



Daffodil
International
University

Donation Management System

By

Nusrat Afifa
Id :151-35-1113

Department of Software Engineering
DAFFODIL INTERNATIONAL UNIVERSITY

Declaration

I hereby declare that this project report has been done by us under the supervision of Md. Rashed Karim, Adjunct Faculty, Department of Software Engineering, Daffodil International University & Head of Software, Daffodil Software Limited. I also declare that neither this report nor any part of this report has been submitted elsewhere for the award of any degree.

Supervised To:



Md. Rashed Karim
Adjunct Faculty

Department of Software Engineering
Faculty of Science and Information Technology
Daffodil International University

&
Head of Software
Daffodil Software Limited

Submitted By:

Nushrat Afifa

ID: 151-35-1113

Batch: 16th

Department of Software Engineering
Faculty of Science and Information Technology
Daffodil International University

ACKNOWLEDGEMENT

Firstly, I am very grateful to the almighty Allah that he has given me the opportunity to complete the project. In my university life I have learned politeness, morality, manner and so other important things which are merely impossible to describe in words.

Behind this achievement there are some people needless to mention. My parents' are one of them, this journey would never been possible without their unconditional support. Specially my mother who has given me the inspirations to walk through in this way. I am really thankful to my parents.

I don't want to miss the chance to thanks to Dr. Touhid Bhuiyan, Professor & Head of the Software Department for his support and encouragement.

I am very grateful to my supervisor Md. Rashed Karim, deputy director of swe department for giving me the chance to work with this project.

And lastly I would like to take this opportunity to thanks to all the faculty members of the Department of Software Engineering for their help and invigorating

Table of Contents

| | | |
|--|--|----|
| Chapter 1: Introduction | | |
| 1.1 | Project Overview | 2 |
| 1.2 | Project Purpose | 2 |
| 1.2.1 | Background | 2 |
| 1.2.2 | Benefits & Beneficiaries | 2 |
| 1.2.3 | Project Goals | 3 |
| 1.2.4 | Project Planning | 3 |
| 1.3 | Stakeholders | 3 |
| 1.4 | Project Schedule | 3 |
| 1.4.1 | Gantt Chart | 4 |
| 1.4.2 | Release Plan/Milestone | 4 |
| Chapter 2: Software Requirement Specification | | |
| 2.1 | Functional Requirements | 6 |
| 2.2 | Data Requirements | 7 |
| 2.3 | Performance Requirements | 8 |
| 2.3.1 | Speed and Latency Requirements | 8 |
| 2.3.2 | Precision or Accuracy Requirements | 8 |
| 2.3.3 | Capacity Requirements | 8 |
| 2.4 | Dependability Requirements | 9 |
| 2.4.1 | Reliability Requirements | 9 |
| 2.4.2 | Availability Requirements | 9 |
| 2.4.3 | Safety-Critical Requirements | 9 |
| 2.5.1 | Supportability Requirements | 9 |
| 2.5.2 | Adaptability Requirements | 10 |
| 2.6 | Security Requirements | 10 |
| 2.6.1 | Access Requirements | 10 |
| 2.6.2 | Integrity Requirements | 10 |
| 2.6.3 | Privacy Requirements | 10 |
| 2.7 | Usability and Human-Interaction Requirements | 10 |
| 2.8 | Look and Feel Requirements | 10 |
| 2.8.1 | Appearance Requirements | 10 |
| 2.8.2 | Style Requirements | 11 |
| Chapter 3: System Analysis | | |
| 3.1 | Use Case Diagram | 13 |
| 3.2 | Use Case Description (for each use case) | 15 |
| 3.3 | Activity Diagram (for each use case) | 20 |
| 3.4 | System Sequence Diagram (for each use case) | 22 |
| Chapter 4: System Design Specification | | |
| 4.1 | Class Diagram | 23 |
| 4.2 | Database Design Diagram | 24 |
| 4.3 | Development Tools & Technology | 25 |
| 4.3.1 | User Interface Technology | 25 |
| 4.3.2 | Implementation Tools & Platforms | 25 |

| | | |
|----------------------------|--|----|
| Chapter 5: System Testing | | |
| 5.1 | Testing Features | 29 |
| 5.1.1 | Features to be tested | 29 |
| 5.2 | Testing Strategies | 29 |
| 5.2.1 | Test Approach | 29 |
| 5.2.2 | Pass/Fail Criteria | 30 |
| 5.3 | Testing Environment (hardware/software requirements) | 30 |
| 5.4 | Test Cases | 31 |
| Chapter 6: User Manual | | |
| 6.1 | Home Page | 29 |
| 6.2 | Apply For Donation | 29 |
| 6.3 | Apply For Donation | 30 |
| 6.4 | Apply For Donation | 30 |
| 6.5 | Make A Donation | 31 |
| 6.6 | About | 31 |
| 6.7 | Login | 32 |
| 6.8 | Home | 32 |
| 6.9 | Donor | 33 |
| 6.10 | Donor | 33 |
| 6.11 | Beneficiar | 34 |
| 6.12 | Beneficiar | 34 |
| 6.13 | collection | 35 |
| 6.14 | Distribution | 35 |
| Chapter 7: Project Summary | | |
| 7.1 | | 41 |
| 7.2 | Project Summary | 41 |
| 7.3 | Limitations | 41 |
| 7.4 | Obstacles & achievements | 41 |
| 7.5 | Scope | 41 |

| | | |
|---------------|----------------------------------|---|
| List Of Table | | |
| Table 2.1.1 | User Registration Description | 6 |
| Table 2.1.2 | Login Description | 6 |
| Table 2.1.3 | Apply for donation | 6 |
| Table 2.1.4 | Make donation | 6 |
| Table 2.1.5 | View donor list | 6 |
| Table 2.1.6 | View Beneficiar list | 7 |
| Table 2.1.7 | View member | 7 |
| Table 2.1.8 | Create post | 7 |
| Table 2.1.9 | View report | 7 |
| Table 2.1.10 | Printing option | 7 |
| Table 2.3.1 | Speed & Latency Requirement | 8 |
| Table 2.3.2 | Precision & Accuracy Requirement | 8 |

| | | |
|--------------|-------------------------------------|----|
| Table 2.3.3 | Capacity Requirement | 8 |
| Table 2.4.1 | Reliability Requirement | 9 |
| Table 2.6.3 | Privacy Requirements | 10 |
| Table 2.7.5 | User Documentation Requirements | 10 |
| Table 2.8.1 | Appearance requirements | 11 |
| Table 2.8.2 | Style Requirements | 12 |
| Table 3.2.1 | Login Description | 15 |
| Table 3.2.2 | Show Application Description | 16 |
| Table 3.2.3 | Create Beneficiary Description | 16 |
| Table 3.2.4 | Show Distribution description | 16 |
| Table 3.2.5 | Donation Collection description | 16 |
| Table 3.2.6 | Show donor request description | |
| Table 3.2.7 | Report generate description | 17 |
| Table 3.2.8 | Add new notice description | 17 |
| Table 3.2.9 | Apply for donation description | 17 |
| Table 3.2.10 | Create donor request description | 18 |
| Table 3.2.11 | Notice board description | 19 |
| Table 5.4.1 | Test case for Admin registration | 31 |
| Table 5.4.2 | Test case for Admin Login | 32 |
| Table 5.4.3 | Test Case Admin Login failed | 33 |
| Table 5.4.4 | Test Case for apply for donation | 34 |
| Table 5.4.5 | Test Case apply for donation failed | 35 |
| Table 5.4.6 | Test Case for make donation | 35 |

Chapter-1

Introduction

1.1 Overview:

Donation Management System in short 'DMS' is an web based application for managing donation related task and information of Daffodil International University. In this application an user who use this application will able to manage all the collection OR distribution of DIU Donation Fund with an advanced system.

This application is made with the latest web technology which is usable to all computer platform.

1.2 project purpose:

Taking every single information of an organization is really a difficult job ever. When we talk about the organization like DIU Donation Fund it will be more difficult to keep manage and update every performed task and activities with a decent way. For solving this problem and make all the process easy, there should be a software for this. "DMS" is developed for this purpose to help organized information and activities of DIU Donation Fund.

1.2.1 : Background:

In the earlier time in DIU Donation Fund, there were usually no automated software are used for bookkeeping and accounting. A fund manager are manually track record by an accounting book or by using an Excel file in Computer. If the full donation process is move into a customized computer software then it will be very great for the organization. If there is a software for manage all the manual job of the organization then all working process will be very fast and information's will be reusable for the future.

1.2.2 : Benefits of project:

This projects are mainly beneficiaries for admin and manager of DIU Donation Fund.

Benefits are:

1. This application is fully functional and dynamic.
2. It is very user friendly and easy to use.
3. The application is helps in back office administration by streamlining and standardizing the procedures.
4. It saves a lot of time, money and labors.
5. This application acts as an office that is open 24/7.
6. It increases the efficiency of the management at offering quality services to the donor / Beneficiar.
7. Admin can keep all the donation/distribution records.
8. Beneficiar can apply for get a donation and Donor can apply for donate money to the fund.

1.2.3 : Project goal:

The basic goal of the "DMS" project is to make easier to track every activities of the organization and make donation and distribution process more faster with an standard method and system. The information will be very presentable and can be easily findable by a manager is also a goal to developed this software.

1.2.3 Project Planning:

This system is mainly designed for varsity donation fund managing so that the donation management can be easier than ever before. In previous days the donation statement has to keep manually on desktop PC such as how much donation people give or how much they are getting from it and how they can donate or can get help from the donation. At that time there was no specific or clear method of managing the donation fund and for that reason managing the donation account was very hard. But by the introducing of this system all these can be done very easily. User will able to apply through online for giving donation or receive it.

For Example:

In this system, someone who wants to be a beneficiary firstly she/he has to submit an application. If s/he able to gets the donation then she/he will be notify via phone call or email.

And, if someone wants to donate she/he can donate through online application or directly by phone call.

1.3 Stakeholders:

1. Admin
2. Beneficiar
3. Donor
4. Other user

1.4 Project Schedule:

To complete the project at the right time, project schedule helps for proper planning. I also make a project schedule to complete my project properly.

