Requirements Document 1.0

For:

Project R.I.P Mark

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Group 2

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1 Introduction **3**
1.1 Purpose 3
1.2 Project Scope 3
1.3 Glossary of Terms 4
1.4 References 5
1.5 Overview 5

2 Overall Description **5**
2.1 Product Perspective 5
2.2 Product Features 5
2.3 User Classes and Characteristics 6
2.4 Operating Environment 6
2.5 Design and Implementation Constraints 6
2.6 Assumptions and dependencies 6

3 System Features **6**
3.1 Online Inventory 6
3.1.1 Description and Priority 6
3.1.2 Functional Requirements 7
3.2 Authentication with Customer Accounts 7
3.2.1 Description and Priority 7
3.2.2 Functional Requirements 7
3.3 Statistics Gathering 7
3.3.2 Functional Requirements 8

4 External Interface Requirements **8**
4.1 User Interfaces 8
4.2 Hardware Interfaces 8
4.3 Software Interfaces 8
4.4 Communications Interfaces 9

5 Other Non Functional Requirements **9**
5.1 Performance Requirements 9
5.2 Safety Requirements 9
5.3 Security Requirements 10
5.4 Software Quality Attributes 10

6 Other Requirements **10**

Appendix: Issues List **10**

Revision History

Name	Date	Reason for Changes	Version
Matt S	Sept 19 2018	Initial commit	0.1
BS Consulting	Oct 01 2018	Final version	1.0

1 Introduction

1.1 Purpose

The Uvic Food Bank and Free Store (FBFS) has several problems with their current inventory and data management system. First off, one problem facing customers of the FBFS is not being able to view current inventory that is available. Additionally, the FBFS has an issue with customers abusing usage regulations and a lack of data about who uses the service. The purpose of this Requirements Document 1.0 is to document all requirements and establish a basis for work towards a solution to these issues.

A critical issue which we wish to address is the abuse of the current FBFS system. Customers have found methods of unlawfully gaining more items than meant to be alloted. Customer's of the FBFS should be monitored to notify the volunteers of unlawful habits. Additionally, the gathering of statical data should be considered as well.

1.2 Project Scope

The volunteer must be able to store customer information along with inventory going in and out of the FBFS. The objective is to have a proper system in place for the FBFS so that customers can know what items are in store. Users must be able to view and track available inventory online. The benefits of this software include ease of use with minimal training and more convenient inventory tracking, as well as restrictions on abuse of allotments. Overall, the clients goals are to have an easy to use system, for users, which still meets their standards and other requirements as specified below.

1.3 Glossary of Terms

Term	Definition
FBFS	Food Bank & Free Store
UVic	University of Victoria
V-Number	Student Number
User	Volunteer and customer
Volunteer	Employee of the Food Bank and Free Store
Customer	Students and their Families
Must	Required to have
Should	Optional
System	Software implementation
Service	The process and facility to get stuff from the Food Bank & Free Store
Client	Jam stash organization and their employees
Device	Cell phone, laptop, tablet or computer
Donor	Someone who gives food, or household items and clothing to the Food Bank & Free Store
UI	User interface
Data	User information and family information, including phone, email, and names
Inventory	Items in possession of Food Bank & Free Store

1.4 References

[1] "Jamstash", September, 2018. [Online]. Available: https://sites.google.com/view/jamstash/ . [Accessed: Sept. 24, 2018].

[2] Freedom of Information and protection of Privacy Act, Sept, 19, 2018.[Online]. Available: http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/freeside/96165_00 and regulations http://www.bclaws.ca/civix/document/id/loo90/loo90/155_2012 [Accessed: Sept 24, 2018].

[3] UVic Protection of Privacy Policy, June, 2017.[Online]. Available: https://www.uvic.ca/universitysecretary/assets/docs/policies/GV0235.pdf [Accessed: Sept 24, 2018]

1.5 Overview

The sections are as follows:

- Description
- Features
- Requirements

The Description section covers the context and origin of the system being specified. In addition, the features section summarizes the major behaviors of the system. Lastly, the requirements section covers all the requirements specified by the client.

