A

PROJECT REPORT

ON

HELPING HAND

Submitted by

Gurav Harshika S(196140316032)
Jadav Devanshi R(196140316034)
Jadav Khushi P (196140316035)

In partial fulfillment for the award of the degree

of

Diploma of Engineering

in

Information Technology

Government Polytechnic for Girls, Ahmedabad

Gujarat Technological University

September,2021

Government Polytechnic for Girls,
Ahmedabad.

DECLARATION

We hereby declare that the Project Report submitted, along with the project entitled "**HELPING HAND"** submitted in partial fulfilment for the degree of **diploma in Engineering** in **IT** to Gujarat Technological University, Ahmedabad, is a bonafide record of the project work carried out at **Government Polytechnic for Girls, Ahmedabad** under the supervision of **Mrs.Rikita Parekh** and that no part of any of these project reports has been directly copied from any students' reports or taken from any other source, without providing due reference.

Name of The Students Sign of Students

Government Polytechnic for Girls,
Ahmedabad.

CERTIFICATE

This is to certify that the project reports, submitted along with the project entitled **HELPING HAND** has been carried out by **GuravHarshika S. (196140316032)** under my guidance in partial fulfilment for the degree of **Diploma of Engineering** in **Information Technology** 5th **Semester** of Gujarat Technological University, Ahmedabad during the academic year 2021-22. These students have successfully completed project activity under my guidance.

Mrs. Rikita Parekh
Internal Guide
IT Department
GPG, Ahmedabad.

Ms. Priti Parikh
Head of Department
IT Department
GPG, Ahmedabad.

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ACKNOWLEDGMENT

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We are obliged to staff members of IT department, for the valuable information provided by them. We are grateful for their cooperation during the period of my project.

Lastly, we thank almighty, my parents, brother, sisters and friends for their constant encouragement without which this project work would not be possible.

ABSTRACT

"Helping Hands: Keep The Smile" is web application. There are 3 roll in our website: Admin, User and Volunteer. Admin can manage the profile the user and volunteer. User can manage their profile. In our website, first of all user can sign up and then login. In our website, user can manage login page and password. User can register their event. Then user fills up their personal details. After this user can select their categories. After these all processes done by user he/she select submit button and submit to our website. Volunteer go area wise and collect the parcels from user. Then volunteer deliver the parcels to NGO. After that NGO send feedback to user through our website that "Your parcels are safely delivered to our NGO. Thank you for Helping!" and also sends the pictures and videos of the children of our NGO where happy to receive your parcel.

TABLE OF CONTENT

LIST OF FIGURES

LIST OF TABLES

CHAPTER: 1

INTRODUCTION

1.1 Project Introduction:

We had family function at home, but in the covid-19 situation not as every people we thought came. In that case, we have lots of food waste in our function and after that we thought that waste of food we think that should be do something and after that I share this idea with my friends. And at that time we had Rajesh sir's internship and we discuss this idea with sir. Ask him to make this type of project and sir agrees with us to make this project. After that sir prepare module on our project and give it to us.

There are 3 roll in our website: Admin, User and Volunteer. Admin can manage the profile the user and volunteer also and also manage their profile. User can manage their profile and categories. In our website, first of all user can sign up and then login. In our website, user can manage login page and password. User can register their event. Then user fills up their personal details. After these all processes done by user he/she select submit button and submit to our website. All details given by user our volunteers go there and collect it. Benefit of our website is that our volunteers work by area. Volunteers go area wise and collect the parcels from user. Then volunteer deliver the parcels to NGO. After that NGO send feedback to user through our website that "Your parcel is safely delivered to our NGO. Thank you for Helping!" and also sends the pictures and videos of the children of our NGO where happy to receive your parcel.

1.2 Project Purpose:

- The man purpose of the Helping Hand project is to make the children of Ngo happy and to deliver the necessary items and food to them.

1.3 Project Scope:

- Our main scope of the project is that to reach food to our NGO's children and they cannot survive without the food any day.
- And also does not happen the food waste.

CHAPTER: 2

SYSTEM REQUIREMENT ANALYSIS AND PROJECT MANAGEMENT

2.1 Tools and Technology:

Front-End Technologies:

HTML / HTML5: HTML is the basic language for development of primary web pages while HTML5 is a comprised of many elements, including the fifth revision of HTML, CSS3 and many JavaScript API's. It allows you to use the multimedia experience of the desktop on the web. Prior to this technology, experiences of this kind could only work on the desktop.

CSS / CSS3: CSS (Cascading Style Sheets) consist of a group of formatting rules that you use to control the layout and appearance of the content on a web page. One really great feature of CSS is that one can store all the CSS rules in one document and keep that document separate from the HTML content and link the two together. Then, when person make a change to the CSS that change is instantly and automatically updated on all the HTML files. Another great feature is that it "cleans up" the appearance of the code on web pages. In addition it will speed up browser loading times.

JAVASCRIPT: JavaScript is a very powerful client-side scripting language. JavaScript is used mainly for enhancing the interaction of a user with the web page. In other words, you can make your web page more lively and interactive, with the help of JavaScript. JavaScript is also being used widely in game development and Mobile application development.

BOOTSTRAP: Bootstrap is a framework for front end web development and uses HTML5. One can employ responsive web designs with relative ease (the page will shrink and images will resize as the amount of screen real estate is reduced). This framework uses a 12 column grid for initial layout of items. It was developed at Twitter and relies on LESS CSS and jQuery.

Language:

PHP:

Fig 2.1.1: PHP

PHP was at first created as a simple scripting platform called "**Personal Home Page**". Nowadays PHP is an alternative of the Microsoft's Active Server Pages (ASP) technology .PHP is an open source server-side language which is used for creating dynamic web pages and can be embedded into HTML. It is free to download and use. PHP is usually used in conjunction with a MySQL database on Linux/UNIX web servers. It is probably the most popular scripting language. PHP files can contain text, HTML, CSS, JavaScript, and PHP code. PHP code are executed on the server, and the result is returned to the browser as plain HTML.PHP files have extension ".php". It can generate dynamic page content and can create, open, read, write, delete, and close files on the server. PHP can collect form data and can send and receive cookies and can also add, delete, and modify data in your database. PHP can be used to control user-access and can encrypt data. With PHP you are not limited to output HTML. You can output images, PDF files, and even flash movies. You can also output any text, such as XHTML and XML.

MY SQL: My-SQL is the world's most popular open source database. With its proven performance, reliability and ease-of-use, My-SQL has become the leading database choice for web-based applications, used by high profile web properties including Facebook, Twitter, YouTube, Yahoo! and many more. Oracle drives My-SQL innovation, delivering new capabilities to power next generation web, cloud, mobile and embedded applications.

2.2 Hardware and software requirement:

➢ **Hardware:**

- HDD : 160 GB or Higher
- RAM : 2GB or Higher
- Processor : Dual Core or Higher

➢ **Software:**

- Tools : Sublime Text
- Server : XAMPP SERVER

➢ **Front end:**

- Technology : PHP

➢ **Back-end:**

- Database : MYSQL

2.3 Software Process Model:

WATERFALL MODEL: -

The Waterfall Model was the first Process Model to be introduced. It is very simple to understand and use. In a Waterfall model, each phase must be completed before the next phase can begin and there is no overlapping in the phases. The waterfall model is the earliest SDLC approach that was used for software development.
In "The Waterfall" approach, the whole process of software development is divided into separate phases. The outcome of one phase acts as the input for the next phase sequentially. This means that any phase in the development process begins only if the previous phase is complete. The waterfall model is a sequential design process in which progress is seen as flowing steadily downwards (like a waterfall) through the phases of Conception, Initiation, Analysis, Design, Construction, Testing, Prediction/Implementation, and Maintenance.

