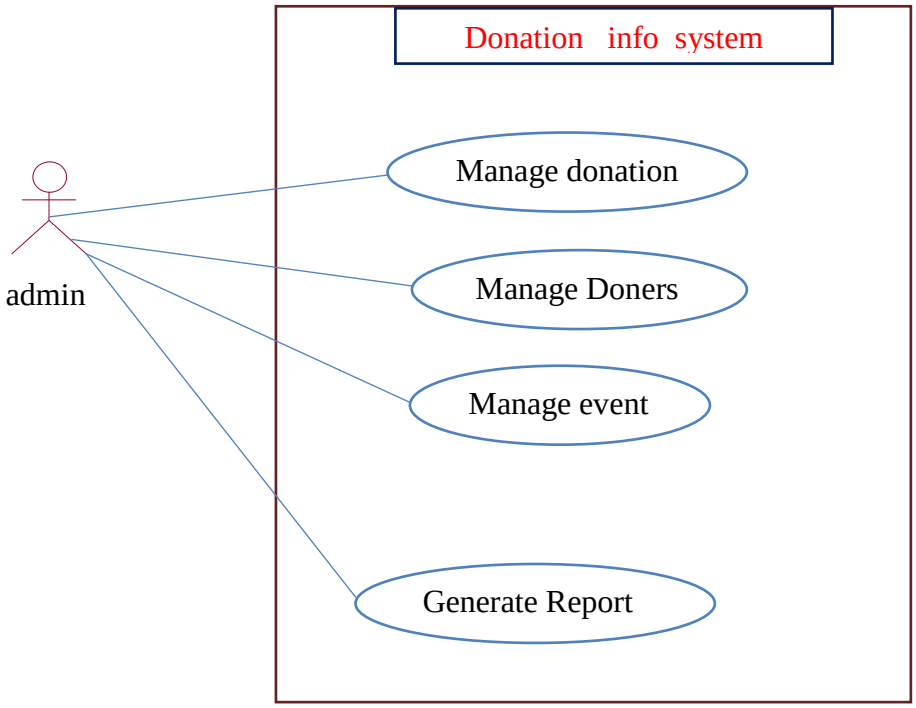


Figure 9 Use case and actor

3.1.1 Use Case Model for manage donations

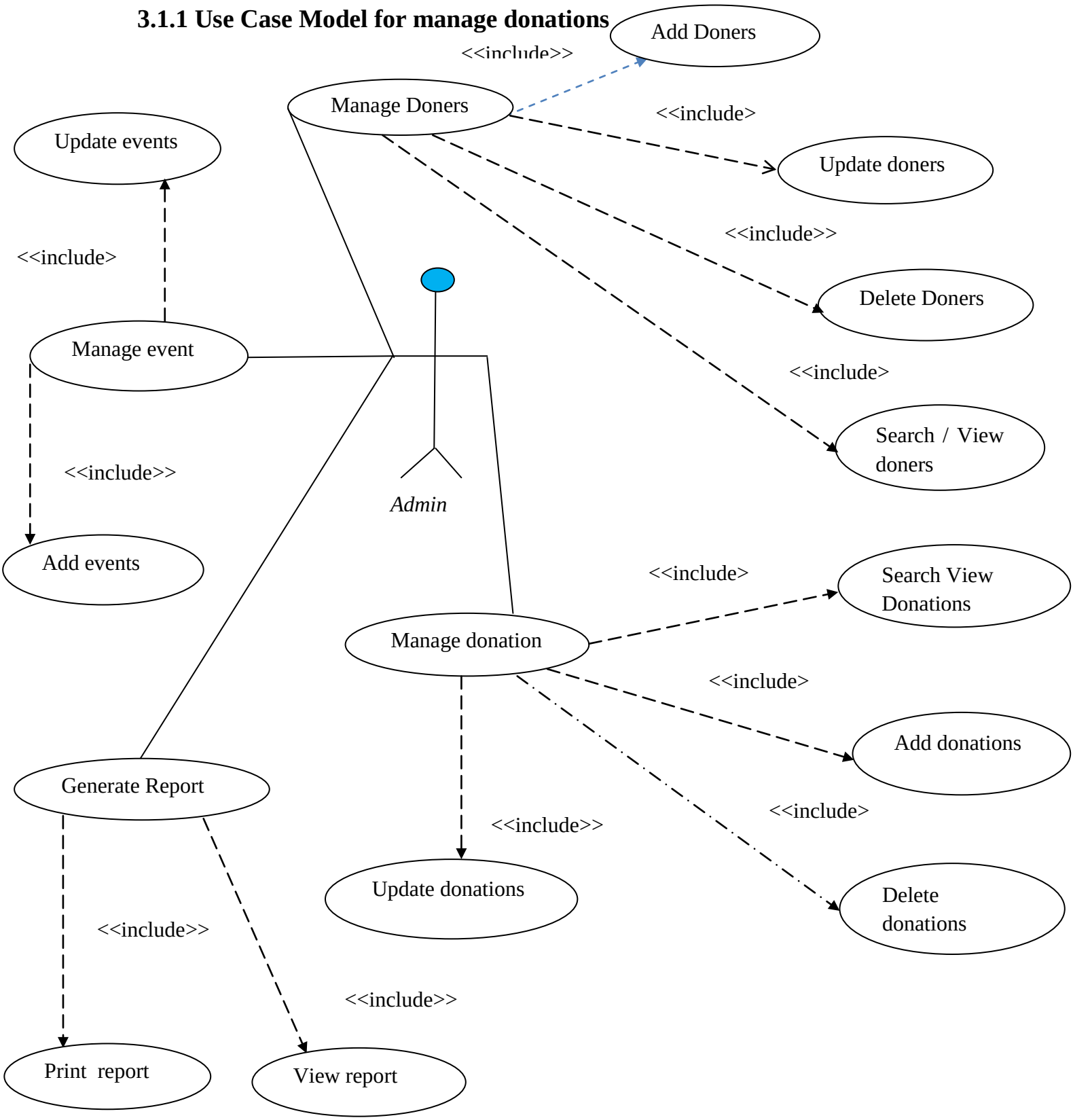


Figure 10 : Use Case diagram for E-donation information system

3.1.2Use Case Model for doner login and donor registration system

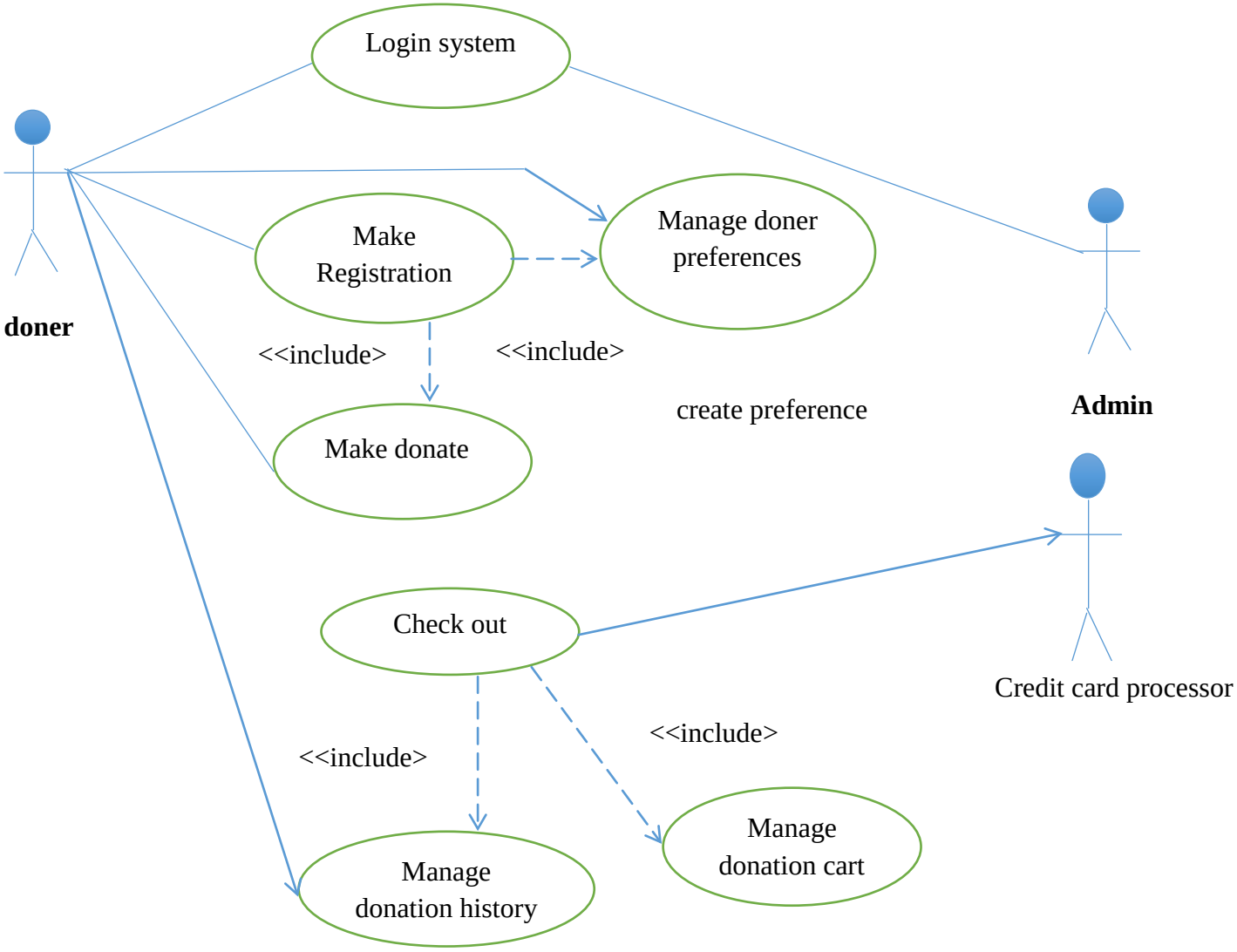


Figure 11: Use Case Model for doner login

3.1.3 Use Case Model for doners and payment process

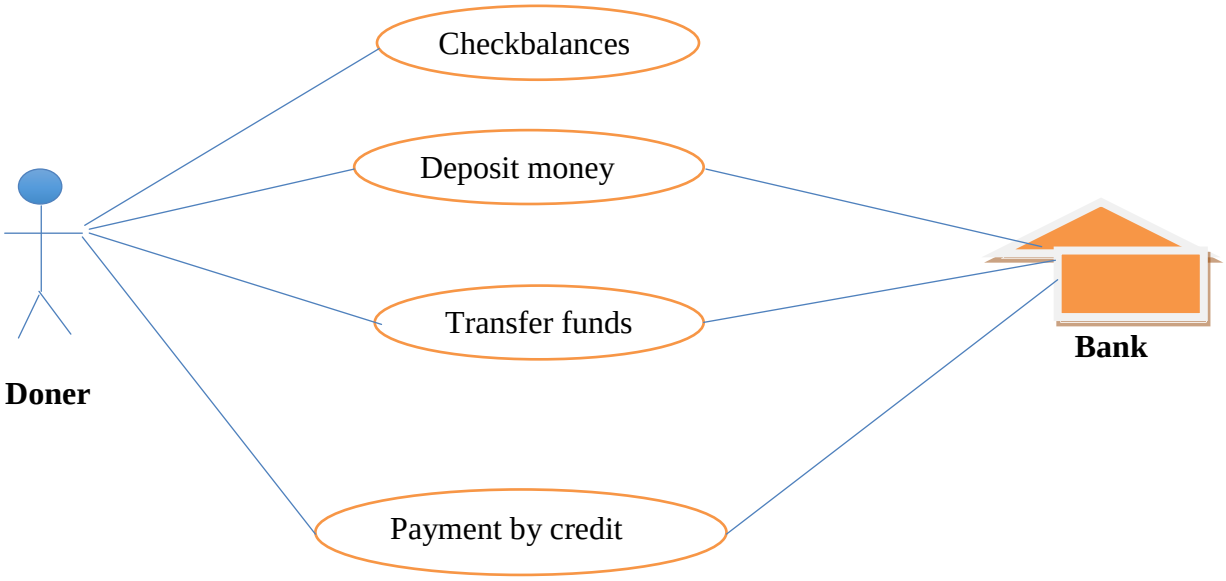


Figure 12: Use Case Model for doners and payment process

3.1.4 Activities Diagram

This section documents each use case package independently. The packages are explained using use case diagrams and, where appropriate, activity diagrams are shown as well. The documentation also consists of a high-level summary of main and alternate flows of events for each use case

The activity diagram of Figure is focused on communicating a single aspect of the system, and that is "Making a Donation." Use more activity diagrams to show other aspects of the system. Activity diagrams can be used to explain systems, subsystems, class, operations, and use cases. You want to create activity diagrams mostly for explaining complex processes.