1.4.1 Gantt Chart:

| Activities | December | January | February | March | April |
|--------------------------------|----------|---------|----------|-------|-------|
| Project proposal | ■ | | | | |
| Requirement Collect & analysis | | ■ | | | |
| System design | | ■ | ■ | | |
| Coding | | | ■ | ■ | |
| Testing | | | | ■ | |
| Documentation & report | | | | | ■ |

Figure – 1.4.1: Gantt chart

1.4.2 Milestones:

Milestones, a timeline of a project, will clarify the task.

| Task No | Task Name | Time |
|---------|-------------------------------------|--------|
| 1 | Project Planning | 2week |
| 2 | Requirements gathering and analysis | 2 week |
| 3 | Database design | 2 week |
| 4 | UI design | 2 week |
| 5 | Development | 3week |
| 6 | Implementation | 2 week |
| 7 | Testing | 1 week |
| 8 | Evaluating the project | 1 week |

Chapter-2
Software Requirement Specification

2.1 Functional Requirements

The project have to develop on the basis of the following requirements:

2.1.1 User Registration

| | |
|-------------|---|
| FR-01 | User registration |
| Description | This system allows to admin to registration the system using first name, last name, email, id , password and become a valid user. |
| Stakeholder | Admin |

2.1.2 : Login

| | |
|-------------|---|
| Fr-02 | Login |
| Description | In this website three types of users like donor, beneficiar, admin etc. Only admin can login after complete Registration. Admin can login anytime. |
| Stakeholder | Admin |

2.1.3 : Apply for donation

| | |
|-------------|--|
| Fr-03 | Apply for donation |
| Description | In this website people can apply for donation. This page is required some information like name, address, family's income, email , phone nmb etc. By filling this information correctly a person can apply for donation. |
| Stakeholder | Beneficiar, admin, other users |

2.1.4 : Make donation

| | |
|-------------|--|
| Fr-04 | Make donation |
| Description | If someone wants to donate s/he has to submit an application in this system or s/he can directly call to the admin. When the admin will add him/her then s/he will be a donor. |
| Stakeholder | donor, admin, other users |

2.1.5 : View donor list

| | |
|-------------|---|
| Fr-05 | View donor list |
| Description | Admin can view donor list. Admin also can view donor profile. |
| Stakeholder | Admin |

2.1.6 : view beneficiar list

| | |
|-------------|---|
| Fr-06 | View Beneficiar list |
| Description | Admin can view Beneficiar profile and he can also view Beneficiar list. |
| Stakeholder | Admin |

2.1.7 View Member

| | |
|-------------|---|
| Fr-07 | Distribution |
| Description | Admin can distribute money to the Beneficiar. |
| Stakeholder | Admin& Beneficiar |

2.1.8 : create Post

| | |
|-------------|---|
| Fr-08 | Create Post |
| Description | Admin can create post on the notice board |
| Stakeholder | Admin |

2.1.9 : view report

| | |
|-------------|----------------------------|
| Fr-09 | View report |
| Description | Admin can view all report. |
| Stakeholder | Admin |

2.1.10 : printing option

| | |
|-------------|---|
| Fr-10 | Printing option |
| Description | If admin wants to print beneficiary profile or any report then he will be able to print it. |
| Stakeholder | Admin |

2.2 Data Requirements:

Full information donor and beneficial

Managing skills and programming skills

2.3 PERFORMANCE REQUIREMENTS:

It's very necessary to maintain the performance of the project. To assure the better performance, this project has to meet some requirements which will provide the better performance.

2.3.1 SPEED AND LATENCY REQUIREMENTS

While inserting or viewing the website in the browser, website need a minimum amount of speed to perform the work

| | |
|-------------|--|
| Slr-01 | The system will be faster |
| Description | When user browsing, it depends on internet speed. It also depends on server bandwidth speed. |
| Stakeholder | Admin, beneficiar, donor |

2.3.2 PRECISION AND ACCURACY REQUIREMENTS

Website has to confirm the Legibility and Accuracy of the data.

| | |
|-------------|--|
| PAR-01 | Data Accuracy |
| Description | The input data should be correct and right pattern data, otherwise the input information never saves. Like username, Phone ,post code etc the input information is not valid, the data never save. Or the input data pattern is not match; the system never saves or accepts the data. |
| Stakeholder | Donor ,Beneficiar |

2.3.3 CAPACITY REQUIREMENTS

The website should maintain the all inserting data.

| | |
|-------------|---|
| Cr-01 | The system will manage all the inserting data in the database. |
| Description | All data like Form information, report information are store in the database. |
| Stakeholder | Donor, Beneficiar |

2.4. DEPENDABILITY REQUIREMENTS

Dependability means, it measures of a website availability, reliability, security etc. Here, dependability means the running time of this project.

2.4.1. RELIABILITY REQUIREMENTS

| | |
|-------------|--|
| Ra-01 | The system must be available 24x7 |
| Description | It's available 24 hours in a day. The system is very user friendly and easy to use. |
| Stakeholder | Teacher, Student |

2.4.2 AVAILABILITY REQUIREMENTS

The website is available for 24 hours a day. It is always available for all users.

2.4.3. SAFETY CRITICAL REQUIREMENTS

There are no specific safety critical requirements.

2.5. MAINTAINABILITY AND SUPPORTABILITY

For Maintenance and support the website, some people associate the project.

2.5.1. SUPPORTABILITY REQUIREMENTS SPECIFICATION

SRS-1. To understand the website's behavior on a technical support is required by the website operator. The reason for reading them might be

SRS-2. Website malfunction has occurred and the system operator has to find the exactpoint of time when this happened

SRS-3. Website produces wrong results and the developers must be able to reproduce the data flow through the system

SRS-4. Hacker tried to breach the website's security mechanisms and the website operator must understand what he did.

2.5.2. ADAPTABILITY REQUIREMENTS

There are no specific adaptability Requirements.

2.6 SECURITY REQUIREMENTS

There are no access requirements beside those that have been outlined in the below:

SR-1. Log in as an Admin

To get access to this system or a specific module the system must provide a central authentication mechanism. In order to prevent anyone to exploit stolen participants all participants password must be encrypted in hash process.

2.6.1 ACCESS REQUIREMENTS

This website provides accesses the different module, by access the authentication way the authentic user.

2.6.2. Integrity requirements

To protect credentials of user from being stolen, all passwords are stored in encrypted form. The Requirements significantly reduces the value of stolen user credentials, it's not easy to decrypt the password.

2.6.3 Privacy Requirements

| | |
|-------------|--|
| PR-01 | All data will be protected |
| Description | The main requirement in the context is the generation of participant's data for analysis |

2.7. Usability AND HUMAN INTERACTON RECUIRMENTS

It has good graphical user interface. So that user feel easy to use.

2.8 Look and Feel Requirements

2.8.1 Appearance Requirements

| | |
|--------------|---|
| LF-01 | Mandatory fields are required |
| Description | Mandatory fields are different from other fields so easily clear for user. In this way they can un understand which filed can be left blank |
| Stakeholders | Admin |

2.8.2 . Style Requirements

| | |
|--------------|---|
| LF-02 | The look and feel must be manageable using style sheet. |
| Description | Here we use JQuery, CSS and bootstrap. |
| Stakeholders | System Developer |

Chapter-3
System Analysis

3.1. Use Case Diagram

Use case diagram, use to be describing the activities of the system in a graphical way. How many actors and how many activities how to work that represent in use case diagram. This view of user perspective of this system. Graphically represent all activities and all actors

