

Requirement Specification

Requested by: Ms. Mary Partridge-Brown
Ms. Roberta Sandler
Co-Directors
Grassroot Givers' Community Store

The logo for SMARK Solutions is centered on the page. It features the word "SMARK" in a bold, uppercase, sans-serif font, followed by "Solutions" in a lowercase, sans-serif font. The text is contained within a light blue, horizontally-oriented oval shape. Below the main text, the tagline "Be intuitive. Be efficient. Be SMARK." is written in a smaller, lowercase, sans-serif font.

SMARK Solutions

Be intuitive. Be efficient. Be SMARK.

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**S.W.I.F.T. (Simple Web Inventory for Tracking)
Requirement Specification**

Contents

1.	Product Overview and Summary	4
2.	Development and Production Environments	4
2.1.	Development Environment	4
2.2.	Operating Environment	4
2.3.	Maintenance	4
3.	Use Case Narratives	5
3.1.	Volunteer	5
3.2.	Director	5
4.	UML Use Case Diagram	6
4.1.	UML Use Case Legend	6
4.2.	UML Use Case Diagram	7
5.	Data Flow Diagrams	8
5.1.	Data Flow Legend	8
5.2.	Context Diagram	9
5.3.	Level 0 Diagram	10
5.4.	Level 1 Diagrams	11
5.4.1.	Log In	11
5.4.2.	Add Customer	12
5.4.3.	Search Customer	13
5.4.4.	Check Out	14
5.4.5.	Record Donation	15
5.4.6.	Edit Customer/Donor	16
5.4.7.	Add Volunteer	17
6.	Prototypes	18
6.1.	Prototype for Donor Receipt	18
6.2.	Prototype for Add Customer	19
6.3.	Prototype for Checkout	20
7.	Functional Requirements Inventory	21
7.1.	Volunteer	21
7.2.	Director	21
8.	Non-Functional Requirements	21
9.	Exception Handling	22

10.	Implementation Priorities	22
11.	Foreseeable Modifications and Enhancements	22
12.	Testing Requirements	22
13.	Acceptance Criteria	22
14.	Appendices	23
14.1.	Appendix A: Cross Reference Index	23
14.2.	Appendix B: Sources of Information	23
14.3.	Appendix C: Glossary of Terms	23
14.4.	Appendix D: Timeline	24

1. Product Overview and Summary

Grassroot Givers is a non-profit organization devoted to bridging the gap between those in need and those seeking to donate. One of the ways in which this is achieved is through the Community Store within their facilities at the GWU Center in Albany, NY. The mission of this store is to create a boutique-like atmosphere so that customers can “shop with dignity”. Co-directors of Grassroot Givers, Mary Partridge-Brown and Roberta Sandler, would like to develop an easy to use, web-based application to supplement their everyday functions of the store. S.W.I.F.T. (Simple Web Inventory For Tracking) is a web-based application that will allow Grassroot Givers to track incoming items through the creation of donor and customer profiles, database searching, and receipts.

2. Development and Production Environments

2.1. Development Environment

Windows Computer

Operating System: Windows 7 Enterprise (x64) Service Pack 1

Processor: Intel Core i5-3470 @ 3.20 GHz

Ram: 6GB

HDD Capacity: 499 GB

Macintosh Computer

Operating System: OS X Lion 10.7.5

Processor: Intel Core i5 @ 2.5 GHz

Ram: 4GB

HDD Capacity: 378 GB

2.2. Operating Environment

This information has yet to be determined by the client. This application will be web-based, so it will operate from an off-site server. The application is designed to be as simple and easy to operate as possible, to allow anyone to easily use it.

2.3. Maintenance

Maintaining this application only involves ensuring that the information is correct and up-to-date, as server maintenance is completed by the third party that houses the servers.

3. Use Case Narratives

3.1. Volunteer

The volunteer will login on to S.W.I.F.T. using a unique username and password. The volunteer will have access to a page where the volunteer will choose to either enter a new customer, look up the history of a specific customer, check out a specific customer, or take in a donation. If the volunteer wishes to enter a new customer into the database, there will be a form for creating a customer profile. The form will require the volunteer to enter the name of the customer, address of the customer, number of family members in the customer's household including each member's age, and other agencies which the customer is affiliated with, additionally the date that the profile was created will be stored in the customer's profile. The volunteer will have the ability to search the customer records by name and address to view the customer's profile. The volunteer will have the ability to search the inventory to see the quantity of the items that are in high demand. The volunteer will be able to check out customers, during which the customer's history within the past three months will be reviewed. If the customer is eligible to take the items the customer has selected, the volunteer will record and store the items in the customer's profile along with the date of the transaction, and the name of the volunteer doing the checkout. The volunteer will have the ability to record a donation, in which the volunteer will document the number of bags and boxes being donated and the contents of the packages. The volunteer will have the ability to create a receipt for the donation by completing a form indicating the items donated and their value. Multiple volunteers will be able to be logged in at once.

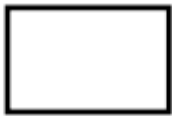
3.2. Director

The director will login on to S.W.I.F.T. using a username and password specific to being a director. The director will have access to a page where the director will choose to either enter a new customer, look up the history of a specific customer, check out a specific customer, edit and delete customer information, add a new volunteer, or take in a donation. If the director wishes to enter a new customer into the database, there will be a form for creating a customer profile. The form will require the director to enter the name of the customer, address of the customer, number of family members in the customer's household including each member's age, and other agencies which the customer is affiliated with, additionally the date that the profile was created will be stored in the customer's profile. The director will have the ability to search the customer records by name and address to view, edit, or delete the customer's profile. The director will have the ability to search the inventory to see the quantity of the items that are in high demand. The director will be able to check out customers, during which the customer's history within the past three months will be reviewed. If the customer is eligible to take the items the customer has selected, the director will record and store the items in the customer's profile along with the date of the transaction, and the name of the director doing the checkout. The director will have the

ability to create a new volunteer account where the director will submit a form with the volunteer's information to S.W.I.F.T.. The director will have the ability to record a donation, in which the director will document the number of bags and boxes being donated and the contents of the packages. The director will have the ability to create a receipt for the donation by completing a form indicating the items donated and their value. Multiple directors will be able to be logged in at once.

4. UML Use Case Diagram

4.1. UML Use Case Legend



System Boundary: where uses will interact between both uses inside the system and actors outside the system



Use Case: the activities that actors interact with outside the system



Actor: Use Case: human or non human users that interact with the system.



