WASHINGTON STATE UNIVERSITY
VANCOUVER

Software Requirements Specification

for

FoodHub

Version 1.0

Prepared by

Group Name: FoodHub

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Date: 10/25/2019

Revisions

Version	Primary Author(s)	Description of Version	Date Completed
First Submission	1) Oleg Kryachun 2) Archaal dela Rosa	First submission, rough first draft of all the requirements before starting the project (Future revisions may change things)	10/25/2019

1 Introduction

The introduction gives an abstract explanation of the document deliverables and product scope. This section covers the document purpose, product scope, intended audience, various definitions, and document conventions.

1.1 Document Purpose

This is the first draft written before any work has been done to begin the project. This document is the SRS requirements put together by both Oleg Kryachun and Archaeal dela Rosa. The document will cover the requirements for a web application named FoodHub, the requirements described cover all aspects of the application and the product as a whole. The requirements describe a relatively high level of the system and are subject to change or be modified as progress is made throughout the software development process.

1.2 Product Scope

The objective of our software is to provide users a resource when selecting food items, providing collected rating, information and reviews by other users. Users will be able to input food items to view or create new ratings and reviews. The food selection include, but not limited to, any item with a scannable barcode.

We wish to create a platform for health and fitness enthusiasts and experts to create and share better nutrition choices when it comes to food selection. Allowing users to use our software across various platforms, computers, laptops, and mobile smart phones.

1.3 Intended Audience and Document Overview

The intended audience for this document are our clients, software developers, testers, and professor. This document provides a full overview and description for the product named FoodHub. The order of document description goes as follows: product perspective, product functionality, users and characteristics, operating environment, assumptions and dependencies, external interfaces, behaviour requirements, and performance requirements.

Depending on your audience identification, in order to gain a good understanding of what the product is, start by reading the product perspective, product functions, users, operating system and behaviour requirements. Those sections cover the bulk of the most important behavior/requirements for the general functions of the product.

1.4 Definitions, Acronyms and Abbreviations

No conventions have been implemented in this document at its current state.

1.5 Document Conventions

- Font used: Arial size 11
- The words formatting is center justified throughout the whole documents
- Each section has a heading which highlights the content covered in the following paragraphs below the heading
- Bold font provides a heading for the following description written in non-bold arial
- Indentations with a dash provide a list of quick descriptions regarding the bold heading above it

1.6 References and Acknowledgments

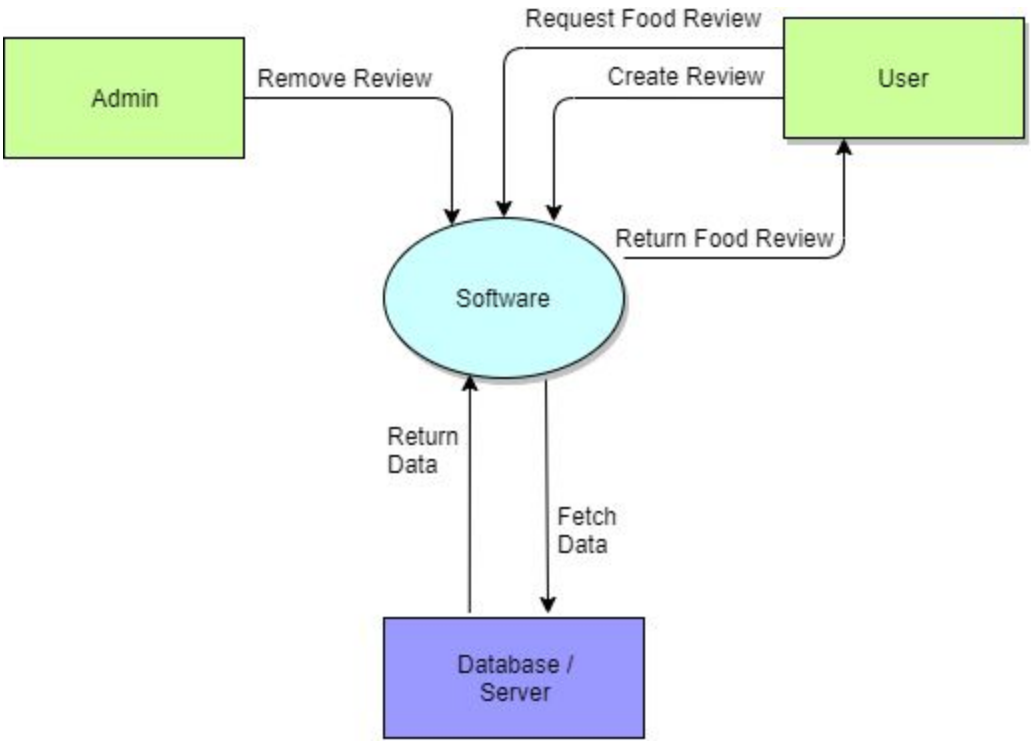
Currently no references and acknowledgements to consider.

