LineUp

<u>Team Aphrodite</u>
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Requirements:
Customer Meetings

CHANGELOG

5/31/14 – Added feedback from user testing meetings.

Customer Meetings – Team Aphrodite AS Non-Customer

Tester: <u>Ian</u>, professional game tester for Nintendo/Microsoft
My design mostly was to allow Ian to sandbox our system, after he had finished (he thought he had explored everything) I gave him tasks to cover the functionality of the site he hadn't explored on his own. Since he had explored very much, I only had one task: manage a queue that you did not create. The most time during the user test was him attempting to break the site, he would put settings very high with lots of characters for names, he would click buttons rapidly, and anything else he thought we might have overlooked. We found a few bugs we didn't know about, (e.g. text overflow), reinforced some opinions we already had (e.g. queue images when listed out needed to be left aligned), and learned that our product is actually pretty user friendly and intuitive once the user understand the basic "function" our product provides (queue management). As for user testing, I learned that it really is great to find intelligent and motivated testers. in addition, it's nice to get a tester that kind of *wants* to find flaws, making bug finding into a reward (game-like) system can increase tester performance.

Tester: <u>Jordan</u>, UW senior in Psychology and Sociology; <u>Rachel</u>, UW freshman
I set up the testing sessions by briefly explaining to each user what LineUp was for and what role I wanted them to play as a user. I then let them both explore the site with these roles in mind.
I asked Rachel to play the role of a business owner who wanted to set up a queue. She was able to login easily but was slightly confused by the filler text, which was Team Aphrodite-related and not useful at all. She was also a little overwhelmed by the number of form fields she had to fill in, and said that she would like to see "required" tags next to the ones that were actually important. Rachel also exposed a bug related to the administrators and managers fields: if you add yourself, it redirects to the error page! After she created the queue, Rachel explored the queue admin interface. She said that drag-and-drop functionality on the list itself would be really nice, and had a little trouble understanding what the "First Person" button meant (we changed it as a result). She accidentally dequeued the first person and said that it would be nice to have an undo button for this action.
Jordan played the role of a user looking to join a queue. She reflected that as a first-time user, it was hard to know what the "create a queue" was for; she said it was conceivable that a user might want to create a queue for a business that didn't currently have one, then expect that the business would honor that queue. However, she had little trouble navigating to the "Find a New Queue" button, searching for the queue she wanted, and joining it. She did not like how the progress bar looked so we updated it to show actual progress. Jordan expressed concerns about how to verify that the queue you were joining was legit; we discussed a couple of different options (having the real business verify, having the location verify, having the time of the latest dequeue, having users verify) but each could be easily fooled by competitors seeking to confuse the users of their competition. Jordan said that she didn't really know what the Postpone button on the queue info page did, as it made her think of a set amount of time to postpone by rather than a single position. She also said that the top navigation buttons were confusing; the edit button didn't do anything (we removed it), the logout button was unintuitive at first (she said we should have a mouseover to explain what it was). Jordan also said she was afraid she would lose her place in line if she logged out and recommend we have a mouseover on the logout button that said "Your changes are saved! Feel free to navigate to a different page."

Tester: <u>Adrian</u>, UW Senior in Mechanical Engineering
For this session, I began by letting Adrian read the LineUp "About" pages to get an idea about what types of interactions we were hoping LineUp would be useful for. She liked the About pages and when she said that she felt like she had a good idea about what our program was designed to do and how to do some of the broader tasks, we moved to line-up.us. At first I had her give me her opinion about the new color scheme, button placement, and overall feel of the website at first glance. She suggested that our color scheme reminded her of a child's playroom, but that it was good overall and she liked the black border around the

"Login" button on the login page, but thought that it should be bigger than the "Sign Up" button. She didn't like that some buttons had a gradient while others did not, which we fixed afterwards and she thought that the collapsible boxes on the Home page needed to have a message saying something like "You are not in any queues at the moment" when no queues were displayed. After getting a little more design feedback, I asked her to join a queue of her choosing and then leave it. She was able to do so without further prompting. I then asked her to create a queue of her choosing, which she was also able to do with no further prompting. I then asked her to advertise her queue to herself and join it as an anonymous user. She quickly figured out how to get the url for a queue and put it in a new browser window, but she was really nervous about giving her name as an anonymous user when trying to join the queue. After explaining that this was the name that would be called when she reached the front of the line, she felt better about it. I then asked if she wouldn't mind exploring the other buttons and features of LineUp. She began by exploring the anonymous visitor's access and found that she could create a queue as an anonymous user and that she got stuck if she accidentally logged out. She was a little confused by these features. I think in future releases, we should heavily limit the things an anonymous user can do, or at least require them to make a username/password combination if they want to do more with LineUp. At this point, we were about out of time, so I thanked her for helping test LineUp and we parted ways.