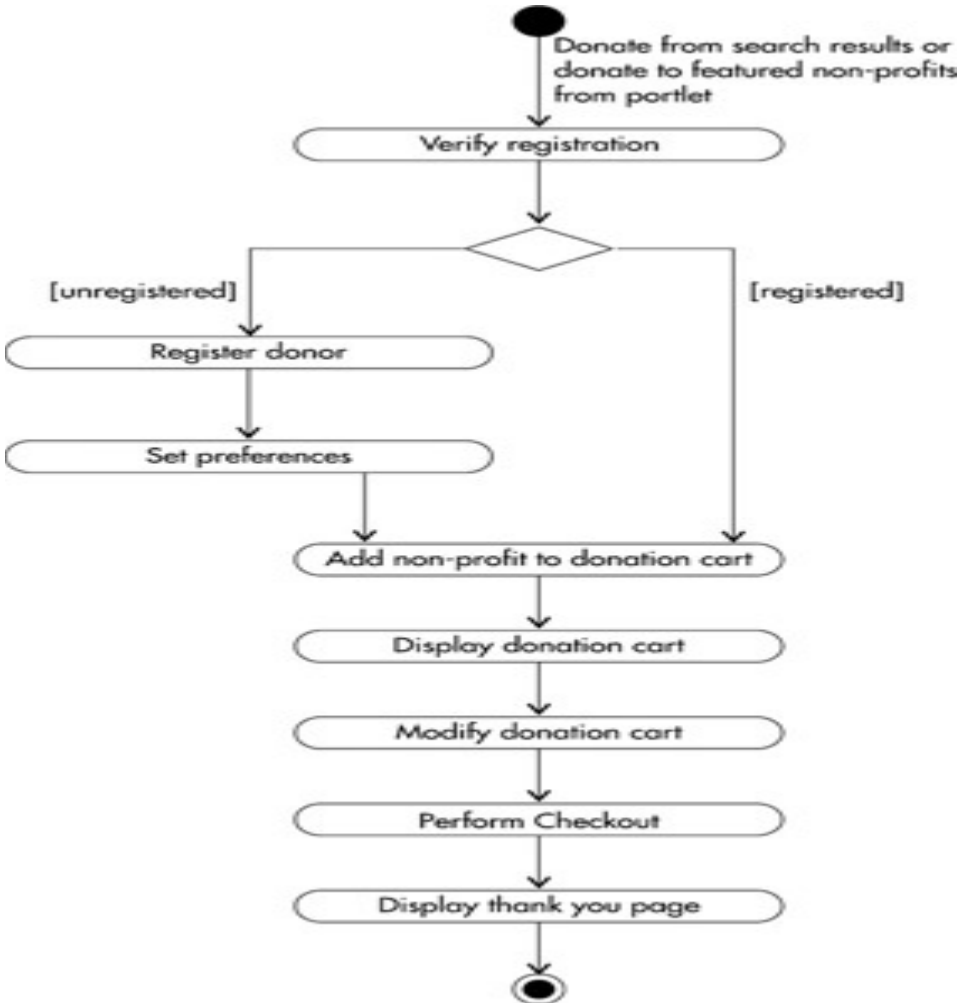


Figure 13: activity diagram

3.2 Software Requirements

Table 1 Software Requirements

Software	Purpose
Active Server Page(Asp.net)	Provides necessary code for manipulating building the system
SQL	Provides the database for the system. In addition, it provides Data Manipulation (DM) and Data Definition(DD) elements. SQL is easy and user friendly and it can store
Microsoft Windows 7	Microsoft Windows 7 we used as the Operating system for the project development
Microsoft word 2007	Microsoft word 2007 we used for research writing of documents needed during the development of the project.

3.3 Hardware requirement

Hardware requirements will be the requirement of PC in the market.

- Processor: 2.26 GHz or higher; Pentium IV or higher recommended.
- Memory (RAM): 512 MB minimum. 1 GB recommended.
- Hard drive space: 50 MB; optional installation supporting .Net Frameworks requires an additional 250 MB of available hard-disk space.
- Note: Hard disk space usage varies depending on the configuration; custom installation choices may require more or less hard disk space. The above listed requirement is for default configuration of the product.