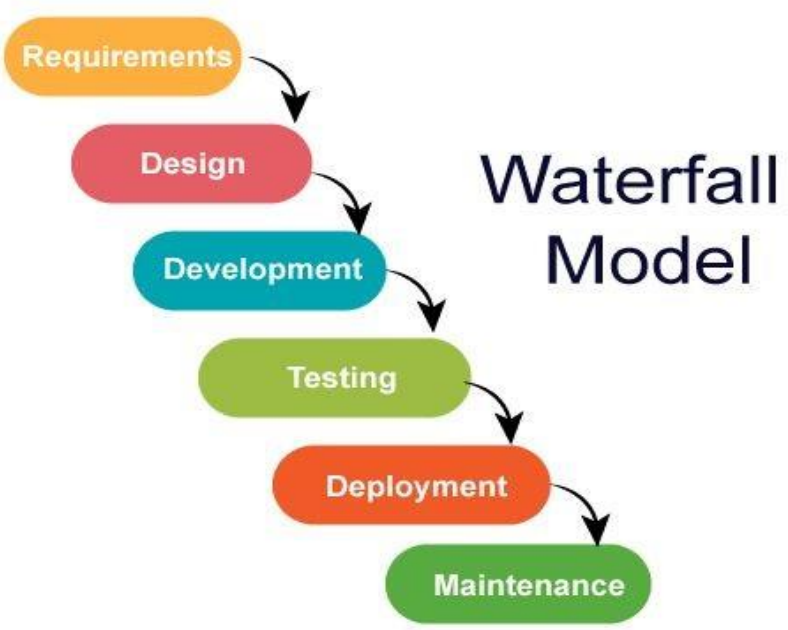


Fig 2.3.1: Waterfall Model

2.4 Project planning and scheduling:

Project planning:

- The problem is decomposed into smaller problems, software managers use historical project data (as well as personal experience and intuition) to determine estimates for each.
- The final estimates are typically adjusted by taking project complexity and risk into account. The resulting work product is called project management plan.
- The objective of the software planning is providing the framework that enables the manager to make reasonable estimation of the resources, cost and schedule.
- Estimate suit attempts Project planning includes description of the project task, activity and function, dependencies, resource requirements and detail schedules.
- Project planning involves estimating how much time, efforts, money and resources will be required build a specific software system. After the project scope is determined and to define the best case and worst case scenarios. So that project outcome can be bounded.

Project scheduling:

- Software project scheduling is an activity that distributes estimated efforts across the planned duration by allocating the effort to specific software engineering tasks.
- Proper Scheduling requires:

1. All tasks appear in network.
2. Effort and timing are intelligently allocated to each task.
3. Inter-dependencies between tasks are properly indicated.
4. Resources are allocated for the work to be done.

2.4.1 Project development approach:

Software Development Life Cycle: Software life cycle models describe phases of the software cycle and the order in which those phases are executed. Each phase produces deliverables required by the next phase in the life cycle. Requirements are translated into design.

Code is produced according to the design which is called development phase. After coding and development, the testing verifies the deliverable of the implementation phase against requirements. The testing team follows Software Testing Life Cycle (STLC) which is similar to the development cycle followed by the development team.

There are following six phases in every Software development life cycle model:

✓ **Requirement analysis**

✓ **Design**

✓ **Implementation or coding**

✓ **Testing**

✓ **Deployment**

✓ **Maintenance**

Requirement analysis: Business requirements are gathered in this phase. This phase is the main focus of the project managers and stake holders. Meetings with managers, stake holders and users are held in order to determine the requirements like; who is going to use the system? How will they use the system? What data should be input into the system? What data should be output by the system? These are general questions that get answered during a requirements gathering phase.

After requirement gathering these requirements are analyzed for their validity and the possibility of incorporating the requirements in the system to be development is also studied.

Design: In this phase the system and software design is prepared from the requirement specifications which were studied in the first phase. System Design helps in specifying hardware and system requirements and also helps in defining overall system architecture. The system design specifications serve as input for the next phase of the model. In this phase the testers comes up with the Test strategy, where they mention what to test, how to test.

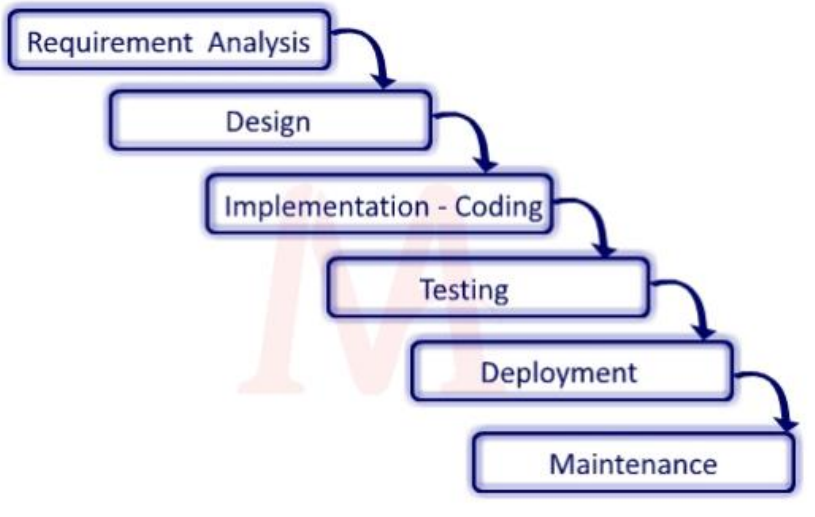


Fig 2.4.1.1: Software Development Life Cycle (SDLC)

Implementation and Coding : After requirement and design completed, the software development life cycle next phases start the implementation and coding to develop software application become agile software development team we analysis all system clearly and divide all functionality of system into small unit and start work to assign unit to different team.

In this coding sdlc phase database administrative team create a back end database as per requirement of system, front-end team design GUI part of system as per the requirement of design.

Testing: SDLC Testing phase tester team is verifying the code is actually done as requirement and design of system. Testing phase all the type of testing done like unit testing, integration testing, functional testing as well as non-functional testing.

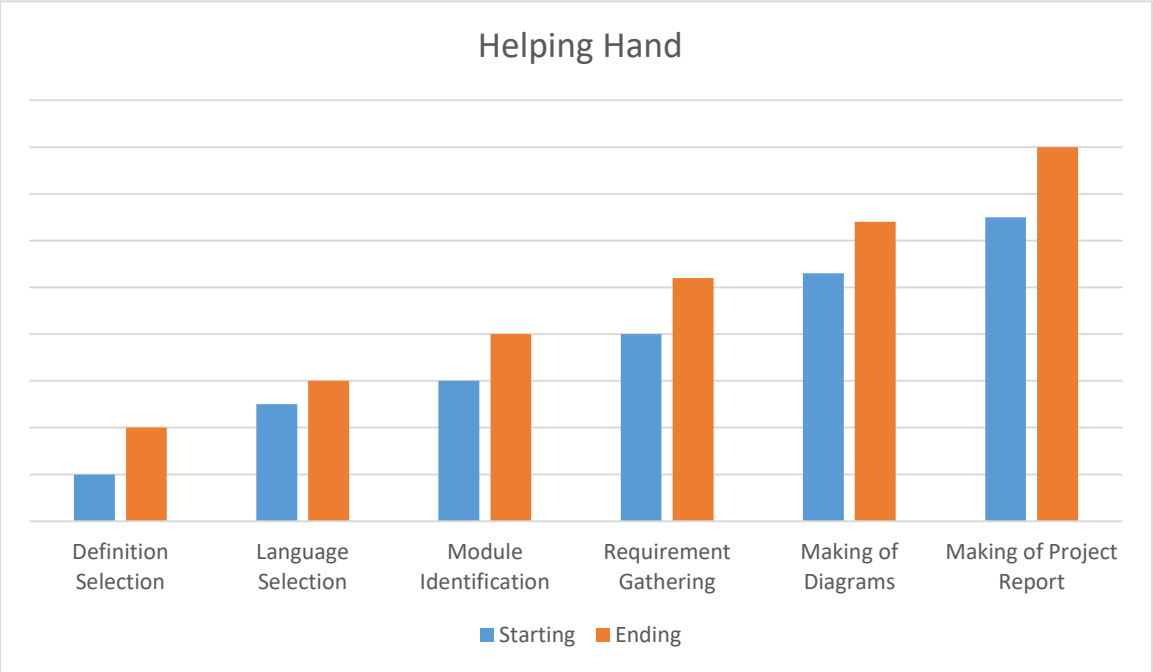
During testing phase tester team found some bugs or issue in system the generate test report and submit to agile software development team to resolve issue in system and after give to testing team to re test the whole system.

Deployment: After successful design and testing the system software is ready to delivered to customer for use.

The customer release software as beta version, if the found any changes or bugs, they report to the agile software development team. Once the developer fixed the bugs and then the final product ready to deployment.

Maintenance: After delivered software to customer, they start to work on system while using system they found some changes in system. To make changes in system give back to developer team and they can done changes, this process are done in maintenance phase.

2.4.2 Project plan:



2.4.3 Schedule Representation:

Name of Activity	Start Date	End Date
Definition Selection	15-jun-2021	05-jul-2021
Language Selection	06-jul-2021	15-jul-2021
Module Identification	16-jul-2021	26-jul-2021
Requirement Gathering	26-jul-2021	08-aug-2021
Making of Diagrams	13-aug-2021	02-sep-2021
Making of Project Report	05-sep-2021	23-sep-2021

CHAPTER: 3

SYSTEM ANALYSIS

3.1Requirement of new system:

- In our website Volunteers work area wise that's why donated food or some kind of things delivered quickly. We also manage Categories.
- There is time flexibility and no time consuming process so people don't have to come here because volunteer works area wise.
- There is no travelling cost.

