# ACC Java Capstone Project

## *Step Up!™*

### Abstract

*Step Up!™* is a web application where folks can log in and record their exercise activities. It is meant to encourage physical activity and, by following family and friends, hold people accountable to exercise. They can see an overview of their recent activity, including a chart showing their weekly active time vs the generally recommended minimum. The user can earn badges on a weekly basis depending on if they exceed the recommended minimum. Additionally, they can follow other users on the site and receive updates when the people they follow log activity.

### Features

| **Feature** | **Milestone #** | **Status** |
| --- | --- | --- |
| Achievement history page with new activity log capability - includes exercise type, duration, intensity, notes, and date (default to today) | 1 | Done |
| Storage of achievement log in a database | 1 | Done |
| Login page | 2 | Done |
| Multiple user support via sessions - login username/password | 2 | Done |
| Storage of username/password in database | 2 | Done |
| Profile page with name, goals, username, member since, last activity, email, phone number backed with database | 3 | Done |
| Profile page view of other users (not editable) showing information with link to their exercise activity | 3 | Done |
| Dashboard page shows all users achievements in the order they had the exercise (not the order they keyed it in) | 4 | Done |
| ‘Follow’ link next to other users names on the dashboard adds to the ‘following’ list for a user and shows up in their profile | 5 | Done |
| Followers get e-mail and/or text notifications of activity of the users they follow | 5 | Partial (email done) |
| Add chart of achievement data on the Achievement Log page - shows minutes / week and displays performance vs recommended min baseline | 6 | Done |
| Add flair for users achieving recommended min baseline per week. | 6 | Done |
| Improve formatting / design of JSPs | 6 | Done |
| Report e-mail / txt for change in flair week to week. | 6 | Not done |
| Dashboard page has an area for posts where logged in users can write posts. | 7 | Done |
| Editable achievement log capability with link to edit if logged in and viewing own log | 8 | Done |
| Following users get an e-mail when post written. | 9 | Done |
| Profile page with picture upload/display backed with database | 9 | Done |
| Create groups | 10 | Not done |
| Create [captcha](https://www.google.com/recaptcha/about/) on login to guard against bots/bad actors | 11 | Not done |
| Deploy to actual web server | 12 | Not done |
| Following users can get a text when followers post/update | 13 | Note done |
| Create mobile app to log activities, write posts | 14 | Not done |
| Make flash messages more human readable | 15 | Not done |
| Send updates when a user’s badge changes in addition to new activities | 16 | Not done |
| Enhance security for login credentials, database password | 17 | Not done |

All GREEN boxes have been completed. WHITE boxes are planned or in work. RED boxes are features that will likely not make the capstone by the time I present.

### Pages

#### Welcome

This page is displayed if the user has not logged in. It welcomes the user and asks for a username and password. After logging in, they are redirected to the Achievement Journal

#### Home

Here is where the user, if logged in, can enter a new exercise that was completed. There is a drop down selector for exercise type as well as fields for duration, distance, notes, and date. Also, if a user is logged in, there will be an edit link next to each achievement where the user can edit the achievement to change exercise type, etc. Lastly, there will be a chart showing user’s activity history vs recommended minutes/week baseline.

#### Dashboard

Shows the achievements of all users in the order the actual exercise happened, not when they were entered by the user. Clickable links on any user which brings up their profile. Area for posts underneath the scrollable achievements field. Logged in users can submit a new post.

#### Registration

Simple page to select username and password.

#### Profile

Users looking at their own profile can edit the fields. Includes username (not editable), full name, picture, goals (free text), email (not publically displayed), phone number (not publically displayed), email subscribe to followers checkbox, text subscribe to followers checkbox, Following list. Users looking at other profile’s will have a link to start following them.

### Technical

#### Java Objects

* User
  + username
  + database key (ID)
  + Profile
    - name
    - picture
    - goals
    - email subscribe
    - text subscribe
    - Following List
      * Following ID1, Following ID2, ….
    - Achievement List
      * Achievement 1, Achievement 2, ...
* Achievement
  + database key (ID)
  + Achiever ID
  + Activity Object
    - Running, cycling, etc varieties
  + Intensity Object
    - Light, Moderate, Hard, Strenuous
  + Duration
  + Notes
  + Date performed
  + Date recorded
* Post
  + database key (ID)
  + Author ID
  + content
* Badge
  + Level
  + Habit
* LoginBean, AchievementBean, RegistrationBean
* StepUpDAO (database access object)

#### Database Schema

Users

User ID (Key)

Username

Password (digest version?)

Profile ID - Foreign key (1 to 1, user owns)

Profile

ID (Key)

User ID - Foreign key (1 to 1, user owns)

Firstname, Lastname

Picture

Goals (free text)

Email Subscribe (boolean)

Text subscribe (boolean)

Achievement

ID (Key)

User ID - Foreign key (1 to many, user owns)

ExerciseType

Duration

Distance

Notes

Date Occurred

Date Recorded

Post

ID (Key)

Author ID - Foreign key (1 to many, user owns)

Content

Followers

BeingFollowedID

FollowerID

ID (Key)

#### Technology

The webapp will be developed using NetBeans and Derby as the database. Initially, Netbeans with Glassfish will be used to test the application, however if time allows, it may be deployed to a live server for demonstration.