CHAPTER FOUR

ANALYSIS AND DESIGN

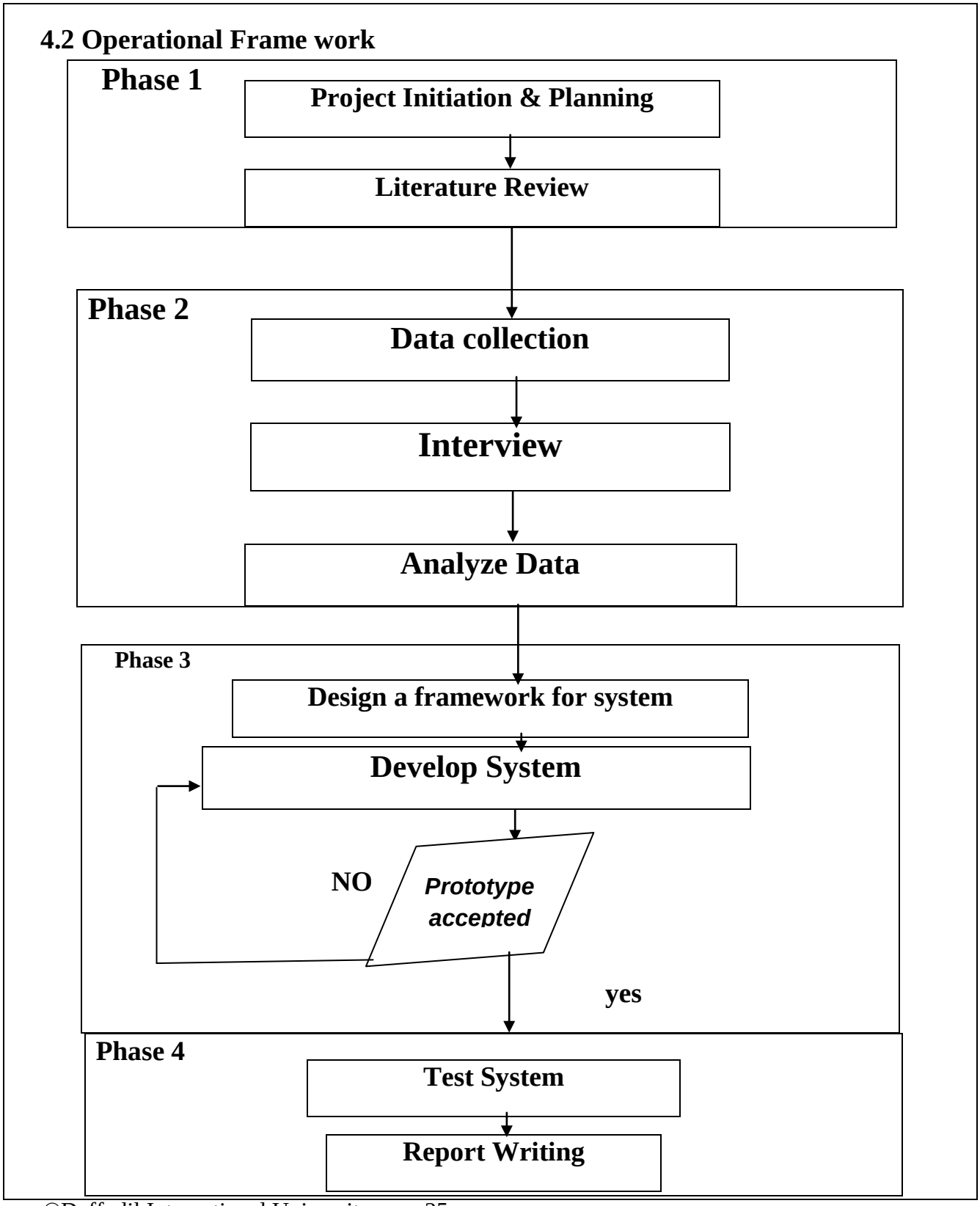
4.1 Introduction

Analysis and Design are the most important phase of software development. it requires a careful planning and thinking on the part of the system designer. Analyzing and Designing software means to plan how the various parts of the software are going to achieve the desired goal It should be done with the all most care because if the phases contain any error then , that will affect the performance of the system, as a result it may take more processing time, more response tie extra coding workload etc.

Software Analyzing and Designing is the technical kernel of the software engineering process and I applied regardless of the software process model that is used. During this chapter the researchers will discover these topics one by one: Data representations, user requirement analysis, feasibility studies, solution strategy, data modeling, database design, interface design and the last codes and forms of the system.

After software Analyzing and Designing have been completed and specified, software will pass three technical important process : Testing by the office before using it and confirming , Implementing by the office when it succeed the testing process and Enhancing by the researchers for future work.

Table 2 Operational Frame work



4.3 Data Flow Diagram (DFD)

A data flow diagram is a graphic representation of a system or part of system It consist of entities, data flows, process, sources, distinctions, and stores that Can facilitate the readability of the system and also shows how data moves through an information system but doesn't show program logic or processing steps. A set of DFDs provides a logical model that shows what the system does, not how it does it

Process symbol: receives input data and processes output that has a different content, form or both.

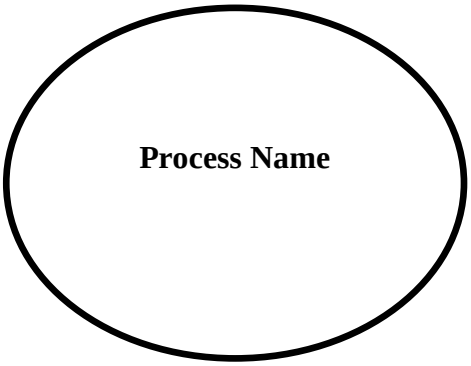


Figure 14 Process Name

Entity symbol: is a rectangular structure that is shaded to make it look three-dimensional

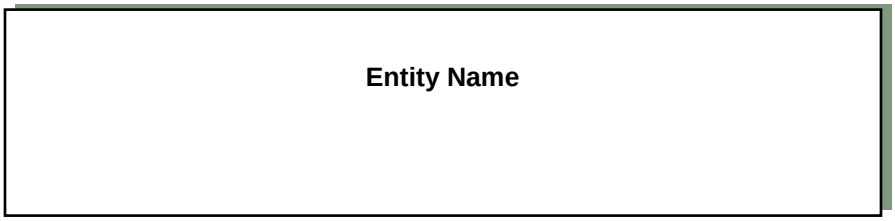
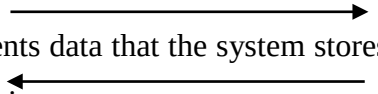


Figure 15 Entity Name

Data flows symbol: is a path for data to move from one part of the information system to another.



Data store symbol: represents data that the system stores because one or more processes need to use the data at later time.

