

A SOFTWARE REQUIREMENT SPECIFICATIONS ON



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Revision History

Name	Date	Reason For Changes	Version
Mitchell Aucoin, Sam Bowden, Thien Nguyen	3/15/2017	Initialization of documentation. Sections 1, 2, 4, and 5 completed	1.1

Mitchell Aucoin, Sam Bowden, Jordan Hendl, Thien Nguyen, Amber Johnson	3/16/2017	Sections 3, 6, and Appendix completed. Line editing.	1.2
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1. Introduction

1.1 Purpose

*The purpose of **FormFitApp** version 1.0 is to provide its users with an easy to use and convenient way to find new exercises, improve their current routine, and or help instruct others on how to improve their fitness lifestyle.*

1.2 Document Conventions

Bolded text will signify any terms that will be defined in the glossary, and red highlighted text will signify safety precautions.

1.3 Intended Audience and Reading Suggestions

This document is intended to be read by developers, users, and testers. Testers should pay close attention to all parts of this document to ensure that all listed features work as they should. Developers should pay close attention to sections 3-5, and use them as instructions during the development of the software. Users reading this document will find section 4 useful. Section 4 will act as operating instructions on how to use the software correctly.

1.4 Product Scope

***FormFitApp** is a fitness application designed to increase physical activity among the population. It intends to do this by helping those who want to work out, but for some reason fell they cannot, by motivating them and providing instruction on how to properly perform different exercises or other physical activities.*

1.5 References

<http://www.formfitapp.com>
<https://github.com/mightyadamyoung/FormFit>

2. Overall Description

2.1 Product Perspective

This system is a new and original system where users can interact with other people with the same interests in working out. Through the upload and sharing system, users can share their workout routines and watch others' workout routines to implement them and can learn new workouts.

2.2 Product Functions

*Each **FormFitApp** user will be able to create a personal account that will be connected to a database where they can upload and share their workout routines. Members can communicate with one another by using a messenger board that will automatically notify them whenever there is a new message posted to the board. Members will also be able to add one another as friends and will have a list of friends on their user page. On the user page, the users will be able to choose their own avatar image to display and change their information such as weight, height, max lift, etc.*

2.3 User Classes and Characteristics

Beginner: We anticipate that the beginners will use this system the most because they will be able to use the system to learn new workout routines from people who are more experienced than them.

Intermediate: We anticipate that the intermediate will be the least likely to use this system because they have already learned new workout routines and are not yet an expert on them to be able to give advice and instruction to beginners.

Expert: We anticipate that the experts will get a lot of use out of this system because they are more likely wanted to help beginners to get into working out so they will be the most active people on the system posting photos, videos, and instructions of how to do a workout where all other users will be able to watch and learn from their examples.

2.4 Operating Environment

We will have a website as our main outlet at **FormFitApp.com**. However, we anticipate also having a working Android Application running on Android 4.4 KitKat and beyond. We will also have an application on iOS so we can reach out as far to as many users as we can.

2.5 Design and Implementation Constraints

As of right now, we do not have any constraint that would limit our options as developers.

2.6 User Documentation

We will have terms of use that the users must agree to before registering to our system that will list requirements that the users must follow in order to use our system.

2.7 Assumptions and Dependencies

We do anticipate that our website and applications will be able to be delivered on time. However, as we are currently in the process of learning new methods to implement our website using languages such as PHP and HTML which none of us currently have any experience working with. Because of this, we anticipate that we might not be able to deliver our website along with working applications on both Android and iOS so we should settle with only having a website otherwise.

3. External Interface Requirements

3.1 User Interfaces

Users can access **FormFitApp** from the website formfitapp.com that has both a desktop and a mobile version. On the homepage of the site, there is an option for the user to register an account or login with an existing account. There is also a link to a shop that will sell

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articles and apparels and a link to an about page which gives users a basic idea of the contents of the page. For a user to register they must create a username and password and provide a valid email address as well as give gender, country, and view Terms of Use. Once a user registers and confirms their account through e-mail, they can login and access their home page. On the home page to the left, users can access five tabs. The Fitness Zone tab is an area of the website where users can view videos, pictures, and exercises submitted by other users. The Notifications tab shows the users messages from other users as well as any pending friend requests. The Create Exercise tab allows users to submit their own exercises that requires a name for the exercise, a description, and a list of muscles that the exercise works out. The Settings Tab allows users to input a bio describing themselves, a personal website, and figures for their max bench, squat, and deadlifts. From each tab, there are links to go to each other tab.

