Hilal Alsibai
Ojas Goyal
Betty Leung
Benjamin Mishkanian
Goldie Young

Requirements for "Badges"

Brief Problem/System Summary

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 in non-standard situations. This is an open source project previously funded with a grant by Mozilla Open Badges.

Stakeholders

Dr. Joanna Normoyle : jenormoyle@ucdavis.edu	(Project Manager)
Trish Ang : pgang@ucdavis.edu	(Lead Designer)
Scott Kirkland : srkirkland@ucdavis.edu	(Lead Developer / Source Maintainer)

As there is a lead designer designated for this project, much of the graphic design work will not be a requirement for the team. Likewise, as there is a lead developer / project maintainer, a large code base has been provided as a starting point, further reducing the total number of requirements needed to complete for this project.

We believe Joanna Normoyle will be signing off on this document, as she is the project manager.

External Ecosystem -

Hardware/Software Requirements:

As we are building a website, many devices can access it; however we are mainly focusing on building support and compatibility with desktop / laptop computers initially before we expand to mobile devices. We will be utilizing HTML5 / CSS3 technology within the website's source code, therefore a modern browser will be required to view and use the website.

Other Concerned Systems:

The website is currently developed in ASP/C#/.NET, a framework we are currently unfamiliar with. We will be required to learn about the framework accordingly to carry out the main features we intend to develop. In addition, we must concern ourselves with the Mozilla Open Badges API to implement the most important use case for the project; this is also something we will be required to learn about.

External Critical Data:

The only pre-existing data we must utilize is student / instructor information from the UC Davis CAS system. Upon account creation in the Badges website, we must pre fill information about the user such as their role (student or instructor), name, and email among other things.

User Interface Guidelines:

Since we are working on a website, the website will be displayed within a web browser on capable devices; primarily focusing on the interface for desktop / laptop computers initially.

Functional Requirements

User Interface Finalization:

All interface finalization will be done via prototyping with an iterative approach.

Detailed Specs:

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

- Push badges to Mozilla Open Backpack
- Upload/Edit experience page's content
- Delete / Revoke a badge from a student's profile / the system
- Contact website administrators
- Session validation (during user login)
- See other peoples badges done, and sort badges category
- Message system between students & faculty with notifications
- Categorize Experiences
- View your own badges
- Cover photo editing/cropping capabilities
- Badge recommendations
- Differentiate between students and instructors on account creation
- Intuitive Navigation

How will the above be tested for?

The team will perform quality assurance on each feature built to test. Additionally, the team will look into unit testing possibilities within the .NET framework.

Non-Functional Requirements

Security:

The users' information must be kept secure from malicious input or attempts to harvest data. Additionally, user's must be able to selectively reveal information to the public, such as experiences and

badges earned. Given that one of the use cases is to view other people's badges earned, we must make sure all users that elect to keep their profiles private will be kept private.

For authentication, it is critical that we are able to differentiate between a student and instructor on login, which is currently not in place and one of our functional requirements to be worked on. As the badges project requires human maintenance to approve / deny badge requests and other similar tasks, a staff of administrators will need to be able to keep the system running well. Similarly, instructors must be able to award and approve badges they designate for students.

Fault Tolerance:

Outside of hardware malfunctions and system updates, the website should run fairly smoothly because of the simplicity of its design. As the website is currently hosted by cloud services there is a low chance of losing data, however backups for the central database must be scheduled and run periodically to ensure resilience within the system.

Performance Requirements:

We are aiming to have each request to the system respond within 1000 milliseconds, or 1 second and have an average response time of at most 500 milliseconds or half a second.

Scalability:

Initially, the primary audience will be relatively small, mostly likely under 5,000 students and 1,000 faculty. In the future when the website is opened up for more departments and students, the current website's framework (ASP/C#/.NET, Azure) provides sufficient scalability.

Process Requirements

Reiterating the high priority use case list, we must complete these use cases by the end of spring quarter 2014:

- Push badges to Mozilla Open Backpack
- Upload/Edit experience page's content
- Delete / Revoke a badge from a student's profile / the system
- Contact website administrators
- Session validation (during user login)
- See other peoples badges done, and sort badges category
- Message system between students & faculty with notifications
- Categorize Experiences
- View your own badges
- Cover photo editing/cropping capabilities
- Badge recommendations
- Differentiate between students and instructors on account creation
- Intuitive Navigation

Our work will be delivered to the project manager, Joanna Normoyle in a timely manner upon completion of each use case. The work will be delivered by pushing our code to a production server and passing on a web address to the project manager.

We believe Joanna Normoyle will sign off on our work when it is completed.

Summary

In this project we will develop a website that will be both easy and exciting to use for students. It will allow students to keep track of their experience and earn badges for their work. Currently we were given a base to start off with and we'll build upon the code to add features described by the high priority use cases expressed by the project manager Joanna Normoyle. We will need to make sure that the website is secured and users of the system have control over their privacy.

Signatures

Name:
Date: 3/19/2014