Participation line: lines that connect uses and actors to show what actors participate in certain uses

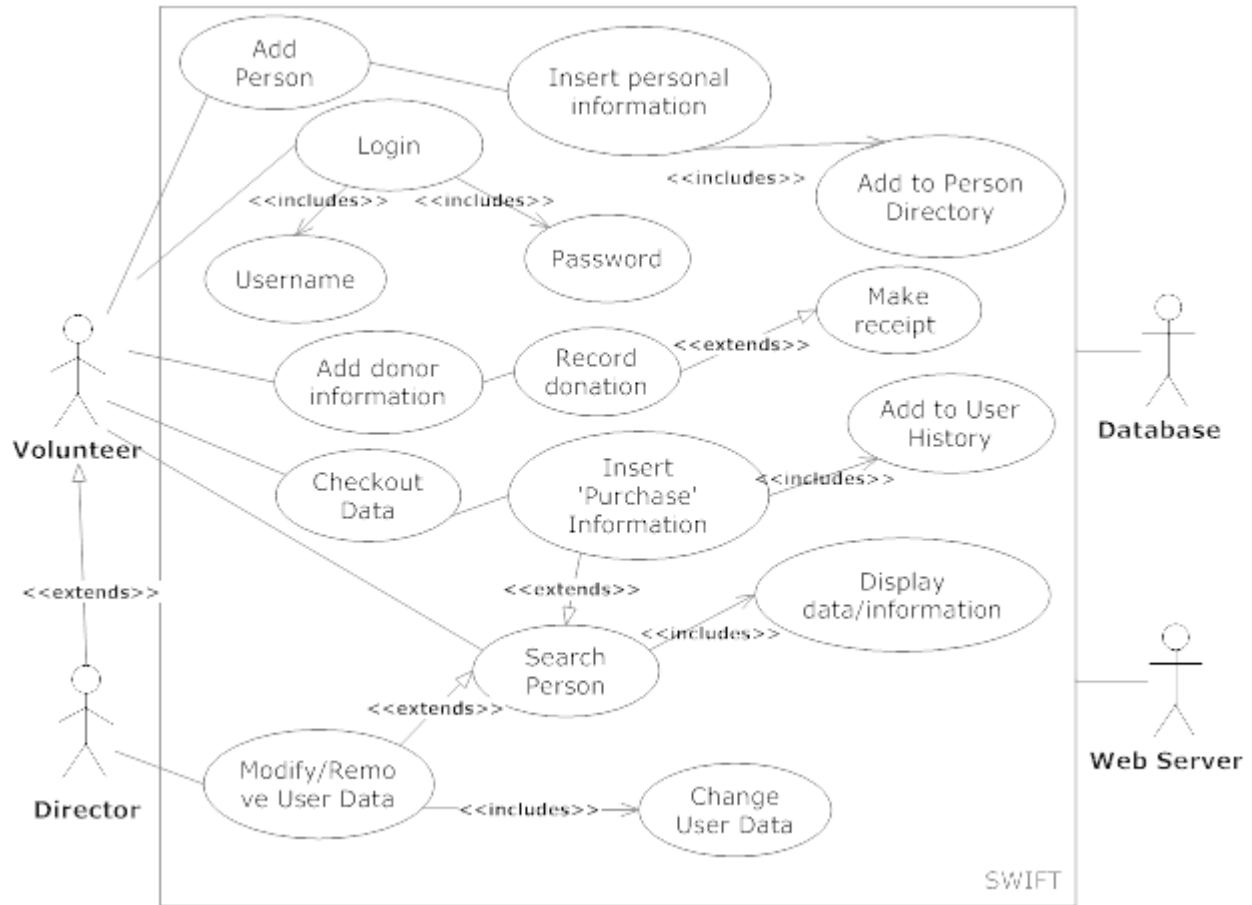


Extends: used to represent items that may be included in a use



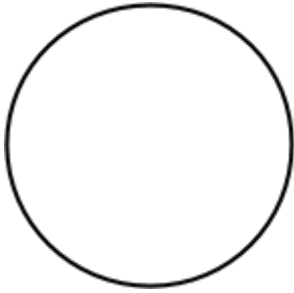
Includes: used to represent items that must be included in a use

4.2. UML Use Case Diagram



5. Data Flow Diagrams

5.1. Data Flow Legend



Process: Functions that are able to receive, modify, and output data.



Entity: Either a source of input or output of data in the system.



Data Store: A place where data is stored permanently or temporarily.