On the Main Tab, a user can upload a profile picture, see his friends list, see posts from friends, and access the users uploaded, pictures, videos, and exercises.

3.2 Software Interfaces

The website uses a MySQL database to store the information on the site. Any user-uploaded content is stored in the user's index file on the website. The control panel for the website as well as the server are Linux based. The website is built using the language PHP and its libraries, and the Android application is built using Java. User submitted items are sent into the database and sent out of the database. When a user logs in their input is checked against information on the database for correctness.

3.3 Communications Interfaces

Session **cookies** are used to establish a user's session and login and last a week unless the user logs out and logs back in. Emails are dispatched for user registration and messages that users receive on the site. When a user registers an account the information is hashed and stored on the database using MySQL.

4. System Features

4.1 Registration and Login

4.1.1 Description and Priority

The Registration and Login system is a high priority feature that allows new users to create accounts using a unique username and email. Users already registered may enter their username and password into the login form to login.

4.1.2 Stimulus/Response Sequences

Upon entering their info into the registration form the user clicks register and the system sends an activation email to the users email address. Once activated a user may log in using the login form. Once their info has been entered and checked to see if they exist the system will redirect them to their profile page.

4.1.3 Functional Requirements (Registration)

- REQ-1: User is on registration page
- REQ-2: Form connects to database
- REQ-3: All form data is filled out
- REQ-4: System checks to see if username is taken
- REQ-5: System denies or approves username
- REQ-6: User clicks register
- REQ-7: Activation email is created and sent
- REQ-8: User is inserted into **MySQL** database

4.1.4 Functional Requirements (Login)

- REQ-1: User is on login page
- REQ-2: Form connects to database

- REQ-3: All form data is filled out
- REQ-4: System checks to see if username and password match/exist
- REQ-6: User clicks login
- REQ-5: System denies or approves login attempt
- REQ-8: If approved the user is redirected to profile, else an error is printed

4.2 Social System

4.2.1 Description and Priority

The Social system is a high priority feature that allows users to connect with other users via a friend and messaging system. Access to the photo upload system is available through the user profile. The user profile is central to the social system. It is where users can change their avatar, and display stats updated within the settings.

4.2.2 Stimulus/Response Sequences

Upon entering their info into the registration form the user clicks register and the system sends an activation email to the users email address. Once activated a user may log in using the login form. Once their info has been entered and checked to see if they exist the system will redirect them to their profile page.

4.2.3 Functional Requirements (Profile Page)

- REQ-1: User is logged in and verified as an activated user
- REQ-2: **MySQL** Database connection is made
- REQ-3: Profile page for the specified user is displayed

4.2.4 Functional Requirements (Friend/Block System)

- REQ-1: User navigates to another user's profile page
- REQ-2: **MySQL** database connection is made
- REQ-3: Add Friend/Block form is displayed under the user's avatar
- REQ-4: User clicks either option and a JavaScript message is displayed
- REQ-6: The receiving user gets a notification if the friend request is successful
- REQ-5: User accepts or denies request
- REQ-8: The request is either deleted from database or marked as accepted

4.2.5 Functional Requirements (Photo System)

- REQ-1: User navigates to either avatar, or gallery upload form
- REQ-2: Connection is made to **MySQL** database is made
- REQ-3: Photo Galleries are displayed and upload form is loaded
- REQ-4: User clicks either option and a JavaScript message is displayed
- REQ-6: User uploads photo or browses gallery

4.3 Settings System

4.3.1 Description and Priority

The Settings system is a high priority feature that allows users to update their info and other settings (passwords, emails, etc.) via a conveniently formatted page.