2 Overall Description

2.1 Product Perspective

The requested software is going to be an improved system to replace the current system, which means the client does not have to upgrade or integrate the old system in any way. The new system must provide them with the functionality and features they require as outlined in the clients RFP and in more detail within this document.

2.2 Product Features

Some of the features outlined by the client are as follows; Users must be able to view the inventory of the FBFS. Volunteers must be able to update the current inventory. Customers must be able to view the current inventory remotely. Volunteers must be able to store customer

information and track customers to make sure no customer abuses the FBFS as well as track and validate the customers' family information for a revised allotment.

2.3 User Classes and Characteristics

The primary user class are the students of UVic. The students who will be using the system are both customers and volunteers of the FBFS. Most students are tech savvy and have access to internet connected personal devices. Learning a new system should not be a hard task for the majority of users. Some of the other volunteers may not be students, so they may require some training in order to learn the interface.

2.4 Operating Environment

The operating environment must be web browsers on windows machines and should also work on other operating systems and mobile devices, as specified by the client. The client has also specified that customer data must be kept according to UVic privacy policy, must be kept on campus..

2.5 Design and Implementation Constraints

One major constraint of the project is following the data storing policies of UVic. Since the FBFS is located on the UVic campus, the rules and regulations state that the server must be hosted by UVic on their servers and adhere to the UVic policies about data protection and privacy [3]. The next constraint is that the operating environment is to be a web browser.

2.6 Assumptions and dependencies

One assumption is that the data collected and stored on UVic servers adheres to their policies outlined in the UVic Protection of Privacy Policy [3].

3 System Features

3.1 Online Inventory

3.1.1 Description and Priority

The first major request of the client is that users must have remote access to a interactive catalogue of the FBFS's inventory. What this requirement entails, is a viewable and interactive online catalogue of the current FBFS inventory, detailing what current items are available and updated in real time. This is the highest priority requirement, and must be part of the system.

3.1.2 Functional Requirements

Real time updating: Users must have real time updates of the FBFS's inventory.

Filtering of inventory: Users should be able to filter the inventory as they choose, to produce a refined search of the inventory based on what it is they are looking for. This includes both the food bank and the free store part of the service.

3.2 Authentication with Customer Accounts

3.2.1 Description and Priority

Users must have accounts to allow the FBFS to both track customer limits and families, as well as tracking customer statistics. Volunteers must have customers create an account with a valid V-Number. Customers with families must submit all family data to be verified, so that the service is not abused. Mitigating abuse of the service is another must have for the client and imperative for implementation.

3.2.2 Functional Requirements

Accurate Tracking of Limits: Limits detail how much a customer can withdraw from the FBFS. Accurate tracking of limits must ensure that every customer cannot abuse the FBFS. Customers may state that they are part of a family, however, the customers who do not qualify for the family limit must be disabled from gaining access to the family limit.

User Account Verification: Customers are expected to provide a valid V-Number when creating an account to verify that they are a student at UVic. Verification of enrollment must be used to prevent customers from exceeding their personal limit by creating additional accounts under fake or other people's V-Numbers.

3.3 Statistics Gathering

3.3.1 Description and Priority

The FBFS should be able to gather and keep track of user data to find where inventory comes from and where it goes as well as customer demographics. Volunteers should also be able to enter old paper records to increase accuracy of tracking. The FBFS has data collection and tracking as a medium priority due to the volunteers making use of the statistics for inventory assistance.

3.3.2 Functional Requirements

Authority to access: Only volunteer admins must have the authority to enter data records and edit them.

Data Analysis: All volunteers should be able to view the collected data about the customers in an ordered and concise display, but access must be restricted in accordance with UVic privacy policy [3].

