

Bethe OPS Project

User Interface Design & Testing

May 16, 2019

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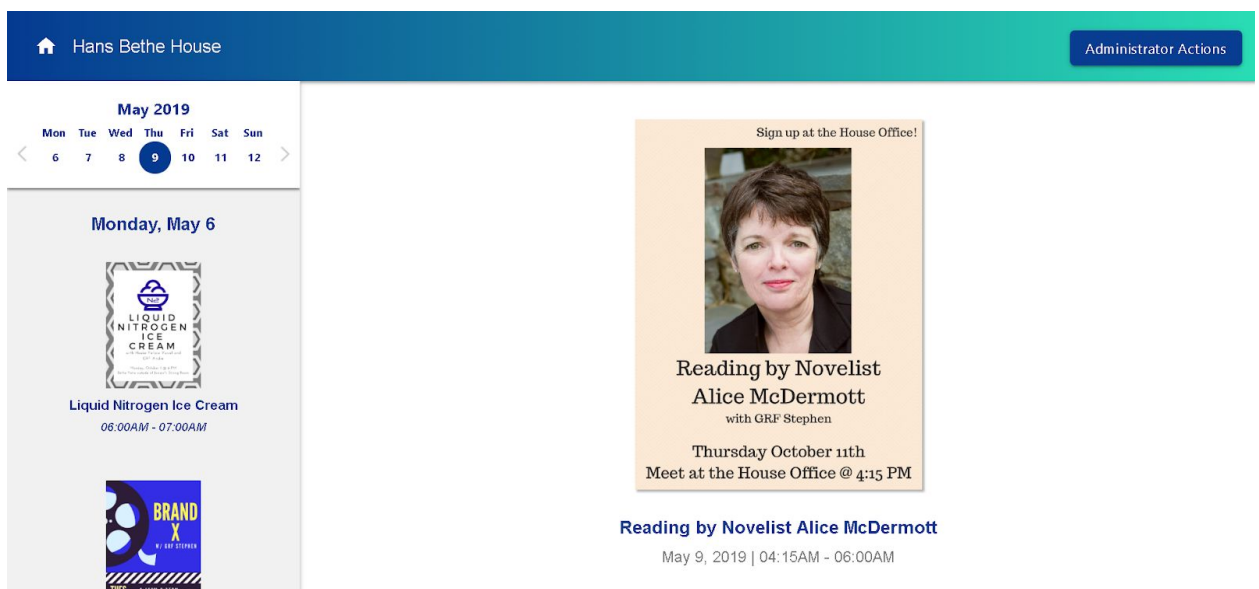
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1 Overview

The purpose of this document is to describe the features of the user interface design and the process employed by the team for user testing. Section 2 provides a general description of the main page of the user interface: the event landing page. The actual features of the user interface are broken down into two categories: sidebar and event profile section. Section 3 covers the specific features associated with the sidebar and Section 4 covers the specific features associated with the event profile section. Section 5 describes the three different types of users and their associated privileges and design layouts. Finally, Section 6 covers the process that the team conducted for user testing.

2 Event Landing Page Overview

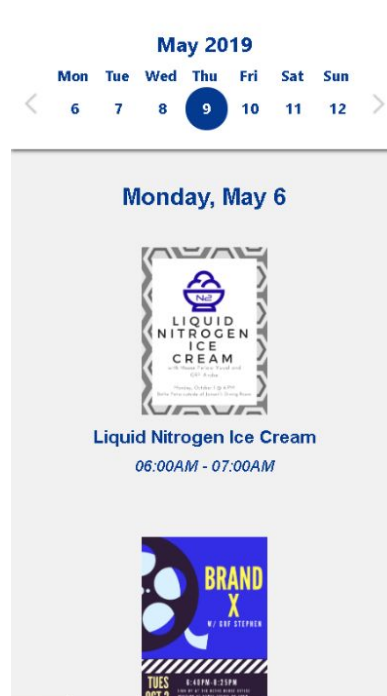
The event landing page (seen in the image below) is the main page that users initially land on after logging into the system. The page is divided into two main sections: the sidebar section on the left-hand side and the event profile section on the right-hand side. The sidebar is designed to allow users to browse a week's worth of events at a time with ease and quickly switch between different weeks using the calendar function located at the top. The event profile section is initially used to display featured events selected by event leaders or admin and is later used to display additional information for events that users open from the sidebar. The following sections cover these features in more detail.