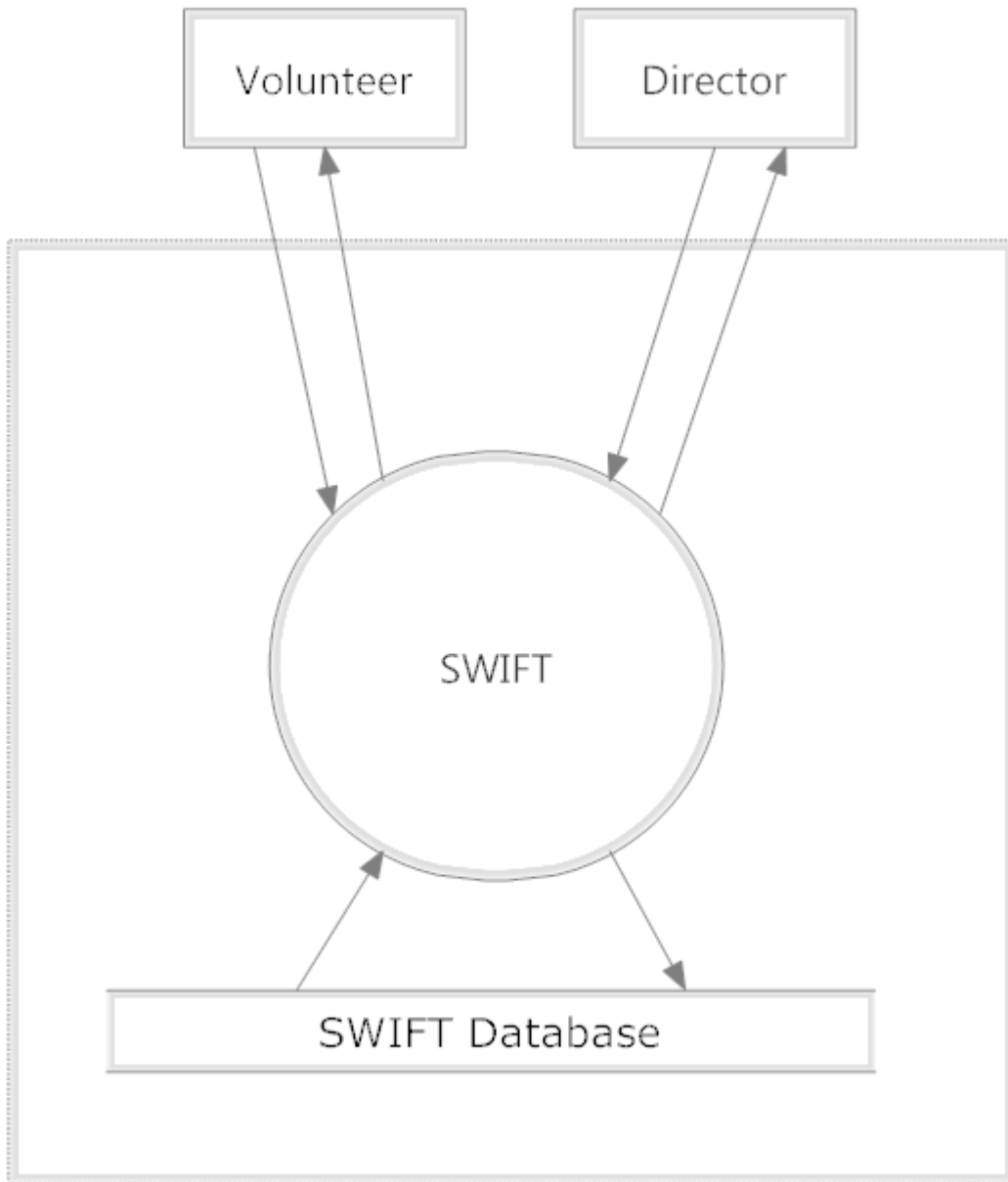


Data Flow: Represents the movement and direction of data.

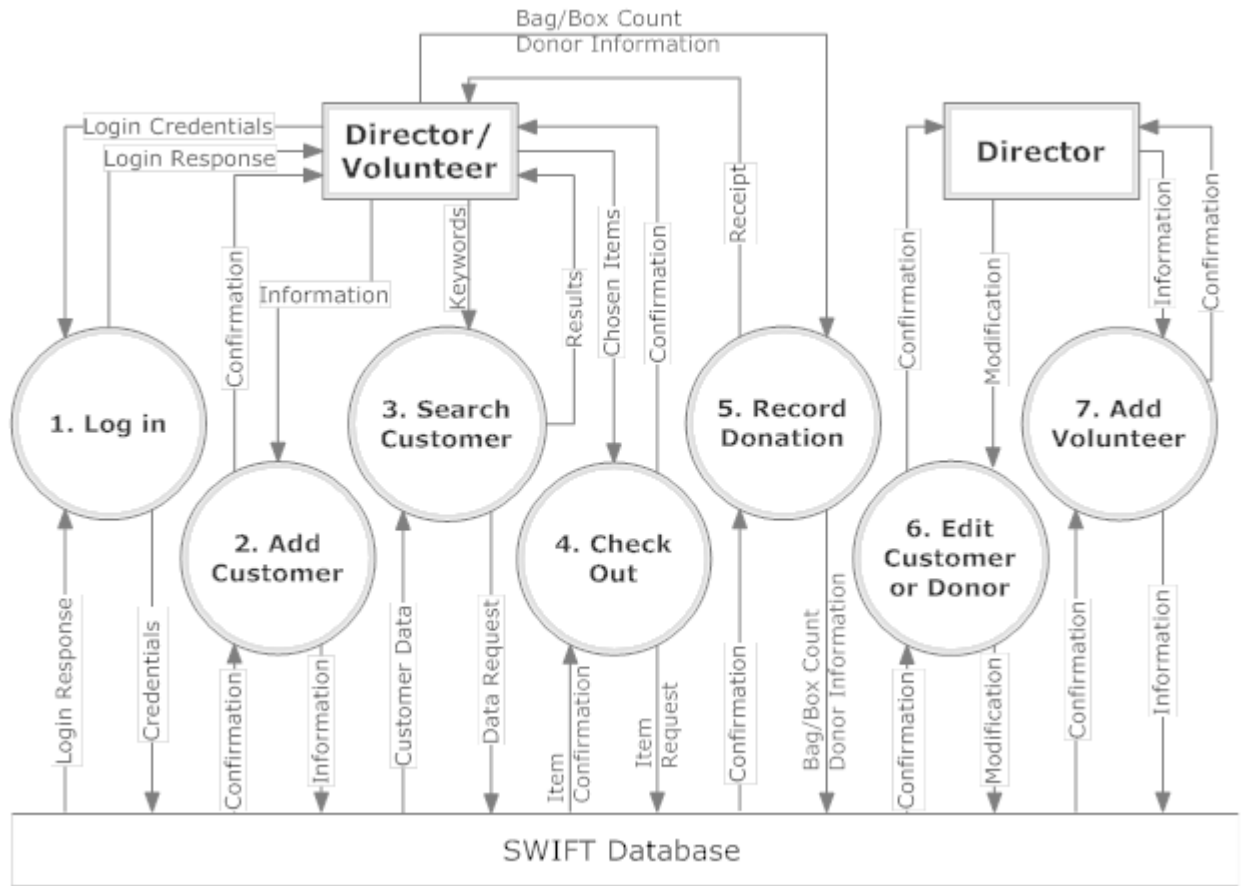


System Boundary: represents the interactions which occur between the entities outside the system and the data stores and the system processes.