3.2Features of New System:

- People will not have to go there themselves and their traveling money and time will be saved, so that they can use that time in other work.

3.3 Feasibility study:

The feasibility study is an evaluation and analysis of the potential of the proposed project which is based on extensive investigation and research to support the process of decision making. Feasibility is the measure of how beneficial the development of information system will be to an organization. The feasibility analysis is categorized under four different types.

1). Technical feasibility
2). Economical feasibility
3). Operational feasibility

3.3.1 Technical feasibility:

- It is a partially measurement of specific technical solution and the availability of technical resorts and expertise.
- The analyst must find out whether the current technical resources, which are available in the system is capable of handling the job.
- If not, then the analyst with the help of developer should confirm whether the technology is available and capable or not.

3.3.2 Economical feasibility:

- Economic feasibility is a measure of cost effectiveness of a project or solution.

- For declaring that the system is economically feasible, the benefits from the project should exceed or at least to the equal to the cost of development.

3.3.3 Operational feasibility:

- The System is to be developed for any user who wants to use it. We want our system user friendly and easy to use.
- The administrator also may be non-technical, so the user interface will be designed in such a way that it gets comfortable for non-technical person to operate easily.

3.4Database Schema Design:

3.4.1 Data Dictionary:

1) **Role Table:** It contains information of Role.

Attributes	Data Type	Size	Constraints
Role_Id	Integer	10	Primary Key
Role	Varchar2	20	Not Null

Table 3.4.1.1 Role Table

2) **User Table:** It contains information of User.

Attributes	Data Type	Size	Constraints
User_Id	Integer	10	Primary Key
Role_Id	Integer	20	Foreign Key
Fname	Varchar2	20	Not Null
Lname	Varchar2	20	Not Null
Gender	Varchar2	10	Not Null
DoB	Date		Not Null
Email	Varchar2	15	Not Null
Contact	Number	10	Not Null
Address	Varchar2	30	Not Null
Password	Varchar2	15	Not Null
Reg_Date	Date		Not Null

Table 3.4.1.2 User Table

3) Category Table: It contains information about category.

Attributes	Data Type	Size	Constraints
Cat_Id	Integer	10	Primary Key
Cat_Name	Varchar2	20	Not Null

Table 3.4.1.3 Category Table

4) City Table: It contains all information regarding City.

Attributes	Data Type	Size	Constraints
City_Id	Integer	10	Primary Key
City_Name	Varchar2	20	Not Null

Table 3.4.1.4 City Table

5) Area Table: It contains all information about Area.

Attributes	Data Type	Size	Constraints
Area_Id	Integer	10	Primary Key
City_Id	Integer	10	Foreign Key
Area_Name	Varchar2	20	Not Null

Table 3.4.1.5 Area Table

6) Donation Table: It contains all information about donation which given by user.

Attributes	Data Type	Size	Constraints
D_Id	Integer	10	Primary Key
User_Id	Integer	10	Foreign Key
Cat_Id	Integer	10	Not Null
Subject	Varchar2	15	Not Null
Description	Varchar2	30	Not Null
Date/Time	Date/Time		Not Null
Status	Varchar2	10	Not Null

Table 3.4.1.6 Donation Table

7) **Donation_Volunteer Table:** It contains all information about donation. where volunteer get to know how to deliver the donation.

Attributes	Data Type	Size	Constraints
Id	Integer	10	Primary Key
D_Id	Integer	10	Not Null
User_Id	Integer	10	Not Null
Received_Time	Date/Time		Not Null
Delivery_Time	Date/Time		Not Null
Remarks	Varchar2	15	Not Null

Table 3.4.1.7 Donation_Volunteer Table

8) Feedback Table: It contains feedback message which is given by user

Attributes	Data Type	Size	Constraints
F_Id	Integer	10	Primary Key
User_Id	Integer	10	Foreign Key
Message	Varchar2	30	Not Null
Date	Date		Not Null

Table 3.4.1.8 Feedback Table

3.5 Data Modeling:

3.5.1 ER Diagram:

- An entity relationship model, also called an entity-relationship (ER) diagram, is a graphical representation of entities and their relationships to each other, typically used in computing in regard to the organization of data within databases or information systems.
- An entity is a piece of data-an object or concept about which data is stored.
- There are three basic elements in E-R Diagram.

1. Entities
2. Attributes
3. Relationships

Data Entity:

- A Data Entity, which will be referred to as entity flow now on, is the main symbol on an ERD.
- An entity is anything, real or abstract, about which we went to store data.

Relationships:

- A relationship is a diamond that contains its name. It touches one relationship-entity and optionally some attribute-entity connectors. It is linked with two entities.

Three Types of Cardinality Relationship:

1). One to one: For one Occurrence of the first entity there can exist only one related occurrence of the second entity and vice – versa.

2). One to Many: For one Occurrence of the entity there can exist many related Occurrence of the second entity, it doesn't matter which is first or second.

3). Many to Many: For one Occurrence of the first entity, there can exist many related occurrence of the second entity, and for occurrence of the second entity there can exist many occurrence of the first entity.

Symbols used in E-R diagrams:

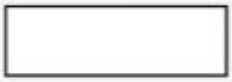
Name	Symbol	Meaning
Oval		Shows different attributes
Rectangle		Shows entity set
Diamond		Show relationship among entity set
Line		Links entity set to attributes & entity set to relationship

Fig 3.5.1.1: Symbols of E-R Diagram

ER-Diagram:

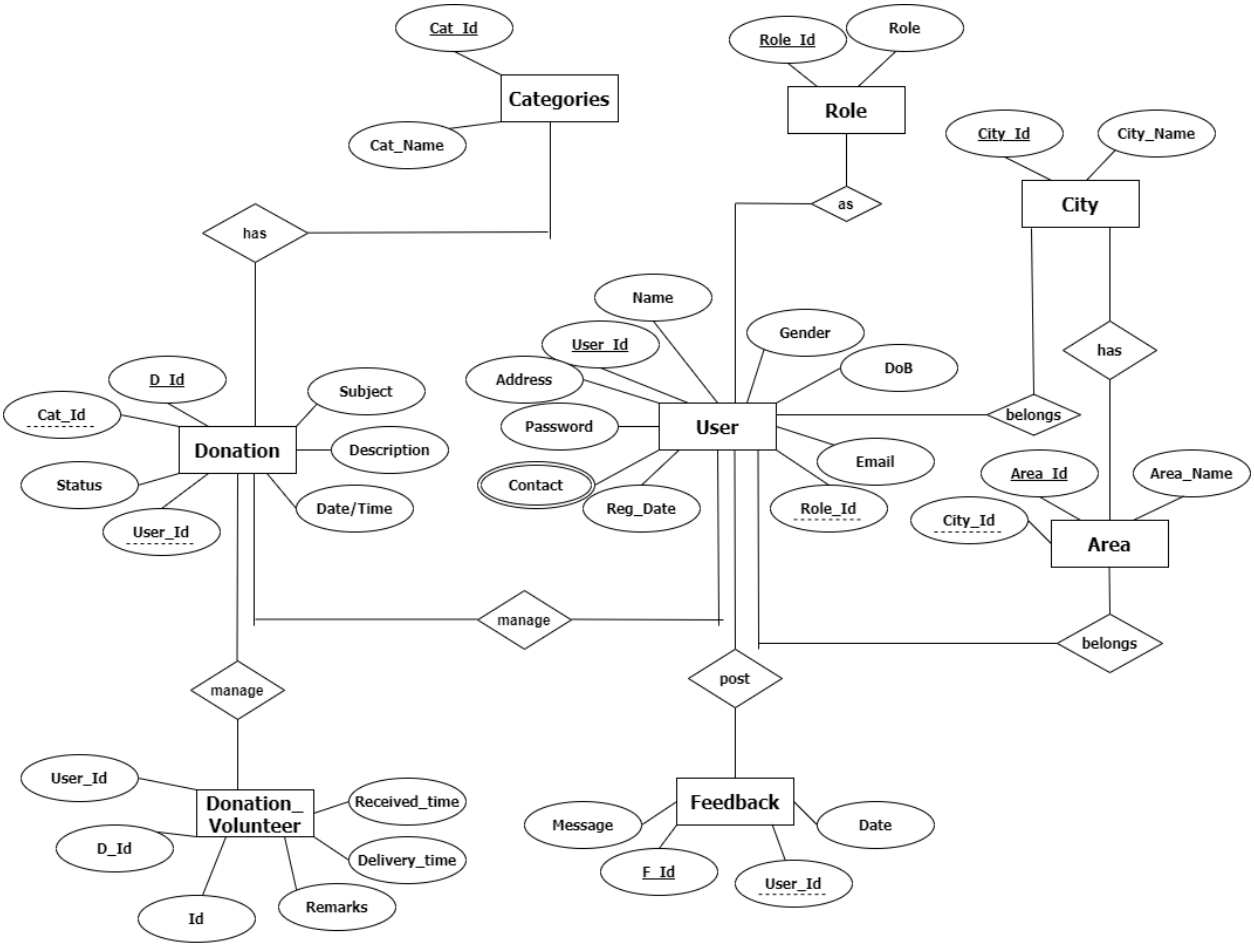


Fig 3.5.1.2: E-R diagram

3.5.2 Activity Diagram:

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.