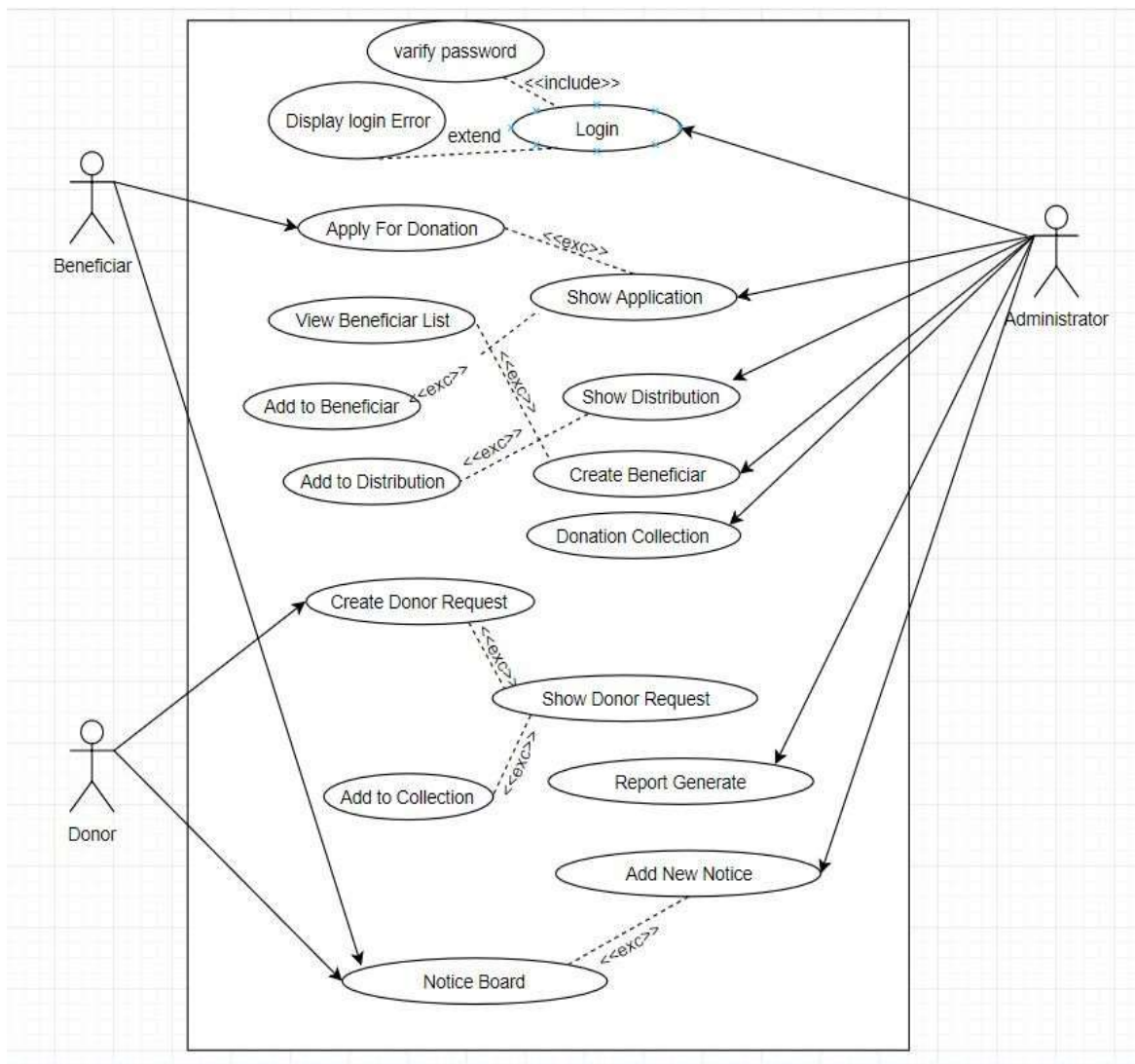


Figure-3.1.1: Use case

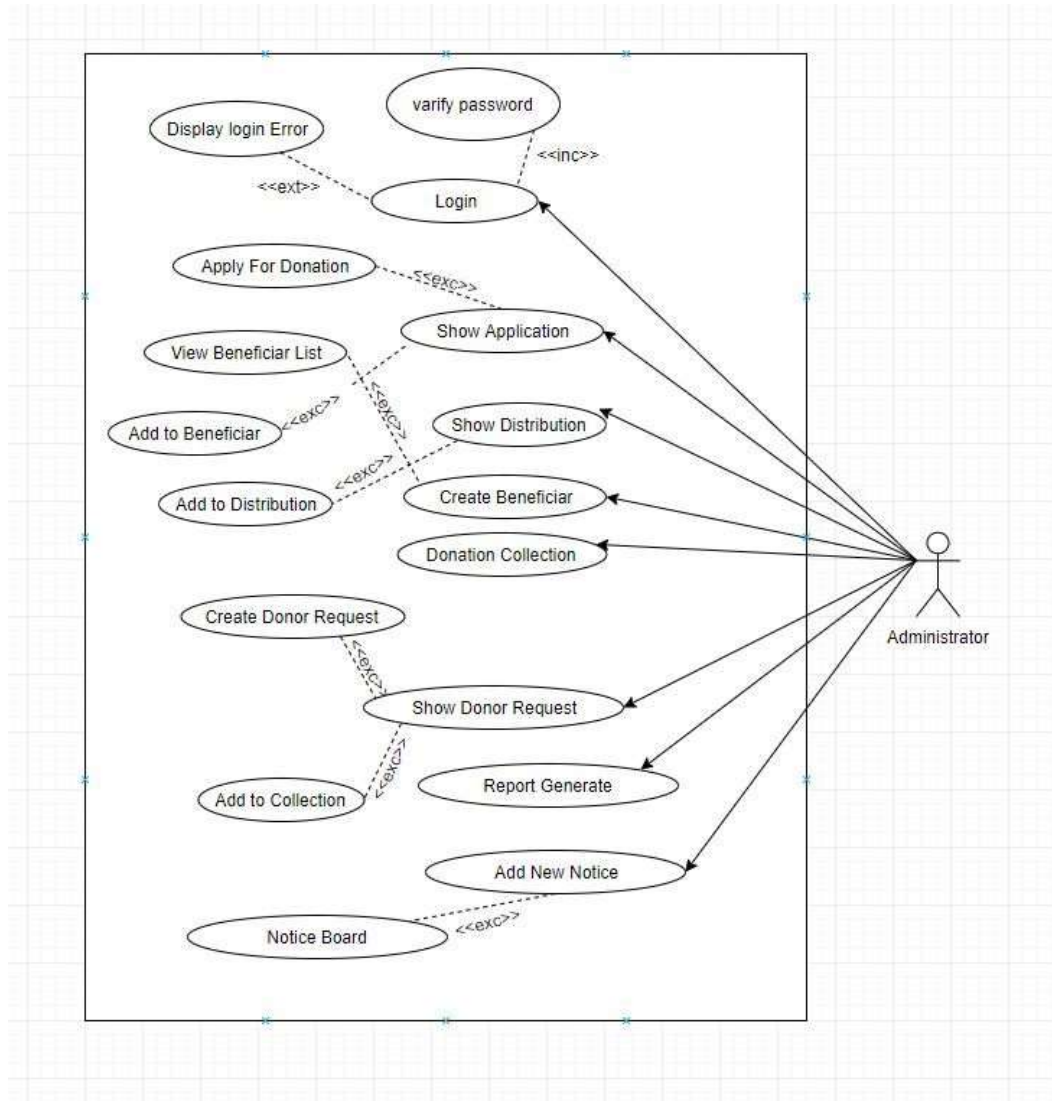


Figure-3.1.2: Use case Admin

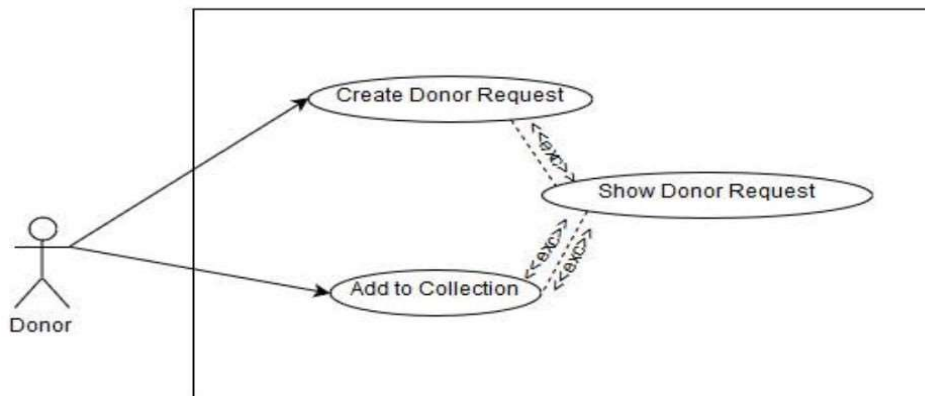


Figure-3.1.3: Use case Donor

3.2. Use Case Description

3.2.1 Admin login:

Table-3.2.1: Login

| | |
|----------------------|---|
| Use Case Name | Login |
| Actor | Admin |
| Description | It is an important functionality for accessing the system |
| Goal | Authorized user can easily access |
| Priority | Essential |
| Trigger | Selecting Login |
| Pre-Condition | Admin must be registered |
| Basic Path | Admin enters email and password |
| Alternative Path | None |
| Post-Condition | Login and view dashboard |
| Possible Enhancement | None |

3.2.2. Show application:

Table-3.2.2: show application

| | |
|---------------|---|
| Use Case Name | Show application |
| Actor | Admin |
| Description | It is an easy functionality for viewing all Beneficiary application |
| Goal | How many people are apply for donation, Admin easily view this |

| | |
|----------------------|------------------------------------|
| Priority | Optional |
| Trigger | View Beneficiar all information |
| Pre-Condition | Admin must be Logged In |
| Basic Path | Admin Click Beneficiar information |
| Alternative Path | None |
| Post-Condition | View all Beneficiar information |
| Possible Enhancement | None |

3.2.3: Create Beneficiar:

Table-3.2.3: create Beneficiar

| | |
|----------------------|--|
| Use Case Name | Create Beneficiar |
| Actor | Admin |
| Description | It is a function for create Beneficiar |
| Goal | Someone who wants to be a beneficiary he must submit an application, if admin wants he can create him Beneficiar |
| Priority | Essential |
| Trigger | Create Beneficiar and view Beneficiar all information |
| Pre-Condition | Beneficiar must be submit an application |
| Basic Path | Admin add someone for Beneficiar |
| Alternative Path | None |
| Post-Condition | View all Beneficiar request |
| Possible Enhancement | None |

3.2.4. Show Distribution:

Table-3.2.4: show distribution

| | |
|----------------------|--|
| Use Case Name | Show Distribution |
| Actor | Admin |
| Description | It is a function for view distribution field |
| Goal | Admin can distribute donation |
| Priority | Optional |
| Trigger | View distribution list |
| Pre-Condition | Admin must be Logged In |
| Basic Path | Admin Click distribution information |
| Alternative Path | None |
| Post-Condition | View all Beneficiar information |
| Possible Enhancement | None |

3.2.5. Donation Collection:

Table-3.2.5: Donation collection

| | |
|----------------------|---|
| Use Case Name | Donation collection |
| Actor | Admin |
| Description | It is an easy functionality for viewing all collection information |
| Goal | How much collection are store in database Admin easily view this |
| Priority | Optional |
| Trigger | Selecting Chart |
| Pre-Condition | Admin must be Logged In |
| Basic Path | Admin Click collection information |
| Alternative Path | None |
| Post-Condition | View all collection information |
| Possible Enhancement | None |

3.2.6. Show donor request:

Table-3.2.6: show Donor Request

| | |
|----------------------|---|
| Use Case Name | Show Donor Request |
| Actor | Admin |
| Description | It is an easy functionality for viewing all donor request |
| Goal | How many people are apply for donation, Admin easily view this |
| Priority | Optional |
| Trigger | View donor all information |
| Pre-Condition | Admin must be Logged In |
| Basic Path | Admin Click donor information |
| Alternative Path | None |
| Post-Condition | View all donor request |
| Possible Enhancement | None |

3.2.7: Report Generate:

Table-3.2.7: Report Generate

| | |
|---------------|--------------------------------------|
| Use Case Name | Report Generate |
| Actor | Admin |
| Description | It is a function for report Generate |

| | |
|----------------------|---|
| Goal | It is important functionality for report generate |
| Priority | Essential |
| Trigger | Create report for all information |
| Pre-Condition | Beneficiar must be submit an application |
| Basic Path | Admin select any report |
| Alternative Path | None |
| Post-Condition | View all report |
| Possible Enhancement | None |

3.2.8. Add new notice:

Table-3.2.8: add new notice

| | |
|----------------------|---|
| Use Case Name | Add New Notice |
| Actor | Admin |
| Description | It is a function for add new notice |
| Goal | It is a important functionality for adding new notice |
| Priority | Optional |
| Trigger | Selecting new notice |
| Pre-Condition | Admin must be Logged In |
| Basic Path | Admin Click new notice |
| Alternative Path | None |
| Post-Condition | View new notice |
| Possible Enhancement | None |

3.2.9. Apply for donation:

Table-3.2.9: apply for donation

| | |
|----------------------|---|
| Use Case Name | Apply For Donation |
| Actor | Beneficiar |
| Description | It is a functionality for apply donation |
| Goal | people are apply for donation and admin can select them |
| Priority | Optional |
| Trigger | People can apply for donation |
| Pre-Condition | none |
| Basic Path | Beneficiar Click apply for donation form |
| Alternative Path | None |
| Post-Condition | Get mail |
| Possible Enhancement | None |

3.2.10. Create Donor request:

Table-3.2.10: Create Donor Request

| | |
|----------------------|---|
| Use Case Name | Create Donor Request |
| Actor | Donor |
| Description | It is a functionality for create donor |
| Goal | people are apply for make donation and admin can receive them |
| Priority | Optional |
| Trigger | People can apply for for make donation |
| Pre-Condition | None |
| Basic Path | Donor Click apply for donation form |
| Alternative Path | None |
| Post-Condition | Add for donor |
| Possible Enhancement | None |

3.2.11. Notice Board:

Table-3.2.11: Notice Board

| | |
|----------------------|---|
| Use Case Name | Notice Board |
| Actor | Beneficiar, donor |
| Description | It is a function for viewing new notice |
| Goal | Admin easily find any notice |
| Priority | Optional |
| Trigger | Viewing new notice |
| Pre-Condition | None |
| Basic Path | People click notice |
| Alternative Path | None |
| Post-Condition | View new notice |
| Possible Enhancement | None |

3.3. Activity Diagram

Activity diagram is another important diagram in UML to describe the dynamic aspects of the system. Activity diagram is basically a flowchart to represent the flow from one activity to another activity. The activity can be described as an operation of the system.