Tester: <u>Anthony</u>, UW sophomore in Biology, and <u>Theodore</u>, UW Junior in Education
To get a feel for how users might interact with one another through LineUp, I asked Anthony to use LineUp as though he were an administrator (after explaining and giving examples of what this role typically desires as outcomes) and Theodore to use LineUp as a user of Anthony's queues. I also asked Anthony to work on his phone and Theodore to work on his laptop so that they could each get a different feel for the website's design. This time, I did not ask either Anthony or Theodore to read the "About" pages, but instead jumped right into asking Anthony to create a queue and then Theodore to find and join his "free ice cream" queue. I then asked Anthony to advertise his queue to 5 anonymous users and then asked Theodore to be each of those users in new incognito windows. With 6 people in the queue at that point, I asked Anthony to dequeue the top 3 people. At first, he had no idea how to dequeue people and needed prompting to press the "First Person" button. Because of this, we have changed the text to "Remove First", adding the verb as a helpful prompt. I then asked Anthony to rearrange the remaining people in his queue and add and remove at least once each. While he did this, I asked Theodore to watch his position in the queue as anonymous users change. He didn't like that a user does not get any explanation when their position increases because of an administrator action in particular, but we talked about what he might like to see instead and he was unsure if anything was better. Finally, I had Anthony try closing and opening his queue, having Theodore trying to interact with it in each state. Overall, Theodore liked the low level of interaction he and Anthony seemed to have with one another and how quickly he could move around the site and in and out of queues, while Anthony suggested that queue owners might want to be able to get more information about their users. Theodore thought that users should be able to sign-in with email addresses and that we were missing a "Forgot your password?" button. Anthony did not like how the thick borders looked on his phone, so we made the borders scale by percentages instead of fixed numbers of pixels to help alleviate that concern. Throughout the test, I was really pleased to see that both Anthony and Theodore clicked on the Help button whenever they got stuck and that the information it provided was enough for them to continue on without my prompting.

Summary of changes resulting from user testing:
- Increased validation/restriction on user input to form fields
- More flexible handling of extreme user input to form fields if they occur
- More helpful placeholder text in form fields for "Create Queue"
- Added functional progress bar for visual element of where you are in the queue
- More flexible UI design to account for mobile users

- More intuitive button names ("Postpone" became "Move Back One", "First Person" became "Remove First")
- Easier access for administrators to queue URL for emailing to potential anonymous users

Summary of things learned from performing user evaluation
We mostly learned that giving user testers free reign over the product was the best way to collect candid, unbiased feedback about our design. We also learned the value of using testers completely unfamiliar with our product: they can come up with feedback from scratch as if they were first time users of the product in real life.

Brian Burg
Present: Everyone
    Brian emulated a few different customer types. At first, he played the role of a business owner and brought up a number of different issues. Brian asked us whether it was possible to attach information to a queue, such as email or other contact, which a business could find useful. Perhaps joining the queue involved joining a mailing list first. He also raised the issue of having more than one queue for a single business, such as one general queue and one VIP queue. An idea was brought forth to integrate with Facebook so that customers that "liked" a business could gain access to the VIP queue. Additionally, Brian said that he would like to see a show-vs-no-show ID stamp when dequeuing customers so that they could build a more accurate history of customer flow.
    Brian also took on the role of a CLUE Tutor organizer. He said that it would be useful for people to be able to see tutors present on a given night so that you could sign up with an individual tutor if you wanted. He also brought up that people are unlikely to want to set up queues every single night; it would be very useful to make recurring queues an option. Finally, he said that there would need to be an ability to group class titles, such as all CSE courses or all math courses, together to make choosing a tutor easier.
    Brian also acted as a person wanting to get into line. Would they have to install an app? Would they have to make a profile? We decided that we were NOT developing a mobile app, just a mobile-friendly website.
    Finally, we asked Brian about some foreseeable issues that we came up with on our own. We asked him how to deal with malicious users, and he suggested an authentication system like using Captcha, identifying by IP address, or logging in to other services like Facebook. It would be important to couch these functionalities correctly within the existing framework. We asked Brian about in-person identification once you reached the start of the queue. A number would be sufficient, he said, as long as we focused on important requirements like making the site load quickly and without lag. Lastly, we asked Brian about tools: he suggested using frameworks like Angular, Ember, and Backbone for Javascript development of both front-end and back-end components.