2 Overall Description

2.1 Product Perspective

FoodHub is a web application that will likely be used on smartphone most rather than computers but it will make it useable on both devices. The user can use the application to request a food review which will search the database, if nothing is found then they will have the option to create a review which will be stored in the database for future users to view. The admin will have the ability to edit the reviews uploaded to the database through the application allow for quality control of the system.

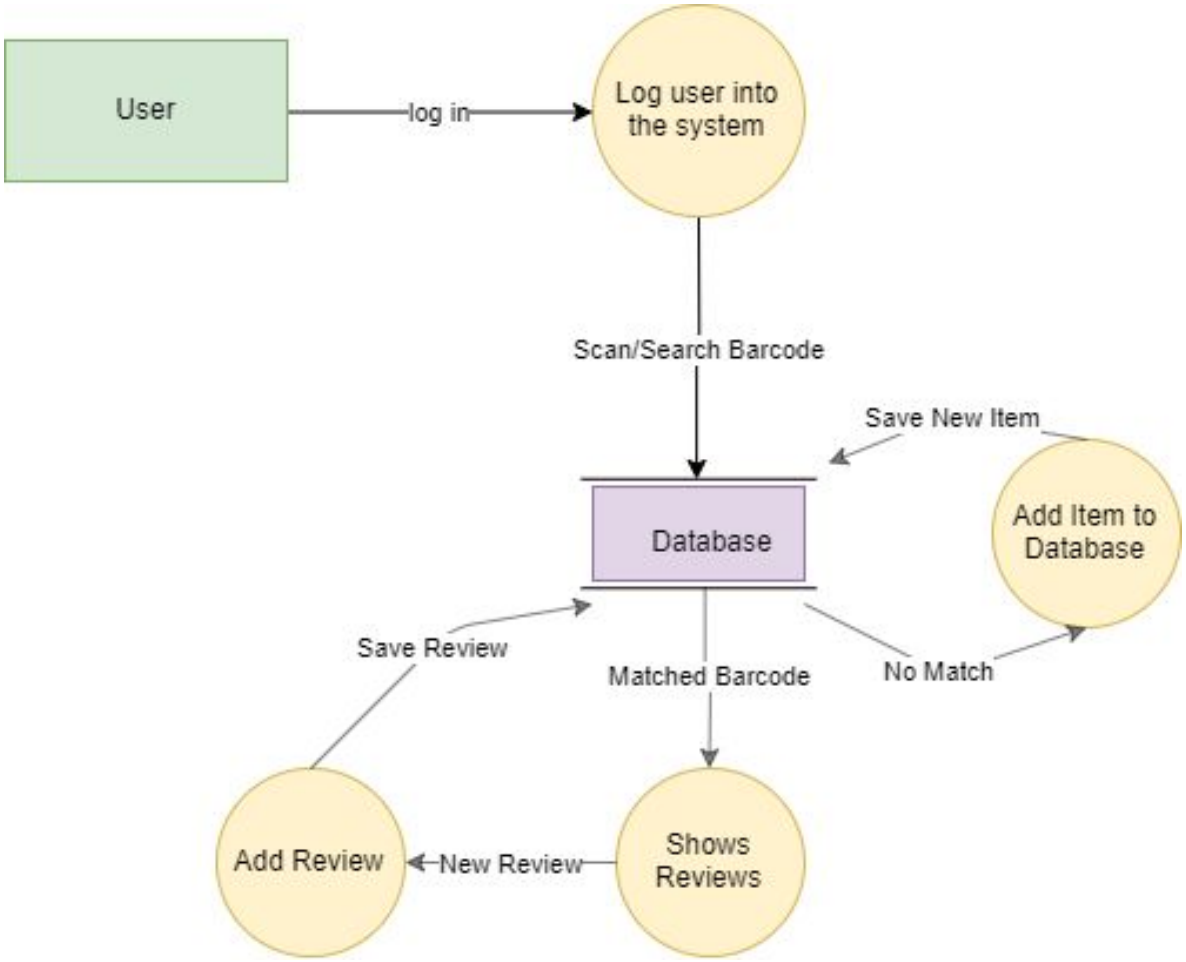
(This is a visual representation of the process described above.)



