



# Requirements Elicitation and Analysis II

IST 654 - Information Systems Analysis  
Professor Lu Xiao

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## **Requirement Overview**

### **Interview Details**

- Group conducted the interview in the fourth week of the class. We prepared a list of questions and designed an Interview outline prior to the decided date for the meeting.
- The first meeting was conducted at YWCA office, Syracuse with Ms. Liz Wierbinski. The meeting went on as a discussion more than an interview. It lasted for almost one hour.
- Two students (Raghav Raheja, Rajat Varshney) from the group were given the responsibility to interview the client and the other two (Niti Saluja, Ashmin Swain) were assigned to jotting down the points discussed.
- We also recorded the interview with prior permission from the client. We also got the consent form signed before the beginning of the session.
- The meeting with Ms. Wierbinski helped us understand the programs run by YWCA, it also gave us a clear understanding of what is expected from the project.
- We tried to allocate time to each topic relevant to the project, the topics were selected keeping in mind the discussion client had in the class and understanding that we required from the meeting.
- The discussion touched on topics related to the working in the organization (Hierarchy, Vision), the relevance of data with the programs, present data collected by the organization, desired state after the completion of the project, and the meaning of data for each member in the organization. The detailed outline can be seen in the annexure at the end.
- The group also had a second meeting on a call to understand the data shared by the organization. During this call, we got a better understanding of the information shared. The organization representative Ms. Wierbinski also mentioned about the physical data form formats that will be shared in some days.

## Collected Information

YWCA has been very cooperative in their efforts of sharing information throughout. They have shared many documents with us to get us acquainted with the kind of information the organization deals in. There are still some documents awaited apart from the ones that are received.

Document	Description	Status
2017 DOC Comprehensive Spreadsheet	This document gives a detailed understanding in terms of the sponsor involvement with the organization	Received
Girls Inc. Programs 2017 demographic data	This file shows the framework of what all information is captured for different programs in Girls Inc. for the year 2017.	Received
Girls Inc. total numbers 2016	Filled in data for the parameters in the framework with graphical representation that is generated by the organization for 2016.	Received
Poverty Tool 2017	This excel document shows, the basis, on which the organization justifies a family below poverty line or above poverty line.	Received
STYA Demographics Mar-Aug 2016	The document offers the demographic data (Gender and Race) that is collected for STYA.	Received Additional Data Expected
SU Intern Database	This is the work of the students from the same course who worked with the organization last year.	Received
UW Annual Report - YWCA Girls Inc. Year 3	This document shows the format of the annual report that is generated for Girls Inc. program by the organization	Received
UW Annual Report YWCA Women's Residence Year 3	The file shows the format of the annual report generated for women's residence program by the organization.	Received More Data Expected

\*Apart from the data received, additional data is expected in terms of the physical forms in which the organization collect the data.

## Observations

The team went through the data and realized that: to integrate the data, there will be a lot of things that the team will need to figure out. The first and foremost is how to design a framework that takes in data for all the programs and create visualization and the same time does not get slow.

After going through the data, team tried to think over the options to ease their process. One observation from the data was that some of the data collection parameters were common like, demographics (Race, Gender, and Area) and attendance. We tried to develop a sample model that might be helpful for the organization.

## Paper Prototype

To put in the observations by the team, we tried to map it across papers to see how the system would work.

The idea is to cover, three high level topics:

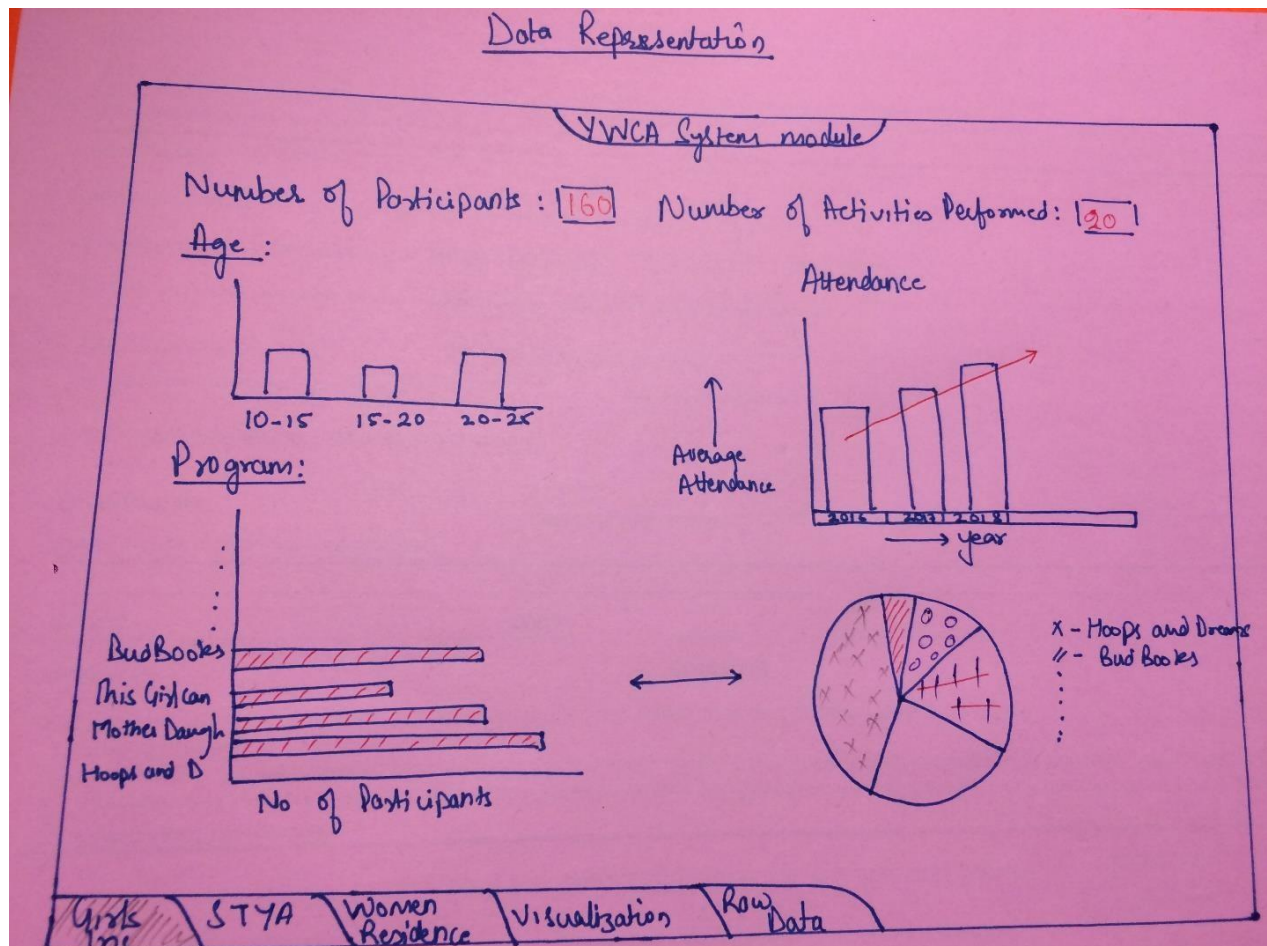
- Data Gathering
- Data Representation
- Ease of Use

Data Gathering: We thought gathering of data gets difficult when we have to manually enter the data in each excel cell. To reduce the work and ease the process of entering the data, we propose using excel forms to input data and if the data is collected through google drive, that data can just be copied in these excel sheets. The excel form could something like this:

Uses Form in Excel

Data Gathering		
Name:	<input type="text"/>	
Age:	<input type="text"/>	
Race:	<input type="text"/>	
Program:	<input type="text"/>	
Zipcode:	<input type="text"/>	
Girls Inc. / STYA / Women Residence		
Event Date:	<input type="text"/>	<input type="text"/>
Total Participant:	<input type="text"/>	
Activity Performed:	<input type="text"/>	
Attendance		
Date:	<input type="text"/>	<input type="text"/>
<input type="checkbox"/> Present	<input type="checkbox"/> Absent	

Data Representation: Our focus is on this step as majority of the work is being done in this step. The representation of the data becomes difficult considering the programs of the organization. It becomes really challenging to display the data that is so extensive in a way that is useful and easily understandable by the organization. We thought of creating common table for subprograms in a program, and a common attendance sheet for all the programs. This would help as it would reduce the number of sheets in the worksheet, thereby making the file light.



Ease of use: To ease the organizations move to the new tool, we plan to create a training manual that would explain the step by step working of the system. This training module will cover the screenshots from the actual project, so that the system can be understood just by reiterating the steps as shown in the module.