Figure 16 Data flows symbol

4.3.1 Context Diagram

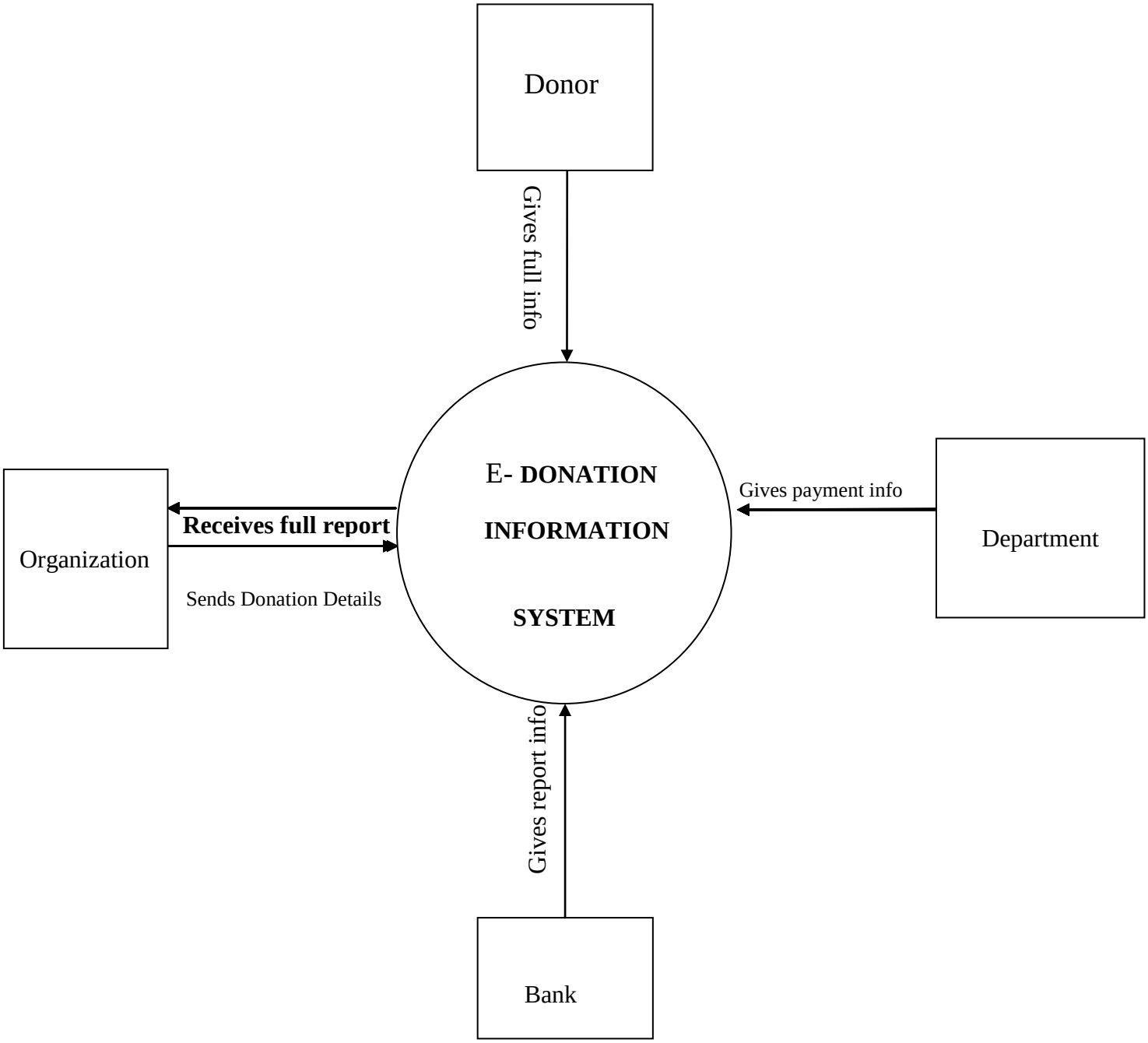
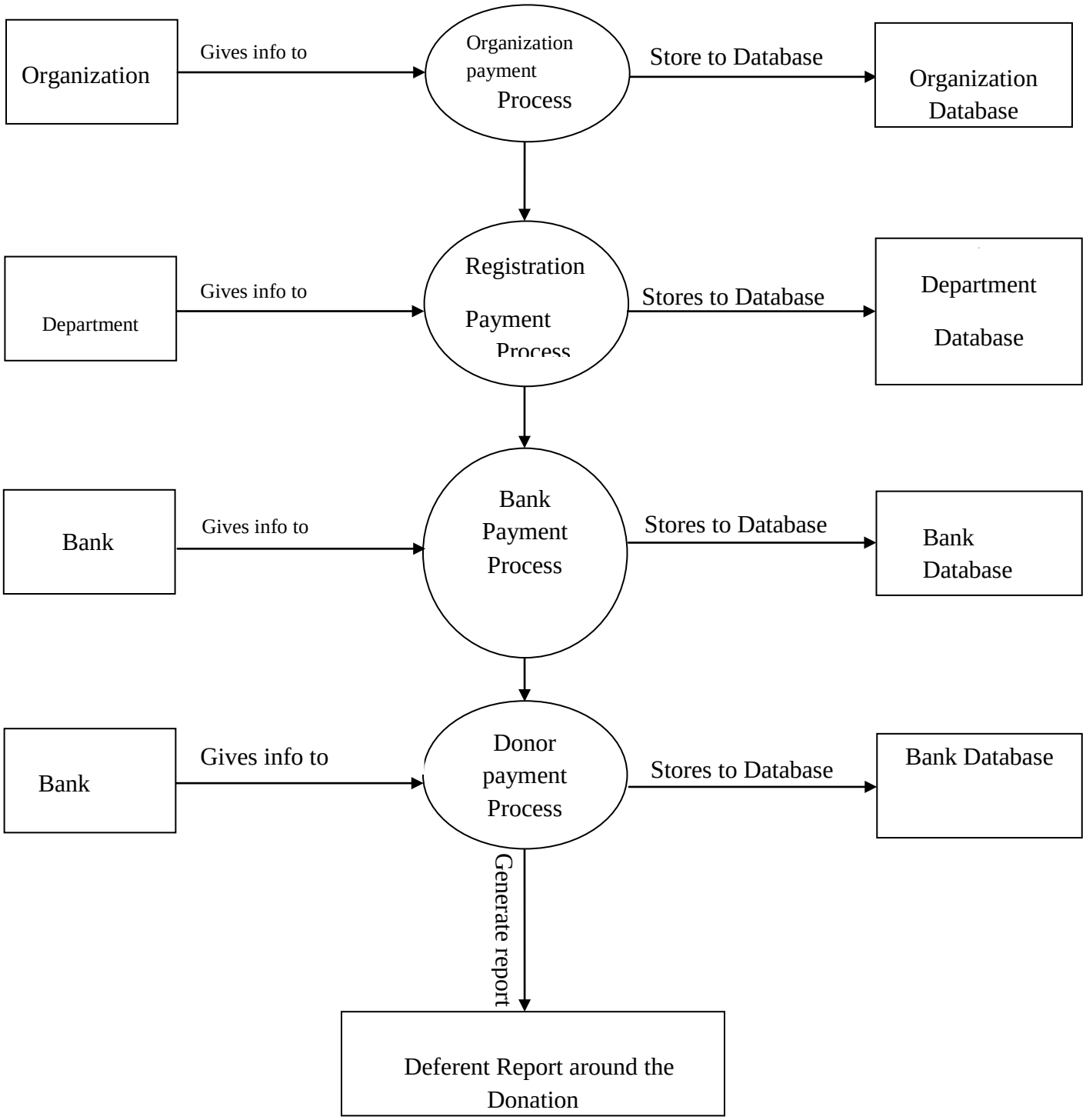
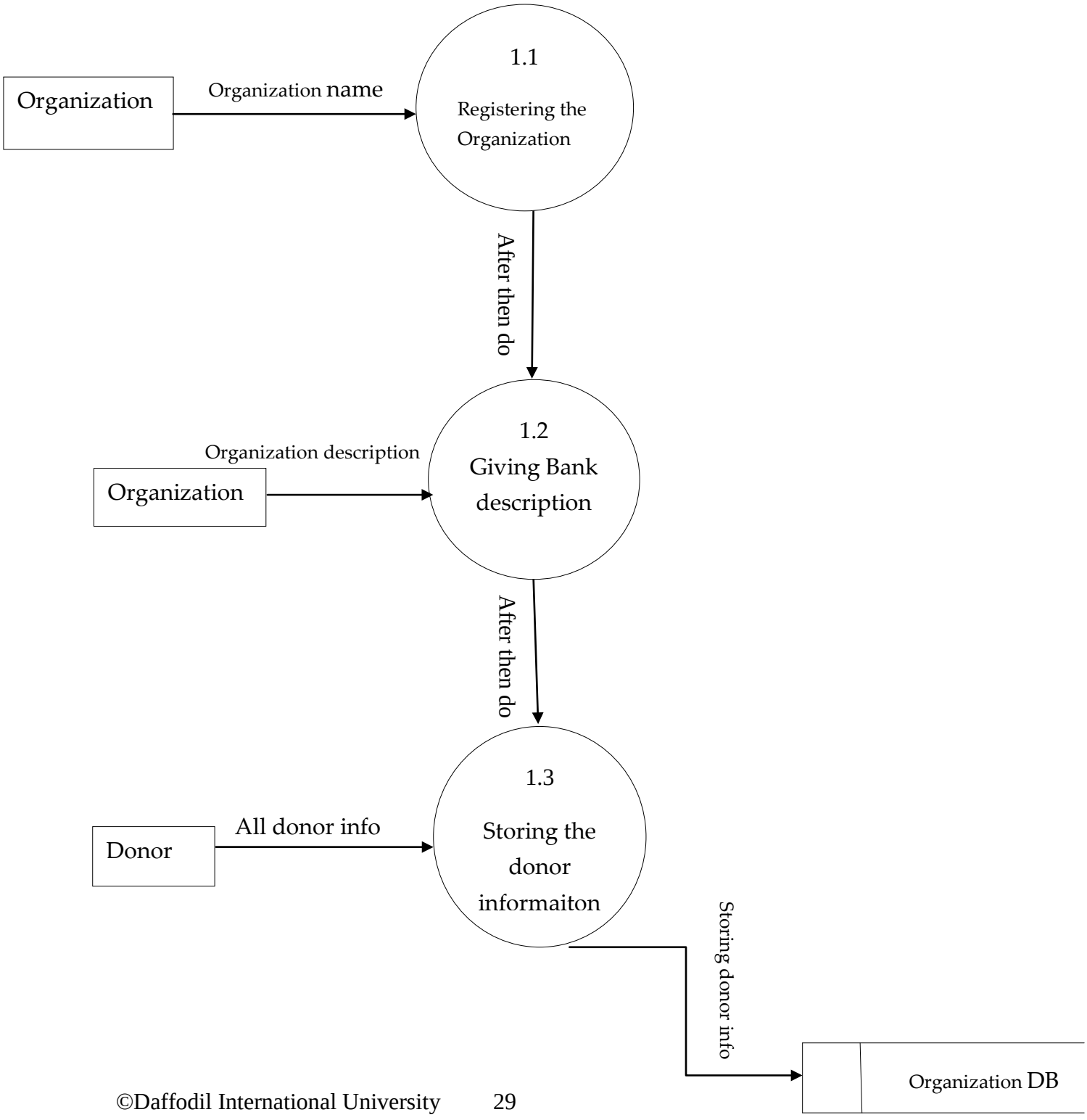