2.2 Product Functionality

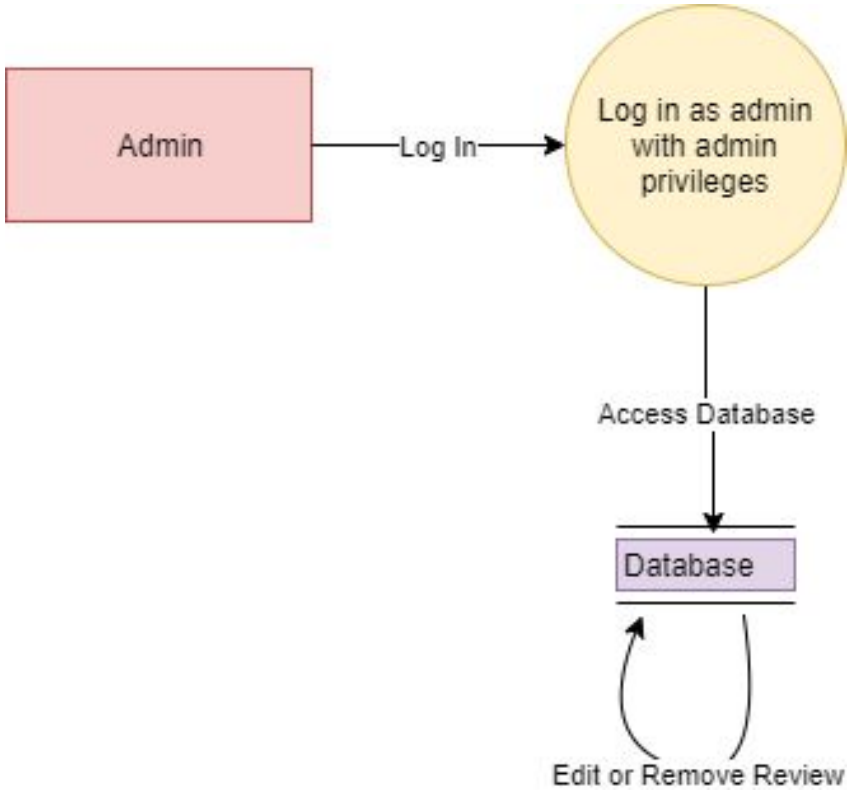
From the User perspective:

- Log into the system username and password (log in can be saved for easier future access)
- Choice between scan barcode or search barcode number
- The system searches for a match of the food product to a previously created review thread stored in the database/server
    - If no match found in the database, user can create a new review which will be stored in the database



From the Admin perspective:

- The admin will have the ability to review other reviews made by users that are flagged as “inappropriate” and decide whether to delete or keep the review in the database.