Team Hermes
Present: Bryan Djunaedi, Stephen LaPlante, Evan Leon, Thomas Rothschilds, Simone Schaffer, Nicholas Shahan, Evan Whitfield
    Team Hermes brought up a number of issues which we took note of. Some of them were the same as Brian's, and they will not be noted here. The unique issues they brought up consisted of some of the following questions.
- Can you see your friends in the queue?
- Can business owners personally enqueue people?
- Can you preserve a queue at the end of the day to restart the next day?
- Can you empty the queue at the end of the day but use the same one the next day with an empty start?
- What if a customer does not have a smartphone? (They can call in and the restaurant can manually enqueue you).

- Had we considered sending notifications via SMS to people once they got to a certain point in line, customizable per user?
- Could you enter the size of your party if you were waiting in a queue for a restaurant?
- Could we implement a re-enqueue wait time so that people couldn't sign up for the same queue again and again?

Team Hermes also expressed concern about information being sold to telemarketers if they had to sign up with additional information. They suggested having a basic queue with pre-entered values so that people wanting to set up a simple queue didn't have to enter excessive information.

Customer Meetings – Team Aphrodite AS Customer TO Team Caelus
Present: Nicholas Shahan, Bryan Djunaedi, Stephen LaPlante, Evan Leon, Thomas Rothschilds, Evan Whitfield

Team Aphrodite acted as a customer to Team Caelus, which is working on Note2Flash. Our primary concern involved their desire to build a text editor in conjunction with the notes-to-flashcards functionality, since so many text editors exist, and are in popular use, already. We asked them if they would consider implementing a mobile-friendly version so that you could study your flash cards on the run. We asked a lot of additional questions, such as the following:

- Can you read directly from a different text editor? (That might be doable).
- Are symbols available for technical subjects? (They might implement LaTeX support).
- Would they have a spell check?
- Can you archive old sets of notes without deleting them? (Yes).
- Is there a scoring system for notecards so you can mark some as "Yes! I got it right!" and "Nope, got it wrong"?
- Can you recover deleted notes?

We ended with potential issues regarding touch integration and modifying and sharing existing notecard sets with friends or other users. We brought up the fact that many users might want to sell their quality notes to others, so they could think about monetization (taking a cut of the money generated by sales).

Customer Meetings – Additional

We also had the pleasure of meeting with three pseudo-customers this week. The first was Sam, a tutor for CLUE in Mary Gates Hall. He was most interested in the dequeuing process and how his manager could create queues. He brought up interesting points about the size queues might need to be to work at CLUE tutor sessions because the whiteboards they currently use work for around 50 students. He also made us realize that we need to put some thought into where students might wait if we allow them to see how long it will be before they are called. Sam suggested that it might be nice to have a line at which students would know that they should be in the room, ready to be helped by a TA. He also suggested that the ability for students to postpone themselves could be useful. Our second pseudo-customer was Jane from the University Bookstore. Jane works as a clerk during some of the busiest times of the year, including the bookstore rushes at the beginning of each quarter. Jane suggested that having a queuing app could alleviate some of the stress during these busy times. She brought up that students could browse the rest of the books in their subjects instead of standing in lines. However, she also suggested that the ability for students to see how long they have left could lead to them missing their names being called, which could further complicate the bookstore rushes, among other ideas. Our final pseudo-customer was Amanda, a clerk at the University's Hall Health. She raised concerns as an administrator regarding displaying student names before and after students enter the queues. She also suggested that administrators might need access to an internal queue to process broken limbs and contagious diseases separately from flu and cold cases. Finally, another major concern that she brought up was how to process appointments alongside walk-ins. We will have to consider the ideas each pseudo-client brought to light very carefully in the next few weeks.