Figure 17 Contex diagram

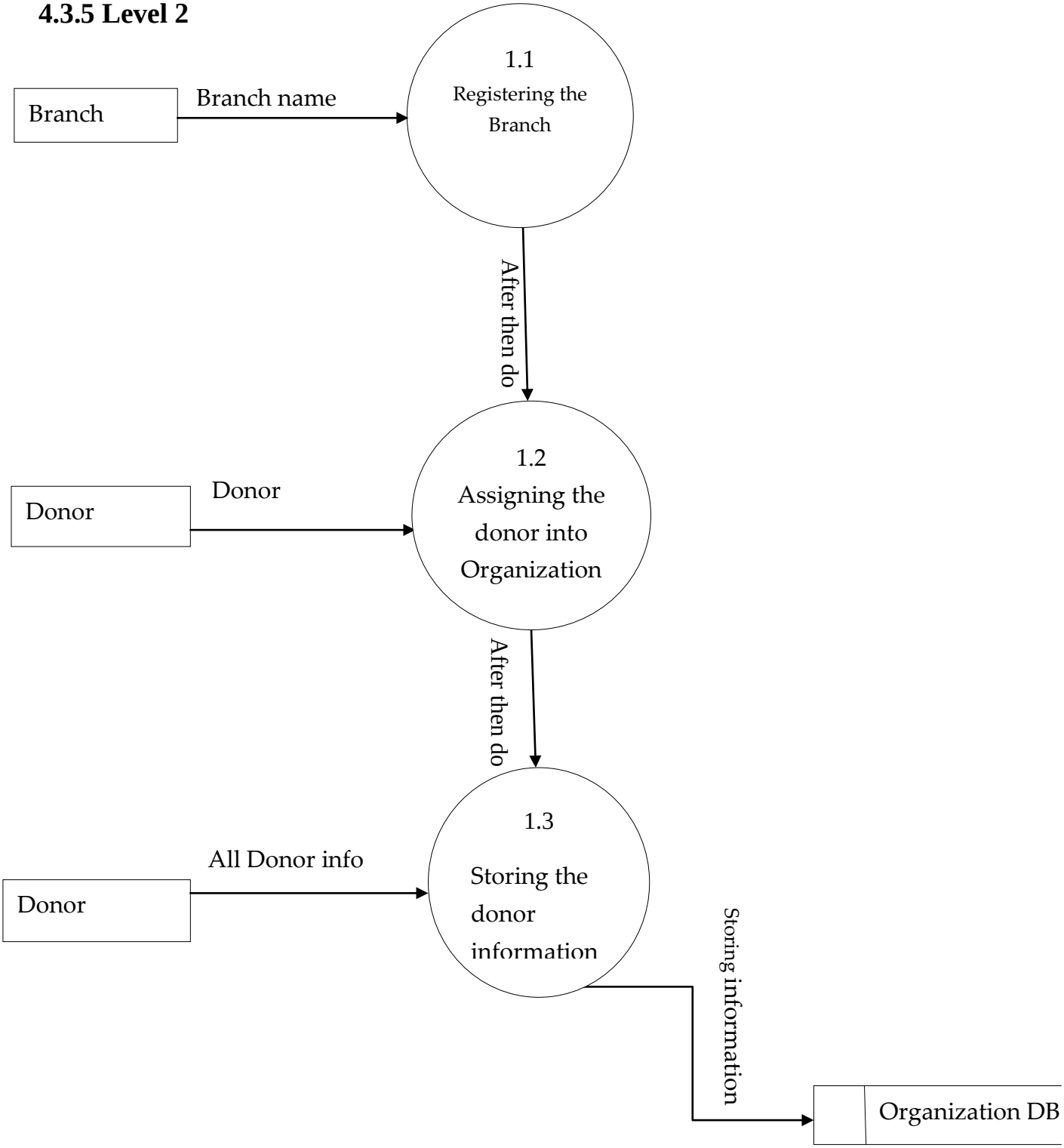
4.3.3 Diagram Zero (0)



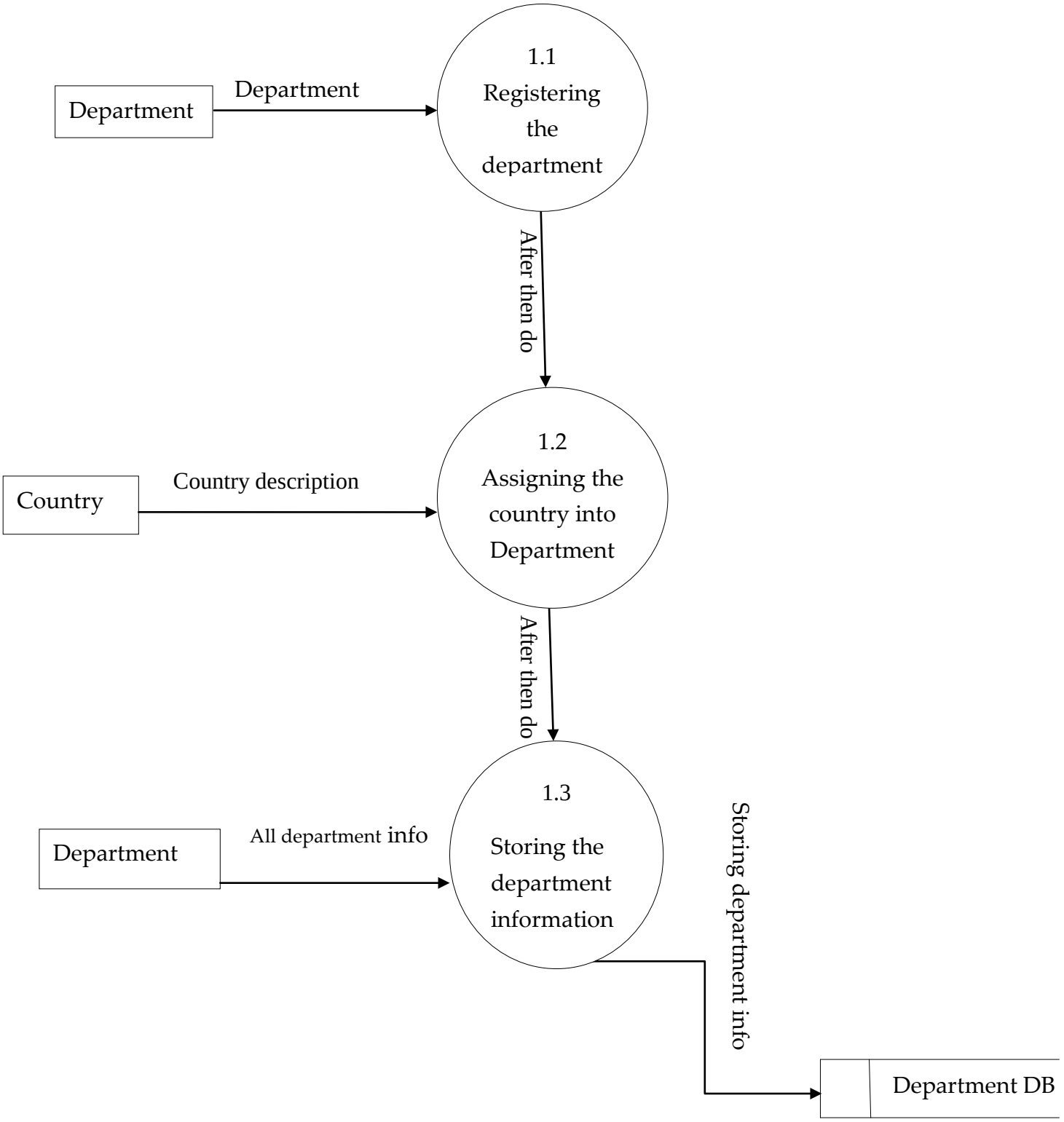
4.3.4 Level 1


Organization
Organization name
1.1
Registering the Organization
After then do
Organization description
Organization
1.2
Giving Bank description
After then do
Donor
All donor info
1.3
Storing the donor informaiton
Storing donor info
Organization DB