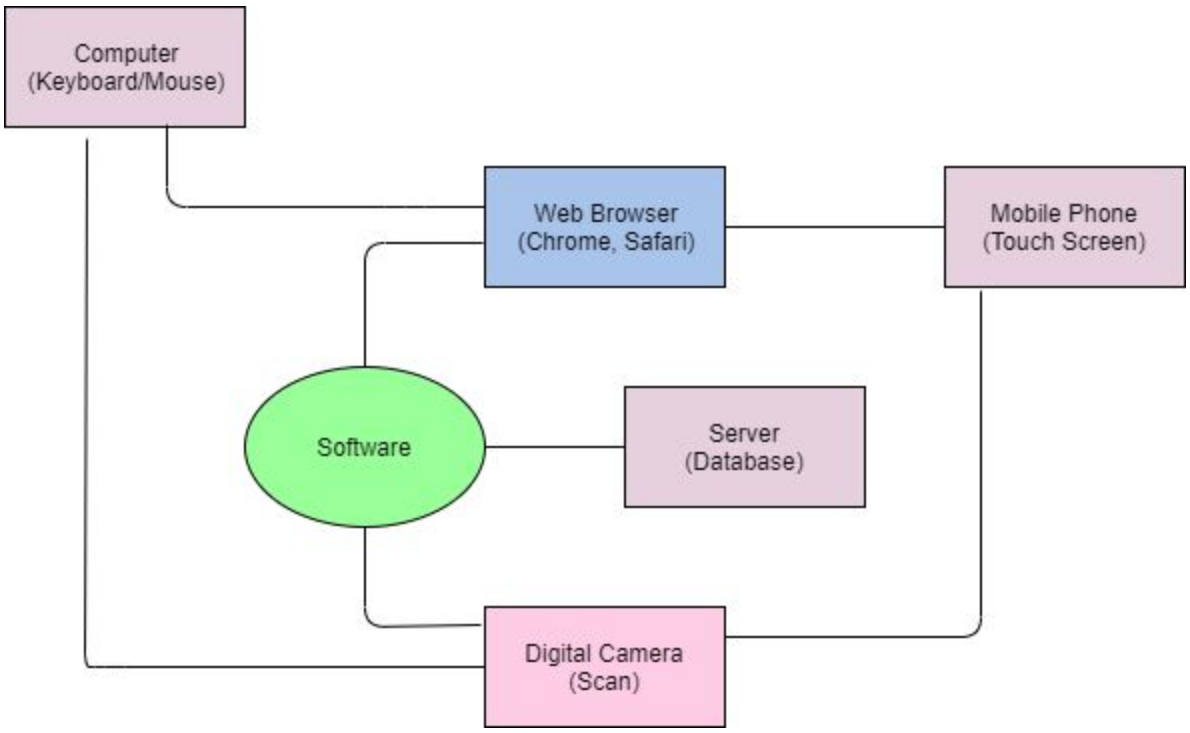


2.3 Users and Characteristics

We anticipate this software to initially draw users with a priority in health and nutrition. We distinguish two categories with our product, enthusiasts and experts. The two identifiers will include various privileges in how they interact with our product. All users will be able to view and post within all aspects. ‘Experts’ will be granted a priority with visibility and weighted scaling to their reviews and ratings. Users can be promoted to ‘Experts’ with valid credentials pertaining to health, fitness and nutrition.

2.4 Operating Environment

Our software will operate within the users web browser. Data will be stored within a server database. Users will have a graphical interface. Hardware requirements include functional camera, keyboard, mouse, and/or touchscreen.



2.5 Design and Implementation Constraints

Initially we will have various constraints to work with. The forefront being camera usage to scan barcodes to pull up items within the product. String input will be available to manually enter items barcode numbers when camera operation is unavailable. Memory storage will be limited initially to binary (text, identifications, ratings, etc.), we look to later expand on this to allow photos of the item to be included in addition to the food item description. Security considerations will be expanded upon as user information becomes more sensitive. As for now minor encryption will be used to secure user login information.
As the majority of the information provided from this product is peer to peer, some information will be inaccurate. The products rating system is designed in mind with limiting or voiding outlier submissions.

2.6 User Documentation

There will be a general “How-To” section provided that will allow the users a quick explanation for how to use the application along with the benefits we wish to provide our users. The only information that we will collect from the user is a username of their choice and a password for login purposes. No real data will be collected for user permission documents to be necessary.

