Andy Morrison

Ben Ratner

CCEL Project STEP-UP organization web app

Software Requirements Specification

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2. Introduction

2.1 Purpose of this document

This document is to be used by the developers of the Project STEP-UP organization web app. It is to document all functional and nonfunctional requirements to be exhibited by the first release of the project. All requirement descriptions documented here will be used to verify that the first release of the project functions correctly.

2.2 Project functionality

A detailed description of project vision and scope can be found in the *CCEL Project STEP-UP organization web app, Vision and scope* document. The primary purpose of the project is to provide the Project STEP-UP tutoring program with a digital, online-accessible system for

organizing tutoring sessions to replace the current system of organization which is primarily paper- and email-based. By achieving this migration, tutors will have better communication with teachers and other location hosts, and students will be able to instantly check what sessions are available to them.

3. Overall description

3.1 Overall trajectory

The project is meant to eliminate reliance on private email communication and paper-based scheduling in Project STEP-UP. The primary component for achieving this is a user-friendly website, which will be built on top of a database of Project STEP-UP users and sessions. The database will be designed to be versatile and efficient with regards to the types of queries that will be made most often, and to serve as the basis for a login and messaging system. For that reason, the database may be suitable in the future as a basis for a Project STEP-UP organization mobile app on Android and/or iOS. However, such mobile apps are not currently within the scope of this project.

3.2 User classes

- <u>Attender</u> - An attender is a person who seeks out the tutoring sessions offered by Project STEP-UP, or any user not registered on the website. Since Project STEP-UP offers sessions anywhere in the K through 12 grade levels, an attender may be either a student or a parent seeking sessions for their student. Upon visiting the website, any attender must be able to see a complete list of tutoring sites and sessions, and be able to filter sessions by location, subject, day of the week, time, and tutor if they have a preference. An attender must be able to register on the website, and login with their unique username and password combination. From the logged-in interface, an attender must be able to send a message to a user affiliated with Project STEP-UP, and must be able to indicate their intention to attend a given session.
- <u>CCEL supervisor</u> - A CCEL supervisor is a CWRU employee working on Project STEP-UP within the Center for Civic Engagement and Learning. A CCEL supervisor can view, create, and cancel any session. Additionally, they are able to register new tutors, site leaders, and site hosts. A CCEL supervisor can view detailed registration information

of any user that would normally be hidden, such as email address. A CCEL supervisor must also be able to view the web app's log of session changes.

- Site host - A site host is a teacher or building administrator who is offering their classroom or other indoor space for tutoring to take place. A site host can only be registered by a CCEL supervisor, and must be able to log in with their unique username and password combination. Upon logging in, a site host must be able to view all sessions scheduled to take place at their site, and cancel any or all of those sessions.
- Tutor - A tutor is a CWRU student serving as a tutor for Project STEP-UP. A tutor can only be registered by a CCEL supervisor, and must be able to log in with their unique username and password combination. Upon logging in, a tutor must be able to view, create, or cancel tutoring sessions they are scheduled to host. They must also be able to view the usernames of any attenders who plan to attend one of their sessions.
- Site leader - A site leader is a tutor who has been given some additional administrative power within a site on behalf of a CCEL supervisor. Only a CCEL supervisor can make a tutor into a site leader. A site leader is able to view all items pertaining to their site in the web app's log of session changes. They are also able to view, create, or cancel tutoring sessions of any tutors working within their site, and they are able to view the usernames of attenders of any session at their site.

3.3 Operating environment

The system will be hosted within the case.edu domain name, the specific subdomain to be determined later. An SQL database must be available for the system to use. The web server must support JavaScript, including jQuery and Ajax. The web server must support the latest version of PHP.

The front-end of the system must be tested and verified to display correctly in the latest versions of Internet Explorer, Mozilla Firefox, and Google Chrome.

3.4 Design and implementation constraints

- All PHP scripts must be hidden. No .php web pages will be used in the system. Rather, all PHP scripts will be run through Ajax scripts to insert content into standard HTML web pages.
- The system must adjust its layout to be easily readable on all screen sizes. At least two layouts will be needed: one for desktop computers, and one for mobile devices.

- The back-end database of the system must have a table to serve as a change log.
- Using the system's own messaging system, the system must automatically send a notification to all affected users when a tutoring session is modified or cancelled.

4. **Functional requirements**

- <u>FR-01</u>: Users must be able to execute a text-based search for sessions by location, subject, grade level, time, day of the week, and tutor
- <u>FR-02</u>: After executing a search, users must be able to restore the page to the state it was in prior to the search if desired
- <u>FR-03</u>: Users must be able to register for a unique username within the system and set a password
- <u>FR-04</u>: Users must be able to login to the system using their unique username/password combination, enabling extra functionality when using the system
- <u>FR-05</u>: Tutors, site leaders, and CCEL supervisors must be able to create sessions, modify session time/location, and delete sessions; the scope in which a user can enact these capabilities depends on the user class
- <u>FR-06</u>: Registered attenders must be able to indicate that they "will attend" a session, or revoke a previous indication that they "will attend" -- the "will attend" status must be visible to the session's tutor
- <u>FR-07</u>: Attenders must be able to send messages to Project STEP-UP-affiliated users
- <u>FR-08</u>: Project STEP-UP-affiliated users must be able to send messages to other Project STEP-UP-affiliated users, or to attenders
- <u>FR-09</u>: When a session is modified or cancelled, the system must automatically send a message to all attenders who made the "will attend" indication for that session to inform those users that the session has been changed or cancelled

5. **Non-functional requirements**

- <u>NR-01</u>: Upon a search being executed, there must not be a full page refresh in order to display the search results

- <u>NR-02</u>: The system must return and display search results within 1.5 seconds of execution whenever there are 200 or fewer users logged into the system
- <u>NR-03</u>: All functional requirements must be exclusively accessible to those user classes for which they are intended, and inaccessible to all other classes of users
- <u>NR-04</u>: Correspondence with the server to perform a "login" or "logout" operation must be done through the POST method of HTML
- <u>NR-05</u>: The system's home page must have a search bar to allow immediate browsing of available sessions

6. Document change history

- 12 Oct 2015 - Added "Document change history" section and updated table of contents.
- 12 Oct 2015 - Added identification codes to each of the functional and non-functional requirements.
- 12 Oct 2015 - Edited FR-01 to include "grade level" as a possible search criterion.