3.3.1. Admin Perspective Activities

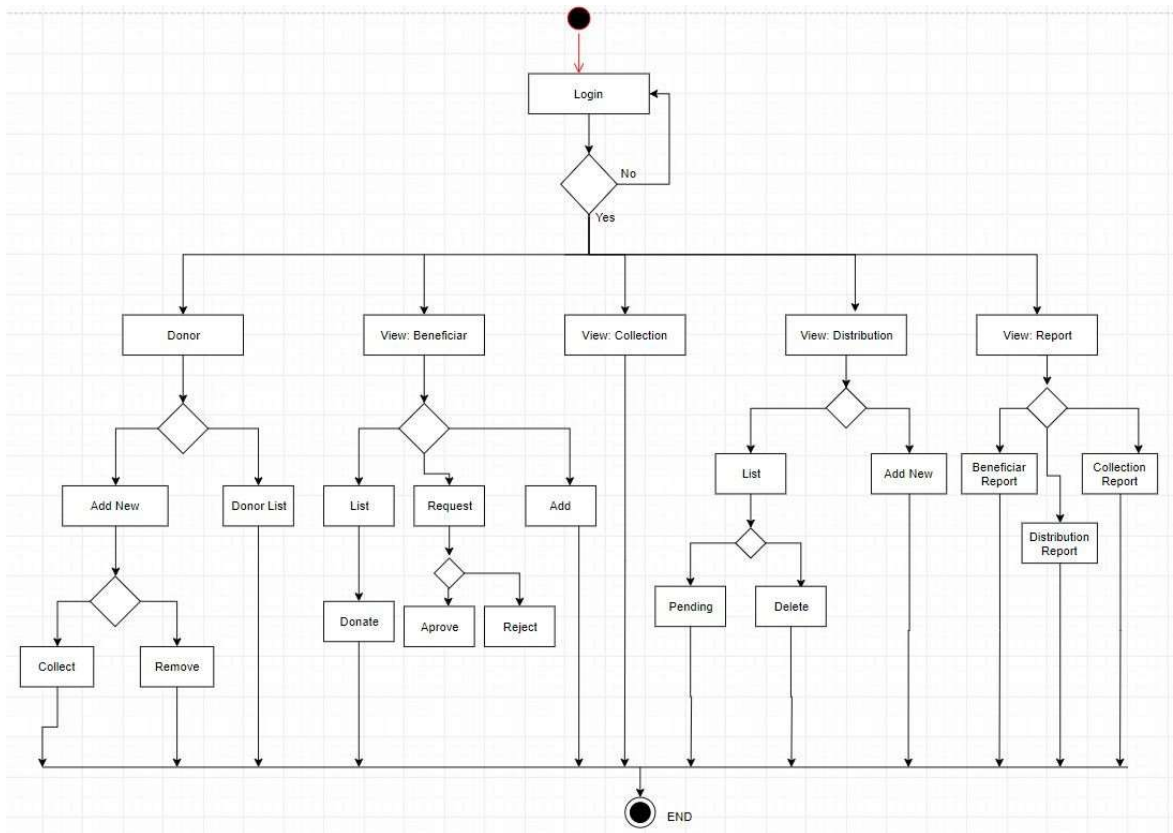


Figure-3.3.1: Activity Diagram For Admin

3.3.2. Donor Perspective Activities

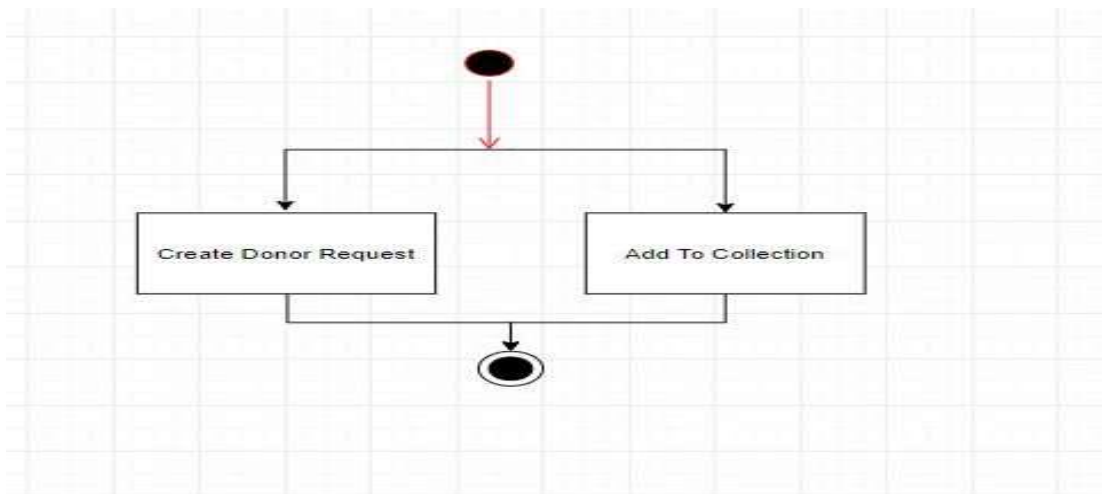


Figure-3.3.2: Activity Diagram For Activities

3.3.3. Beneficiary Perspective Activities

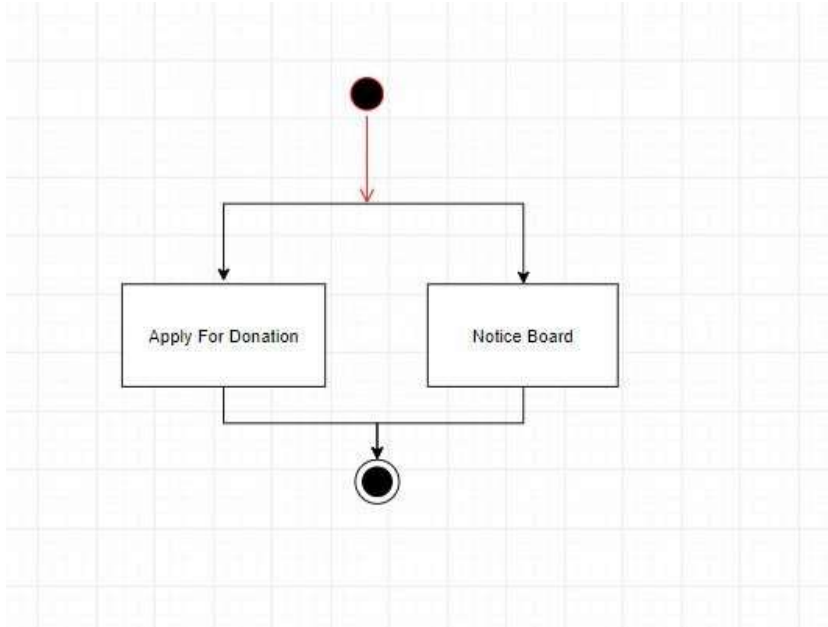


Figure-3.3.3: Activity Diagram For Beneficiary

3.4. Sequence Diagram

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.

Admin Perspective Sequence Diagram:

3.4.1 Admin Registration Sequence Diagram

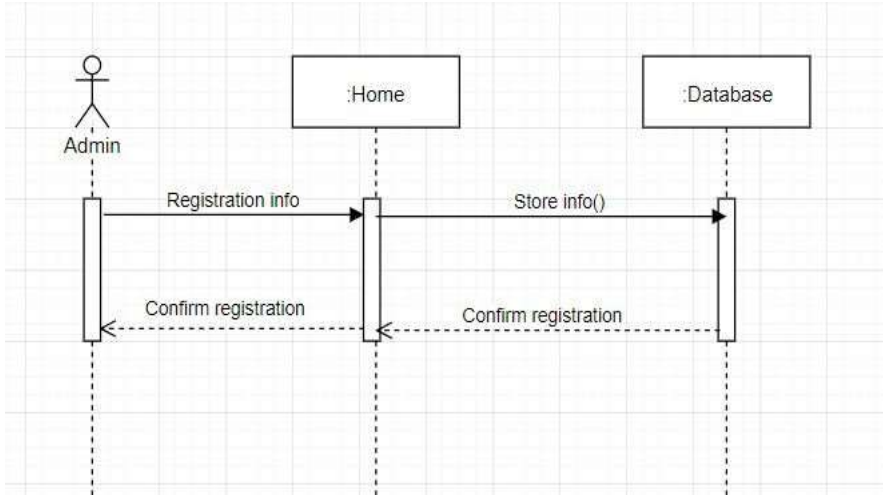


Figure-3.4.1 Admin Registration Sequence Diagram

3.4.2 Admin Login Sequence Diagram

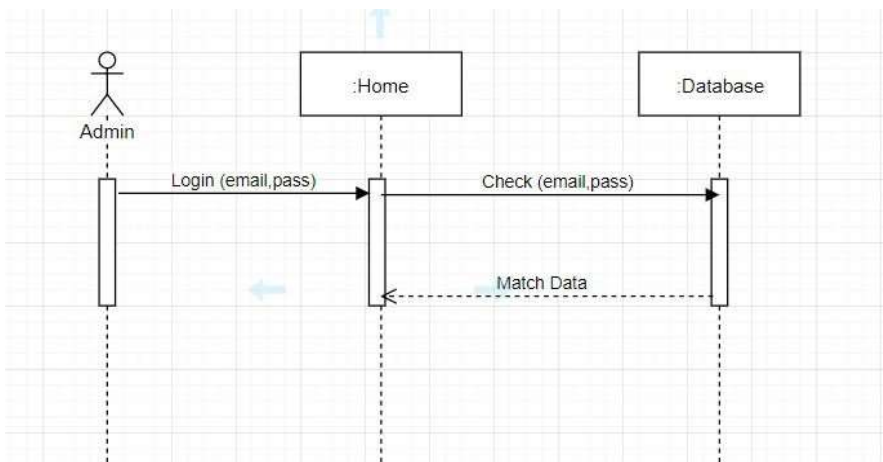


Figure-3.4.2 Admin Login Sequence Diagram

3.4.3 Create Beneficiar Sequence Diagram

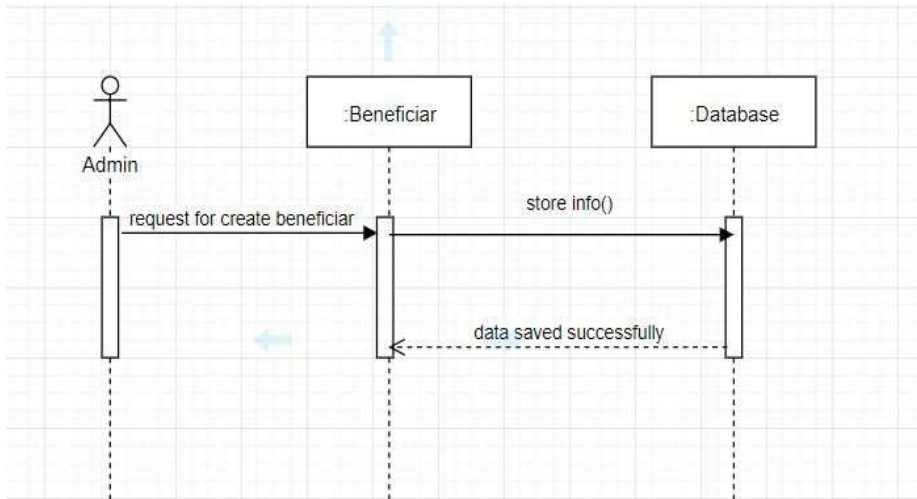


Figure-3.4.3 Create Beneficiar Sequence Diagram

3.4.4 Apply for Donation Sequence Diagram

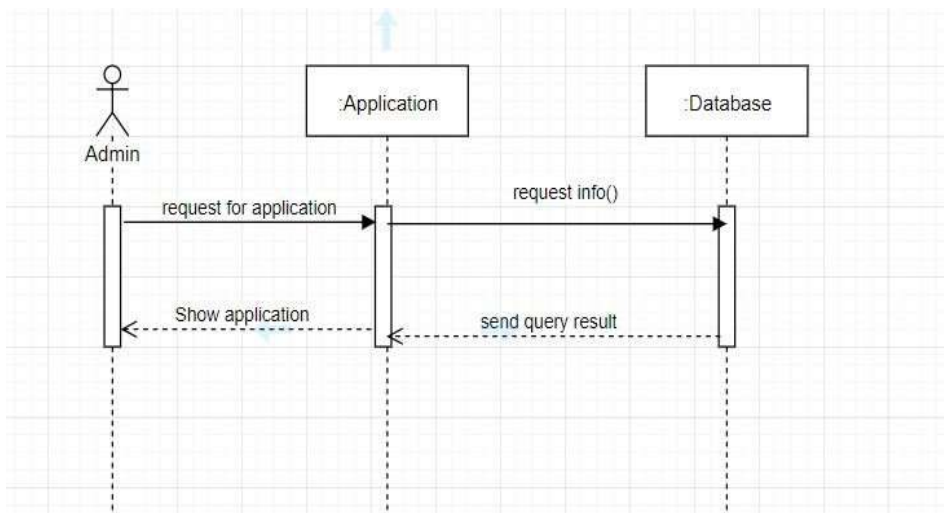


Figure-3.4.4 Apply for Donation Sequence Diagram

3.4.5 Show Distribution Sequence Diagram

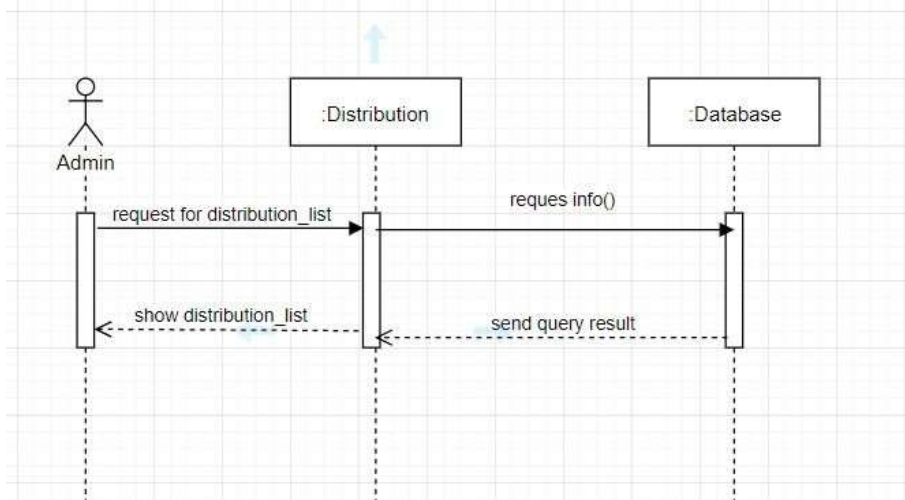


Figure-3.4.5 show distribution Sequence Diagram

3.4.6 Show Donor Sequence Diagram

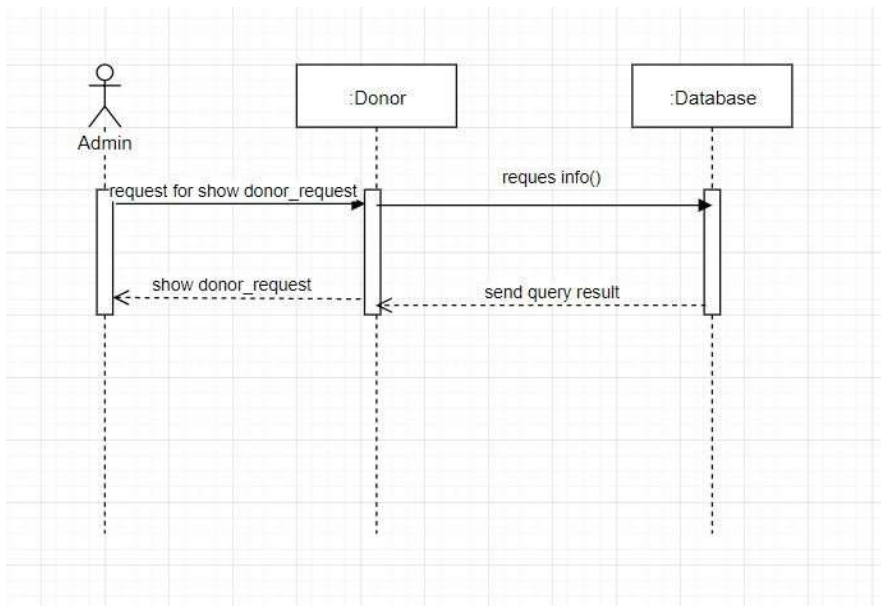


Figure-3.4.6 Show Donor Sequence Diagram

Beneficiary Perspective Sequence Diagram

3.4.7 Create Beneficiary Sequence Diagram

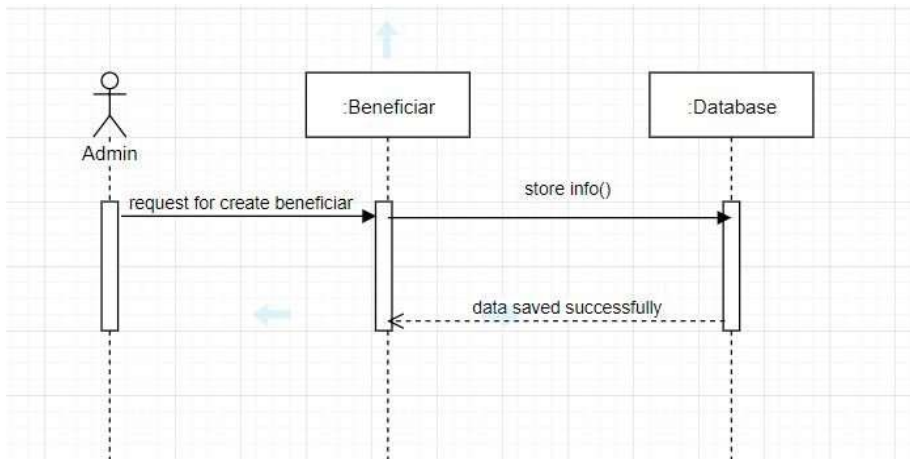


Figure-3.4.7 Create Beneficiary Sequence Diagram

3.4.8 View Notice Board Sequence Diagram

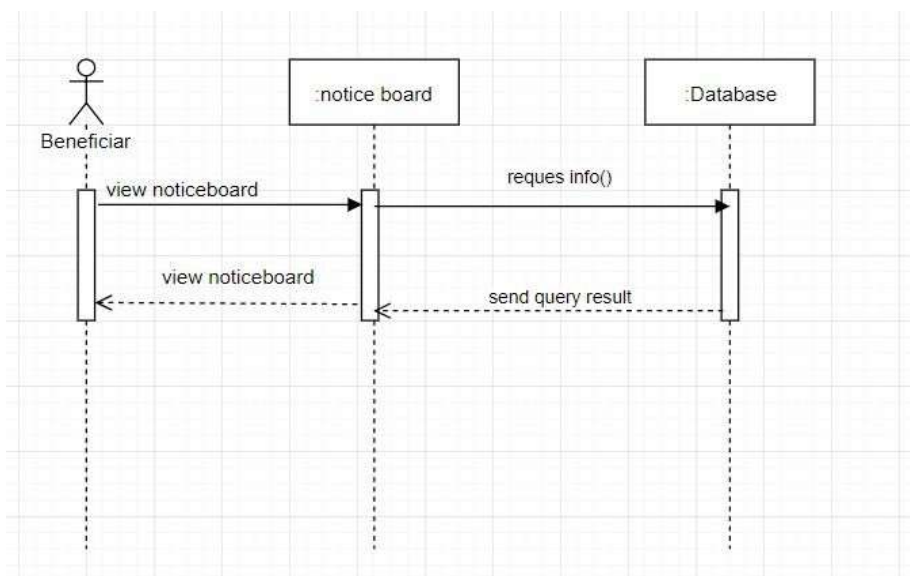


Figure-3.4.8 View Notice Board Sequence Diagram

Donor Perspective Sequence Diagram

3.4.9 Create Donor Request Sequence Diagram

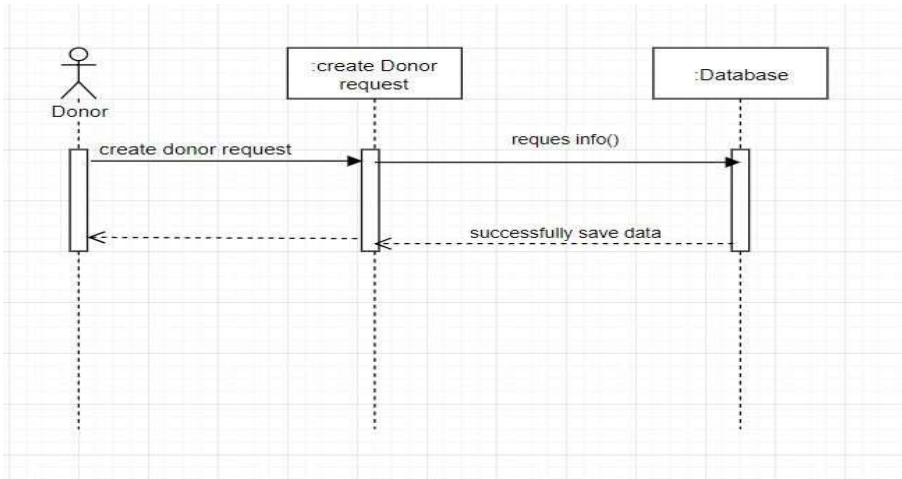


Figure-3.4.9 Create Donor Request Sequence Diagram

3.4.10 Add Collection Sequence Diagram

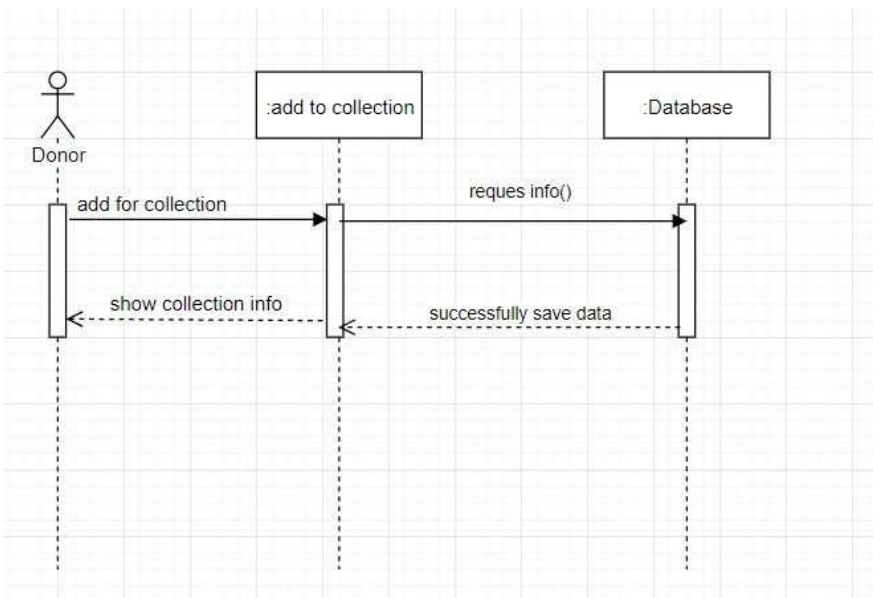


Figure-3.4.10 Add Collection Sequence Diagram

Chapter-4

System Design specification

4.3 : Class diagram:

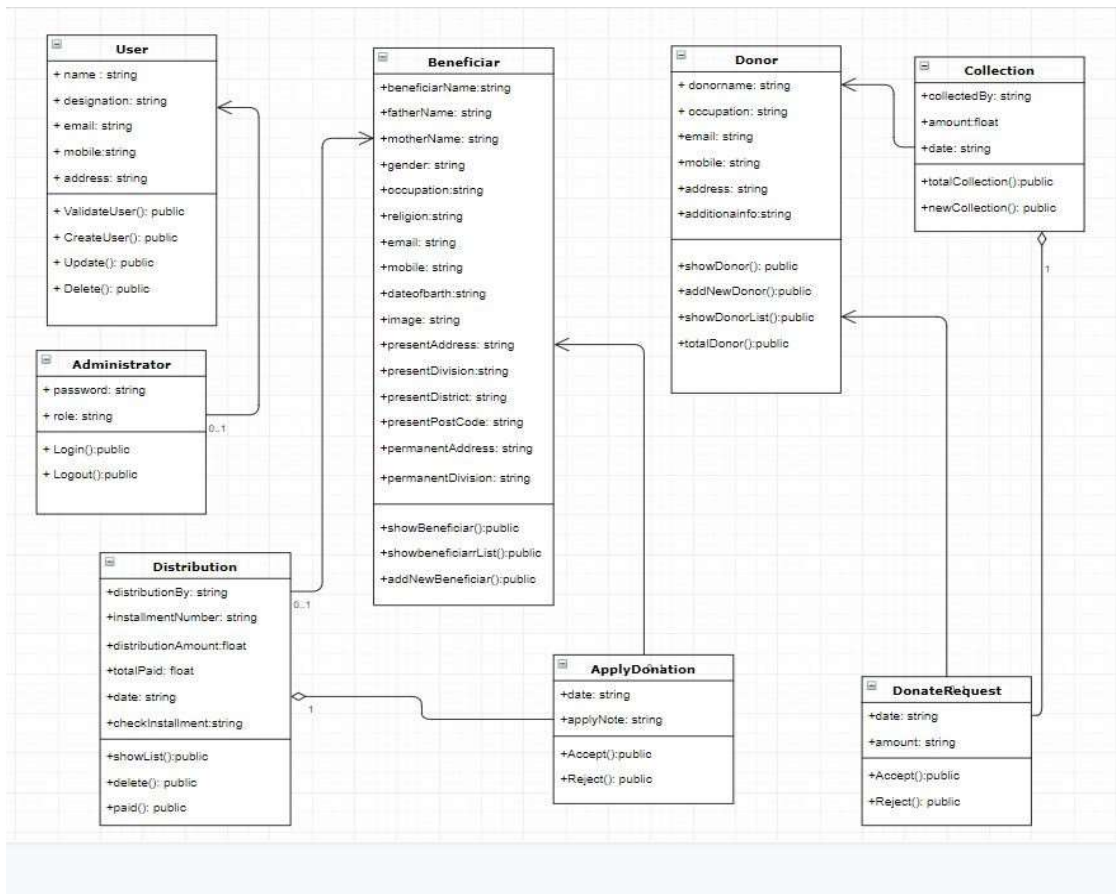


Figure-4.3: Class Diagram

4.4 Database Design Diagram

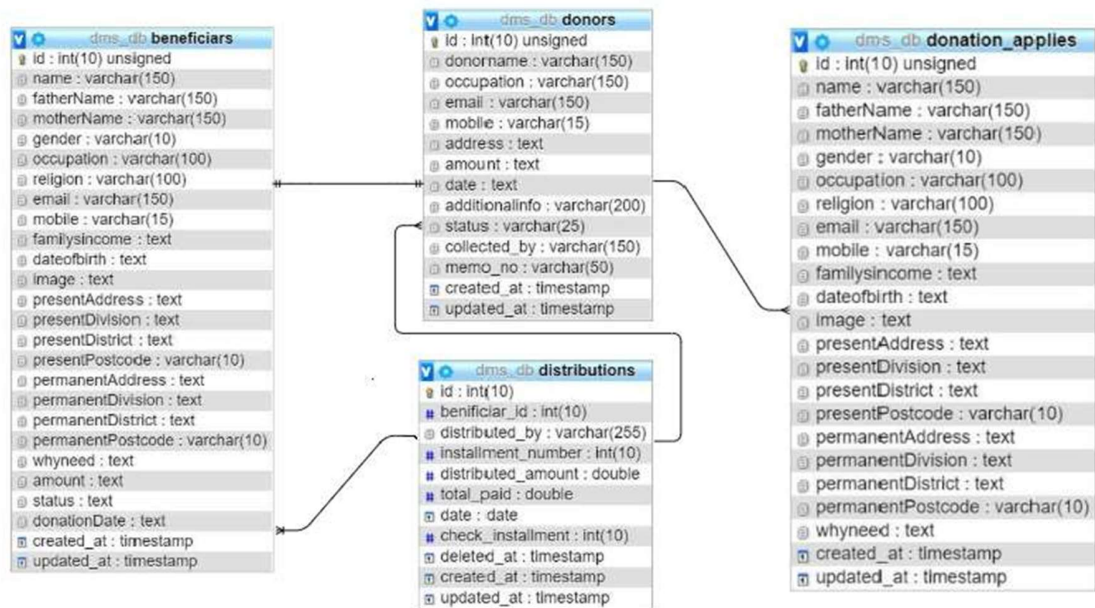


Figure-4.4: Database Diagram

4.5 Development Tools and Technology

4.5.1 User Interface Technology

4.5.1.1 Laravel

4.5.1.2 using for developing backend for this web application

4.5.1.3 jQuery

4.5.1.4 Using for frontend design and form validation

4.5.1.5 CSS3 and Bootstrap

4.5.1.6 using for frontend design

4.5.2 Implement Tools and Platform

4.5.2.1 Sublime Text 3

4.4.2.2 Using for text editor

4.4.2.3 Xampp

4.4.2.5 To build up a local server for this web application

4.4.2.6 Preferred Database MySQL

4.4.2.7 Using for various query

4.4.2.8 Apache

4.4.2.9 Using for local Server

Chapter-5

System Testing

5.1 Testing Feature

Feature testing is the process of making changes in software system to add one or more new features or to make modifications in the already existing features. Each of these feature is said to have a characteristics that is designed to be useful, intuitive, and effective.

5.1.1 : Features to be tested

01- Admin Registration

02- Admin Login

03- Apply For Donation

04- Make Donation

6.1.2:Features can not to be tested

01- View Application

02- View Distribution

03- View Donor Request

5.2 Testing Strategies

A testing strategy is a general approach to the testing process rather than a method of devising particular system or component tests. Different testing strategies may be adopted depending on the type of system to be tested and the development process used.

5.2.1 Test approach

A test approach is the test strategy implementation of a project, defines how testing would be carried out. Test approach has two techniques:

Proactive - An approach in which the test design process is initiated as early as possible in order to find and fix the defects before the build is created.

Reactive - An approach in which the testing is not started until after design and coding are completed.

5.2.2 Pass / Fail Criteria

The entrance criteria for each phase of testing must be met before the next phase can commence. Now the criteria for pass and fail are given below.

According to the given scenario the expected result need to take place then the scenario will be considered as pass otherwise that criteria should be failed

If an item tested 10 times, 9 times perfectly worked and single time do not work properly then it will consider as fail case.

System crash will be considered as fail case.

After submitting a query in the system, if expected page won't appear then it will be considered as fail case.

5.3 Testing Environment

Testing environment is a setup of software and hardware for the testing teams to execute test cases. In other words, it supports test execution with hardware, software and network configured.

For test environment, key area to set up includes

System and applications

Test data

Database server

Front end running environment

Client operating system

Browser

Hardware includes Server Operating system

Network

Documentation required like reference documents/configuration

Guides / installation guides/ user manuals

5.4 Test case

A test case is a document, which has a set of test data, preconditions, expected results and post conditions, developed for a particular test scenario in order verify compliance against a specific requirement

Table 5.4.1: Test case for Admin Registration

| Test Case ID: TC 01 | | | Module Name: Registration | | | |
|---|------------------|------------------|---------------------------------|--|--|-----------|
| Sub Module: Admin Registration | | | Test Designed by: Nusrat Afifa | | | |
| Test Priority (Low/Medium/High): High | | | Test Designed date: 12.03.2019 | | | |
| Test Title: User Registration with valid information | | | Test Executed by: Nusrat Afifa | | | |
| Description: This Section covers the functionality of registering new Admin. | | | Test Execution date: 20.03.2019 | | | |
| Pre-condition: Admin has no precondition. | | | | | | |
| Step | Test step | Test data | Code module | Expected result | Actual Result | Pass/fail |
| 1 | Input first name | Nusrat | Registration .php | User should be registered successfully | User navigate or redirect to home page | Pass |
| 2 | Input last-name | Anni | | | | |
| 3 | Input phone | 01720164143 | | | | |
| 4 | Input address | Dhaka | | | | |
| 5 | Input username | nusrat@gmail.com | | | | |
| 6 | Input user type | Admin | | | | |
| 7 | Input password | 1221 | | | | |
| Post-conditions: if the information's are valid then the information will saved in the database otherwise show the invalid fields | | | | | | |

Table 5.4.2: Test case for Admin Login

| | | | |
|--|--|---------------------------------|--|
| Test Case ID: TC 02 | | Module Name: Login | |
| Sub Module: User Login | | Test Designed by: Nusrat Afifa | |
| Test Priority (Low/Medium/High): High | | Test Designed date: 15.03.2019 | |
| Test Title: Admin Login with valid email/user name and password | | Test Executed by: Nusrat Afifa | |
| Description: : Test Login process of Admin | | Test Execution date: 29.03.2019 | |
| Pre-condition: Admin must be registered already. The current email is mriddikaa@gmail.com and password 5555. The system navigates to Login page. And click on | | | |


| the Login button. | | | | | | |
|---|------------------------|--------------------|-----------------|--|----------------------------|-----------|
| Step | Test step | Test data | Code module | Expected result | Actual Result | Pass/fail |
| 1 | Navigate to Login Page | Click on login tab | Login.blade.php | Admin should be able to login successfully | User navigate to home page | Pass |
| 2 | Input username | mruttika@gmail.com | | | | |
| 3 | Input password | 5555 | | | | |
| Post-conditions: Admin is validated with database and successfully login to account. The account session details are logged in database | | | | | | |

Table 5.4.3: Test case for Admin Login failed

| Test Case ID: TC 03 | | | Module Name: Login | | | |
|---|------------------------|--------------------|---------------------------------|---|---|-----------|
| Sub Module: User Login | | | Test Designed by: Nusrat Afifa | | | |
| Test Priority (Low/Medium/High): High | | | Test Designed date: 15.03.2019 | | | |
| Test Title: User Login with valid email/user name and password | | | Test Executed by: Nusrat Afifa | | | |
| Description: Test the system's on login page | | | Test Execution date: 29.11.2018 | | | |
| Pre-condition: The user has valid email and password. The current email is mruttikaa@gmail.com and password 5555. The system navigates to Login page. And click on the Login button. | | | | | | |
| Step | Test step | Test data | Code module | Expected result | Actual Result | Pass/fail |
| 1 | Navigate to Login Page | Click on login tab | Login.blade.php | User should not be able to login successfully | User navigate or redirect to the login page with error message page | Fail |
| 2 | Input username | Mruttika@gmail.com | | | | |
| 3 | Input password | 5333 | | | | |
| Post-conditions: User is validated with database and successfully login to account. The account session details are logged in database | | | | | | |

Table 6.4.4: Test case for Apply for Donation

| | | | | | | |
|--|--|--|---------------------------------|--|--|--|
| Test Case ID: TC 04 | | | Module Name: Apply For Donation | | | |
| Sub Module: People Apply for donation | | | Test Designed by: Nusrat Afifa | | | |
| Test Priority (Low/Medium/High): High | | | Test Designed date: 03.11.2019 | | | |
| Test Title: People can browse this site. If he want then Full fill the required all field. | | | Test Executed by: Nusrat Afifa | | | |
| Description: Test the system's apply for donation page | | | Test Execution date: 29.03.2019 | | | |
| Pre-condition: must be valid user | | | | | | |

| Step | Test step | Test data | Code module | Expected result | Actual Result | Pass/fail |
|------|-------------------------------------|---|----------------------------|--|--|-----------|
| 1 | Navigate to Apply For Donation Page | Click apply for donation tab | ApplyForDonation.blade.php | People successfully apply for donation | Who wants donation, he/she can view successful message | Pass |
| 2 | Input name | Rafi | | | | |
| 3 | Input father name | Reza | | | | |
| 4 | Input mother name | Rafa | | | | |
| 5 | Input gender | female | | | | |
| 6 | Input occupation | student | | | | |
| 7 | Input religion | Islam | | | | |
| 8 | Input email | rafi@gmail.com | | | | |
| 9 | Input mobile | 01982876876 | | | | |
| 10 | Input familys income | 5000 | | | | |
| 11 | Input dateofbarth | 20/10/1995 | | | | |
| 12 | Input image |  | | | | |
| 13 | Input presentAddresses | Dhaka | | | | |
| 14 | Input present division | Dhaka | | | | |
| 15 | Input Present district | Dhaka | | | | |
| 16 | Input present postcode | 1234 | | | | |
| 17 | Input permanent address | Meherpur | | | | |
| 18 | Input permanent division | Khulna | | | | |

| | | | | | | |
|--|--------------------------|----------|--|--|--|--|
| 19 | Input permanent district | Meherpur | | | | |
| 20 | Input permanent postcode | 3456 | | | | |
| Post-conditions: people validated with database and successfully apply for donation. | | | | | | |