Example of event landing page dashboard

3 Sidebar

As described previously, the scrollable sidebar is used for browsing and navigating a list of events. At any given time, users are shown a week's worth of events and may view events in a different week using the side arrows in the calendar. The sidebar may or may not be initially shown depending on the type of device (or more specifically, the screen size) the user is using to access the system. If the user is on a laptop, the sidebar is automatically displayed. If the user is on a mobile device, however, the sidebar is hidden for the sake of space and can be displayed using the menu button in the top left-hand corner. The sidebar can be hidden by tapping outside the sidebar to once more display the entire screen. The sidebar consists of two features: the weekly calendar and the event posters. These are described below.



Example screenshot of weekly calendar and sidebar

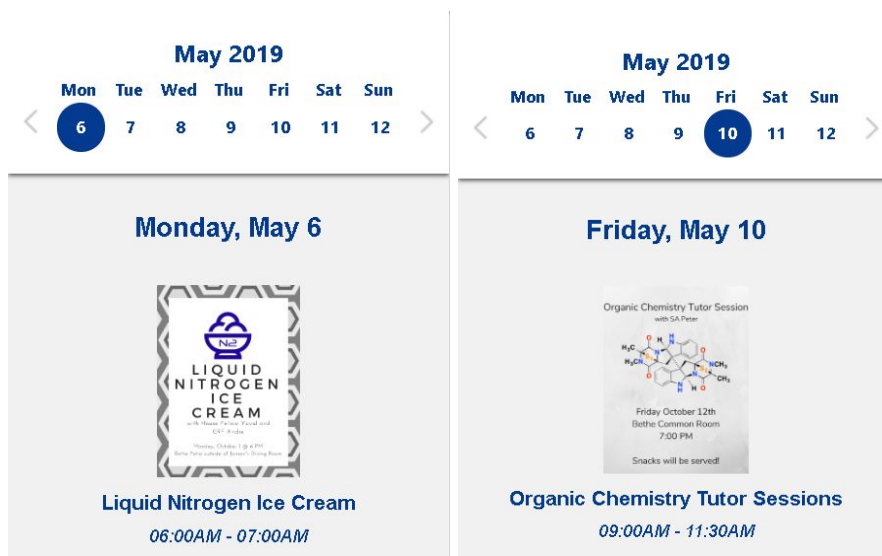
3.1 Weekly Calendar

The horizontal weekly calendar is located at the top of the sidebar and is used to quickly navigate between different weeks or days. Users can click on the left and right arrows on the weekly calendar to view previous and future weeks, respectively. The day that the user is currently viewing in the sidebar is indicated with a filled circle. An image of this calendar is shown below.



Example screenshot of calendar

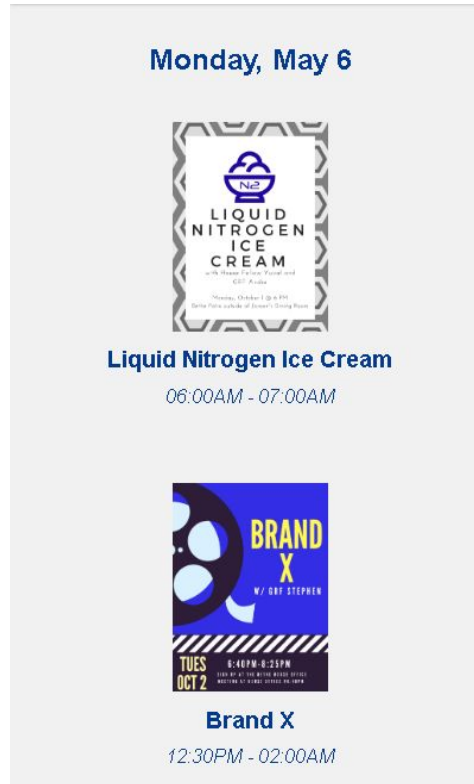
Users can also click on a specific day to jump to that date. When a user clicks on a specific day, the system automatically scrolls the user to the section in the sidebar containing the selected day's events. An example of this is shown below.