4 External Interface Requirements

4.1 User Interfaces

The user must be able to log into an account. Each account type (customer, volunteer, or volunteer admin) must display different views. Once the user has logged in, they must have the option to see products from either the foodbank or the freestore.

There must be a seperate catalog for both the freestore and the foodbank that all users can see. Only volunteers will be able to edit stock numbers. Volunteers must also have the ability to access a separate area, where they can access information and statistics about both individual and a subset of clients.

There must also be an area which houses general information about the services. Customers must have the ability to to access their own personal information under their account information, which will include information like their account type, withdrawal amount left and more.

The volunteers should be able to post timely updates to all users about relevant information.

4.2 Hardware Interfaces

Users must be able to use all features on a Windows PC. Users should also be able to use all features on a Mac, Linux or mobile phones.

4.3 Software Interfaces

All data must be accessible and transmittable from a functional machine with Microsoft Windows installed. All data should also be accessible and transmittable from a functional machine with macOS, Linux, iOS or Android.

4.4 Communications Interfaces

The data must be transmitted over the internet via TCP/IP protocols. In order to prevent security breaches, users must log into their accounts to see any private or personal data.

5 Other Non Functional Requirements

5.1 Performance Requirements

For the system, there are several performance requirements that need to be taken into account, split into four categories:

- Speed
- Capacity
- Reliability
- Usability

For speed, each user must have the system respond to queries within three seconds of making the request of the system. Additionally, volunteers modifying inventory must have their changes viewable immediately. In terms of Capacity, the FBFS regularly provides service for 500-1000 users with 120 new users added per year. Accounts must also be removed from active storage one year after the user leaves UVic. Ten users are expected to use the remote system at any one time without issues.

Users must be able to use the system with less than 10% downtime per month and be able to rely on everything working properly.
For usability, customers looking at what the FBFS has in stock must see updates in real time so they have an accurate reference of what they can get. Similarly, users should be able to reach all parts of the system within five clicks of the mouse.

5.2 Safety Requirements

With a software solution, there are fewer safety concerns then with other methods, but there are still a few requirements for safety. The main requirement of the system is that users' data must not be released to unaffiliated parties. Personal data must be kept secure and away from any possible data leak situations. Along with personal data, customers can have family data stored on record, and this family data must not be accessible by anyone outside the FBFS.
Additionally, it is possible that customers can find product that does not meet safety standards and can affect their health. As such, volunteers must be able to manage removal of unfit items from the inventory with no issues, and real time updating.

5.3 Security Requirements

There are several security concerns of which must be followed by the system. First, in respect to UVic and FBFS policy, all user data must be on a UVic server or closed system and must follow UVic policies for protection of private information. Privacy of personal information must be kept inaccessible to unaffiliated groups, and only accessible to the FBFS without written consent. Only volunteers in the organization can access personal data and the accessible personal data must conform to the Uvic Protection of Privacy Policy [3]. Customers must also require a valid V-Number to use the service and false/additional V-Numbers must be prevented for the same customer. Customers who register a family must have their family validated, and the data recorded according to FBFS and UVic security policies.

5.4 Software Quality Attributes

The characteristics outlined here will directly impact how the system is to function and to what extent each attribute is valued. Volunteers must be able to add and delete items from the inventory with relative ease and efficiency. Availability of stock items must be easily accessible for any user and intuitive to read. Volunteers should be able to learn the system easily and have little to no learning curves. Correctness of inventory is required and must be able to handle the frequent changes in inventory. Time will greatly impact the correctness of the system and therefore needs to be heavily considered.

6 Other Requirements

Currently, the client has specified that they would like a newsletter that users can view in order to see daily/weekly changes in the stock of the FBFS. This requirement is not as high in priority as the other features, but should be completed if time allows it to be added as it is seen as an extra feature in the project scope.

Appendix: Issues List

- Which versions in particular of Windows, macOS, Linux, Android and iOS must the user be allowed to use?