5.2. Context Diagram

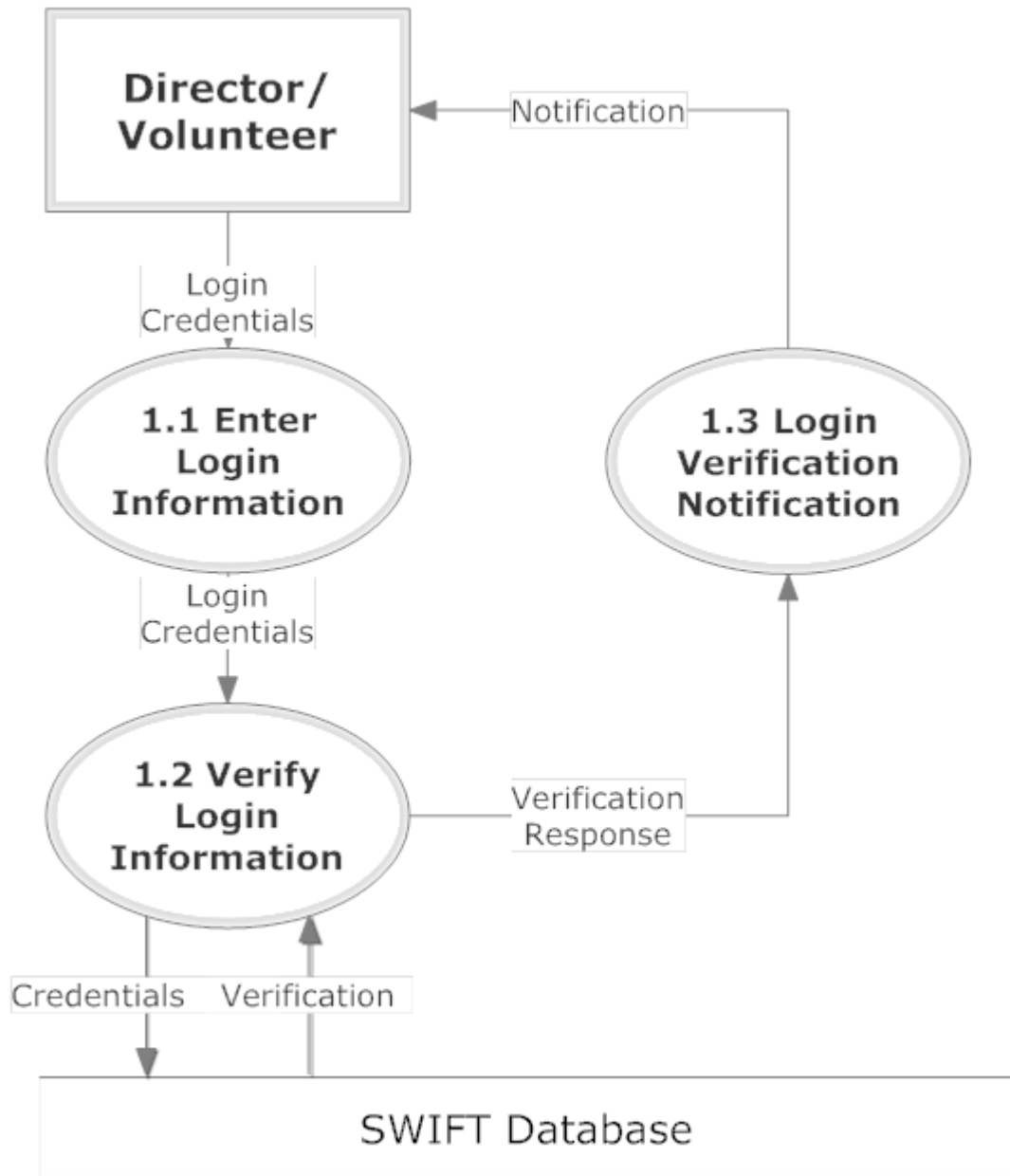


5.3. Level 0 Diagram

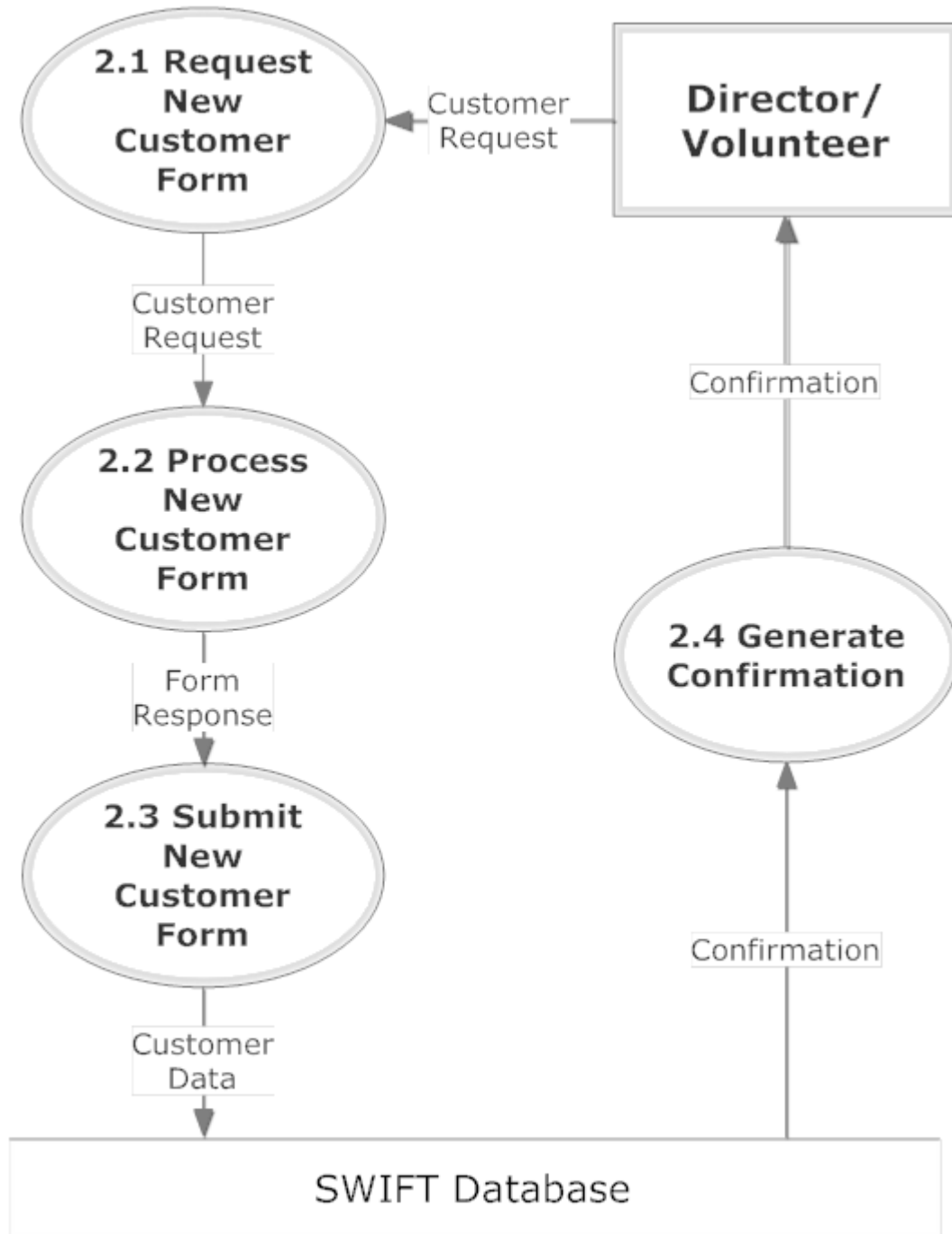