Example of scrolling from Monday (left) to Friday (right)

3.2 Event Posters

Underneath the horizontal calendar is a list of event posters representing available events for the selected week. Users can either jump to specific days using the calendar or scroll through this list of events either with a mouse or touchpad (for computers) or with regular scrolling gestures (for mobile phones). Each poster corresponds with an individual event and additional details for the event (event name and time of event) are shown underneath the poster. The events are grouped together and organized by time and date of the event. As seen in the image below, text is used to indicate the beginning of the next day's set of events.



Example screenshot of event posters

Clicking or tapping an event poster pulls up the event's profile details, which is described later in this document.

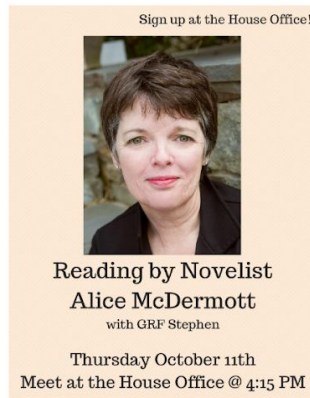
4 Event Profile Section

As mentioned before, the event profile section is initially used to display featured events chosen by event leaders or admin and is later used to display additional information for events that users open from the sidebar. Each of these use cases is described below.

4.1 Featured Event

Every day, an upcoming event is selected as a featured event. Currently, the default is to display the first event happening today as the featured event. If there are no events happening on the current day, the system will search for the first upcoming event within two weeks of the current day. If there are no events within two weeks of the current day, then a message indicating that there is no featured event will be displayed. Only one featured event is shown as a time and is replaced each day. In the future, a potential improvement would be a feature allowing admin or event leaders to select which events to list as featured events as well as implementing functionality allowing users to click

directly on the featured event to bring up the event's profile. An example of a featured event is shown below.



Reading by Novelist Alice McDermott

May 9, 2019 | 04:15AM - 06:00AM

Example screenshot of featured event

4.2 Event Profile Details

When clicking on an event in the sidebar, the event profile section will be updated to display the details of the selected event (see image below). These details include:

- Event poster
- Event title, time, date & location
- Event coordinator contact info (email address)
- Event description
- Sign-up button
- Sign-up list
- Waitlist



May 13, 2019 from 09:00AM - 11:00AM

Virtual Reality Experience

Bethe Dining Room

GRF Albert Tsao (awt46@cornell.edu)

Ever wondered what virtual reality feels like? Come check it out with Albert!

Additional Details: Not for those who get nauseous easily.

[Sign Up](#)

Event Attendees

1	Durant Gittoes	(dg628)
2	Sondra Cavilla	(sc404)
3	Pippo O'Ferris	(pf851)
4	Binnie Spring	(bs656)
5	Albert Tsao	(awt46)
6	Available to sign up	

Waitlist

Waitlist currently empty

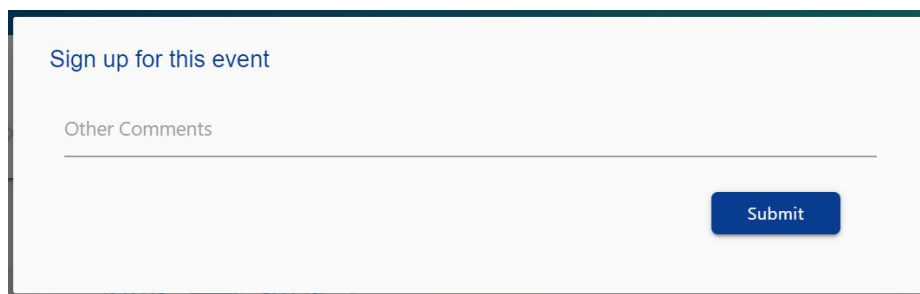
Example event profile

The top half of the section includes the actual details of the event (title, date, time, location, poster, coordinator contact info, description, and sign-up button). The event coordinator's email is displayed next to his/her name in case students need to contact the person in charge of the event.

