CMU Spring Carnival Committee

Executive Summary

Community Partner
Amalia Martinez
Stephen Clark
Student Development Team
Akshay Goradia
Bruce Lin
Rumby Wilson

Background

The annual Carnegie Mellon University Spring Carnival is a three-day event to create a relaxing environment for the campus community. The event is organized by the Spring Carnival Committee (SCC). It has three major components: Booth, Buggy and Mobot. The SCC puts together these events by supervising hundreds of students from different organizations.

Project Description

Project Opportunity

The SCC relies on Binder – a Ruby on Rails web application – during Booth to manage tools borrowed by students. While Binder has many useful features like waitlist, watch shift, downtime, and notes. While Binder has incorporated many useful features that received positive feedback from last year's booth coordinators, there are minor issues to be fixed to avoid odd functional behaviors and to further increase efficiency and user interactions.

Project Vision

We propose to first robustly test the application models and fix the 6 high-priority GitHub issues that are bug and security related. We aim to use this as a fundamental version of the application that is stable and free of functional errors. The next step is to build a notification feature in conjunction with the existing features to alert the users under different situations. For SCC members, the notification feature alerts them when a note is posted to a member. For student users, the feature alerts them when a requested tool becomes available, when a watch shift is imminent, and when organization starts downtime.

Project Outcomes

Following our project vision, we built an enhanced Binder with notification feature, as well as a stable version without this feature as a fail-safe should any unpredictable incident happen over carnival. Both versions proved to be quality. Although the enhanced Binder was shut down during an emergency, our client indicated they were overall very happy with notification feature. For example, they spoke highly of the note scenario because they receive a text message whenever a note is posted to them, claiming this feature the most useful improvement. After shutting down

notification, our client rolled back to our fail-safe version of Binder. They were happy with this version as well. Every year, SCC holds a post-carnival review to discuss its performance. Usually Binder errors is on the spot light because of functionality problems. However, Binder was only briefly mentioned this year because of its stable performance during carnival. As our client said, they had the least amount of problems with Binder this year.

Project Deliverables

Our project is a GitHub open source project. The source code can be found here: https://github.com/sc0v/binder-app. Note that the "Master" branch contains the deployed code during carnival. The "17/goat/main" branch was the primary development branch and the "hot-fixes" branch was used by our client and us for emergency purposes during carnival.

Recommendations

Although notification feature was proven useful, some student users were surprised when receiving text messages. A misfired text message to the wrong student faced angry reaction, which led our client to shut down the notification system. Therefore, it is highly recommended to do stress testing on the notification system to simulate real-time situation. Our team also explored a keyword response feature where student users can reply to our message (i.e. take themselves off the waitlist by replying "cancel"). This could be further expanded upon to increase efficiency. Finally, there are improvements to be made for user interface / user experience. For example, notify every student once they sign the waiver that they will receive text messages from SCC. This will reduce confusion among students when they receive a text message under certain situations.

Student Development Team

Akshay Goradia took charge of development roadmapping and creating sprint reports. He is a third year Information Systems major with a double in HCI.

Bruce Lin took on the responsibility of quality assurance in addition to notification development. He made sure codes pushed to the development branch are functional, before approving the code.

Rumby Wilson took charge of general project manager responsibilities and notification testing. She is a third year Information Systems with a minor in Global Systems Management and is looking towards a career in consulting.