5.4. Level 1 Diagrams

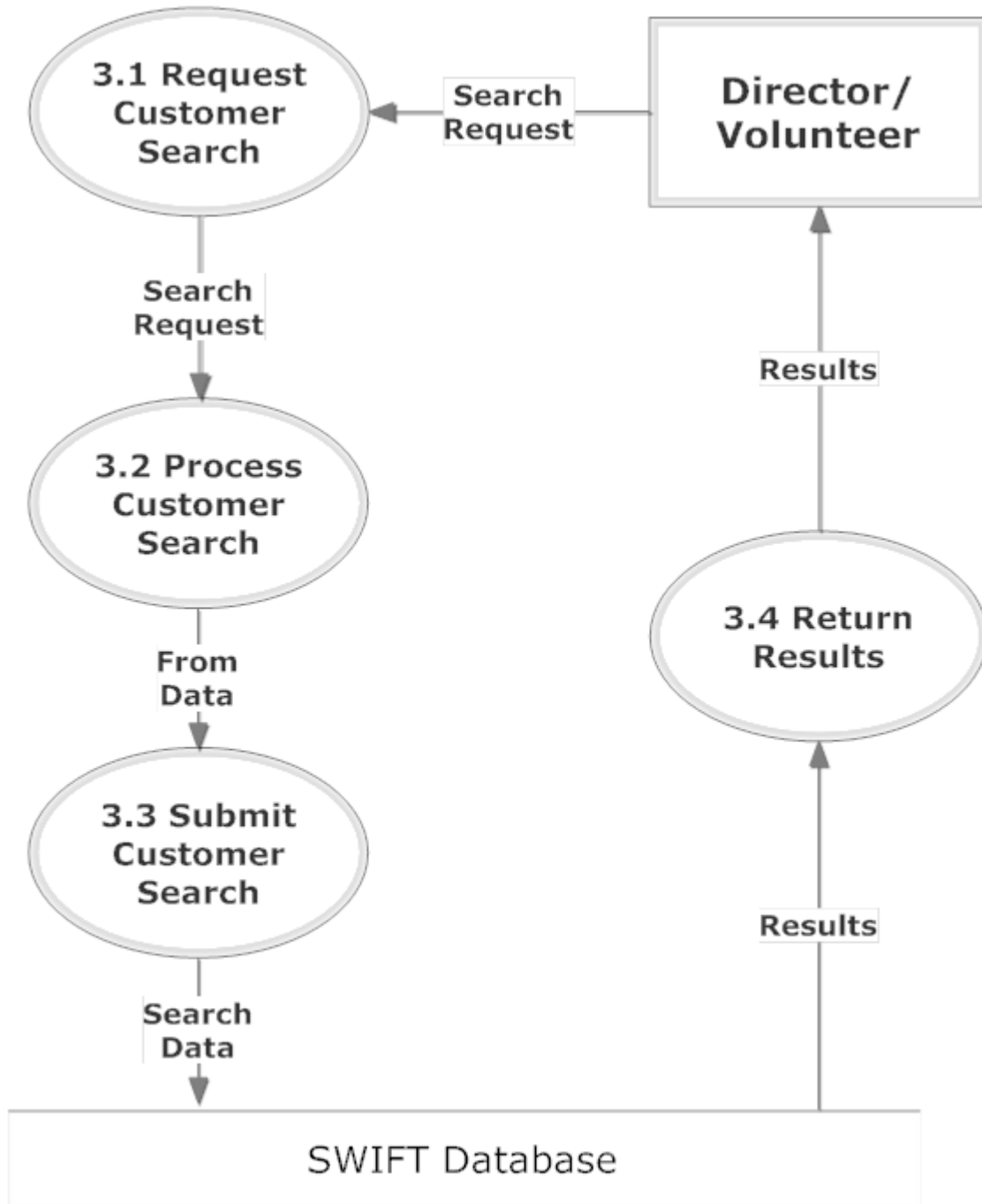
5.4.1. Log In



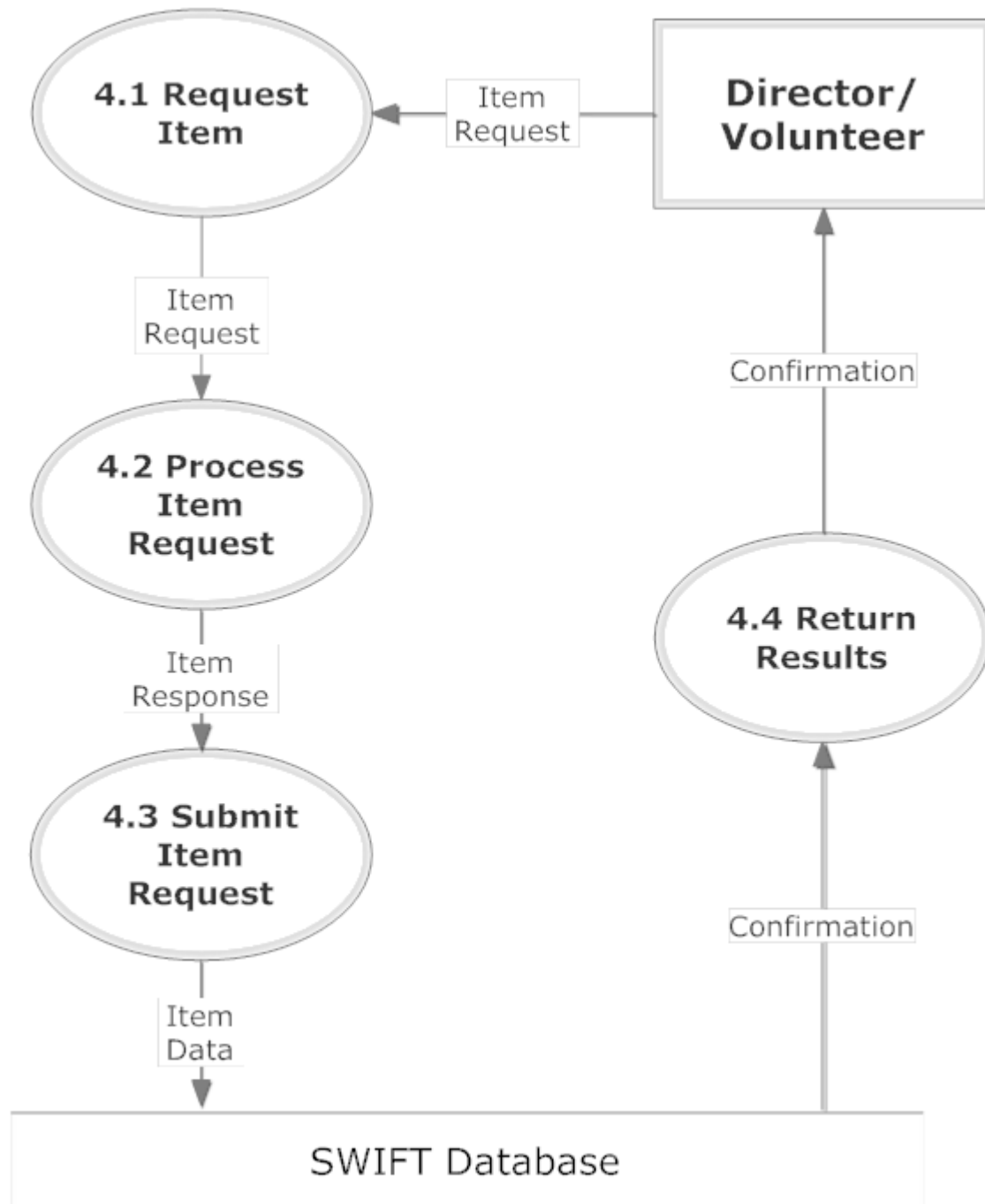
5.4.2. Add Customer