Table 5.4.5: Test case for Apply for Donation failed

| Test Case ID: TC 05 | | | | Module Name: Apply For Donation | | |
|---|-------------------------------------|------------------------------|----------------------------|--|---------------------------------|-----------|
| Sub Module: People Apply for donation | | | | Test Designed by: Nusrat Afifa | | |
| Test Priority (Low/Medium/High): High | | | | Test Designed date: 03.11.2019 | | |
| Test Title: People can browse this site. If he want then Full fill the required all field. | | | | Test Executed by: Nusrat Afifa | | |
| Description: Test the system's apply for donation page | | | | Test Execution date: 29.03.2019 | | |
| Pre-condition: The user has valid email and password. The current email is jannat@gmail.com and password 12345678. The system navigates to Login page. And click on the Login button. . | | | | | | |
| Step | Test step | Test data | Code module | Expected result | Actual Result | Pass/fail |
| 1 | Navigate to Apply For Donation Page | Click apply for donation tab | ApplyForDonation.blade.php | People successfully apply for donation | People see image field is error | Failed |
| 2 | Input name | Rafi | | | | |
| 3 | Input father name | Reza | | | | |
| 4 | Input mother name | Rafa | | | | |
| 5 | Input gender | female | | | | |
| 6 | Input occupation | student | | | | |
| 7 | Input religion | Islam | | | | |
| 8 | Input email | rafi@gmail.com | | | | |
| 9 | Input mobile | 01982876876 | | | | |
| 10 | Input familys income | 5000 | | | | |

| | | | | | | |
|---|--------------------------|------------|--|--|--|--|
| 11 | Input dateofbarth | 20/10/1995 | | | | |
| 12 | Input image | | | | | |
| 13 | Input presentAddresses | Dhaka | | | | |
| 14 | Input present division | Dhaka | | | | |
| 15 | Input Present district | Dhaka | | | | |
| 16 | Input present postcode | 1234 | | | | |
| 17 | Input permanent address | Meherpur | | | | |
| 18 | Input permanent division | Khulna | | | | |
| 19 | Input permanent district | Meherpur | | | | |
| 20 | Input permanent postcode | 3456 | | | | |
| Post-conditions: people cannot be validated with database and failed to apply for donation. | | | | | | |

Table 5.4.6: Test case for make donation

| Test Case ID: TC 06 | | | | Module Name: makedonation | | |
|--|-----------|-----------|-------------|---------------------------------|---------------|-----------|
| Sub Module: Donor apply for make donation | | | | Test Designed by: Nusrat Afifa | | |
| Test Priority (Low/Medium/High): High | | | | Test Designed date: 18.03.2019 | | |
| Test Title: People can browse this site. If he want then Full fill the required all field. | | | | Test Executed by: Nusrat Afifa | | |
| Description: Test the system's make donation page | | | | Test Execution date: 29.03.2019 | | |
| Pre-condition: | | | | | | |
| Step | Test step | Test data | Code module | Expected result | Actual Result | Pass/fail |

| | | | | | | |
|--|-----------------------|---------------------------------------|--------------------------------|--------------------------------------|---|------|
| 1 | Navigate to | Click on make donation tab | Makedo nation.bl ade.php | people success fully submit | people can see successful message | pass |
| 2 | Input donorname | mini | | | | |
| 3 | Input occupation | Female | | | | |
| 4 | Input email | kitten | | | | |
| 5 | Input mobile | Scottis fold | | | | |
| 6 | Input address | Dry | | | | |
| 7 | Input amount | Yes | | | | |
| 8 | Input collected by | No | | | | |
| 9 | Input date | Cat2.gpg | | | | |
| 10 | Input additional info | She is very well trained | | | | |
| 11 | Input memonnb | Userid:2,j annat@g mai l.com | | | | |
| Post-conditions: people validated with database and successfully login to account. The account session details are logged in database. | | | | | | |

Chapter-6

User Manual

6.1 Home Page

Daffodil University DMS

Home Apply for Donation Make a Donation Notice About Login

DIU Donation Management is a web based application for manage donation related information. At before , there is no donation management system or donation management automation system where people can donate or apply for get donation in a single application from DIU donation fund. This application can provide the donation related information to it's users.

| Total Donor | Total Donation | Total Beneficiar | Total Collection |
|-------------|----------------|------------------|------------------|
| 5 | 35.8K BDT | 5 | 1.23B BDT |

If you are looking for donating something then you are requested to donate an amount of money to the DIU Donation Fund for the poor people and students. We are here to received your money and distribute that whom it's need. DIU Donation Fund is managed by Daffodil International University's authorised persons and stackholders.

© Daffodil International University 2019 | Developed By: Nushrat Afifa | Department of SWE

Figure 6.1 Home Page

6.2: Apply For Donation Page

Daffodil University DMS

Home Apply for Donation Make a Donation Notice About Login

Apply for Donation

Personal Information

Name

Father Name

Mother Name

Gender

Occupation

Religion

Email

Mobile

Family's Monthly Income

Date of Birth

Image No file chosen

© Daffodil International University 2019 | Developed By: Nushrat Afifa | Department of SWE

Figure 6.2 apply for donation

6.3: Apply For Donation page

The screenshot shows a web browser window with the Daffodil University DMS logo in the top left. The navigation menu includes Home, Apply for Donation, Make a Donation, Notice, About, and Login. The main content area is titled 'Apply for Donation' and contains a form with the following elements:

- Additional Information** section header.
- A label: 'Why need the donation:'.
- A text input field with a placeholder: 'Maximum 150 characters...'.
- A blue 'Prev' button.
- Blue 'Submit' and yellow 'Cancel' buttons.

At the bottom of the page, the footer text reads: '© Daffodil International University 2019 | Developed By: Nushrat Afifa | Department of SWE'.

Figure 6.3 apply for donation

6.4: Apply For Donation page

The screenshot shows the same web browser window as Figure 6.3. The main content area is titled 'Apply for Donation' and contains a form with the following elements:

- Verifying** section header.
- A label: 'Please enter the verify code below which was sent to this "nusrat@gmail.com" mail'.
- A text input field containing the value '290531'.
- Blue 'Submit' and yellow 'Cancel' buttons.

At the bottom of the page, the footer text reads: '© Daffodil International University 2019 | Developed By: Nushrat Afifa | Department of SWE'.

Figure 6.4 apply for donation

6.5: Make a Donation

The screenshot shows the 'Make a Donation' form within the Daffodil DMS interface. The form includes the following fields and options:

- Donor Name:
- Designation:
- Address:
- Email:
- Mobile:
- Donation Amount: BDT
- Probable Donation Date: Select Date
- Additional Information: Maximum 380 characters.

At the bottom of the form are two buttons: 'Submit' (blue) and 'Cancel' (yellow). The page header includes navigation links: Home, Apply for Donation, Make a Donation, Notice, About, and Login. The footer contains the copyright information: © Daffodil International University 2019 | Developed By: Nushrat Afifa | Department of SWE.

Figure 6.5 apply for donation

6.6: About

The screenshot displays the 'About DIU DMS' page. It features a navigation bar at the top with links for Home, Apply for Donation, Make a Donation, Notice, About, and Login. The main content area is divided into three sections:

- About DIU DMS:** Includes an image of a group of people and a text block describing the application as a web-based tool for managing donation information, replacing a previous manual system.
- DIU Donation Fund:** Includes a text block describing the application as a web-based tool for managing donation information, replacing a previous manual system, and an image of a group of smiling children.
- DIU Donation Fund Authority:** Includes an image of a banner that reads 'Support GIVE We need DONATE' and a text block describing the application as a web-based tool for managing donation information, replacing a previous manual system.

The footer contains the copyright information: © Daffodil International University 2019 | Developed By: Nushrat Afifa | Department of SWE.

Figure 6.6 about

6.7: Login

© Daffodil International University 2019 | Developed By: Nushrat Afifa | Department of SWE

Figure 6.7 login

6.8: Home

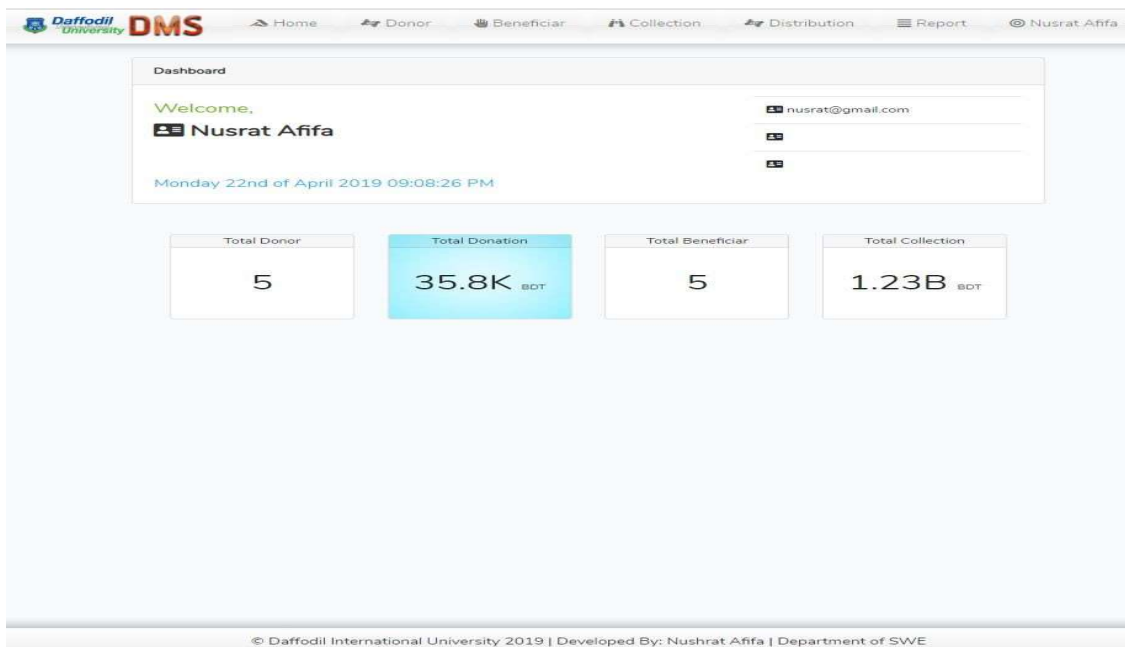
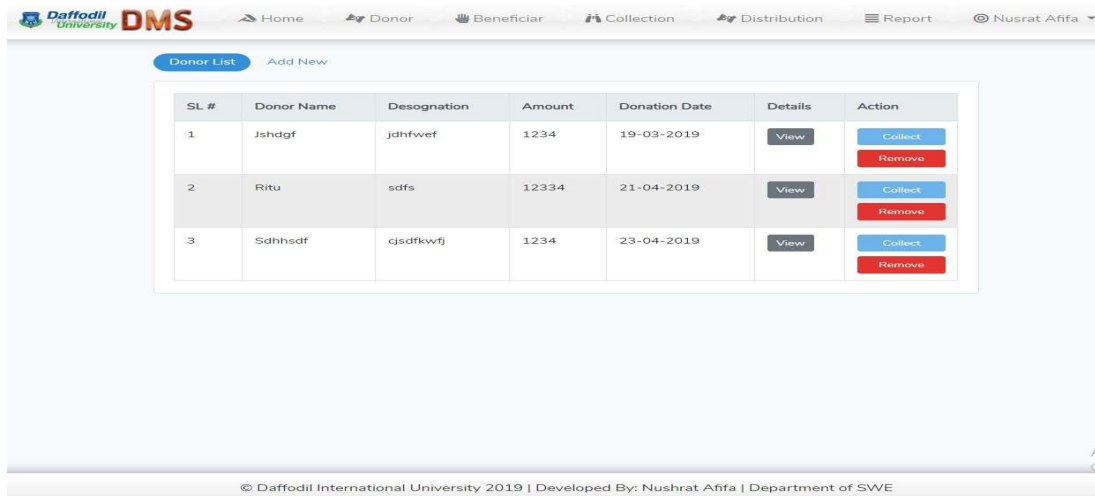