### **Requirements Representation**

After having the discussion and going through the documents sent by the organization, we all brainstormed to figure out the major events in the whole process. We listed down all the events in a chronological order. It can be depicted as:

- 1) Registering a new beneficiary and collecting his/her details on a physical form.
- 2) Entering the details of all the beneficiaries into the system.
- 3) Receiving requirements from the funder and the Executive Director for data.
- 4) Generating graphical visualizations to depict the progress of the organization
- 5) Submitting the report to the funder or the Director

Additionally, we have added one more activity that is missing and is important for the organization i.e. training the existing employees using training module.

- 6) Using Training module

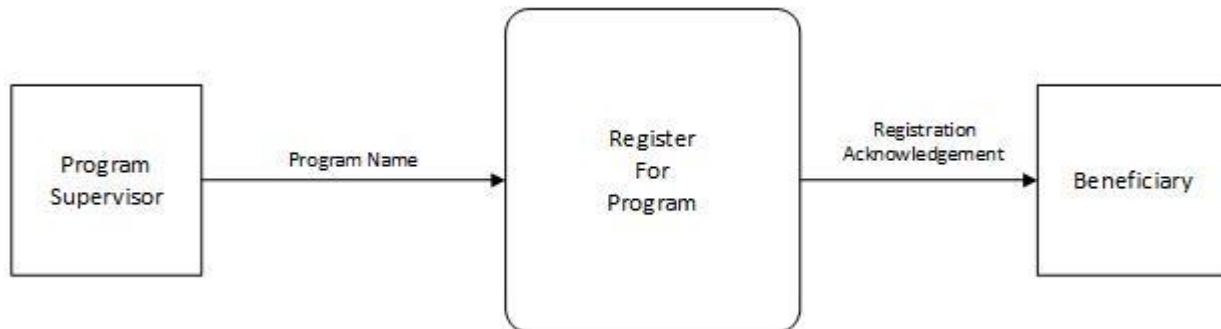
The list mentioned above covers the overall working of the organization in terms of the tasks that are necessary for the organization in our perspective. When we tried to study these activities, we could put them in different baskets of:

- 1) Data Gathering (Register beneficiary and data entry in the system)
- 2) Data Representation (Creating graphical representation for the reports from the metrics)
- 3) Training Module (Training the employees about the usage of the system)

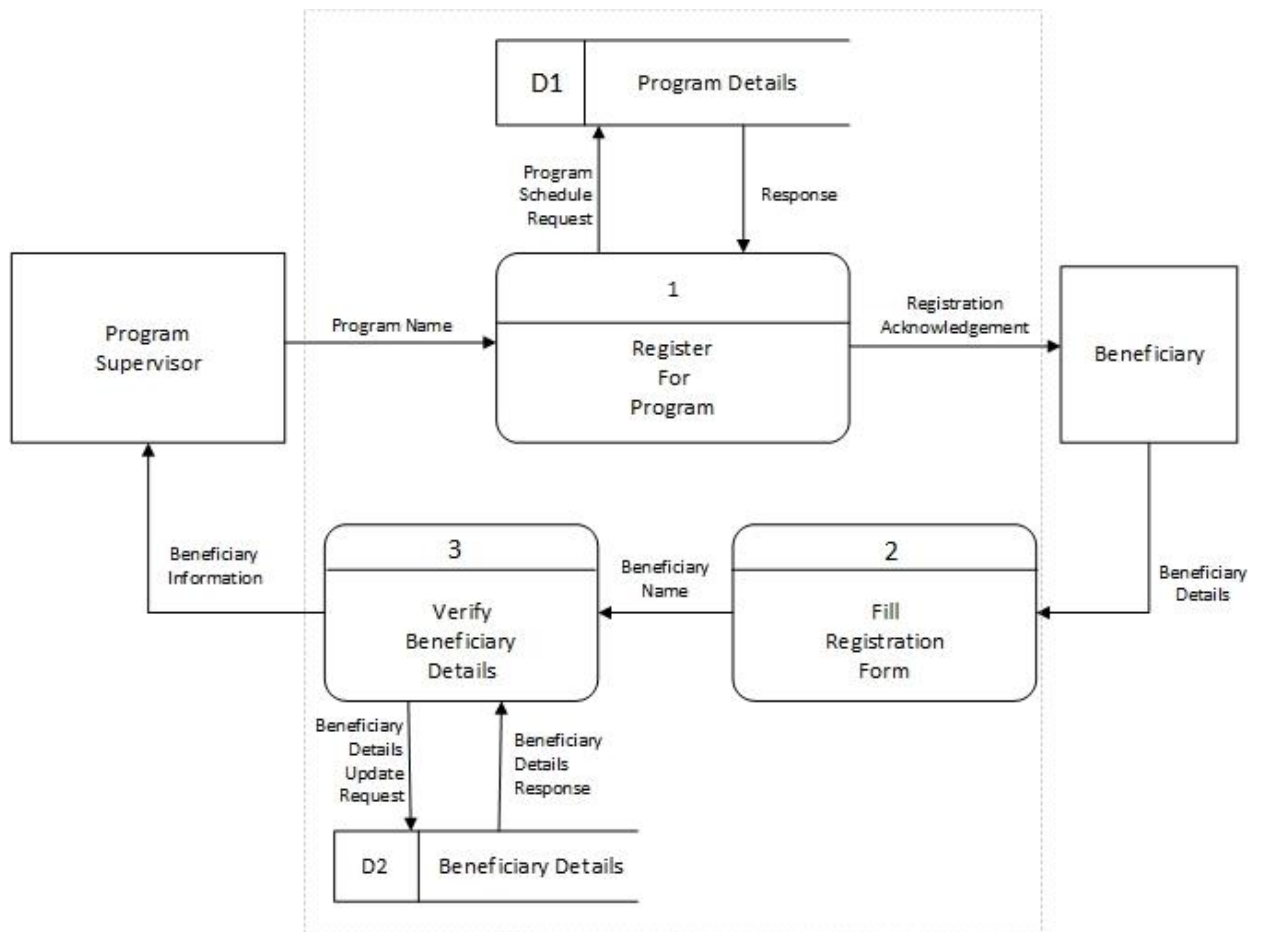
Based on the use cases, we have represented the below three Data Flow Diagrams and an Integrated Data Flow Diagram depicting all the three flows:

## Data Gathering

### Context Diagram



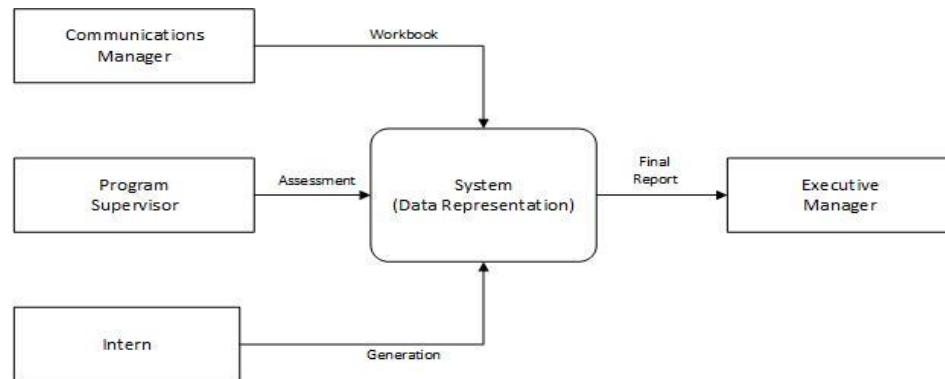
### Level 0 Data Flow Diagram



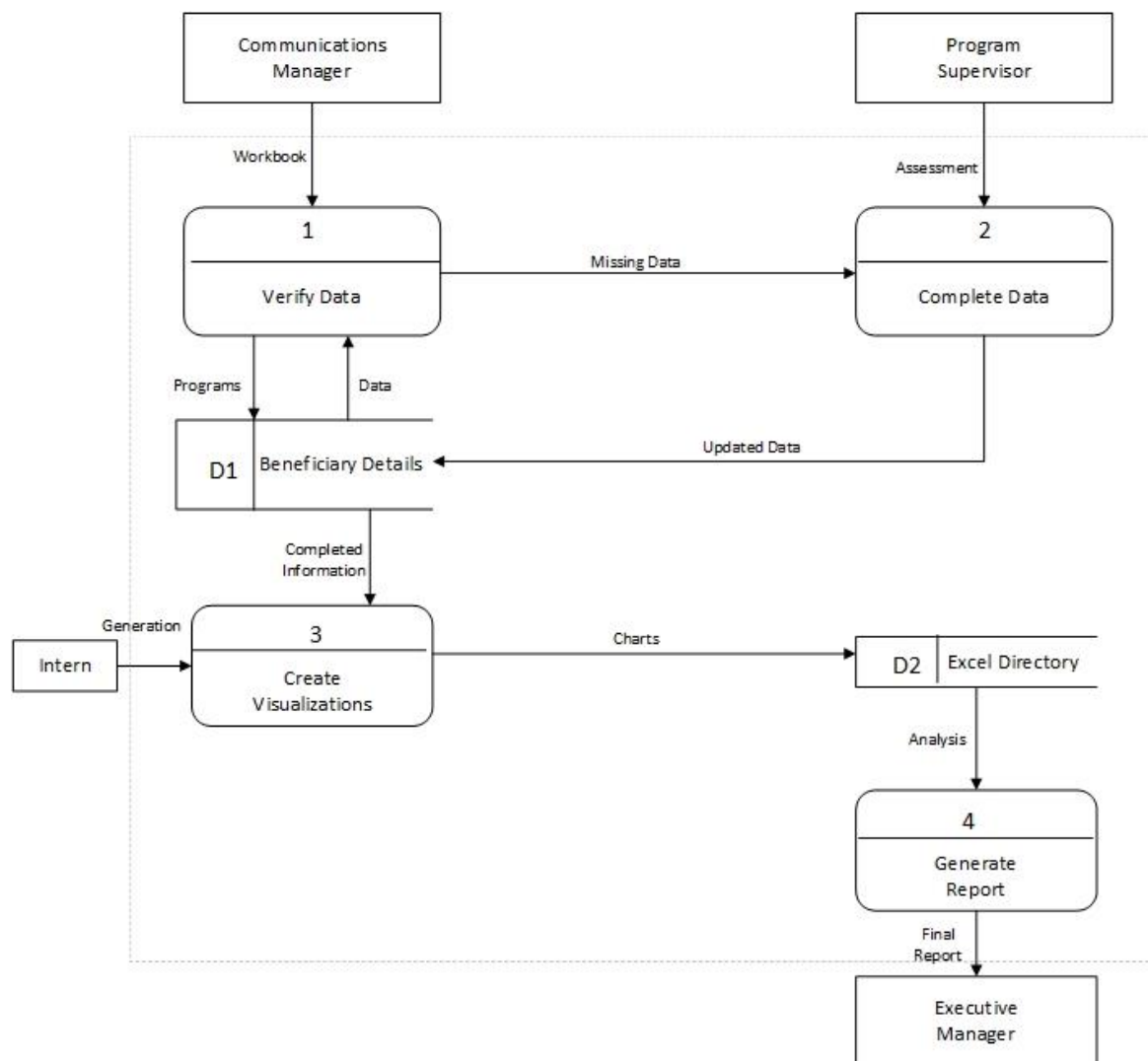


## Data Representation

### Context Diagram

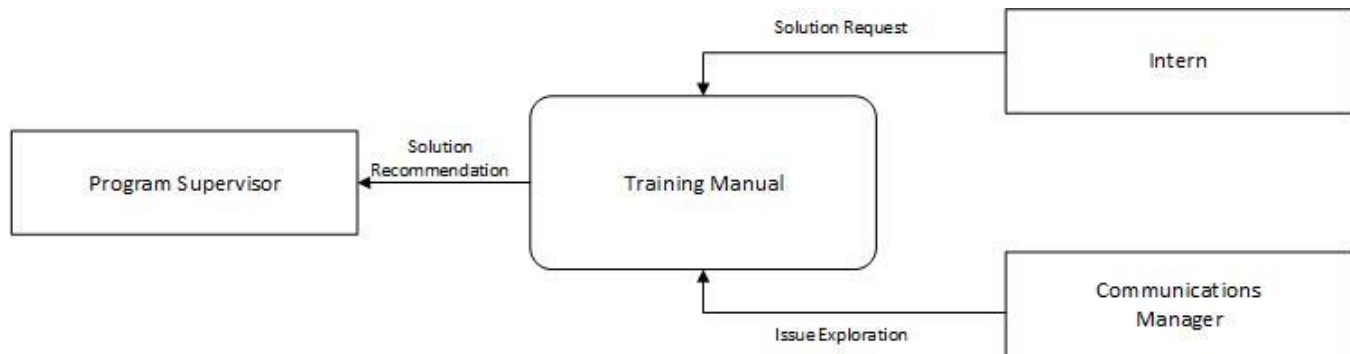


### Level 0 Data Flow Diagram

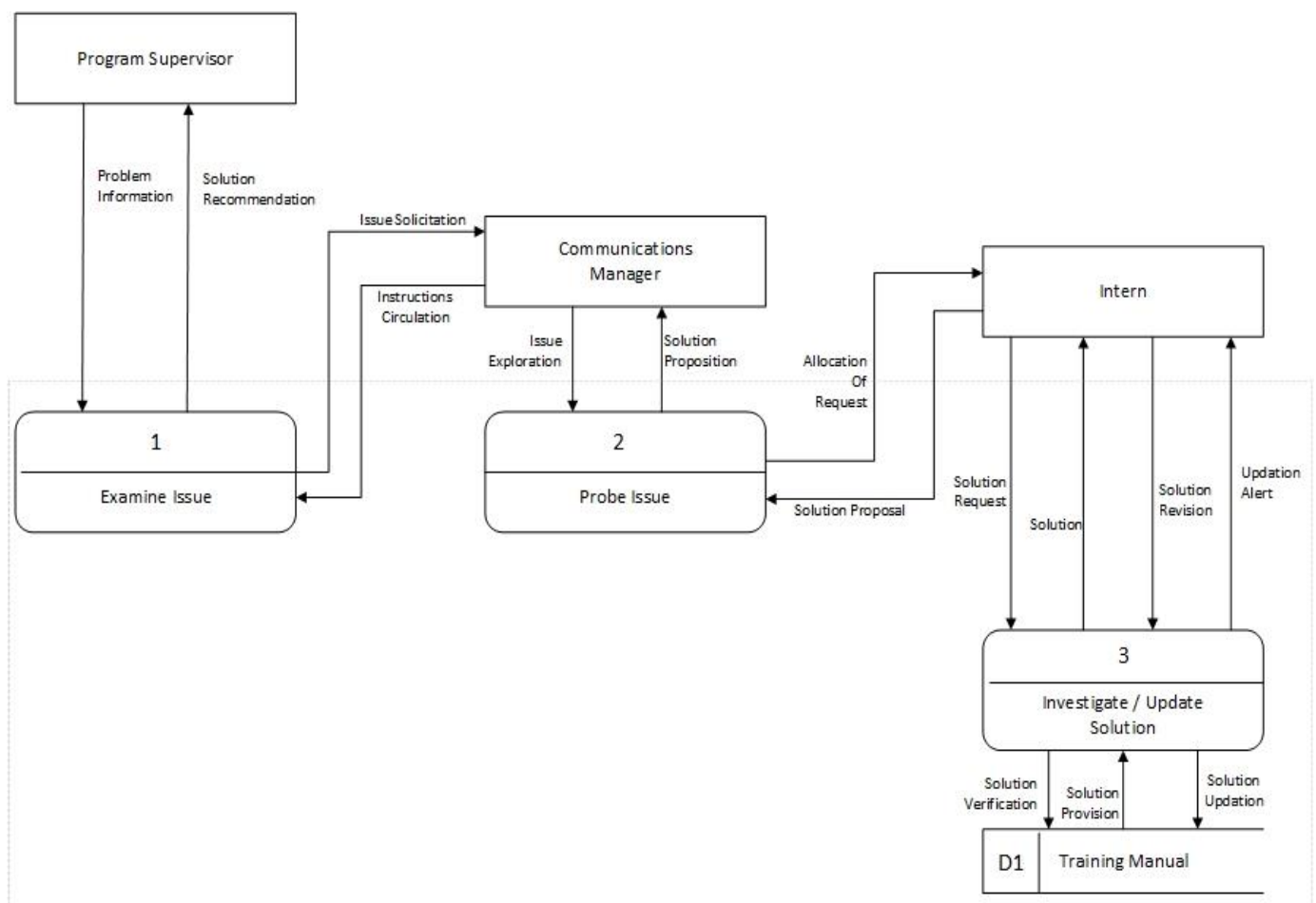


## Training Module

### Context Diagram

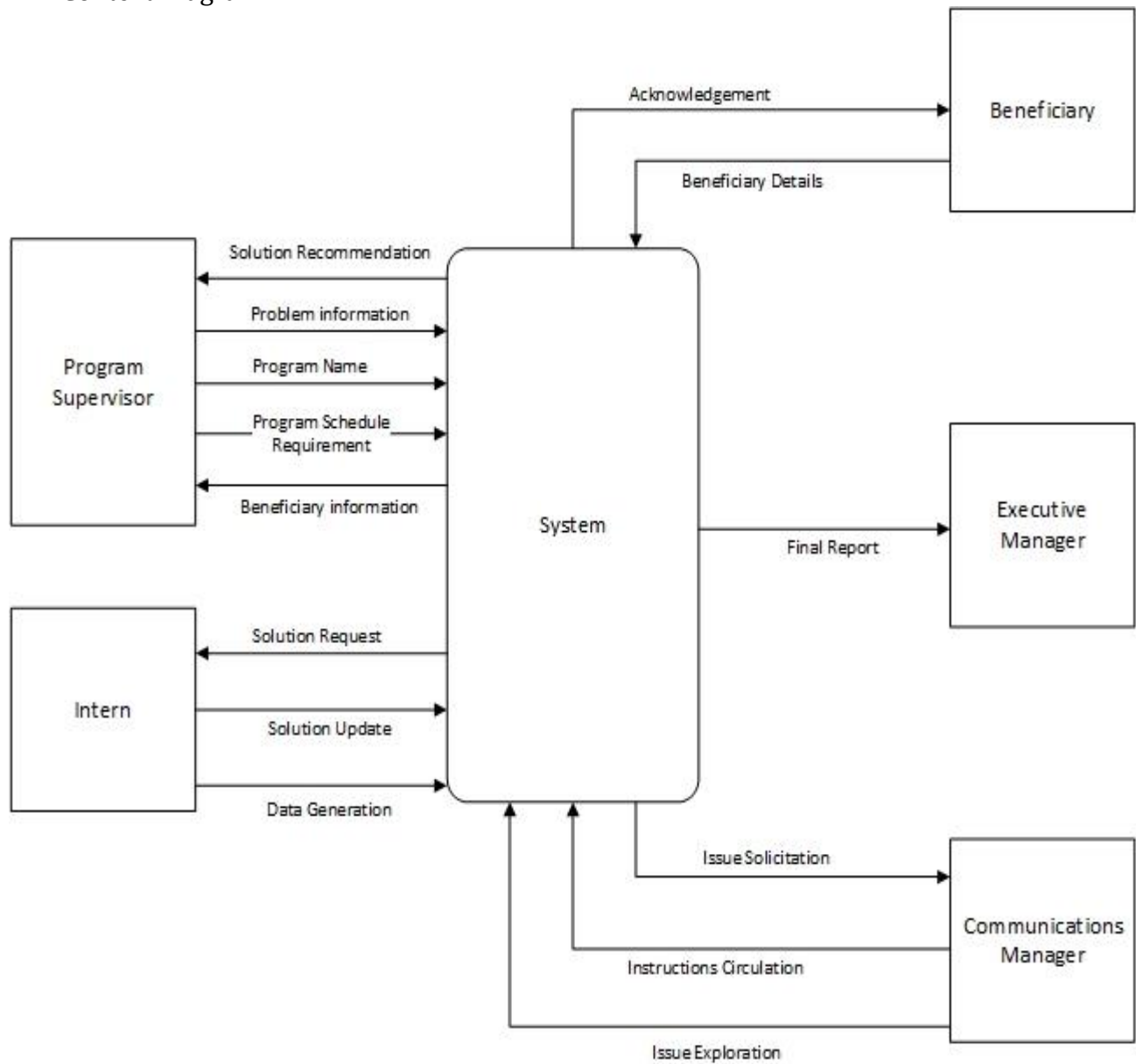


### Level 0 Data Flow Diagram

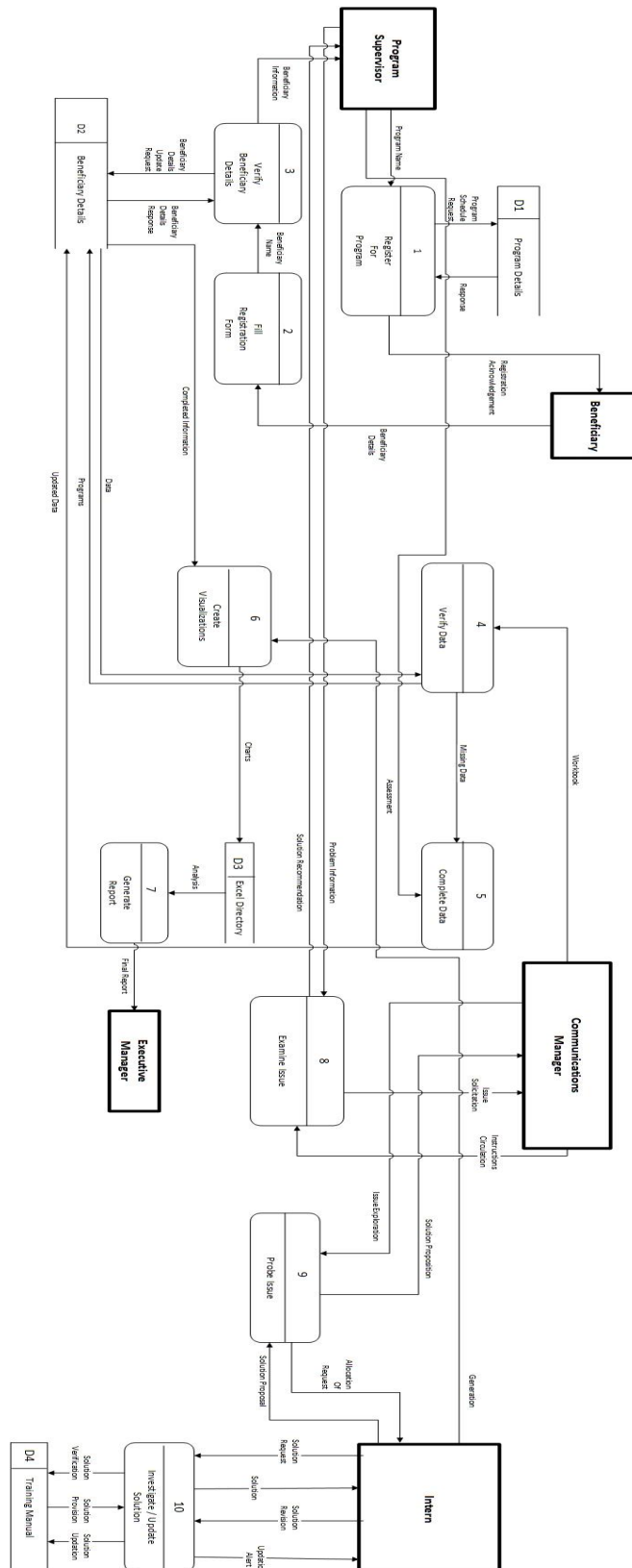