GRF Erica Ostermann (eo93@cornell.edu)

Example contact info

Clicking on the sign-up button brings up a pop-up form containing a section labeled “Other Comments” that users fill out according to additional instructions listed in the event description (e.g. “List any food allergies.”) or if users want to share certain information with the event leader in regards to the event. Information such as the user’s name, net ID, and location is automatically included based on the user’s profile. To change this information, users must edit their profile using the “Edit Profile” button listed on the header at the top right. See the images below for an example of this.

A screenshot of a web form titled "Sign up for this event" in blue text. Below the title is a section labeled "Other Comments" in a light gray font, followed by a horizontal line indicating a text input area. In the bottom right corner of the form, there is a blue button with the word "Submit" in white text.

Event sign-up form

The sign-up list shows the number of students who have signed up for the event and how many available spots are remaining. For privacy, only the first and last name of the student and their netID is shown in the sign-up list. Event leaders and admin however are able to view students’ residence buildings. If desired, event leaders and admin can make the sign-up list private and prevent students from viewing other attendees on the list. Instead, the message “*The sign-up list is hidden for this event. If you need to cancel your sign-up, please email the event leader.*” is shown in place of the original sign-up list. Examples of this view is shown below.

Event Attendees		
1	Durant Gittoes	(dg628)
2	Sondra Cavilla	(sc404)
3	Pippo O'Ferris	(pf851)
4	Binnie Spring	(bs656)
5	Albert Tsao	(awt46)
6	Available to sign up	
Waitlist		

Waitlist currently empty

Example of sign-up list with an available spot and empty waitlist

Event Attendees		
-----------------	--	--

The sign-up list is hidden for this event. If you need to cancel your sign-up, please email the event leader.

Example of hidden sign-up list

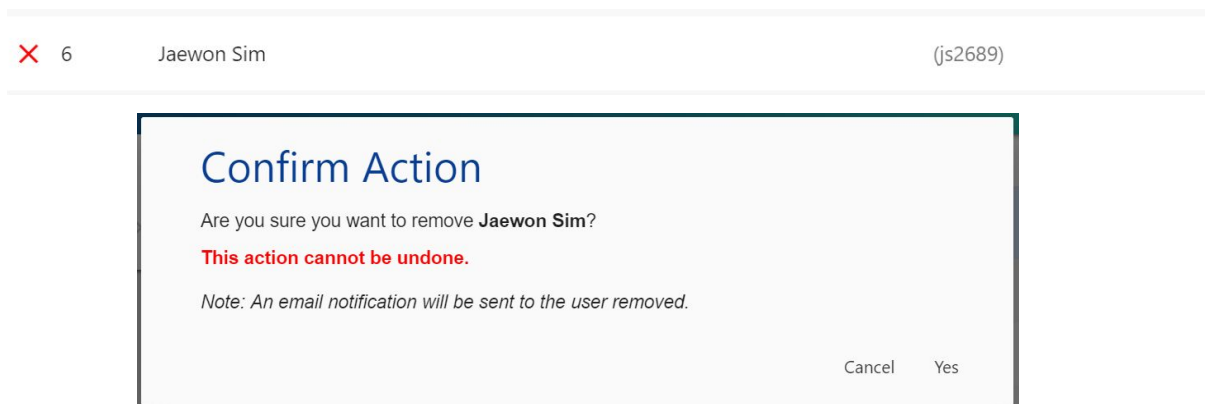
5 User Types

The system has a hierarchy of users types containing three different types: students, event leaders and admin. All users are students and have basic student privileges/capabilities. A subset of users are event leaders and have a certain set of privileges available to them that are not available to regular students. Finally, a subset of users are admin, who have additional privileges that are not available to regular students or event leaders. Thus, each user type has a different set of actions and privileges available to them and the design of their dashboards differ between each type accordingly. The three types of users and their corresponding dashboard designs are explained below.