▪ The control flow is drawn from one operation to another. ▪ This flow can be sequential, branched, or concurrent.

▪ Activity diagrams deal with all type of flow control by using different elements such as fork, join, etc.

▪ Activity diagram is used to show message flow from one activity to another.

Admin:

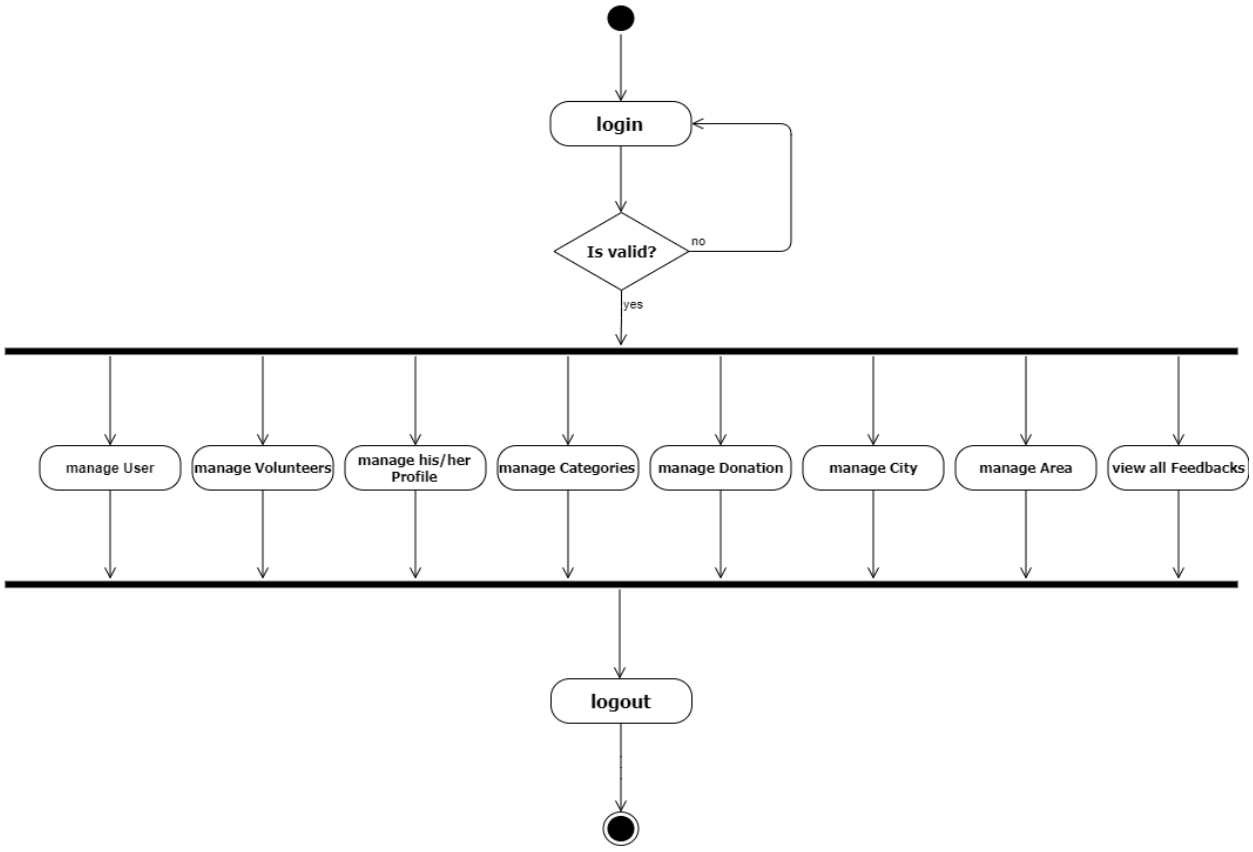


Fig 3.5.2.1: Activity diagram of Admin

User:

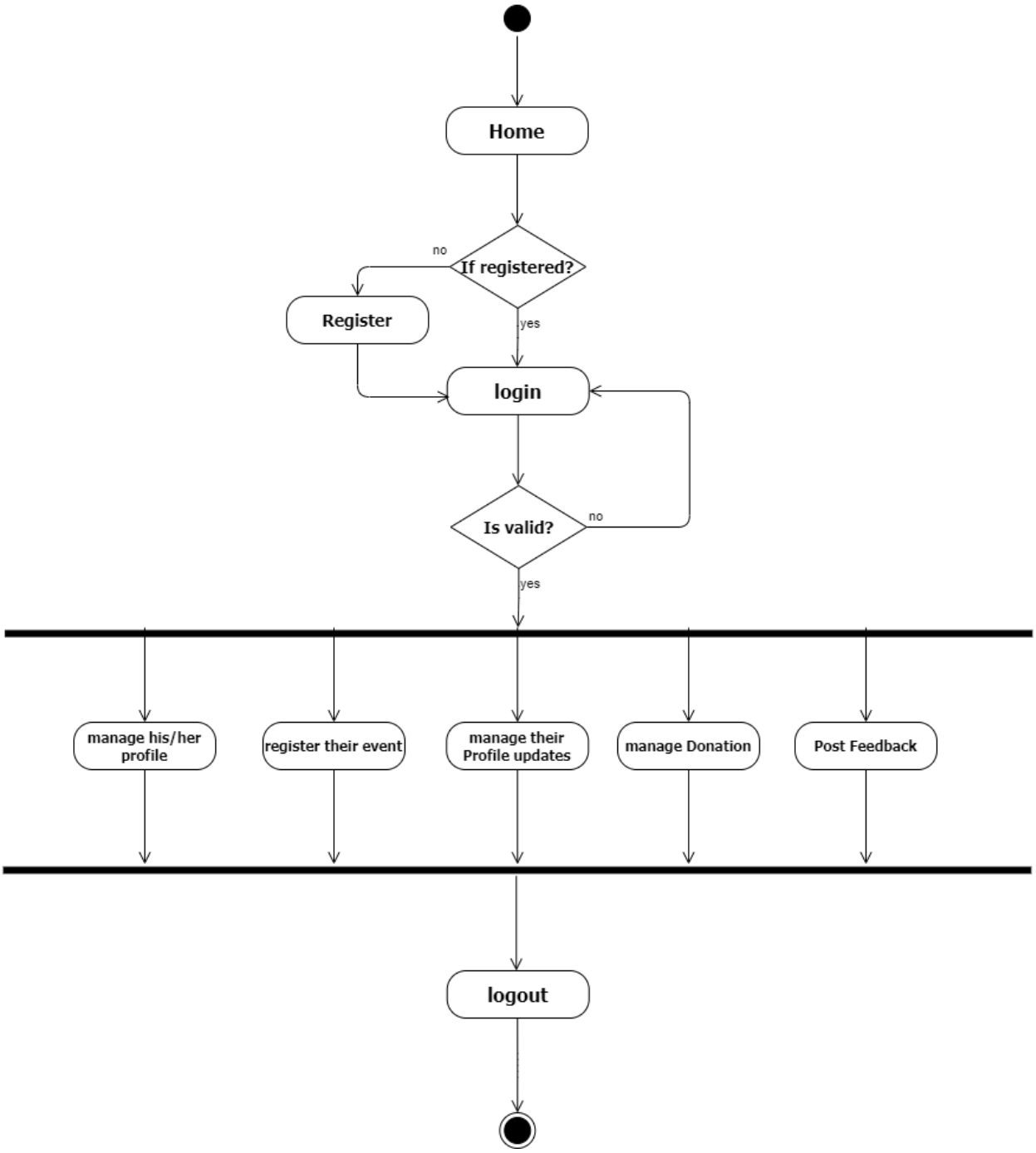


Fig 3.5.2.2: Activity diagram of User

Volunteer:

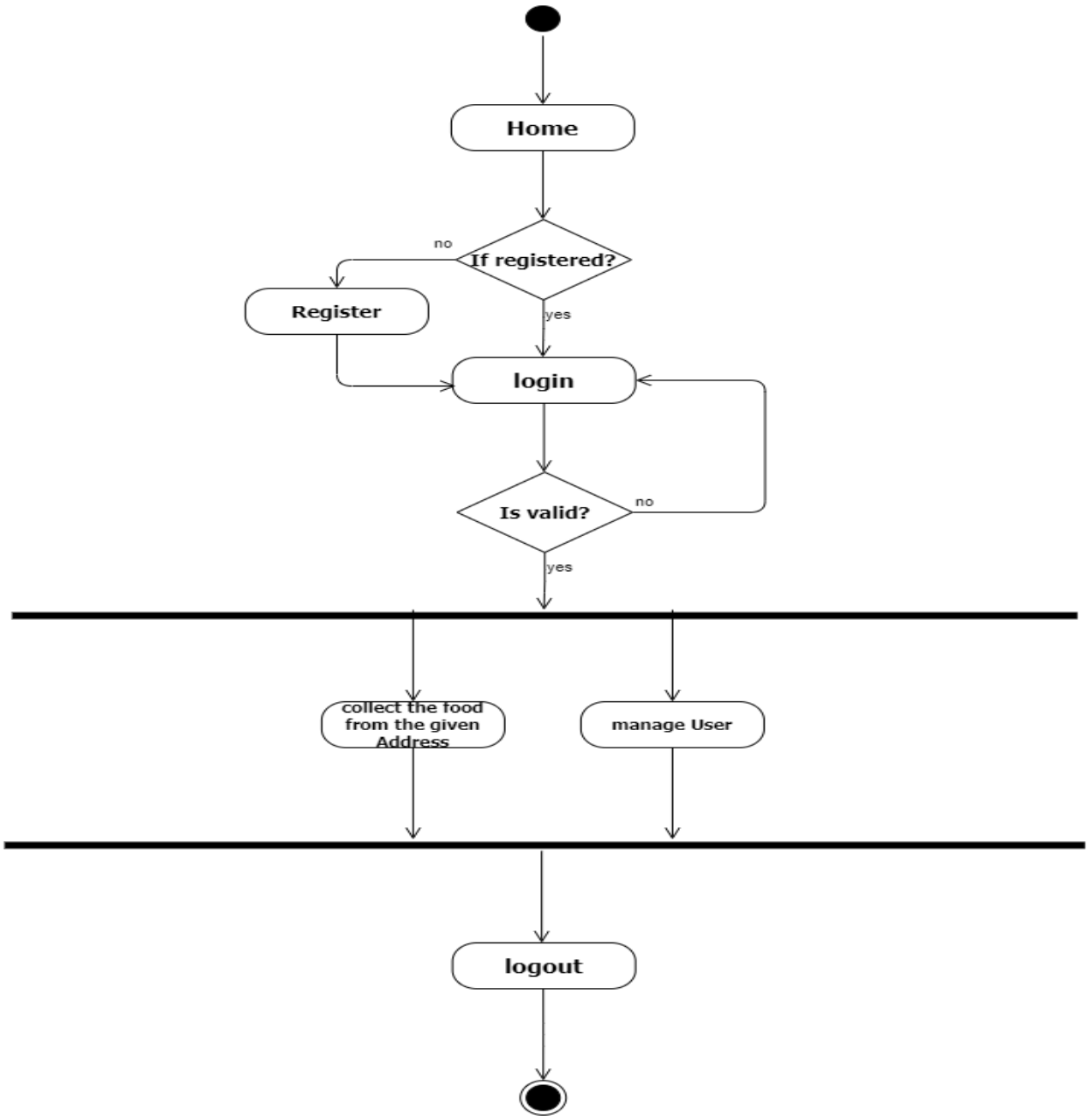


Fig 3.5.2.3: Activity diagram of Volunteer

3.6 Functional and Behavioral modeling

- Diagram is a graphical representation of the flow of data through an information system.
- It differs from the system flowchart as it shows the flowchart as it shows the flow of data through processes instead of hardware.
- A data flow diagram is logical model of the system and shows the flow of the data and the flow of logic so this all thing describe s what takes place in a proposed system, not how the activities are accomplished.
- DFD consist of a series of symbols joined together by a line. There may be a single DFD for the entire system or it may be exploded into various levels.

→ Types of DFD's:

1) Context Level Diagram
2) First Level DFD A Data Flow
3) second Level DFD

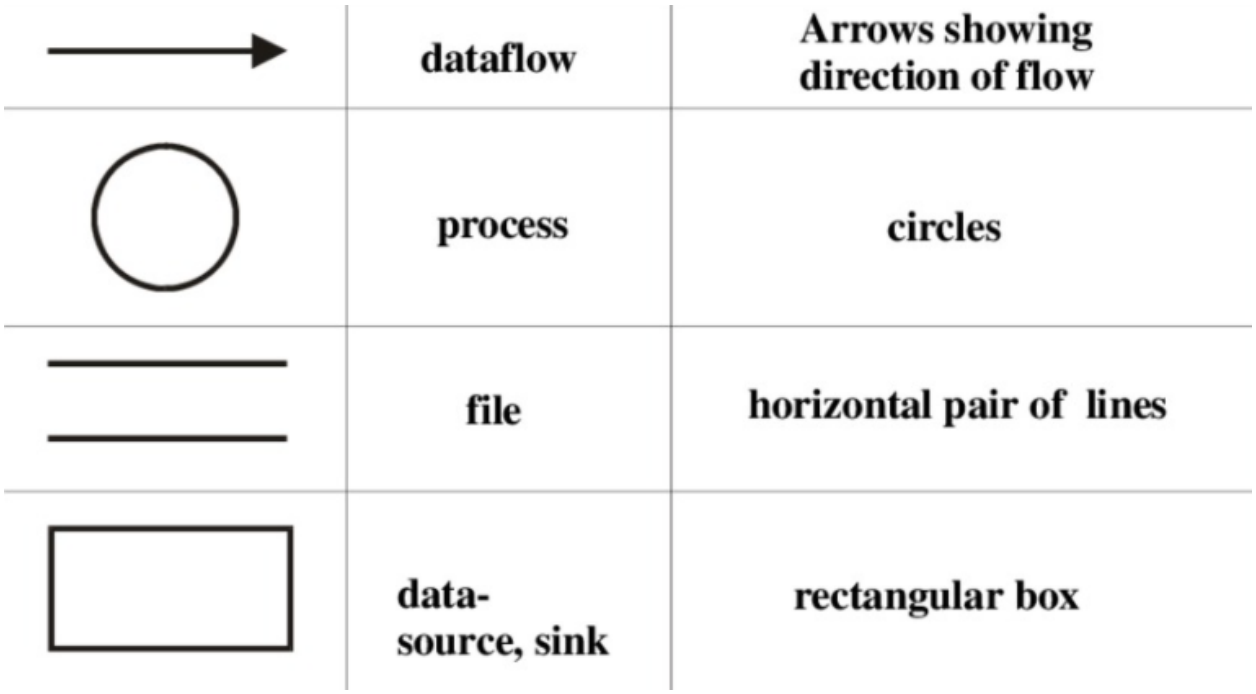


Fig 3.6.1: Symbols used for DFD

3.6.1 DFD Level 0

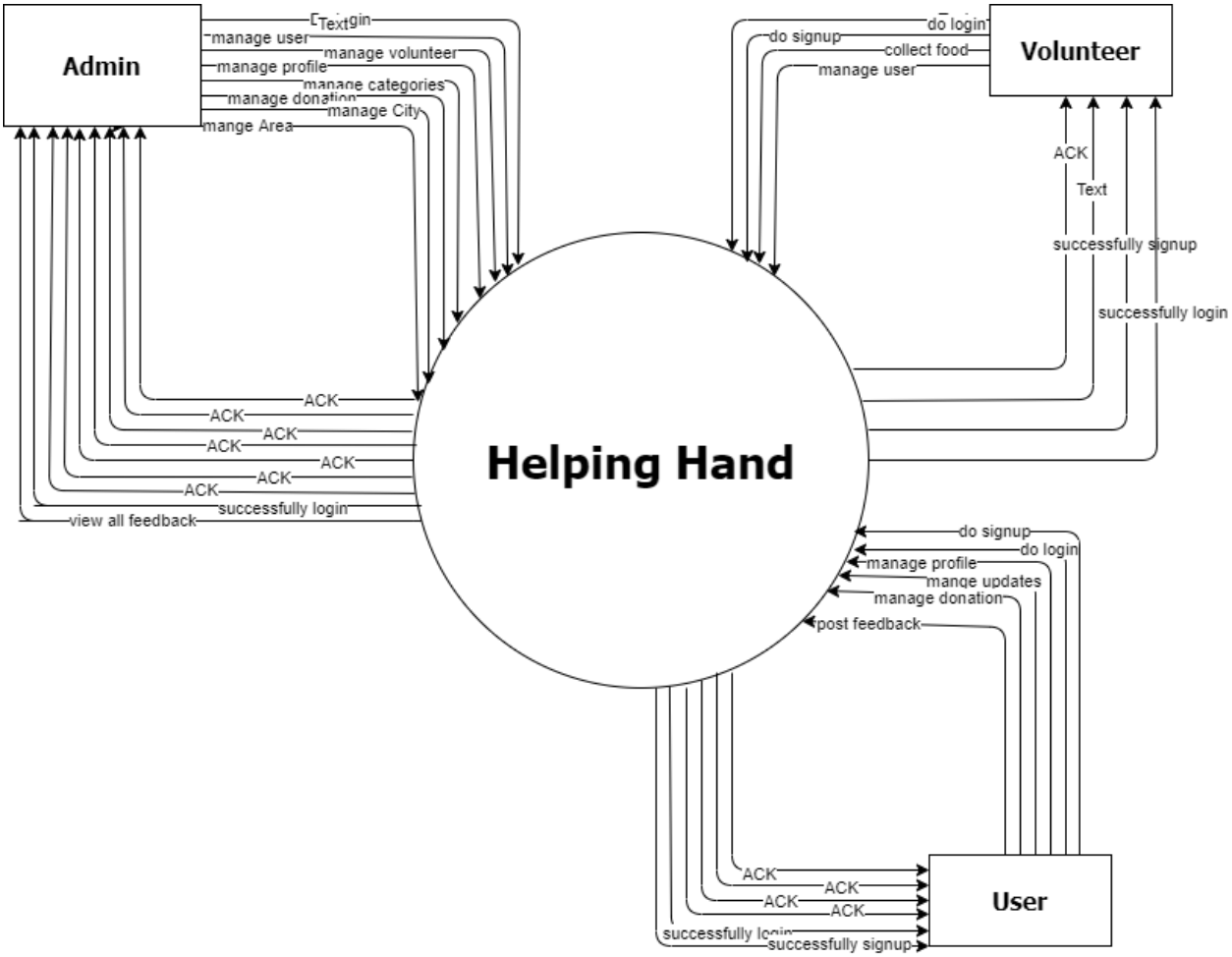


Fig 3.6.1.1: Data Flow Diagram 0 Level

3.6.2 DFD Level 1:

Admin:

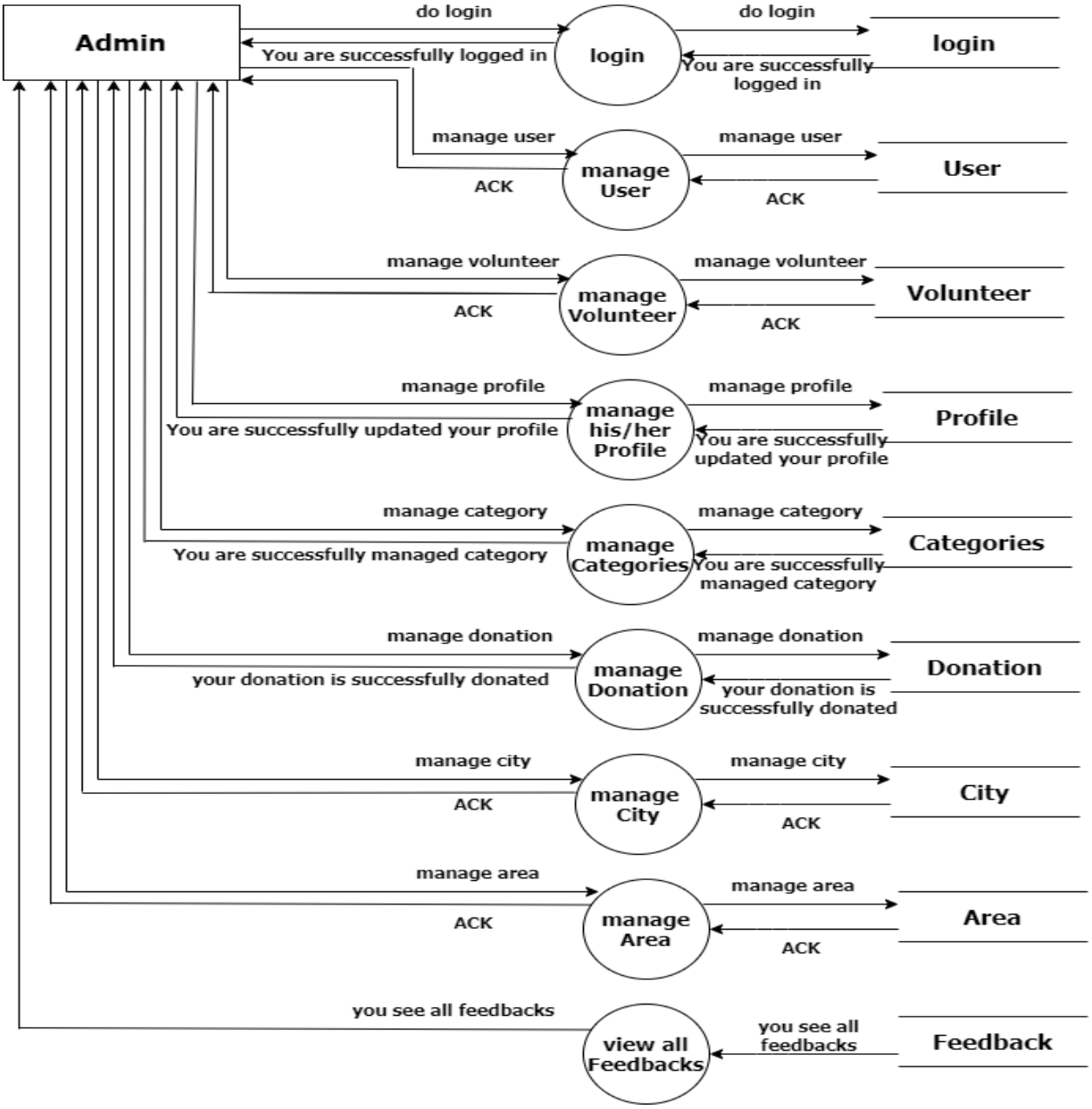


Fig 3.6.2.1: Data Flow Diagram Level -1 of Admin

User:

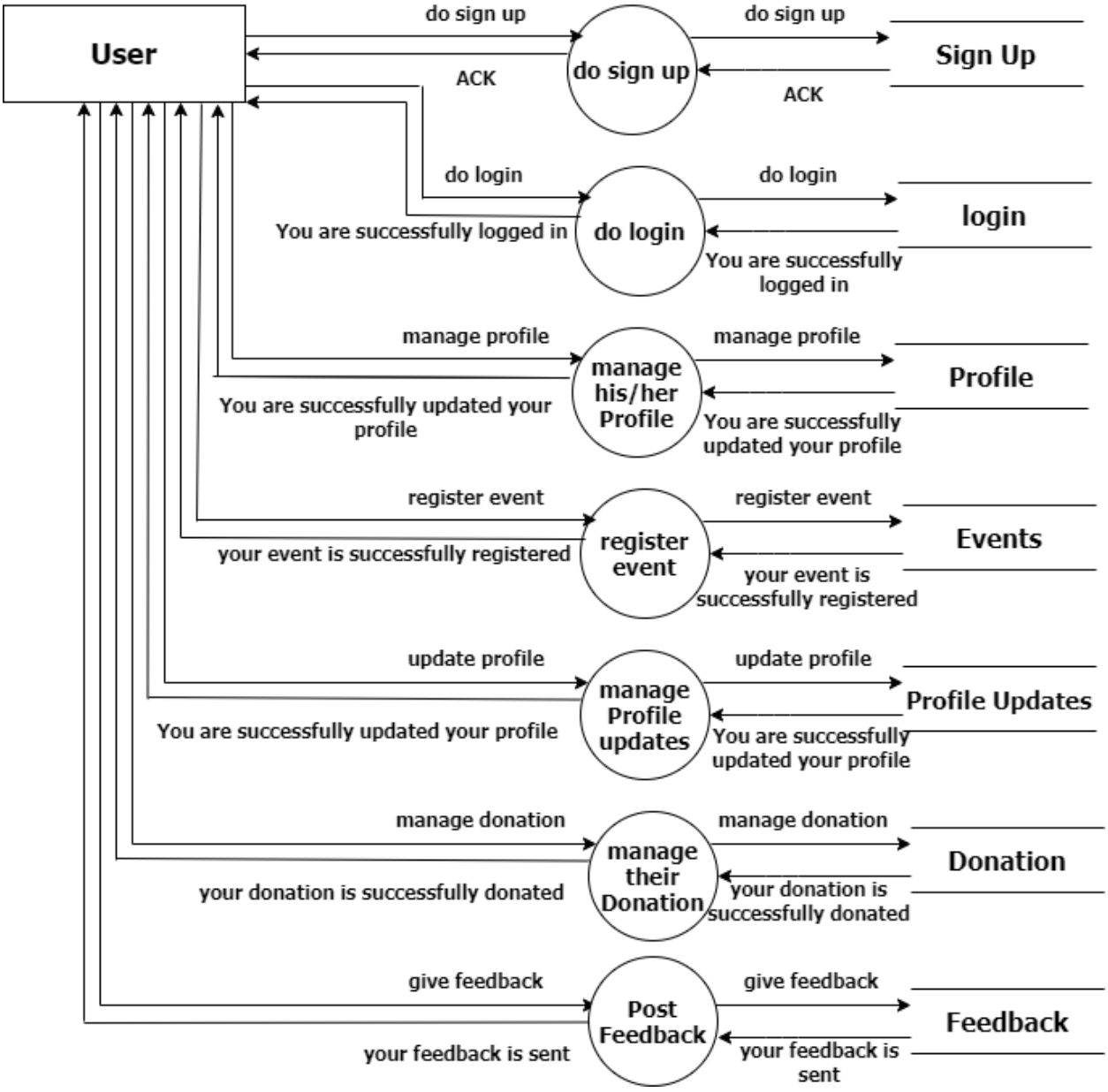


Fig 3.6.2.2: Data Flow Diagram Level -1 of User

Volunteer:

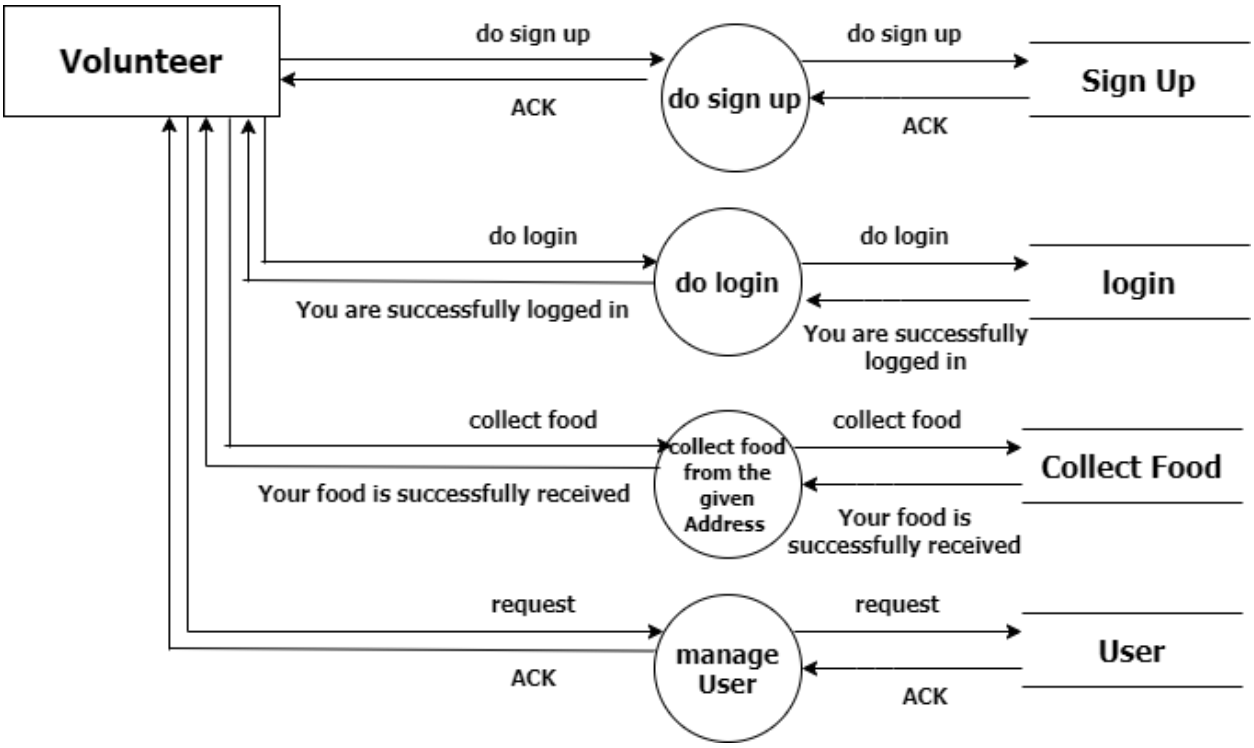


Fig 3.6.2.3: Data Flow Diagram Level -1 of Volunteer

3.7 Functions of System:

3.7.1 Use Case Diagram:

- Use case diagrams are used to gather the requirements of a system including internal and external influences.
- These requirements are mostly design requirements
- So when a system is analyzed to gather its functionalities use cases are prepared and actors are identified.
- The use case model captures the requirements of a system.
- Use cases are a means of communicating with users and other stakeholders what the system is intended to do.

Symbols used for Use case:

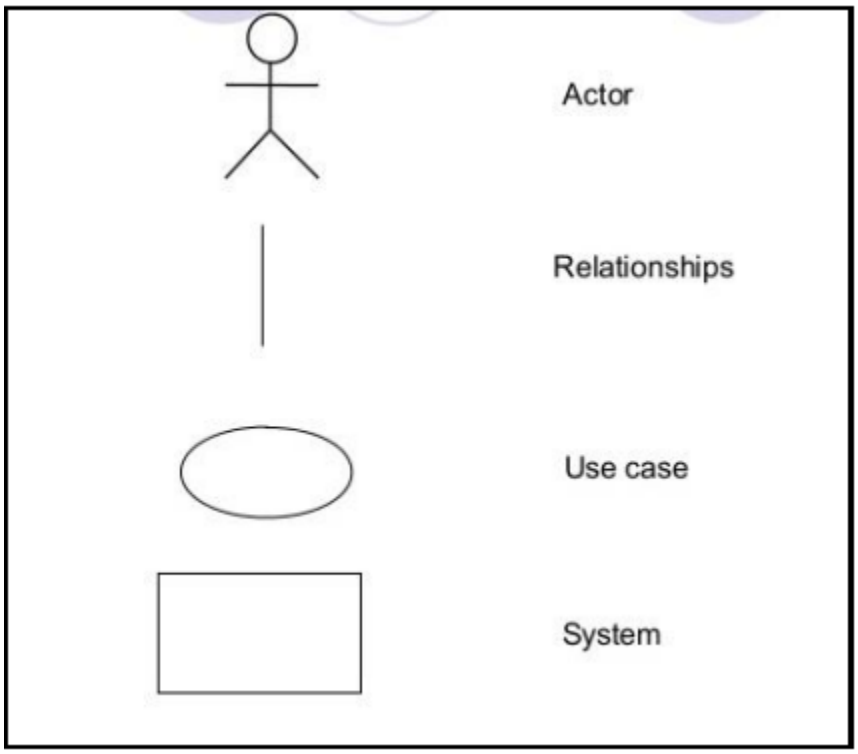


Fig 3.7.1.1: Symbols used for use case

Admin:

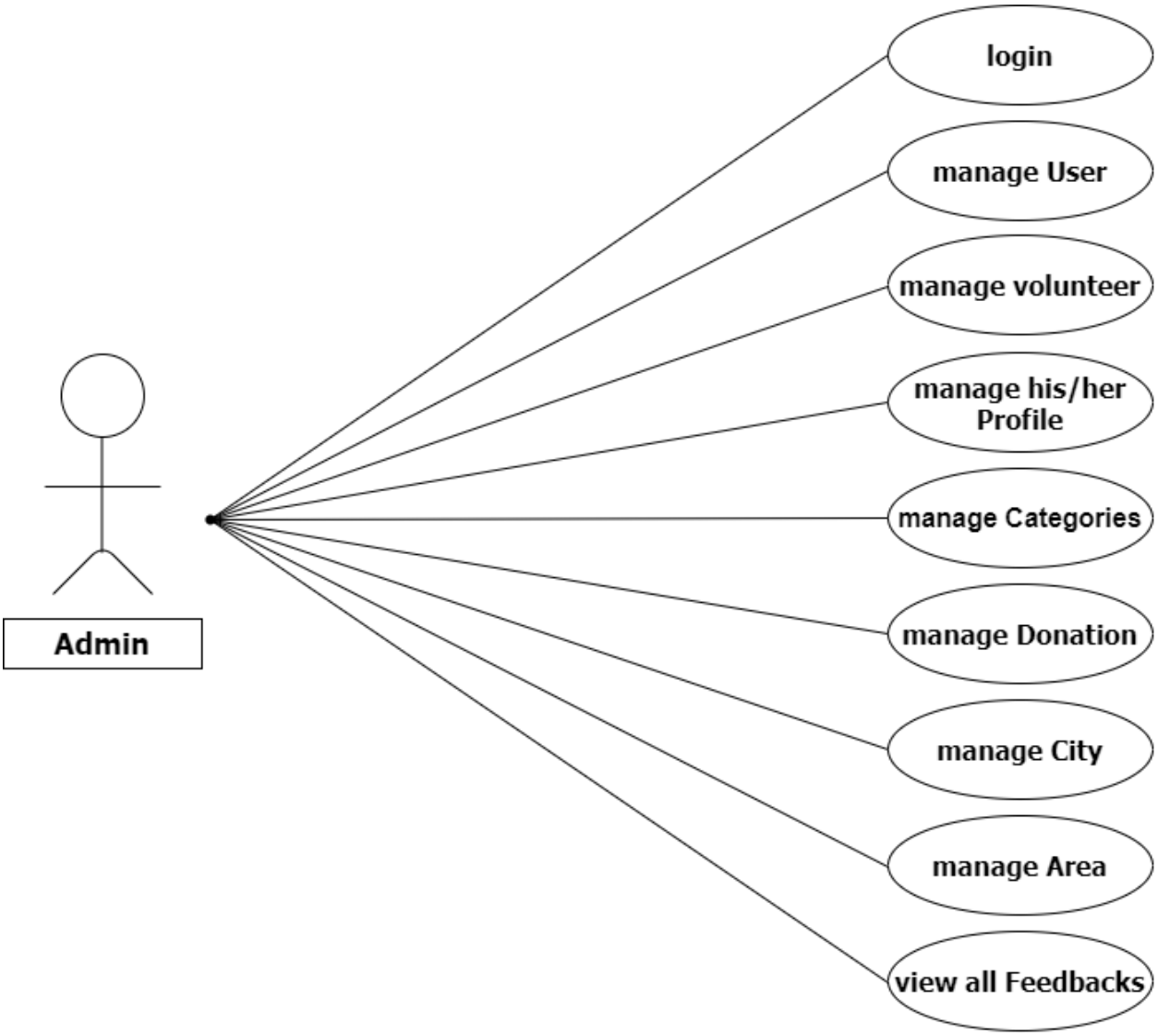


Fig 3.7.1.2: Use Case of Admin

User:

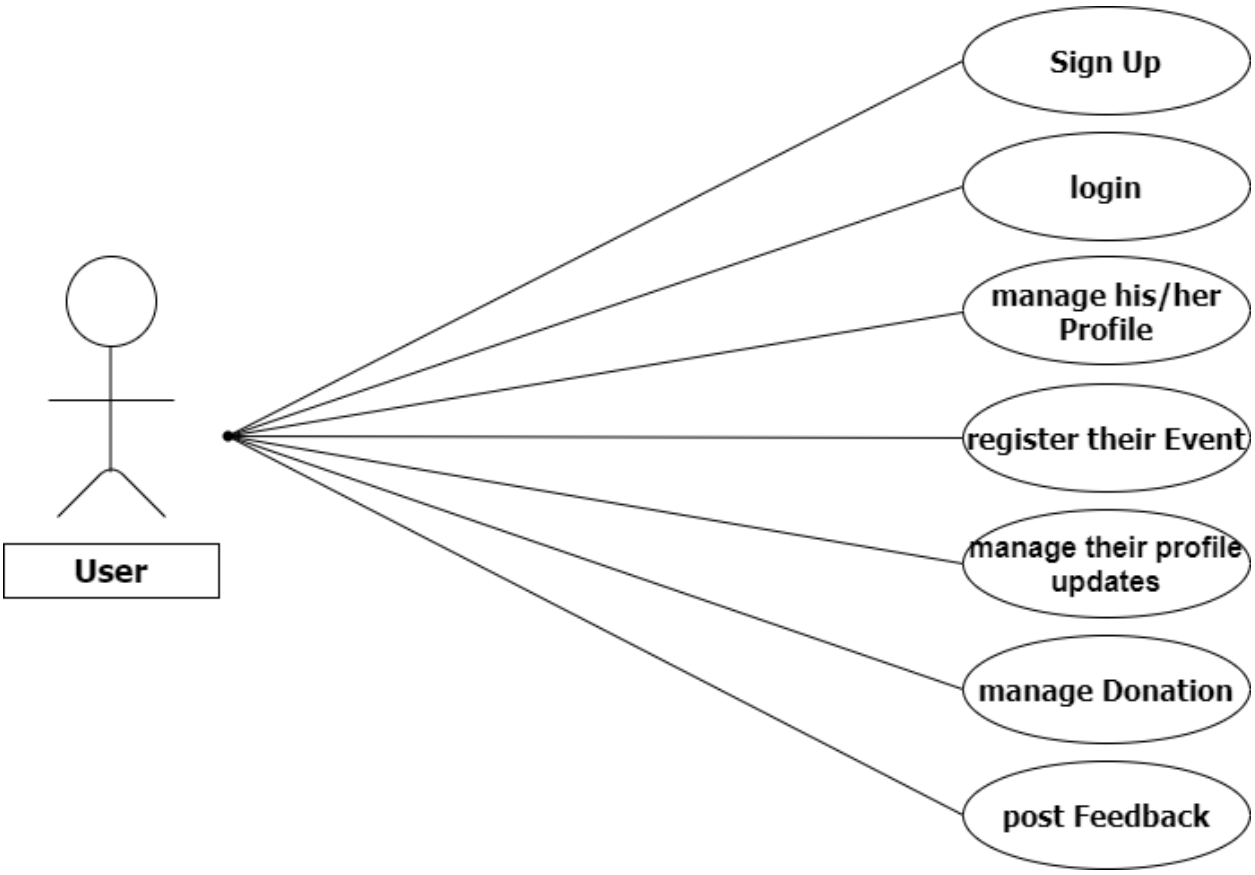


Fig 3.7.1.3: Use Case of User

Volunteer:

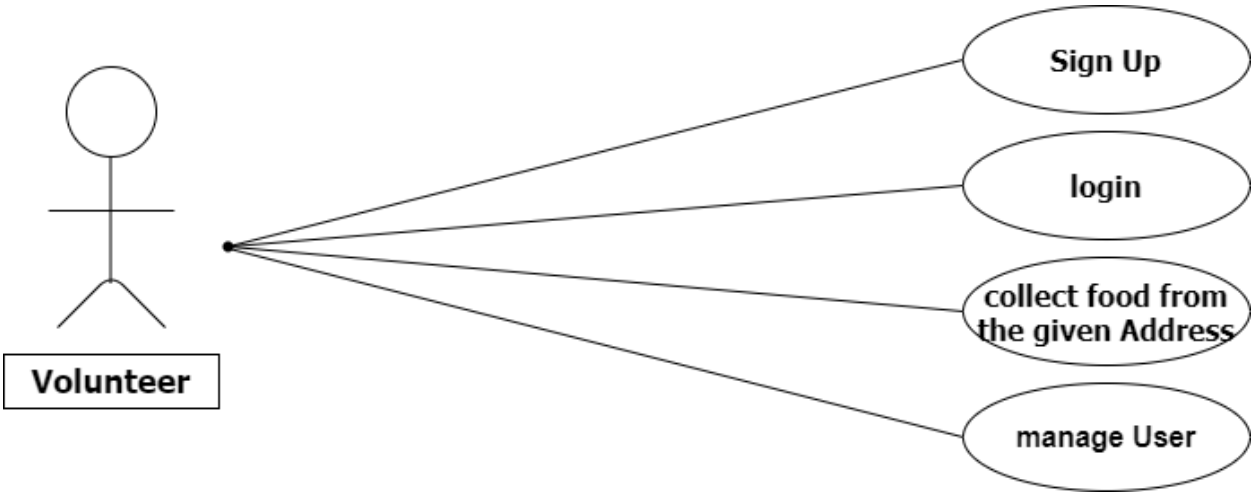


Fig 3.7.1.4: Use Case of Volunteer

CHAPTER: 4

IMPLEMENTATION

CHAPTER: 5

CONCLUSION AND FUTURE WORK

Conclusion:-

- Our project is to make the children of Ngo happy and to deliver the necessary items and food to them.
- In our website Volunteers work area wise that's why donated food or some kind of things delivered quickly. We also manage Categories.
- People will not have to go there themselves and their traveling money and time will be saved, so that they can use that time in other work.

Future work:-

- In future, We will add new categories that's why users donate more thing.
- And bring happiness to the faces of children.