2.7 Assumptions and Dependencies

The first major assumption our software makes is that all food items will have a barcode to identify each food item. And that each unique food item will have a consistent barcode to match.

A major dependency is that our users will have access to camera function to scan barcodes, manual input is available if not. Additionally, information will be delivered and retrieved from an external database, requiring internet access.

3 Specific Requirements

3.1 External Interface Requirements

3.1.1 User Interfaces

Screen 1: Login screen with logo, and simple username and password section
Screen 2: If user, then screen will go to search/scan barcode screen for user to begin searching
Screen 3: If user scans then camera will be brought up to scan the barcode
Screen 4: If the barcode is matched in the database, a screen with all the information regarding the review will be displayed. This screen will include things such as name of product, macro breakdown, diet compatibility, overall star rating, user health score, score breakdown by credibility, comments left by other users.
Screen 5: If no match for barcode, then add product screen will come up. This screen will allow the user to add all the basic information about the food item. The information will consist of the item name, macro content (fats, carbohydrates, and protein), star rating, word review.
Screen 6: If admin then screen will open to a page displaying all the content flagged as inappropriate, admin user can view the content and decide to keep or delete.
Screen 7: If new user, then account creation screen will display.

3.1.2 Hardware Interfaces

If the web application is being run on a smartphone with a working camera, the software will try to access the camera (if the user allows it) in order to scan a barcode that the camera is pointing at. Some special libraries used may include photographic barcode scanner libraries that are available for Javascript. Otherwise if the application is being run on a computer, the user will be limited to typing the barcode in by hand.

3.1.3 Software Interfaces

This application will not be affected by what software the user's device is running. The only constraint will be whether the user is using a smartphone with an accessible camera for barcode reading or a computer with a manual barcode input option. As long as the device can open and run a web application on the internet, this product will be able to run on said device.

3.1.4 Communications Interfaces

FoodHub will have minimal encryption, the data is not sensitive enough to be seriously protected against data exploitation. The users will not provide any personal data aside from their username and password. Users will access the website via HTTP protocol. Data will be sent and received from the database server, initially with simple JSON structure. Some constraints may include web browser access and internet connectivity/speed.

3.2 Functional Requirements

For users:

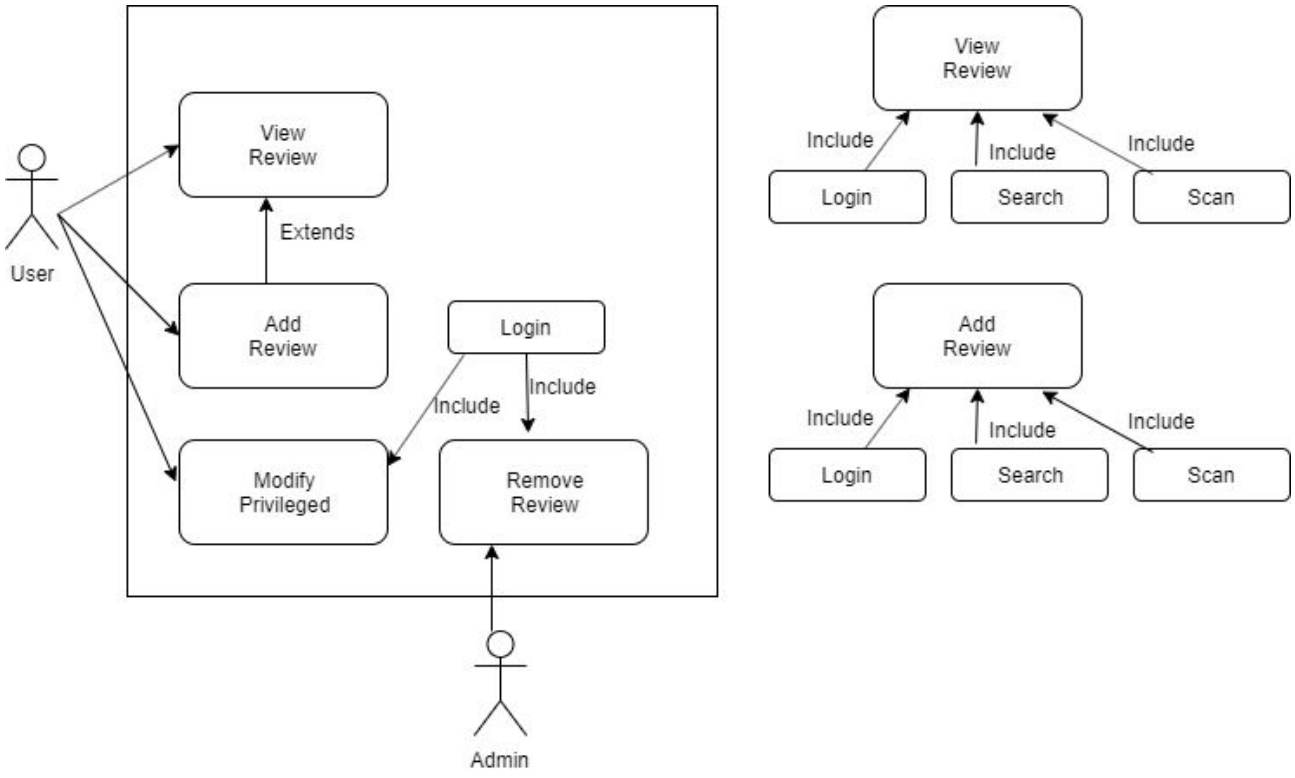
1) Create account for new users
2) Log user into the application
3) Use the device's camera to scan barcode
4) Search number input barcode
5) Retrieve and display previously stored reviews
6) Add new review if no previous review made (of the same item)
7) Flag reviews for admin review

For admin:

1) Create admin account with access code?
2) Access database and edit published reviews

3.3 Behaviour Requirements

3.3.1 Use Case View



4 Other Non-functional Requirements

4.1 Performance Requirements

The search function will need to be optimized to be as fast as possible, this may also depend on the internet speed from the users end. With initial database content, no search should take longer than 3 seconds given that the user has a good internet connection. As users fill the database with new reviews and food items, We feel that an acceptable search should take no longer than 5 seconds Other performance requirements are limiting login time to 3 seconds, along with limiting uploads of new reviews to 5 seconds.

4.2 Safety and Security Requirements

Each user will have a person username and login to use in order to log into the application. The passwords provided by the user will be hashed and stored as SHA-3 hash in the database. FoodHub will not collect sensitive user information to warrant serious security implementations. The majority of the information stored in the database will be food reviews created by FoodHub users, this information is not private and doesn't need to be protected against potential exploits.

4.3 Software Quality Attributes

Some quality control features that will be implemented allow users to flag reviews and comments made by different users giving admin the opportunity and review and edit those reviews and comments. For example, FoodHub is a food review platform, if a user uploads a chair with a random barcode, another user can flag that review and an admin will review and delete the flagged review.

5 Other Requirements

Appendix A – Data Dictionary

Appendix B - Group Log

Meeting 1: 10/14/2019
Oleg Kryachun and Archael dela Rosa met after class for about 1.5 hours to discuss goals and to lay a solid foundation for the future of this project.

Meeting 2: 10/21/2019
Oleg & Archael met for about 1.5 hours to plan for the completion of the SRS and to create all the visual diagrams in this document

Personal Time:

- **Archael dela Rosa: 10/21/2019, 7:00-7:30pm-** 0.5 hour setting up Git repo.
- **Archael dela Rosa: 10/21/2019, 7:30-9pm-** 1.5 hour filling in various section content.
- **Oleg Kryachun: 10/25/2019, 12-4pm** - 4 hours writing a rough draft of the SRS
- **Oleg Kryachun: 10/25/2019, 8-9pm** - 1 hour reviewing the document, final edits and submissions
- **Archael dela Rosa: 10/25/2019, 4-5pm -** 1 hour revising draft for submission.