5.1 Students

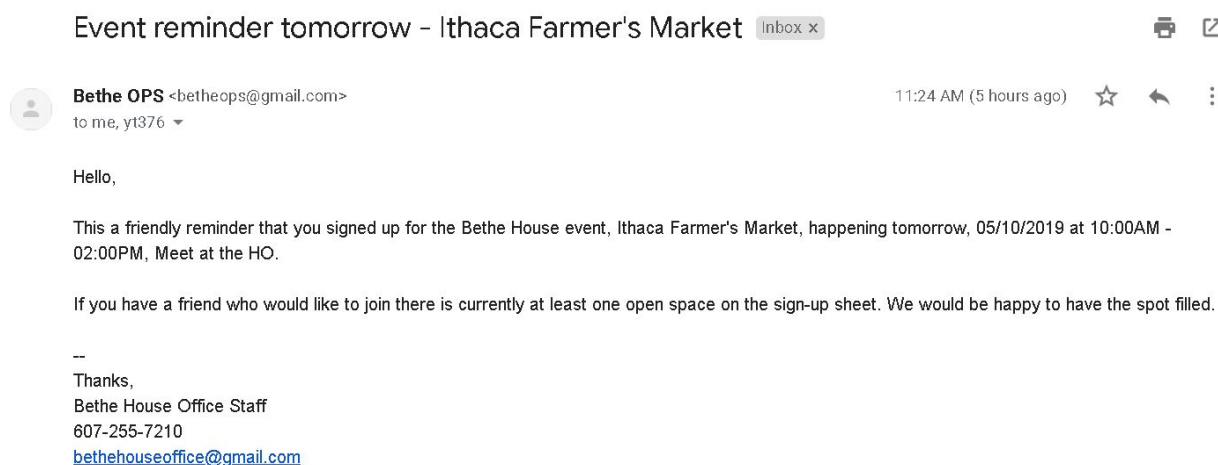
Students are the most basic of users and are only able to view and sign-up for events. Students can browse events using the sidebar as described above and can sign up for events (or sign up for the event's waitlist) using the sign-up button located on the event profile details page. Once a user has signed up for an event, his or her name will appear

on either the sign-up list or the waitlist (depending on the availability of the event). If a student wants to remove themselves from the event list, he or she simply needs to click the red “X” located next to his or her name in the list. The image below demonstrates these functionalities.



Example of student removal

After a student has signed up for an event, (s)he will receive an email from betheops@gmail.com reminding them of the upcoming event one day before and two hours before the event. For each reminder, there are three possible types of emails that can be sent: (i) the event roster is not full, (ii) the event roster is full and the event waitlist is empty, and (iii) the event roster is full and the waitlist is not empty. Below is an example of what each type of such an email looks like in the order listed.



Example screenshot of scenario (i)

Event reminder tomorrow - Organic Chemistry Tutor Sessions Inbox x

Bethe OPS <betheops@gmail.com>
to me, awt46 ▾

11:24 AM (5 hours ago)



Hello,

This a friendly reminder that you signed up for the Bethe House event, Organic Chemistry Tutor Sessions, happening tomorrow, 05/10/2019 at 09:00PM - 11:30PM, Bethe Common Room.

This event is currently full. If you can no longer attend please remove your name from the event roster online.

--

Thanks,
Bethe House Office Staff
607-255-7210
bethehouseoffice@gmail.com

Example screenshot of scenario (ii)

Event reminder tomorrow - Walk Through Cornell Botanical Gardens Inbox x

Bethe OPS <betheops@gmail.com>
to me ▾

Tue, May 7, 10:30 AM (2 days ago)



Hello,

This a friendly reminder that you signed up for the Bethe House event, Walk Through Cornell Botanical Gardens, happening tomorrow, 05/08/2019 at 12:00PM - 03:00AM, Meet At House Office.

This event is currently full with a waitlist. We have included folks on the waitlist on this email.

If you can no longer attend please remove your name from the event roster online. If you are on the waitlist your name is included below in the order you appear on the waitlist.