## Integrated Data Flow Diagram

### Context Diagram



## Level 0 Data Flow Diagram



## Annexure

### Interview Outline

Interviewee: Ms. Liz Wierbinsk

Interviewer: Raghav and Rajat

Location/Medium: YWCA OFFICE

Appointment Date: 09/22/2017

Start Time: 12:00 PM

End Time: 12:45 PM

#### Objectives:

1. Understand the working of the organization
2. Get more clarity on the expectations from the project
3. Develop a timeline of the process

#### Reminders:

1. Ask who uses the data
2. What is the data used for?

#### Agenda:

Introduction

Clarity on the project

Overview of Interview

1. About the Organization
2. Present State of data
3. Current Problems
4. Desired State
5. Objective from data
6. Success Metrics
7. Identify who will use it

Summarize the understanding

Questions from Interviewee

Close

#### Approximate Time:

4 min

3 min

3 min

2 min

2 min

2 min

2 min

2 min

2 min

3 min

3 min

1 min

#### About the Organization

1. What all activities does the organization perform?
2. How many members are there?
3. What is the hierarchy/How does information flow in the organization?
4. Any specific incident that you would want to share?

#### Present State of data

1. Who uses this data?
2. What form of data is collected currently?
3. How is it collected?
4. How do you use this data?

### Current Problems

1. What was the most frustrating moment interfacing with the system?
  2. What do you think about the current system?
  3. What problems should the new system solve?
  4. Do you see any areas where data gathering is difficult?
- 

### Desired State of Data

1. How would you like information to be captured?
  2. What functionalities do you need from the system?
  3. Who will have access to the data?
  4. Is the decision metric already decided?
- 

### Objective from Data

1. What is the reason behind getting this system?
  2. What is expected from the system?
  3. How is the data supposed to look after capturing?
  4. How is the data projected? (Tables, graphs, and so on)
- 

### Success Metrics

1. How is the metrics decided?
  2. What is to be accomplished to make this system a success?
- 

### Identify who will use it

1. Identify the users/administrator?
  2. How much technical knowledge do they have?
  3. How much are they open to learn?
-