4.3.2 Stimulus/Response Sequences

Once a user navigates to settings the fields already filled out are populated with the values from the database. The user may enter new values and then click submit, the values are then updated in the database

4.3.3 Functional Requirements

REQ-1: User navigates to the settings page

REQ-2: **MySQL** Database connection is made

REQ-3: Non-empty database fields are inserted into their corresponding text box

REQ-4: User then fills out the forms they want to update

REQ-5: User Clicks submit and new values are updated in the database and displayed on the profile page.

4.4 Exercise System

4.4.1 Description and Priority

The Exercise system is a high priority feature that allows users view and exercises created by other members, and create their own exercises for others to view. Exercises include a video tutorial, a description, and a list or image of the muscles worked during the exercise.

4.4.2 Stimulus/Response Sequences

A user creates an exercise by clicking the "Create Exercise" link in the navigation bar, the user must fill out the specified form items before proceeding to the video upload section. Once a video is uploaded the exercise can be found on the Fitness Zone page, with other created exercises.

4.4.3 Functional Requirements (View Exercises)

REQ-1: User navigates to the Fitness Zone

REQ-2: **MySQL** Database connection is made

REQ-3: Exercises that have videos are displayed. 16 are displayed per page

REQ-4: User clicks an exercise that he/she would like to view.

REQ-5: Exercise description, video, and muscles worked section are loaded onto the exercise display page.

4.4.4 Functional Requirements (Create Exercises)

REQ-1: User navigates to the create exercise page

REQ-2: **MySQL** Database connection is made

REQ-3: User fills out form data

REQ-4: User clicks next and is brought to video upload form

REQ-5: User uploads video (time may vary depending on size and connection)

REG-6: Video upload succeeds and user is redirected to their newly created exercise.

5. Other Nonfunctional Requirements

5.1 Performance Requirements

The maximum size of uploads such as videos and photos will be limited to 500mb. Also, whenever a video or a photo is uploading, one of the threads of the CPU should be ready to be able to initiate and finish uploading, otherwise the process will hang until a thread of the CPU is ready.

5.2 Safety Requirements

We are not responsible for any failures of the users attempting any exercises that are shared on our database. We are only hosting the exercises on our database, any attempts that result in injury, property damage, or death will solely be the user's responsibility to use our system with their own safety in mind. However, we will monitor what is being uploaded to our database to make sure that the videos do not contain obscene material and that they conform to our terms of use policy.

5.3 Security Requirements

*We will **encrypt** the user's passwords on our database so nobody will be able to access them if our database security is compromised. When a user forgets his/her password, the user will be able to request a temporary password that will be sent to his/her email address that was used to register an account on our system. If the user's e-mail is compromised, then there is nothing we could do about that other than erasing his/her profile for good if the user can prove to us that he/she owns the account.*

5.4 Software Quality Attributes

The most important thing for us as developers of this system is that this product will be an easy tool to use for any users at any technical levels. The system will be a very simple interface that users can interact and change in small amounts of clicks. An example of this would be if the users wanted to upload a video of an exercise, when the user is logged in, he/she will only have to click on the "Create Exercise" button, from there, he/she will give a brief description of the exercise, then the user will be able to choose a video to upload if it is under 500mb. The system will be able to be flexible and adaptable to new technologies. If in the future, we wanted to add new functions to the system, we want to make it as easy as possible for us to add new functions to the system without having to change anything on our existing functions. We also anticipate making our system be portable for the users with our Android and iOS application. That way, users will be able to use our system without having to be tied down to a computer.

5.5 Business Rules

Each user will only be able to change information on their own profile. On our end as the developers, we will only be able to maintain the database without knowing the passwords of our users. However, if needed, we can terminate any account per request by only the owner of the profile.

6. Other Requirements

We are legally required to have terms of use that absolves us from liability and lawsuits. This form gives our team, as developers, safety and security in our jobs so that we can safely design and try new designs without being endangered by lawsuits. This does not clear us of all legal action, however, though it greatly helps to protect us.

Appendix A: Glossary

MySQL - Open-source database management system

FormFitApp - Name of the website we are developing

Encrypt - To obfuscate data by running it through an encryption algorithm

Cookies - Data stored by web browsers to keep track of a user's session