Waitlist:
Edgar Shildrake
--
Thanks,
Bethe House Office Staff
607-255-7210
bethehouseoffice@gmail.com

Example screenshot of scenario (iii)

Finally, the sign up button is disabled for events that have passed. This is to prevent users from accidentally signing up for past events. A future improvement would be to also disable sign ups for events that are more than three weeks in the future. This would prevent users from abusing the sign up capabilities of the system by signing up for events that exist but are not yet intended to be open for sign ups. This feature is demonstrated in the image below.

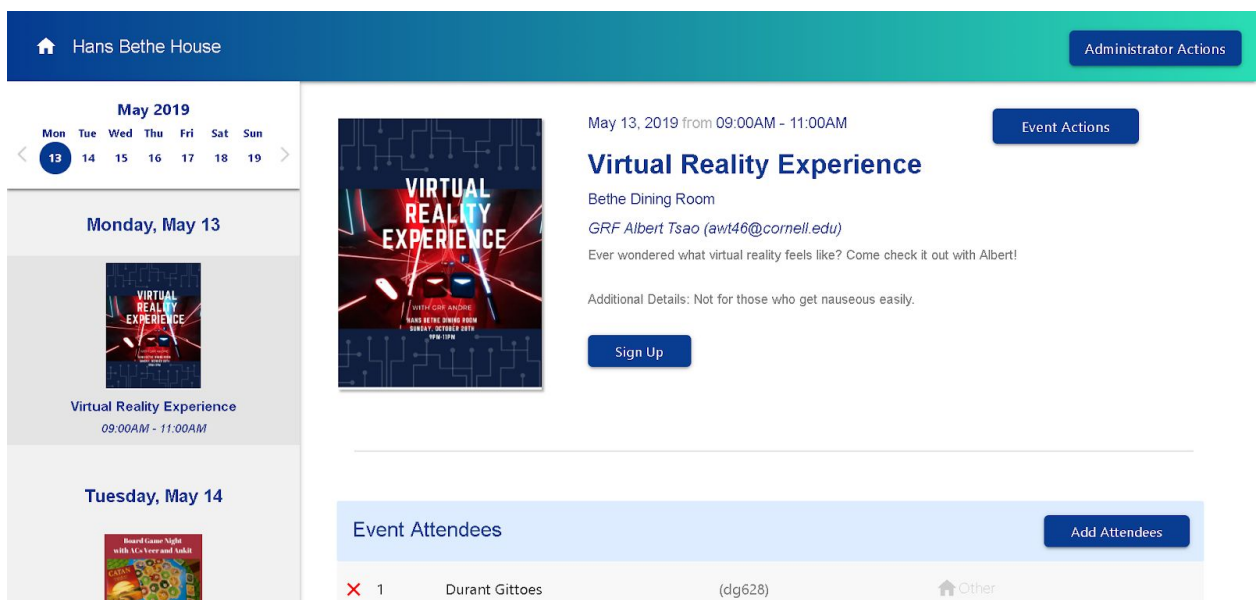


Example of disabled sign up button

5.2 Event Leaders

Event leaders are users who lead an event but may have lower authority/privileges than admins. Thus, the dashboard and user flow for event leaders is very similar to that of the admin but with a few restrictions/differences. Event leaders are able to see the same information and perform all actions available to admin except for downloading data from an event and adding/removing users from the event sign-ups. These actions are unavailable to event leaders and thus cannot be seen in the event leader dashboard. Thus, event leaders have the following privileges:

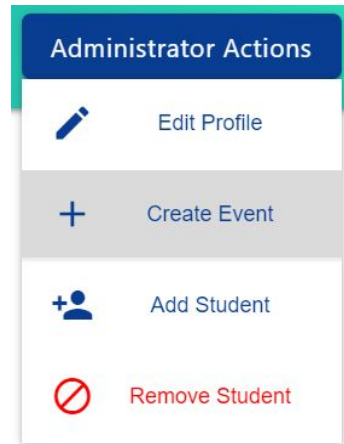
- Create events
- Add/Remove students from the system
- Edit events
- Download event data
- Delete events



The screenshot shows the event leader dashboard for 'Virtual Reality Experience'. The top header is blue with 'Hans Bethe House' on the left and 'Administrator Actions' on the right. The left sidebar shows a calendar for May 2019, with 'Monday, May 13' selected. The main content area displays event details for 'May 13, 2019 from 09:00AM - 11:00AM'. The event title is 'Virtual Reality Experience', located in 'Bethe Dining Room', led by 'GRF Albert Tsao (awt46@cornell.edu)'. A 'Sign Up' button is visible. Below the details, there is an 'Event Attendees' section with an 'Add Attendees' button. The attendees list shows one person: 'Durant Gittoes (dg628)' with a red 'X' icon and a home icon labeled 'Other'.

