

## Test Plan for Badges.

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**Client:** Joanna Normoyle

### Summary of Product(s) to be tested.

We are working on a website project with Joanna Normoyle and her team from the UC Davis Agricultural Sustainability Institute. The website allows users to share experiences with others and earn badges to demonstrate the user's past experiences and learning. The goal of this project is to allow students an easy way to display and share the experiences they gained during their time as a student. Using the website, students will be able to receive badges, or endorsements, from faculty members of their institution and then share their badges and experiences to the outside world through the Mozilla Open Backpack API. Potential employers will then have the ability to verify each badge or experience on the website to ensure authenticity.

### Major Elements of the product:

The website must allow

- Students to push badges to their Mozilla Open Backpack
- Students to delete and edit experiences, also to upload/delete relevant work files
- Administrators to delete a badge from the entire system and revoke a specific badge from a student
- Administrators to be notified of instructors creating an account in the system to grant them necessary permissions.
- Students and Instructors to be notified of feedback events such as requests for feedback from instructors, and instructors subsequent feedback to the student
- Students to be notified when a badge they had previously earned is either revoked or deleted from the system.

### ● Contact information for developers

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### Resources Required for testing.

**Hardware and software resources required for testing.**

- Visual Studio Express with the ASP.NET MVC framework
- Git
- Active internet connection
- UCDavis CAS credentials
- Source Code from Github
- Mozilla Open Backpack account

**Estimated person hours for testing (will be amended by test team).**

3 hours (excluding installing Visual Studio)

**How resources may be obtained.**

Visual Studio - <http://www.visualstudio.com/en-us/products/visual-studio-express-vs.aspx>

Git - <http://git-scm.com/>

Source Code - <https://github.com/UCD-Badges-193/Badges>

Mozilla Open Backpack account - <http://backpack.openbadges.org/backpack/login>

## Packaging, Building, Configuration and Option.

**1. Bitbucket Repo/URL for checking out product (read access only) [Please provide DIRECT links to any files in your repository that will be used in the testing process].**

The project is open source:

<https://github.com/UCD-Badges-193/Badges>

**2. How to checkout, build on the major elements (client, server etc)**

- Create a directory
- Execute: git clone git@github.com:UCD-Badges-193/Badges.git
- Open Solution file “Badges.sln” in Visual Studio
- Click the green “play” button to build and run the website on a local server

**3. How to install and configure the elements (Path names? URLs? etc)**

To allow the website to connect to the test database, you must modify the web.config file located in ./Badges/Badges/. Once you have the source code cloned open the Web.config file in a text editor and locate the section <connectionStrings></connectionStrings> and replace the MainDB connection string with this (within the quotes):

Data Source=tcp:[knotaohtr.database.windows.net](http://knotaohtr.database.windows.net),1433;Initial Catalog=badges;User ID=badges@knotaohtr;Password=aCBToRvOXx3Dp5kyI33G

Now, the code should compile, and if not check the errors to make sure the configuration is setup to auto-download dependencies, which can be enabled in the Visual Studio options.

#### 4. How to sanity check basic function to ensure it's built & installed properly.

If you are able to get to the homepage without any exceptions occurring within Visual Studio, then the project has been successfully built and installed properly. Getting to the home page is done via the green “play” button located in Visual Studio.

### Process for defect reporting & repair.

Please report all issues using GitHub's issue tracker on the GitHub page for the project.

We will push the updated code to GitHub.

The testing team can then do git pull and their code on Visual Studio will be updated.

### Functional Testing Plan.

List all test cases in a table as shown below. In the testID column use index labels to refer to Actual test cases in below, using outline as shown here under.