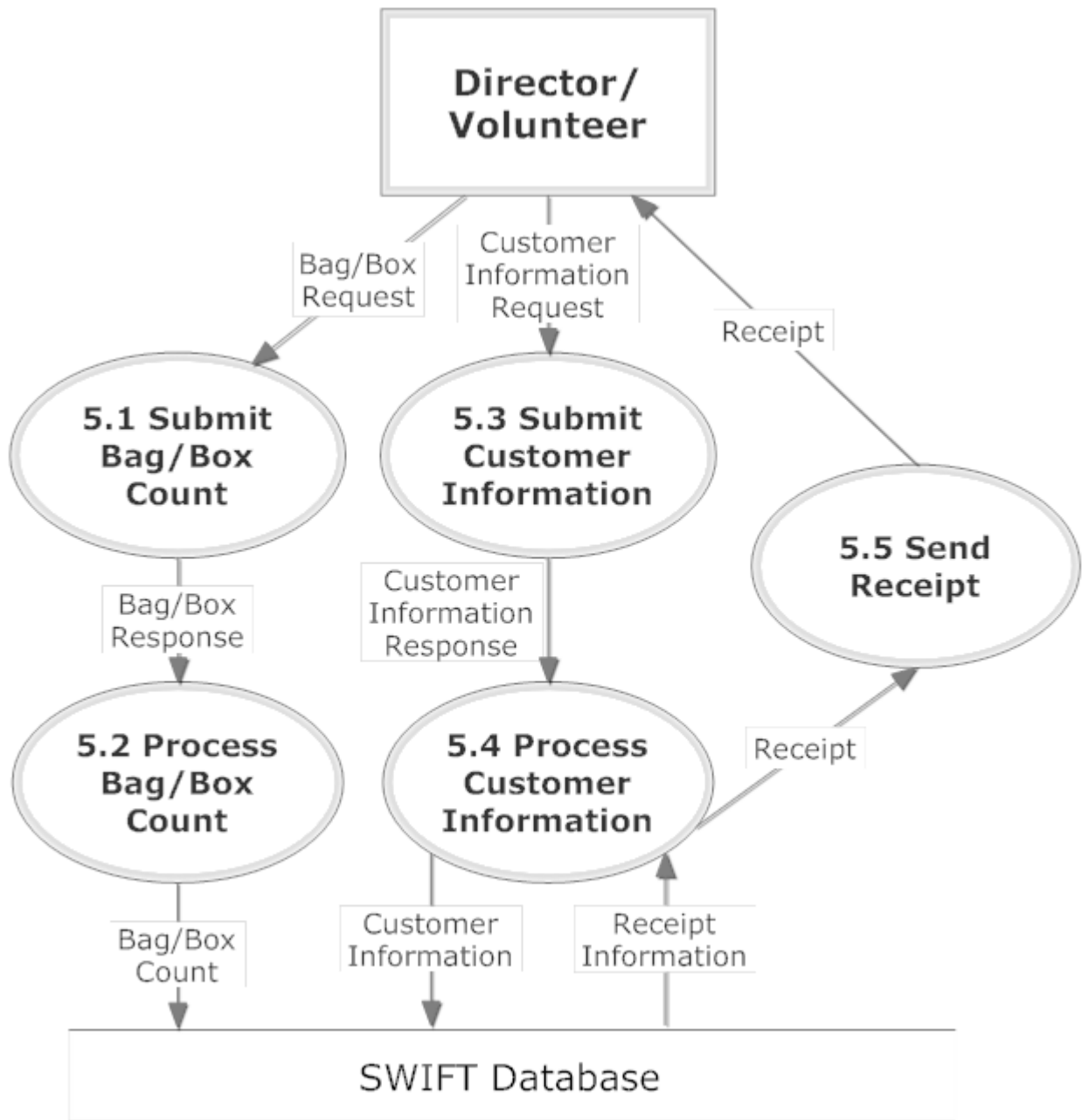
5.4.3. Search Customer



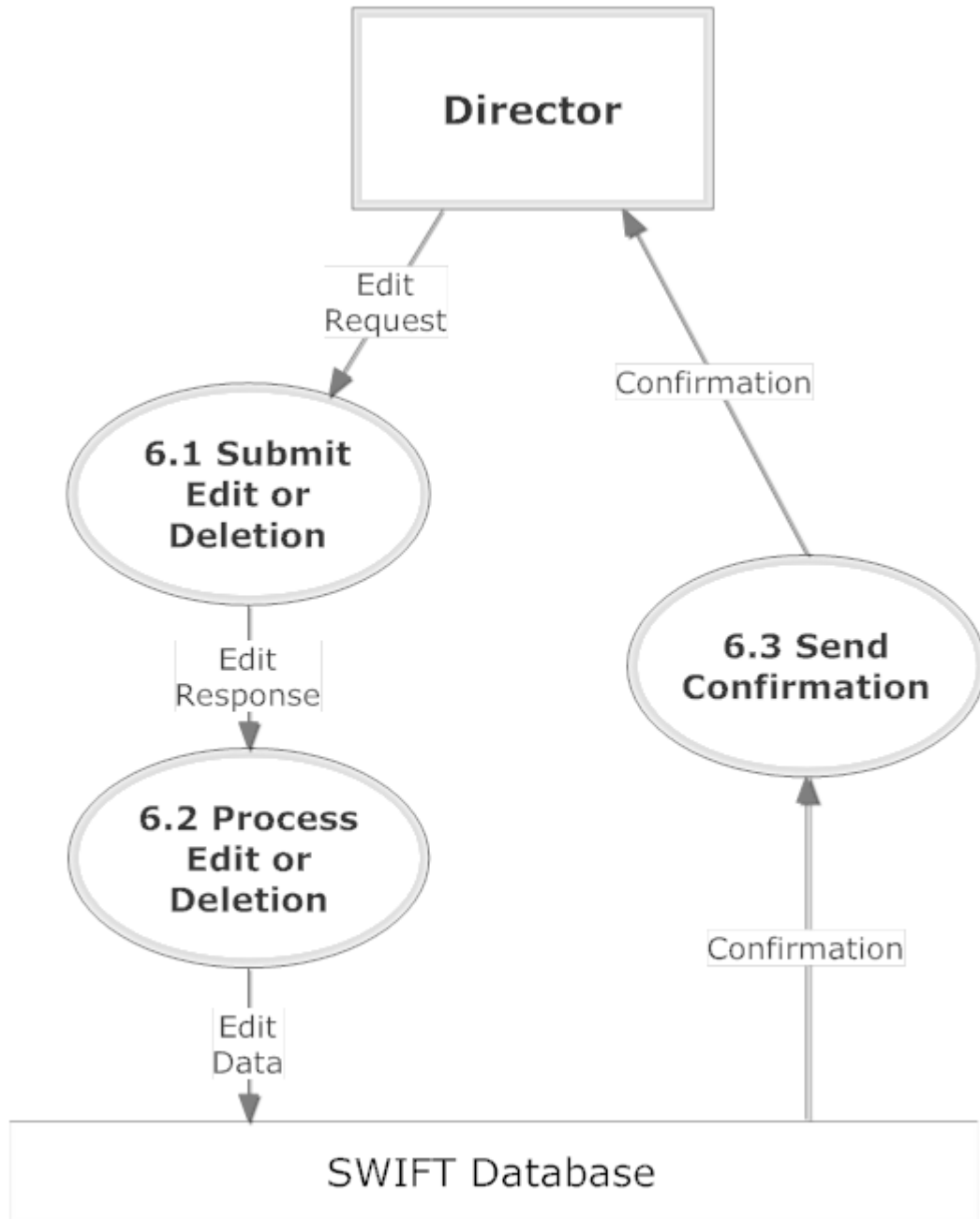
5.4.4. Check Out



