UC-364 Step Up

Abstract

Step Up is a website designed to let users enter their information and calculate a step count to aid them in losing weight. Each user creates an account to store their data. This information will include necessary variables to calculate their step count using their target weight loss. The step count provided by Step Up considers the number of steps a user between the ages of 19 to 40 must make over three months to reach their goal. Step Up allows users to receive email reminders to keep their information up to date. Administrators of Step Up have the option to download anonymous user data for further research into the method behind Step Up's calculations.

Fig. 1 Step Up Logo

Project Objectives

- Accurately calculate a daily step count for the user based a prescriptive algorithm that utilizes these variables: sex, current weight, target weight loss, waist circumference, neck circumference, and body composition.
- Build an account system for users to register and store, and modify their data.
- Establish a email based notification system to send reminders to the user.
- Provide anonymous user data to administrators to user in further research.

Materials and Methods

All programs used in the making of our project: Step Up

- Flask - The framework for our web application.
- Pycharm - The primary choice of IDE used by our team.
- Github - A repository to share and collaborate on the project.
- HTML, CSS, Javascript - To create and stylize our web pages.
- Python - Our programming language of choice.
- PythonAnywhere - The host of our current product.
- SQLite - The testing database for our product.
- MS Teams and GroupMe - Our choice of communication software.

Step Up followed the methods we laid out in our project plan at the beginning of our project. Our plan uses a prototype to give the client a visualization of his product. We workshop this with him until he agrees on the design of the product. Next, we created the structure of a design document to construct and document the product's inner workings. Then our project could begin, and we used our communication and collaboration tools to recreate the prototype. To do this, we followed the agile methodology to get small sections of tested code released one at a time. This, in tandem with the white box/black box techniques we've learned, gave our project a relatively sturdy structure. We finished the project with minor tweaks given by our client and a small user manual.

Tools

Flask

python™

HTML

CSS

JS

Results

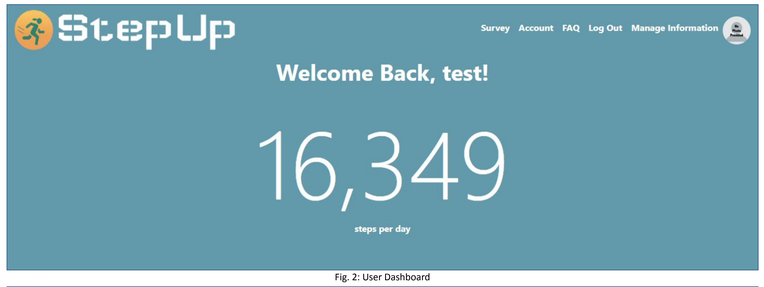

Fig. 2: User Dashboard

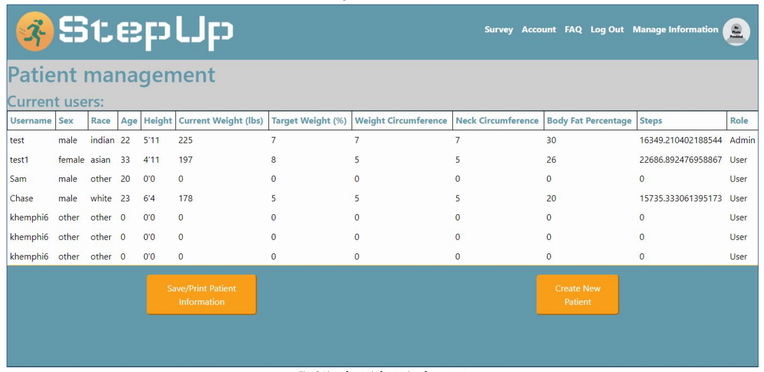

Fig. 3 List of user information for survey

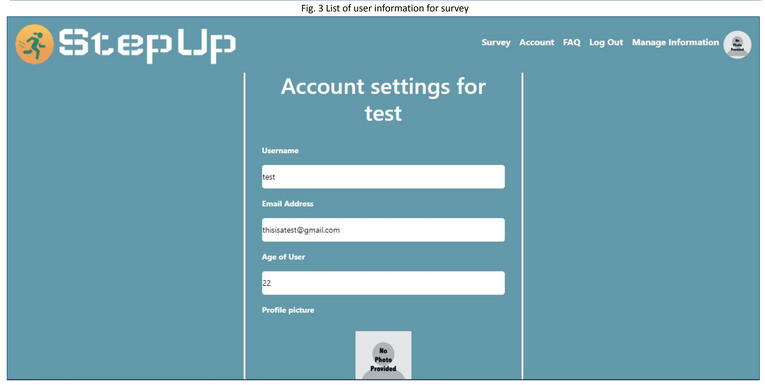

Fig. 4 Account settings for user to update their account

Results

Step Up became a lot like its prototype as envisioned. Step Up is capable of creating and logging in users; it stores each user's information and securely hashes their passwords; it can display essential features to the user, such as their step count; and it can let users update their information whenever necessary. In addition, the administrator can see and save all user information for the study this web application is built for. For everyone on our team, a lot of the programs, languages, and resources used are new to us. Through creating Step Up, we learned new programming languages, techniques, and skills to help us as we move forward.

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Contact Information

Professor
Prof. Yan Huang: yhuang24@kennesaw.edu

Students
Liam Hardage: lhardag3@students.kennesaw.edu
Emely Guerrero: Eguerre4@students.kennesaw.edu
Kennedy Hemphill: khemphi6@students.kennesaw.edu
Zachary Okwuosa: zokwuosa@students.kennesaw.edu
Sami Iqbal: siqbal6@students.kennesaw.edu

References

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https://github.com/KSU-Capstone-Team-2/StepUp.git

lkhardage.pythonanywhere.com

KENNESAW STATE UNIVERSITY
COLLEGE OF COMPUTING AND SOFTWARE ENGINEERING

Author(s) Hardage, Liam K; Iqbal, Sami; Guerrero Bengoa , Emely P; Okwuosa, zachary; Hemphill, Kennedy
Advisors(s) Prof. Yan Huang