User Identification	User Goal	Test Id	Estimated Time (Devs)	Estimated Time (Testers)
User Interface	Everything in the Appendix of Use Cases	all ( 1- 13)	3 hrs	1 hr

### Non-Functional Testing Plan

Category	SubCategory	Specific Goal	Use Case	Index	Estimated Time (Devs)	Estimated Time (Testers)
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Security	Only users verified through CAS can access the website	Immediately require a CAS login before accessing any part of the website	Only Student, Instructor, or Admin can login	all	3 hr	1 hr
Fault-Tolerance	Avoid server-side errors due to bad requests	Prevent references to nonexistent data	Can not revoke a badge that does not exist	3	3 hr	1 hr
Usability	Intuitive navigation	User can quickly understand the organization of the website	Navigation buttons have tooltips	all	0.5 hr	0.5 hr
Performance	Deleting and Adding Experiences	Gives user the flexibility to display what they want to show	Edit Experience content	2	3 hr	1 hr

## List of test cases.

### Push a badge to Mozilla Backpack

1. User type: Student
2. Goal: Push a badge earned on the website to Mozilla Backpack
3. Initial Conditions: Student is logged in and has earned a badge, also has an open backpack account
4. Test script:
  - a. From home page go to badge center > My Badges
  - b. Click on the badge you want to push
  - c. Click on push to backpack
  - d. Verify that the badge has been put into your backpack on the Mozilla Open Backpack website

### Edit experience content

1. User type: Student
2. Goal: Edit the contents of an experience page
3. Initial Conditions: User is logged in as a student, and has created an experience entry.
4. Test script:
  - a. Create an experience in Student/AddExperience (cross symbol on the home page)
  - b. Click View Portfolio on the home page. Then click View Full Details under the Experience Title.

- c. Add Text. (You can also try adding other media).
- d. Delete any one of them.
- e. You can also delete the whole experience by clicking on the Trash icon labeled: Delete Experience.
- f. You should also be able to change the experience itself via the edit experience button

### **Revoke a badge from a student**

1. User type: Administrator
2. Goal: Revoke a badge from a student
3. Initial Conditions: User is logged in as an administrator, and there is a student who has a badge granted to them.
4. Test script:
  - a. Go to /Admin/Landing and click the link “Revoke a badge”
  - b. Click the “view badges” link for the student whose badge you want to revoke
  - c. Click the “revoke badge” link on the badge you want to revoke
  - d. Verify that the badge is not awarded to said student any longer
  - e. Verify that the student received a notification detailing the reason for removal

### **Delete a badge from the system**

1. User type: Administrator
2. Goal: Delete a badge from a student
3. Initial Conditions: User is logged in as an administrator, and there is a student who has a badge granted to them.
4. Test script:
  - a. Design a Badge by click on the Star Icon on the header of the website
  - b. Make your account an Administrator by going to your account (Click on the name) -> Change Account Type to Administrator.
  - c. Now go to Admin Homepage by clicking on the home button in the header.
  - d. Go to Manage Badge Requests -> Review under the Badge you created -> Click Approve
  - e. Now go back to the Admin Homepage
  - f. Have a student account obtain the badge by requesting it and having an administrator approve it
  - g. Go to Delete Badges -> Delete your Approved Badge
  - h. Verify that the badge does not come up on the list of available badges to earn and the student no longer has the badge
  - j. Verify that the student has received a notification saying their badge was removed via a system-wide deletion.

### **Notification System**

1. User type: Administrator, Instructor or student
2. Goal: Set up a notification system between users of the website to allow implicit communication
3. Initial Conditions: User is logged in
4. Test script:
  - a. Have a student indicate that they are an instructor on their profile settings
    - Verify that all administrators received a notification detailing that said student wishes to have instructor permissions
    - Verify that after approval, said student account is now an instructor and received a notification of said change.
  - b. Have a student design a new badge
    - Verify that all administrators received a notification detailing that there is a new badge design request
    - Verify that the student receives a notification upon administrative approval
  - c. Have a student attempt to earn a badge
    - Verify that all administrators received a notification saying said student wishes to earn said badge
    - Verify that the student receives a notification upon administrative approval

### **Appendix of Use Cases**

Here are the high priority use cases the project manager expressed:

- 1) Push badges to Mozilla Open Backpack
- 2) Upload/Edit experience page's content
- 3) Delete / Revoke a badge from a student's profile / the system
- 4) Instructor verification through notifications/admin approval