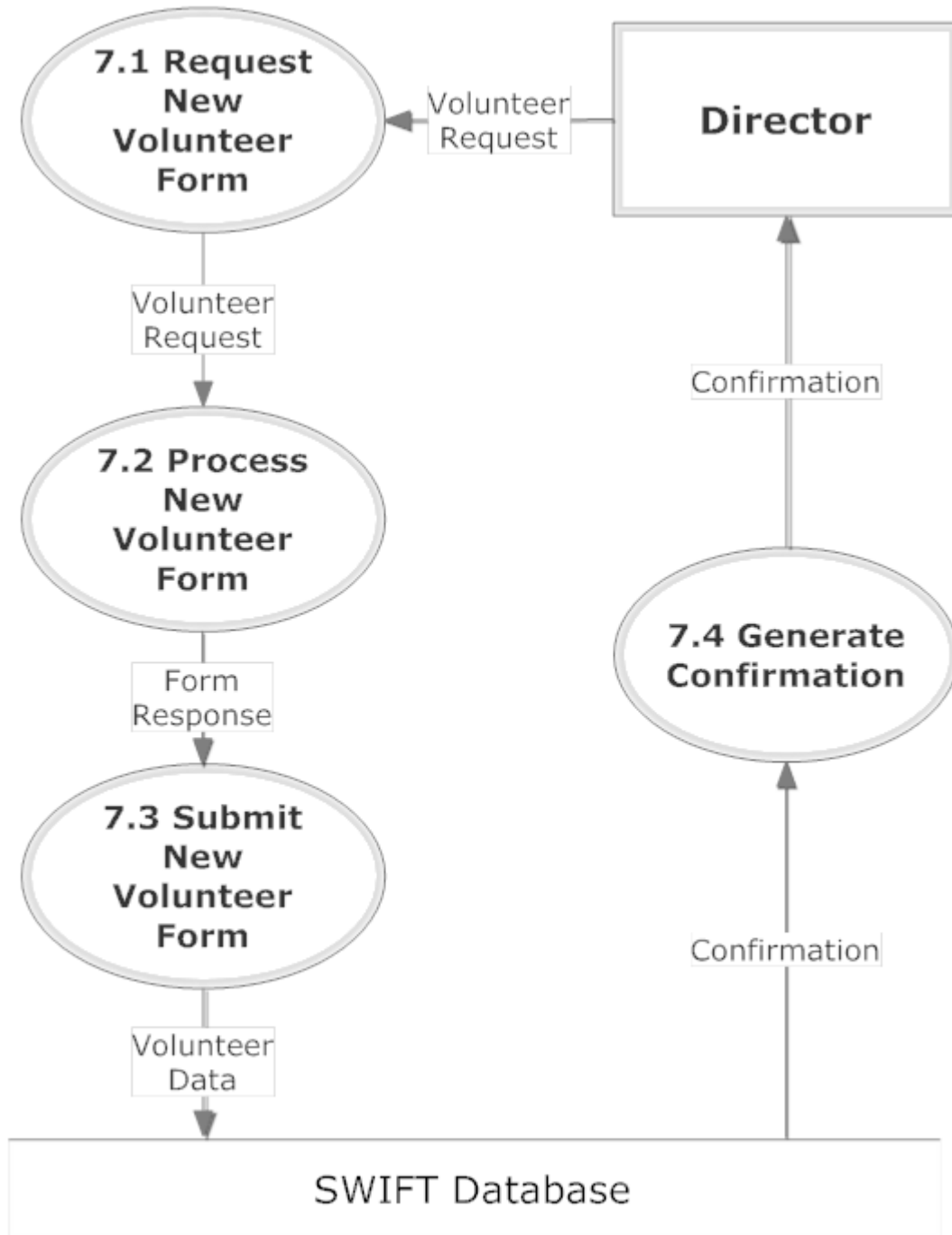
5.4.5. Record Donation



5.4.6. Edit Customer/Donor



5.4.7. Add Volunteer



6. Prototypes

[Main Menu](#)