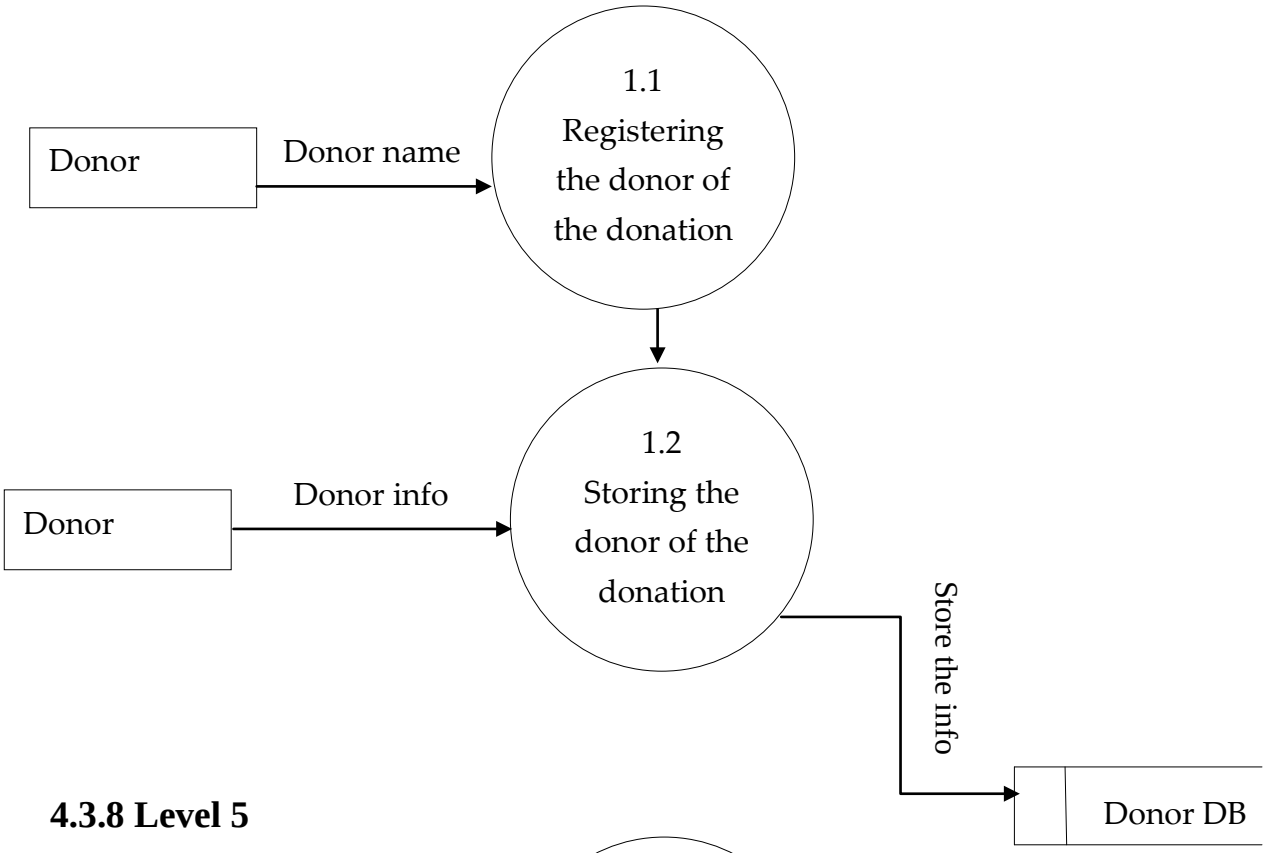
4.3.5 Level 2


Branch
Branch name
1.1
Registering the Branch
After then do
Donor
Donor
1.2
Assigning the donor into Organization
After then do
Donor
All Donor info
1.3
Storing the donor information
Storing information
Organization DB

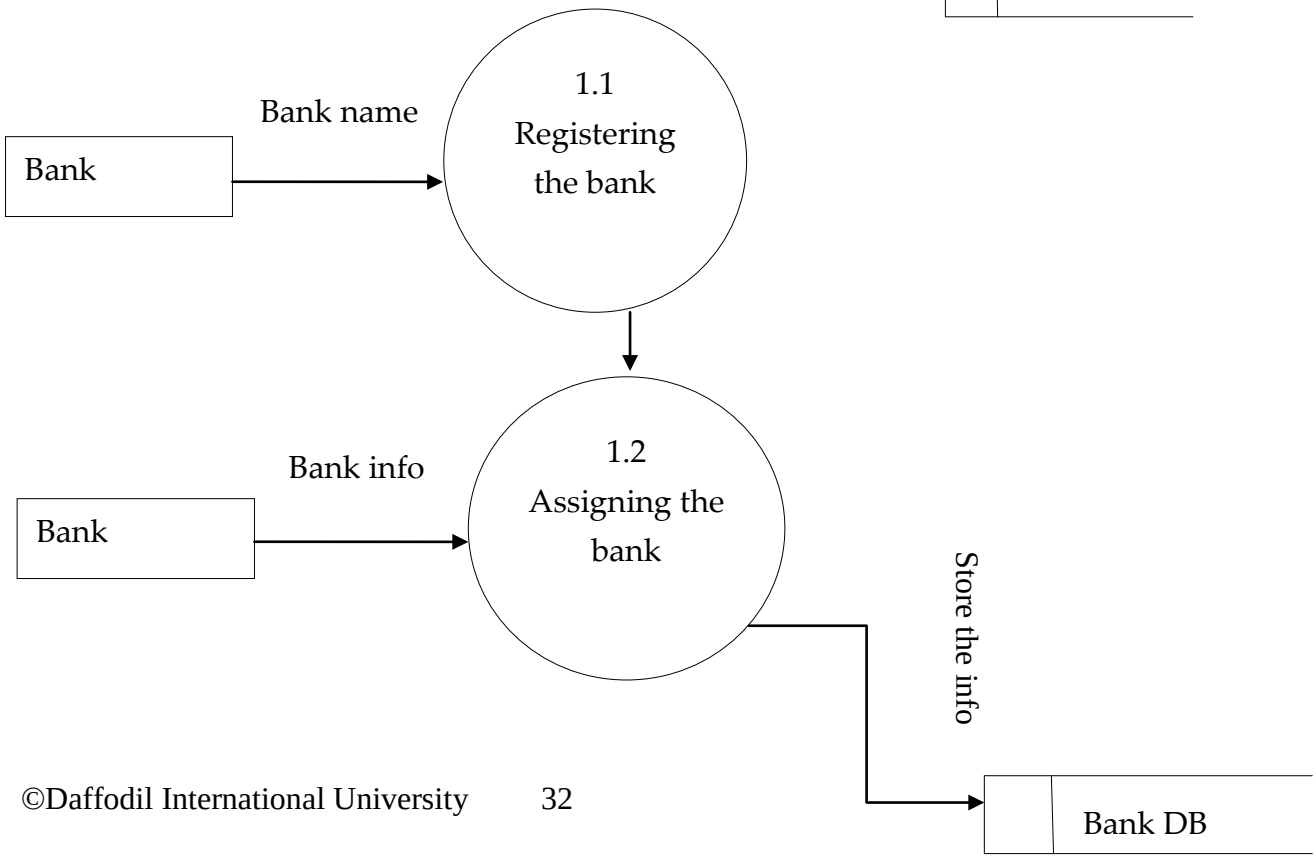
4.3.6 Level 3


Department
Department
1.1
Registering
the
department
After then do
Country
Country description
1.2
Assigning the
country into
Department
After then do
Department
All department info
1.3
Storing the
department
information
Storing department info
Department DB

4.3.7 Level 4



4.3.8 Level 5



4.4 Database Design

This section of database design consists 3 sections: data dictionary, Data normalization and table design, so the researchers focus one after one.

4.5.1 Data dictionary

Data dictionary is centralized store of information about database, it contains information about tables, fields, the table contained data type, constraints the join which have been established, between those table referential integrity cascades update, cascades delete, data dictionary also called “meta data”.

TABLE 3

4.6 User Creation Table

The CREATE TABLE statement is used to create a table in a database.

Tables are organized into rows and columns; and each table must have a name.

Table 2 User Creation Table

Field	Data type	Length	Description	Constraints
Userid	Varchar	50	Identification	Primary key
UserFullName	Varchar	50	Full name	Not null
User_Name	Varchar	50	User name	Not null
Password	Varchar	50	The Password	Not null
Type	Varchar	50	Retype password	Not null
secret_Question	Varchar	50	S/Question	Not null
Secret Answer	Varchar	50	S/Answer	Not null

TABLE 4

4.7 Doner Registration

A table can contain only one PRIMARY KEY constraint.

Table 3 Doner Registration

Field	Data type	Length	Description	Constraints
Doner_ID	Varchar	50	doner Identification	Primary key
Don_name	Varchar	50	Doner name	Not null
Bank	Varchar	50	Bank name	Not null
Accoun Name	Varchar	50	Accoun name	Not null
Account	Varchar	50	Account name	Not null
User_Name	Varchar	50	User Name	Not null
Password	Varchar	50	password	Not null
Address	Varchar	50	Doner Address name	Not null
Tell	Varchar	50	Doner telephone	Foreign key
Credit Card	Varchar	50	Credit card	Not null
Zipcode	Varchar	50	zipcode	Not null

4.8 donate Now

All columns defined within a PRIMARY KEY constraint must be defined as NOT NULL. If nullability is not specified, all columns participating in a PRIMARY KEY constraint have their nullability set to NOT NULL.

TABLE 5

Table 4 donate Now

Field	Data type	Length	Description	Constraints
ID	Varchar	50	doner Identification	Primary key
Doner_Name	Varchar	50	Doner name	Foreign key
Type	Varchar	50	Bank name	Not null
Security Code	Varchar	50	Acc number	Not null
Credit car	Varchar	50	Account	Not null
Paid_Mon	varchar	50	Pad money	Not null
Remaining account	varchar	50	Stock money	Not null

4. 9 Data Modeling

Database Design is the process of producing a detailed data model of database; this logical data model contains all the needed logical and physical design choices and physical storage parameters needed to generate a design in data definition language, which can then be used to create database. A fully attributed data model contains detailed attributes for each entity .the term database design can e used to describe many different parts of the design of an overall database system.

4.9.1 Entity Relationship Diagram

An entity-relationship diagram (ERD) is a specialized graphic that illustrates the interrelationship between entities in a database. ERD is a power full tool that is used to simplify the relationship between organizations data storage. An Entity Relation Diagram (ERD) is often used as a way to visualize a relational database: each entity represents a database table, and the relationship lines represent the keys in one table that point to specific records in related tables. Relationship is three types:

Table 5 Entity Relationship Diagram

Name	Description	Symbol
One-to-One	This kind of relation shows One entity can relate only another one entity	1 :1
One-to-Many	This kind of relation shows One entity can relate many another entities	1 : M
Many-to-Many	This kind of relation shows many entities can relate many another entities	M : N

4.9.2 Entity Relationship Diagram

Key terms

Entity: an entity is an object that exists and distinguishable from other objects

A person, place, object, event or concept in the *user* environment about which the organization wishes to maintain data.