Figure 6.8 home

6.9: Donor



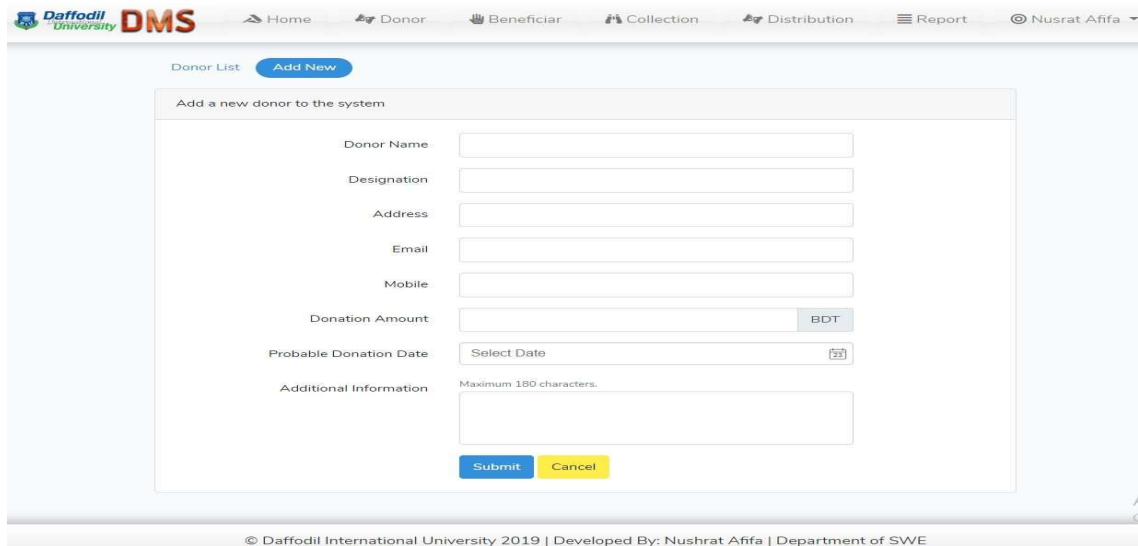
The screenshot shows the 'Donor List' page in the DMS system. It features a navigation bar with 'Home', 'Donor', 'Beneficiary', 'Collection', 'Distribution', 'Report', and a user profile 'Nusrat Afifa'. Below the navigation bar, there are buttons for 'Donor List' and 'Add New'. The main content is a table with the following data:

| SL # | Donor Name | Desogation | Amount | Donation Date | Details | Action |
|------|------------|------------|--------|---------------|---------|-------------------|
| 1 | Jshdggf | jdhfwef | 1234 | 19-03-2019 | View | Collect Remove |
| 2 | Ritu | sdfs | 12334 | 21-04-2019 | View | Collect Remove |
| 3 | Sdhhsdf | qsdfkwfj | 1234 | 23-04-2019 | View | Collect Remove |

At the bottom of the page, there is a footer: '© Daffodil International University 2019 | Developed By: Nushrat Afifa | Department of SWE'.

Figure 6.9 donor

6.10: Donor



The screenshot shows the 'Add New Donor' form in the DMS system. It includes a navigation bar and buttons for 'Donor List' and 'Add New'. The form is titled 'Add a new donor to the system' and contains the following fields:

- Donor Name:
- Designation:
- Address:
- Email:
- Mobile:
- Donation Amount: BDT
- Probable Donation Date: Select Date
- Additional Information: Maximum 180 characters.

At the bottom of the form, there are 'Submit' and 'Cancel' buttons. The footer at the bottom of the page reads: '© Daffodil International University 2019 | Developed By: Nushrat Afifa | Department of SWE'.

Figure 6.10 donor

6.11 : Beneficiary

The screenshot shows the 'Beneficiary List' page in the DMS system. At the top, there are navigation tabs: 'Beneficiary List' (selected), 'Beneficiary Request', and 'Add New'. Below the tabs, a summary box displays 'Total Beneficiaries: 5' and 'Total Donation: 35831 BDT'. The main content is a table with the following data:

| Name | Gender | Occupation | Mobile | Donation Date | Amount | Details | Action |
|--------------|--------|------------|-------------|---------------|--------|---------|---------|
| 5454 | Female | Business | 01515641182 | -- | -- | View | Donate |
| Amika | Female | Student | 01711605286 | -- | -- | View | Donate |
| Nusrat Afifa | Female | Student | 01478532468 | 04-03-2019 | 12500 | View | Donated |
| Afifa | Male | Student | 01515641182 | 04-03-2019 | 987 | View | Donated |
| Nusrat Afifa | Male | Student | 01711605286 | 03-03-2019 | 1234 | View | Donated |
| Nusrat Afifa | Female | Student | 01515641182 | 01-04-2019 | 12345 | View | Donated |
| Jannat | Female | Student | 01515641182 | 04-04-2019 | 8765 | View | Donated |

At the bottom of the page, there is a footer: '© Daffodil International University 2019 | Developed By: Nushrat Afifa | Department of SWE'.

Figure 6.11 beneficiary

6.12 : Beneficiary

The screenshot shows the 'Beneficiary Request' page in the DMS system. At the top, there are navigation tabs: 'Beneficiary List', 'Beneficiary Request' (selected), and 'Add New'. Below the tabs, a table displays a single beneficiary request with the following data:

| SL# | Name | Gender | Occupation | Family's Income (M) | Mobile | Details | Action |
|-----|--------|--------|------------|---------------------|-------------|---------|----------------|
| 1 | Nusrat | Female | Student | 12345 | 01515641182 | View | Approve Reject |

At the bottom of the page, there is a footer: '© Daffodil International University 2019 | Developed By: Nushrat Afifa | Department of SWE'.

Figure 6.12 Beneficiary

6.13: Collection

The screenshot shows the 'Collection' page in the DMS system. At the top, there is a navigation bar with 'Home', 'Donor', 'Beneficiar', 'Collection', 'Distribution', 'Report', and 'Nusrat Afifa'. Below the navigation bar, there is a 'Download All List' button. The main content area displays 'Total Donor: 5' and 'Total Collection: 1234598224 BDT'. Below this, there is a table with 9 columns: SL #, Donor Name, Occupation, Amount, Donation Date, By, Memo No, Details, and an action column. The table contains 5 rows of data, each with a 'View' button and a 'Collected' status indicator.

| SL # | Donor Name | Occupation | Amount | Donation Date | By | Memo No | Details | |
|------|------------|------------|------------|---------------|---------|---------|---------|-----------|
| 1 | Gfgfxdzs | sdfs | 1234456788 | 10-03-2019 | Nn | 1200 | View | Collected |
| 2 | Jhffs | sdfs | 5432 | 11-03-2019 | Jhgfd | 65421 | View | Collected |
| 3 | Hgfd | sdfs | 12446 | 04-03-2019 | Hgdfds | 56532 | View | Collected |
| 4 | Mdhfdj | dhjshdv | 122324 | 09-04-2019 | Jhhhh | 6578 | View | Collected |
| 5 | Dgdd | jhdjshfj | 1234 | 11-03-2019 | Ttrewaq | 7653 | View | Collected |

© Daffodil International University 2019 | Developed By: Nusrat Afifa | Department of SWE

Figure 6.13 collection

6.14: Distribution

The screenshot shows the 'Distribution' page in the DMS system. At the top, there is a navigation bar with 'Home', 'Donor', 'Beneficiar', 'Collection', 'Distribution', 'Report', and 'Nusrat Afifa'. Below the navigation bar, there is a 'Distribution' section with 'Users List' and 'Add New' buttons. The main content area displays a table with 7 columns: Beneficiary ID, Distributed By, Number of Installment, Distribution Amount, Total Paid, Distributed Date, and Installment Status. The table contains 5 rows of data, each with a 'Paid' or 'Send' button and a 'Delete' button. Below the table, there is a pagination control showing '1' and '2'.

| Beneficiary ID | Distributed By | Number of Installment | Distribution Amount | Total Paid | Distributed Date | Installment Status |
|----------------|----------------|-----------------------|---------------------|------------|------------------|--------------------|
| 4 | nusrat | 4 | 100000 | 85000 | 2019-04-18 | Paid Delete |
| 3 | nusrat | 4 | 100000 | 85000 | 2019-04-12 | Paid Delete |
| 4 | nusrat | 4 | 100000 | 10000 | 2019-04-12 | Send Delete |
| 1 | nusrat | 4 | 100000 | 10000 | 2019-04-24 | Send Delete |
| 5 | nusrat | 4 | 100000 | 35000 | 2019-04-12 | Send Delete |

© Daffodil International University 2019 | Developed By: Nusrat Afifa | Department of SWE

Figure 6.14 distribution

Chapter-7
Project Summery

7.1 GitHub Link

7.2 Project Summary

This project has been started from September. From that beginning time I have to work hard to know the requirement clearly. After that I proposed a design to them by help of my supervisor.

I started to develop the project. From then I gradually develop the project. I think storing the data in database neatly is very important. That's why I did this first and made a relationship with the tables. After that I design the UI. This project's UI is very simple and clean which is very help for the user's experience. Then I started coding and executing the project.

If I did not test this project, there will stay some bug on this project which will ruin the full project. That why give importance to test this project and then I solved some bug which I got after testing this project.

7.3 Limitations:

- Password is to encrypted
- Not Fully Responsive
- Not highly Secure

.

7.4 Obstacles & Achievements

To walk in the good way, one's have to face many obstacles. By facing obstacles one will get some achievements. Send notification through mail and give the status from application was an obstacle for me. Although I have done it by taking help from my supervisor, friends and by searching the solution from google.

7.4 Future Scope

By working with this project, I have learnt many things and meet with some great person. This project will give me some opportunity to work with this type of similar project.

References

- i. Diagram drawing tool
<https://www.draw.io>
- ii. Gather knowledge of Activity Diagram_
<https://www.lucidchart.com/pages/uml-activity-diagram>
- iii. Gather knowledge of Class Diagram_
<https://www.lucidchart.com/pages/uml-class-diagram>
- iv. Gather knowledge of Data Flow Diagram_
<http://agilemodeling.com/artifacts/dataFlowDiagram.htm>
- v. Gather knowledge of Sequence Diagram_
<https://www.lucidchart.com/pages/uml-sequence-diagram>
- vi. Gather knowledge of Use Case Diagram_
<https://www.lucidchart.com/pages/uml-use-case-diagram>