Create New Customer

First Name:

Last Name:

Address:
Street City State Zip Code

Family Situation:
Gender Age

Agencies Affiliated with: or
Agencies

6.3. Prototype for Checkout

[Main Menu](#)

Checkout Customer

Checkout for: (Customer Name) 1 Customer St, Albany, NY 12201

Recent History:

Month
(list of month's history)

Month
(list of month's history)

Month
(list of month's history)

[View Full History](#)

Family Profiles:
[\(Family Member Name\)](#)
[\(Family Member Name\)](#)
[\(Family Member Name\)](#)

[Full Customer Profile](#)

Checkout:

or

Item Quantity

[Add Item](#)

(list of items)

[Complete Checkout](#)

7. Functional Requirements Inventory

The list below will provide a general outline for the users involved in the system and what they will have access to do. Since the software will be a user-friendly web application, it will be able to be used on all major web browsers. The browsers that the software will be compatible with include Google Chrome, Safari, Mozilla Firefox, and Internet Explorer.

7.1. Volunteer

- Will be able to login
 - Logins will be individualized names and passwords
- Will be able to log out
- Will be able to search for a person
- Will be able to checkout items
- Will be able to create receipts
- Will be able to insert
 - personal information
 - purchase information
 - donor information

7.2. Director

- Will inherit all functional requirements for the volunteer
- Will be able to edit existing data on the system
- Will be able to delete data no longer wanted on the system
- Will be able to add volunteer accounts
- Will be able to delete volunteer accounts

8. Non-Functional Requirements

The non-functional requirements describe the non-specific behaviors of S.W.I.F.T. They are not meant to describe specific features in the system, but rather what the system is intended to do. S.W.I.F.T.'s non-functional requirements are:

- S.W.I.F.T. will be user friendly.
- S.W.I.F.T. will be easily maintained.
- S.W.I.F.T. will be stable.
- S.W.I.F.T. will be easy to access.
- S.W.I.F.T. will be [mobile/not localized] (in case of theft/migration of data)

9. Exception Handling

S.W.I.F.T. will be able to handle exceptions so that the system will run properly in the event of an error. Input will be simplified to limit user errors, while S.W.I.F.T. will make sure all the required information is present before accepting the input to store it in the system.

10. Implementing Priorities

Although all of the functional requirements are important, the components that will be prioritized and implemented earlier will be:

- The ability to add new customers
- The ability to view customer history
- The ability to checkout customers
- The ability to add donations to inventory
- The system will be simple and user friendly
- The System Administrator will be able to view and modify everything within S.W.I.F.T.

11. Foreseeable Modifications and Enhancements

Future enhancements for S.W.I.F.T. may include a “buy-in” feature for customers. This would be a way for community members to work with Grassroot Givers to earn accessibility to the items in the Community Store. For S.W.I.F.T. to obtain this functionality SMARK Solutions would modify the customer profile to include a type of customer. There would also need to be a work log that determines the amount earned items that would link to the customer’s store history. If other enhancements arise, SMARK Solutions will deal with them accordingly.

12. Testing Requirements

S.W.I.F.T. will be tested on many browsers and browser versions, including mobile and desktop versions of each. Each functional requirement will be tested to ensure that it will work as it should, as well as the ease of which it is used.

13. Acceptance Criteria

SMARK Solutions is working to create an application that goes above and beyond the expectations of the clients, Dr. Fryling, and Dr. Lim. The best and most efficient solutions possible will be created to help solve our client’s problems. Together we can be intuitive, be efficient, be SMARK.

14. Appendices

14.1. Appendix A: Cross Reference Index

S.W.I.F.T. Use Case Diagram
 S.W.I.F.T. Context Diagram
 S.W.I.F.T. Level 0 Diagram
 S.W.I.F.T. Level 1 Log-in Diagram
 S.W.I.F.T. Level 1 Add Customer Diagram
 S.W.I.F.T. Level 1 Search Customer Diagram
 S.W.I.F.T. Level 1 Checkout Diagram
 S.W.I.F.T. Level 1 Record Donation Diagram
 S.W.I.F.T. Level 1 Edit Customer/Donor Diagram
 S.W.I.F.T. Level 1 Add Volunteer Diagram
 S.W.I.F.T. Donor Receipt Prototype
 S.W.I.F.T. Add Customer Prototype
 S.W.I.F.T. Checkout Prototype

14.2. Appendix B: Sources of Information

The primary source of information regarding S.W.I.F.T. will come from our clients, Ms. Mary Partridge-Brown and Ms. Roberta Sandler. Along with the primary source, SMARK Solutions will receive assistance and guidance from Dr. Lim and Dr. Fryling.

14.3. Appendix C: Glossary of Terms

Gantt Chart - Bar chart typically used to project scheduling

Data Flow Diagram - A visual representation of how data moves throughout a system.

Database - An organized collection of data.

Functional Requirements - Defines what the system will be able to do and what is testable about the system.

Non-Functional Requirements - Requirements that are not necessarily specific features that exist in a system, but what the system is intended to do.

Processor - The part of the computer that handles and executes operations.

Prototype - An early sample, model or release of a product built to test a concept.

Random Access Memory (RAM) - a memory unit that allows any specific byte to be used randomly at any time.

Server - a computer or program that manages access to a resource or service in a network.

S.W.I.F.T. - Simple Web Inventory For Tracking

UML Use Case Diagram - A visual representation of the users interaction with the system in a specific instance.

Use Case Narrative - a written explanation of the course of events a user will encounter when interacting with the system

14.4. Appendix D: Timeline

Development Timeline:

