WASHINGTON STATE UNIVERSITY
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Software Requirements Specification

for

Buff Stuff

Version <1.0>

Prepared by

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Revisions

Version	Primary Author(s)	Description of Version	Date Completed
Version 1, rev. 0.0	Thomas Bailey Henry Unruh	Draft version for intial prototyping	10/25/19

1 Introduction

Buff Stuff is an interactive web app designed to be used from a mobile device to manage lifestyle choices and improve user health.

1.1 Document Purpose

The purpose of this document is to present a concept of a web application that is designed to promote healthier activities and manage user health. The systems involved for our product will maipulates multiple sets of data. Given this, some of the software will involve data control and storage. The scope will mostly cover user interaction and data collection, that the user will input in some form for the program to parse and digest and those interactions (*data gathering and user interactivity*) are subsystems of the main site which will house these components.

1.2 Product Scope

Our product **Buff Stuff** is an interactive web application that is used to monitor and track the user's lifestyle choices and fitness activities. It will allow for users to create an account that monitors their current habits allowing the system to gather data on their lifestyle and give the user the ability to generate and manage fitness goals. This data collection, allows the system to compare and contrast elements such as caloric intake compared to calories burned and provide the user a granular indicator of their progress and with additional information, the product can then offer reasonable goals and ideas that the user can engage in to help improve their health. This achieves the vision of creating a relatively basic and simple program to analyze fitness and promote better health.

1.3 Intended Audience and Document Overview

The intended audience for this product are primarily individuals looking to improve their fitness or to start goal-setting to achive better health. The clientele that is intended for this document could be marketing executives and potential developers. Marketing individuals can use this application to promote healthier behaviors for individuals that need an outline for their routine. Users will be the individuals that download and interact with the application. Developers can utilize this program and have a general understanding of what this system is trying to achieve and then integrate other third-party software and hardware into the application.

1.4 Definitions, Acronyms and Abbreviations

BS:	Buff Stuff – the product.
SP:	Swole Patrol – the development team.
HTTPS:	Hyper Transfer Text Protocol Secure – used for websites and to ascertain that the site is secure.
UI:	User Interface.
FAQ:	Frequently Asked Questions

1.5 Document Conventions

This document follows standard IEEE convention for formatting, which includes the use of standardized fonts, font sizes, and other miscellaneous requirements. This section will be expanded upon as future SRS iterations are created.

1.6 References and Acknowledgments

To Be Determined

2 Overall Description

2.1 Product Perspective

Buff Stuff is a product designed to aid in making and maintaining healthier lifestyle choices. It is based around the idea that most fitness management software provides for calorie counting and excercises tracking, along with other features but rarely incorperate them all into a single usable product. This system's design gives the user the ability to create a new plan and account to monitor their status and use existing third-party software with their plan. Monitoring will utilize nutritional databases to calculate excess calories, nutrition in food, and other fitness actions. Optionally, the end user will also have the option of being able to post thier results to social media platforms such as InstaGram or Facebook.

The user's status is then tracked using goals set by the user. Once a goal has been set, the user can then adjust their lifestyle activities to see whether they meet their criteria or not after some given time. Our product will take advantage of various databases in regarding the nurtitional values of different foods and calories burned through exercise.

2.2 Product Functionality

The main functions of the product are as follows:

- Track the total calories that have been burned/consumed.
- A progress tracker that provides the following:
    - Auto generated weekly reports of finess goals.
    - A daily goal of caloric intake.
    - Weekly calorie counter: burned vs. consumed.
    - Nutritional values and vitamins tracker.
- Has access to databases that:
    - Provide nutritional information of certain foods (like a banana).
    - Provides information about various exercises that can be performed.
- User-based goal-setting, with dates and plans.

2.3 Users and Characteristics

The users of the product will be the general public – free to use for everyone, however the scope isn't inherently limited to this audience, fitness trainers and gyms may also use this application. Regular users are defined as people who seek to improve their health physically and wish to have a numerical journal to catalogue and share the progress of their journey in changing their lifestyle. Fitness trainers and gyms can also utilize this app to help create goals for regular users as well as establish potential plans for other clients.

2.4 Operating Environment

The operating environment will be on a computer or mobile device. The software that is pertinent will be any operating system such as Windows 7/10, macOS, iOS, Android, and Linux.

2.5 Design and Implementation Constraints

The system will need access to free databases for exercises and nutritional content. The access of some social media platforms, like account linking, is also a possibility. In addition to this, developers will need access to the software details of third-party accessories such as FitBit or other tracking applications. Hardware compatability is also a potential issue, since some of the guidelines for certain platforms are different and controlled by different manufacturers.

2.6 User Documentation

If the user is confused about any particular element(s) of the application, the interface will have a small help site. This help site will aid in diagnosing basic questions and inquiries. This documentation will contain information about setting up the weekly logs for fitness tracking, basic information about goal tracking as well as mobile push notifications. Other elements of the documentation will include an end-user license agreement for the use of the app as a disclaimer, and for further explanation, a wiki and frequently-asked-questions page dedicated to answering and going through steps on how to perform certain steps will be included.

2.7 Assumptions and Dependencies

It will be assumed that the userbase will have accesss to some mobile device or computer that is easily or readily available. It is optional to have third-party devices like a FitBit, smart watch, or social media presence on sites like Facebook or Instagram, and of course, the willingness to improve one’s physical prowess!

3 Specific Requirements

3.1 External Interface Requirements

3.1.1 User Interfaces

Manual input will be the main interaction that the user will engage with the software. There will be a variety of basic graphics that will lead the user to inputting certain pieces of information, such as calories burned, consumed, etc. Search functions for exercises the user would like to learn about and foods that they would want to investigate, will also be included in this interface. A settings option for adjusting acocunt preferences and notifications will be provided for user convenience .

3.1.2 Hardware Interfaces

The associated hardware will be equipment such as mobile devices to carry the app, but will also be able to interface with other functions of the device, such as the pedometer. Optionally, other tools can be linked together, like smart-watches (apple watch), FitBits et cetera.

3.1.3 Software Interfaces

The software that will be responsible with linking to a database that will provide an updated page for the user's nutritional values for the week. Additionally, there will be a second database for information about exercise techniques, for the end-user to integrate within their routine. Included in the account settings and preferences help menu, the app will have a link to the **Buff Stuff** website FAQs. Other outside networks that the app will be capable of communicating with will be the cloud for information storage as well as social media for sharing and updating progress on fitness goals.

3.1.4 Communications Interfaces

The main website for providing services for the **BS** app will follow the HTTPS encryption standard on top of both the site and app having two-factor authentication that allows for greater security and privacy.

3.2 Functional Requirements

The application will have three main categories in the design of the program. In a susinct format: The progress is the primary function of the **BS** app. It provides two secondary functions which are: a weekly progress report that provides the user with calories consumed vs burned and a overall caloric goal for that week. If the nutrition tracker portion of **BS** is used, it allows the total nutritional value of foods to be displayed for that week as well. Finally, the weekly report will also display the exercises the user has engaged with in a total body workout diagram.

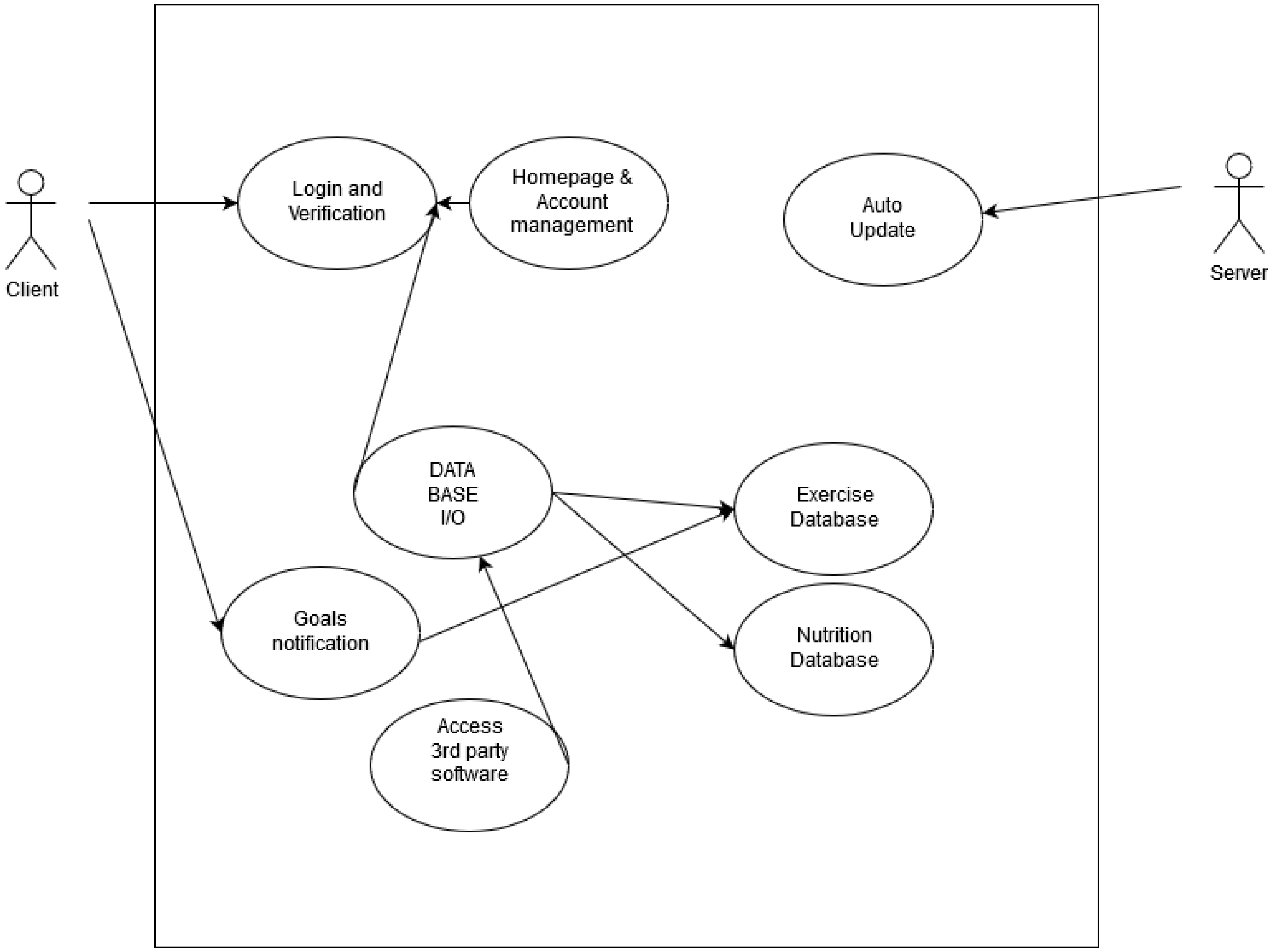
The other subfunction of the progress tracker is to set goals. With this function, the user can determine the timeline of their goals relating to their overall fitness and weight. The system will then attempt to generate a program for the user to follow to achieve their plan, including a diet plan. At the end of the plan, it will compare the initial entries with the current entries to give a before and after snapshot of the user's fitness.

The second, primary function is to track the calories burned throughout the week. In order to accomplish this, it is capable of monitoring the duration and intensities of the exercises performed by the user through the mobile device’s pedometer and/or third-party accessories such as a FitBit or smart watch.

The final primary function is to record the total calories consumed; this function acts in conjunction with the calories burned function to provide the weekly tracker with updated information. It consists of a manual entry mode for the total number of exercises that the user has performed. It also contains a search database for new exercises for specfic muscle groups in the event that the user wants to vary their routine.

3.3 Behaviour Requirements

3.3.1 Use Case View



4 Other Non-functional Requirements

4.1 Performance Requirements

The performance requirements are intended to provide the following:

- The program should be capable of an offline mode, in the event that Wi-Fi isn't available at their current location, this is a particularly useful for long-distance cycling or running.
- The boot time for the app should be less than ten seconds for the app load and less than five seconds for the app to change pages.
- The application should receive automatic updates from a server to ensure stability.
- The application should be compatible and format with various mobile devices.
- The application should included user-friendly touch screen prompts.
- The ability to easily maniplate data, such as adding or removing, and deleting accounts.

4.2 Safety and Security Requirements

The **Buff Stuff** application will take advantage of multiple security protocols to include: two-factor authentication, the potential for biometric security such as facial or fingerprint recognition, the supporting **BS** website will utilize HTTPS encryption, and finally require the user to create a password that is at least eight characters and contains three different symbol types to include an uppercase letter, a number, and a special character.

4.3 Software Quality Attributes

During updates, the databases will be refreshed with the latest information regarding nutritional values and exercises as well as providing user-end support and security. After the user inputs new information into the application, user inputted data and account information should be reflected within the system immediately. The program will have stable access to the cloud and be able to store user data as well access to information databases. The UI experience should be friendly and easy to understand and provide quick navigation.

5 Other Requirements

N/A.

Appendix A – Data Dictionary

- Tracks calories burned
    - Access fit bit
    - Manual entry mode
    - Pedometer function for phone
- Tracks calories consumed
    - Manual entry mode
    - Food nutrition database
- Progress tracker
    - Weekly progress report
        - Consumed vs burned
        - Nutrition tracker
        - Exercise tracker

Appendix B - Group Log

<October 18th> Bailey generated SRS document draft. Generated outline for program. Uploaded to github.

<October 20th-21st> Group collaboration on more ideas of draft and product features. Began skeleton draft for said idea and filled in basic ideas for product. Henry and Bailey added rough ideas to Introduction (1.1, 1.2, 1.3) and Overall Description (2.2).

<October 22nd-23rd> Henry added details to Introduction (1.1, 1.2, 1.3) and Overall Description (2.2).

<October 24th> Henry added details to Introduction (1.1, 1.2, 1.3) and Overall Description (2.2). Uploaded to github. Bailey added details to Non-functional Requirements (4.2). Bailey created skeleton for software requirements. SP team brainstormed ideas for feature to be included.

<October 25th> Henry and Bailey polished the SRS. Turned in for pending grade.