Entity Type: a collection of entities that share common properties or characteristics

Attributes: A named property or characteristic of an entity that is of interest to an organization

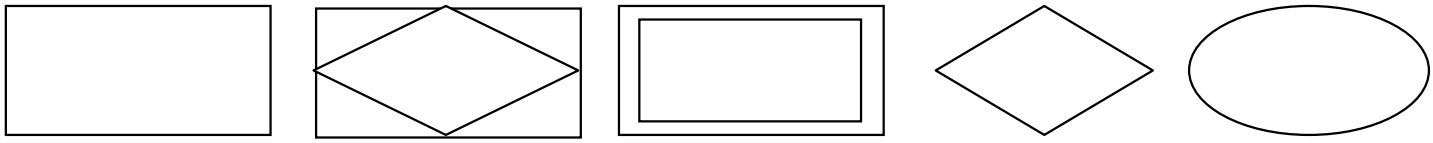
Relationship: is an association of entities where that association includes one entity from each participating entity type where relationship type is a meaningful association between entity types.

ERD Symbols

The ERD is used to represent database schema, here are some symbols used to represent ERD Symbols:

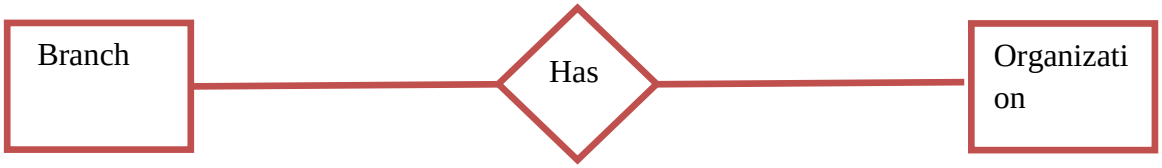
- A rectangle represents an **Entity.**
- An Ellipse represents an **attribute.**
- A diamond represents a **relationship**

Indicators

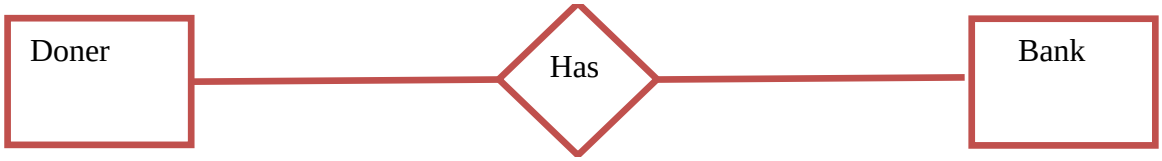


Entity set | Associative entity | Weak entity | Attributes | Relationship

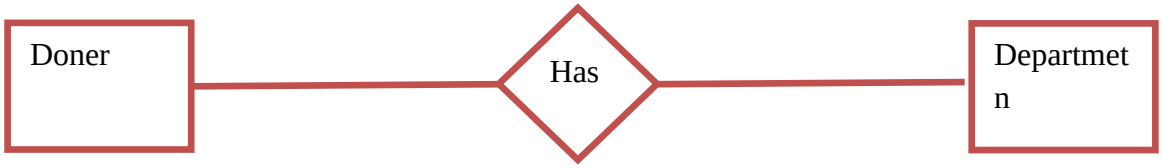
M: 1



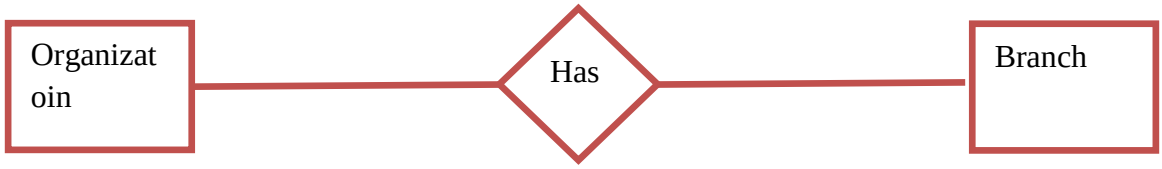
1: 1



1: m



1:M



4.9.3 Attributes

USERS

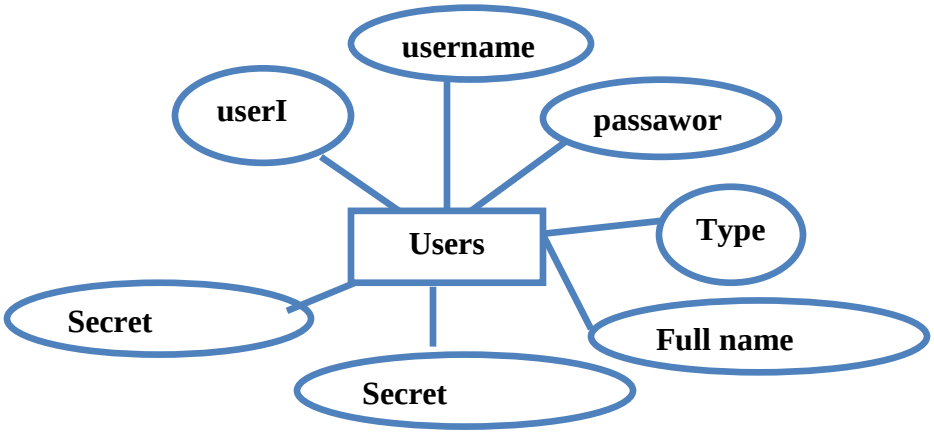


Figure 18 attributes

Doner

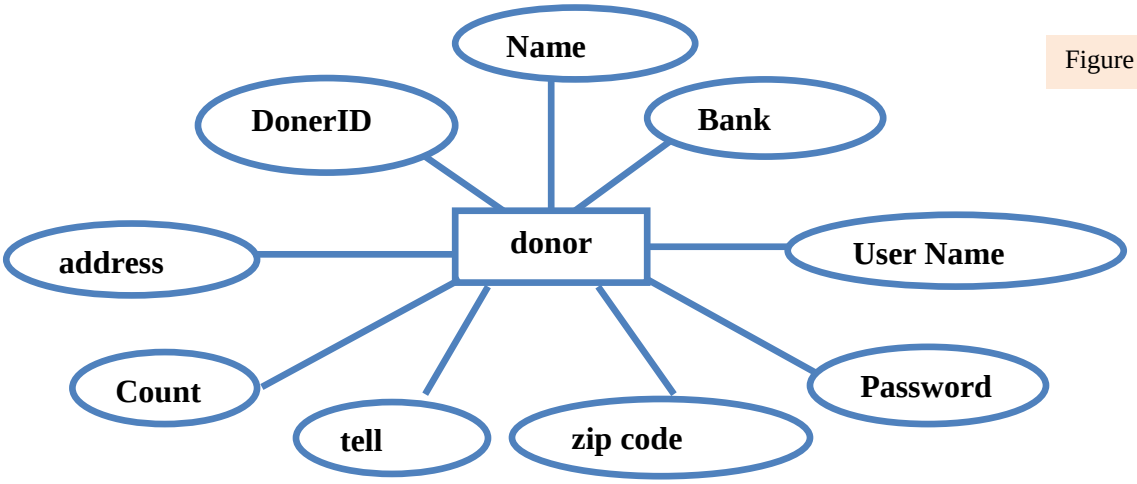


Figure 19 doner

4.9.4 Interface Designs

4.9.4.1 Login page

Enter the administrator username and also the password correctly this page will appear and you will see that the administrator can access whole the system, but if you did not provide a correct username and password, the system will deny the access.

You provide invalid user name and password the system will give a notice message for you incorrectness

If the user name or password is an incorrect you will get a message the display the prompting that the user name or password is invalid

Figure 20 : Login page

4.9.4.2 ADMIN PANEL FORM

The admin panel is control center of any website. It allows you to manage all aspects of the website.

You can view all reports of your website such as, doner report, user report, admin report, registration report.

Figure 21 admin panel form

4.9.4.3 Doner Login

Give the option for doners to register on the site, so when they do return they don't need to enter all their billing and payment details in again, giving them the flexibility to quickly check out. Login system - donors are not required to enter personal details every time.

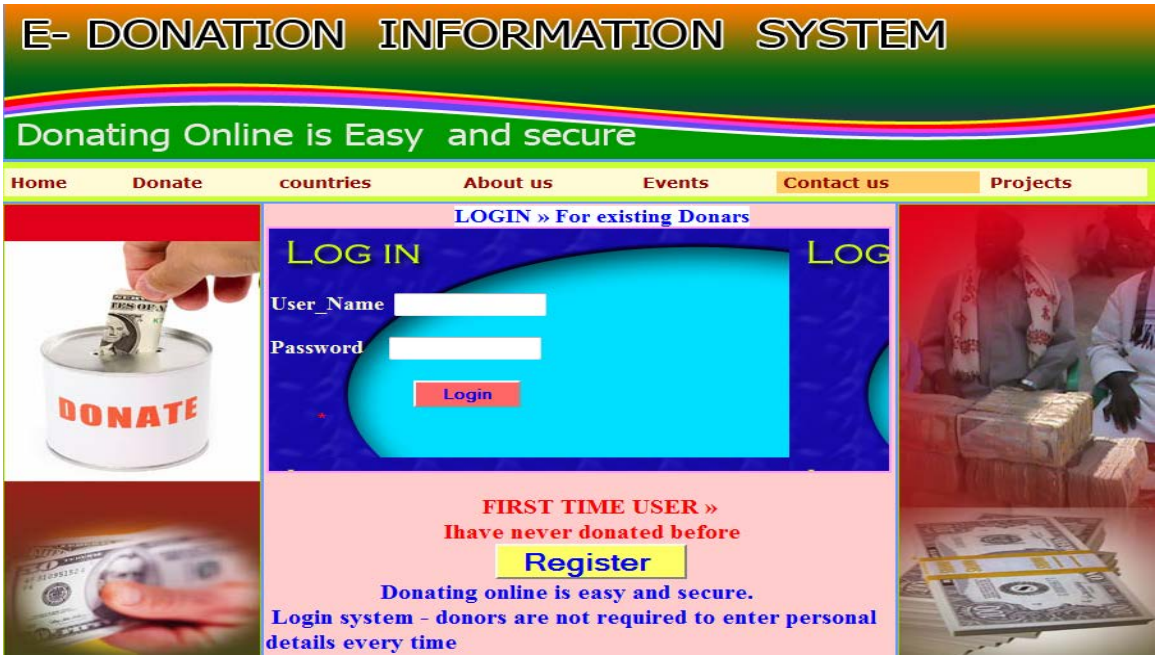


Figure 22 : doner login

4.9.4.4 Registration Report

All reports can see administrations only; admin has privilege to access full reports

registration report

	Doner_ID	Don_name	Bank	Account
Edit Delete	1	Abdiladif Dahir	Dahabshiil bank	4000
Edit Delete	2	A/kariin mahamud Ali	Dahabshiil bank	80000
Edit Delete	3	sanke	Dahabshiil bank	1900
Edit Delete	4	abdi rahmaan	Dahabshiil bank	1900
Edit Delete	5	cabdirahman	Salaama bank	3900
Edit Delete	6	naciim	Dahabshiil bank	9000

Figure 23 Registration Report

4.9.4.5 Doner Registration

If you are first time user you have to register before donating money,doners are not required to enter personal details every time.

Figure 24 doner registration

CHAPTER FIVE

IMPLEMENTATION AND TESTING

5.1 Implementation

Implementation is the part of the process where software engineers actually program the code for the project. Another way it is the realization of an application, or execution of a plan, idea, model, design, specification, standard, algorithm, or policy.

In computer science, an implementation is a realization of a technical specification or algorithm as a program, software component, or other computer system through programming and deployment. Many implementations may exist for a given specification or standard. For example, web browsers contain implementations of World Wide Web Consortium-recommended specifications, and software development tools contain implementations of programming languages.

5.2 Testing

Software testing is the process of evaluation a software item to detect differences between given input and expected output. Also to assess the feature of A software item. Testing assesses the quality of the product. Software testing is a process that should be done during the development process. In other words software testing is a verification and validation process

5.2.1 Verification

Verification is the process to make sure the product satisfies the conditions imposed at the start of the development phase. In other words, to make sure the product behaves the way we want it to.

5.2.2 Validation

Validation is the process to make sure the product satisfies the specified requirements at the end of the development phase. In other words, to make sure the product is built as per customer requirements.

5.2.3 Basics of software testing

There are two basics of software testing: blackbox testing and whitebox testing.

5.2.3.1 Blackbox Testing

Black box testing is a testing technique that ignores the internal mechanism of the system and focuses on the output generated against any input and execution of the system. It is also called functional testing.

5.2.3.2 White box Testing

White box testing is a testing technique that takes into account the internal mechanism of a system. It is also called structural testing and glass box testing.

Black box testing is often used for validation and white box testing is often used for verification.

5.2.4 Types of testing

There are many types of testing like

5.2.4.1 Unit Testing

Unit testing is the testing of an individual unit or group of related units. It falls under the class of white box testing. It is often done by the programmer to test that the unit he/she has implemented is producing expected output against given input.

5.2.4.2 Integration Testing

Integration testing is testing in which a group of components are combined to produce output. Also, the interaction between software and hardware is tested in integration testing if software and hardware components have any relation. It may fall under both white box testing and black box testing.

5.2.4.3 Functional Testing

Functional testing is the testing to ensure that the specified functionality required in the system requirements works. It falls under the class of black box testing.

5.2.4.4 System Testing

System testing is the testing to ensure that by putting the software in different environments (e.g., Operating Systems) it still works. System testing is done with full system implementation and environment. It falls under the class of black box testing.

5.2.4.5 Stress Testing

Stress testing is the testing to evaluate how system behaves under unfavorable conditions. Testing is conducted at beyond limits of the specifications. It falls under the class of black box testing.

5.2.4.6 Performance Testing

Performance testing is the testing to assess the speed and effectiveness of the system and to make sure it is generating results within a specified time as in performance requirements. It falls under the class of black box testing.

5.2.4.7 Usability Testing

Usability testing is performed to the perspective of the client, to evaluate how the GUI is user-friendly? How easily can the client learn? After learning how to use, how proficiently can the client perform? How pleasing is it to use its design? This falls under the class of black box testing.

5.2.4.8 Acceptance Testing

Acceptance testing is often done by the customer to ensure that the delivered product meets the requirements and works as the customer expected. It falls under the class of black box testing.

5.2.4.9 Regression Testing

Regression testing is the testing after modification of a system, component, or a group of related units to ensure that the modification is working correctly and is not damaging or imposing other modules to produce unexpected results. It falls under the class of black box testing.

5.2.4.1.1 Beta Testing

Beta testing is the testing which is done by end users, a team outside development, or publicly releasing full pre-version of the product which is known as beta version. The aim of beta testing is to cover unexpected errors. It falls under the class of black box testing.

CHAPTER SIX

CONCLUSION AND RECOMMENDATION

6.1 Introduction

E-Donation Information System provides and facility to handle donation people in the world, so The People automatically wish to donate Contribution using the internet.

Administrator has a privilege to create, modify and delete the donation details and its particular information. User can login and have privilege to access the donation information and cannot see the reports as well but the user privilege is no longer as the administrator does.

E-donation Information System is developed using ASP.NET with Visual Basic version 2008 language as front end and SQL SERVER version 2008 as back end this application fully meets the objectives of the system for which it has been developed. The system has reached a steady state where all bugs have been eliminated. The system is operated at a high level of efficiency and all the Donors and users associated with the system understand its advantage. The system solves the problem. it was intended to solve as requirement specification.

6.2-Conclusion

the researcher must learn more about the topic under investigation to do this, the research in the last phase of the project developing, after more exhaust and great effort the research successfully finished the previous and all other phases although probably the researcher recognize that, so the researcher is not saying the project is complete 100% but according to my effort I actually believe that , I did the best and well done as well as I acquainted my weakness.

In this book, the researcher discussed about how the system is working; the researcher also provided some guidelines of how the user will deal to this system and what strengths and weakness it has. This is the last step of developing the application; the researcher successfully completed other required steps.

6.3 Recommendations

Since the researchers completed the project about donation Information System it is their role to send their suggestions to the Organization:

- ✓ To encourage and put effort to implement this system any way because when the system works it will be easy to enhance into future

- ✓ Organization should sustain the effectiveness the system to become a back-bone

- ✓ Organization should build more knowledgeable partners for the system by providing training that helps the users to understand the corporate functionalities of the system.

Normally every system has strength and weakness, so the researcher want to mention them in the following lines:

Strengths

Every project has some strengths and weaknesses; so the researcher would like to identify some of the strengths and good features that donation Information System will provide to the users.

The system has ability to provide effective and efficient activities for donation including registering for donors, and handling all details required to the donation.

The system is very friendly system and it has a good interface that can be usable by every person who is computer literate.

For More over, if the user make a mistake it generate an error message that easily understandable by the user and it gives the necessary utilities in the project, and other tools that may need while are working with the project.

The system has a capability to work 24/7 with addition and provides sufficiency and effective work and has equivalent storage

Weaknesses

On the other hand, every project has its own weaknesses, so In this project, the only problems that you might face is alerting messages that appear whenever you misuse to the system, and if you are not familiar with this system you might find it difficult to manage it, please don't confuse, just read carefully what the message is carrying out and then click the appropriate field.

6.4 Future Work

More logical steps would have been added with additional features and Increase the reliability of the application that is the plan would be next logical steps for the future work and Enhancement some of its functionalities and features, he/she should be able to know how to use E-Donation payments and how it works online donation systems properly also Visual Basic.net, Programming language, SQL server Database, and Crystal Report Application in VB.NET applications

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