Example view of event leader dashboard with event opened

To create a new event, event leaders simply click the “Create Event” button located in the header at the top right part of the screen.



Example of event leader's menu with "Create Event" highlighted

Clicking this event brings up a pop-up form that contains the fields required to create an event (event name, date, start and end time, location, event description, event leader, max number of attendees, additional instructions, event poster, and whether to hide the sign-up list). These fields are mostly text-based, though the date and time have alternative input options (a calendar and clock respectively).

+ Create Event

Event name

Date
mm/dd/yyyy

Start time

End time

Location

Event description

Select event leader
Erica Ostermann (e093)

Max number of attendees

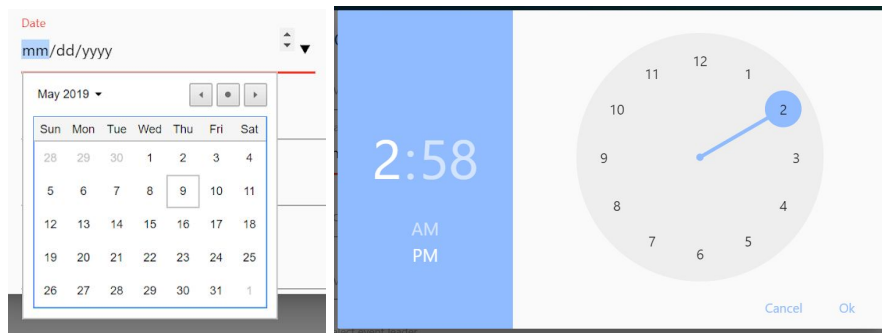
(Optional) Additional instructions for participants (e.g. food restrictions)

File Upload poster file

☐ Hide sign-up list?

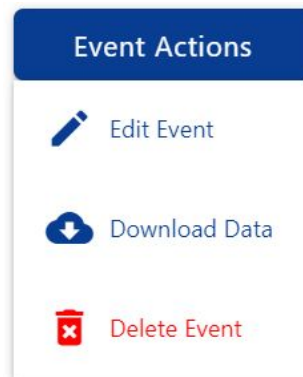
Create Event

Example of create event form



Example of alternative inputs - calendar and clock

To edit an event, download event data, and delete an event, users are required to first open the event profile of the specified event. As seen in the image below, the edit event, download data, and delete event actions are found in a drop-down menu labeled “Event Actions” located at the top right side of the event profile. The drop-down menu is initially hidden with only the “Event Actions” rectangle visible. Clicking on the box brings up the menu, allowing admin to access these actions.



Example of event actions menu

Editing an event brings up a form similar to the create event form, but with the fields pre-populated with the event’s current data. Deleting an event will bring up a confirmation pop-up to prevent users from accidentally deleting an event. Currently, download data functionality has not been implemented and thus does not do anything.

[Edit Event](#)

Event Name

Liquid Nitrogen Ice Cream

Date	Start Time	End Time
05/06/2019	06:00PM	07:00PM

Location

Bethe Patio outside of Jansen's Dining

Event Description

dummy description

Select event leader	Max number of attendees
Erica Ostermann (eo93) ▼	5

Confirm Action

Are you sure you want to delete this event?

This action cannot be undone.

Cancel Yes

Example of edit event form and delete event confirmation

5.3 Admin

Admins are users who have the highest authority and thus have extra privileges that are not available to other types of users. As mentioned prior, admins are very similar to event leaders but can also download event data and add/remove attendees from sign-up lists. Thus, admin dashboards are very similar to event leader dashboards with the main difference being that admin can see a few additional actions. In short, admins have the following privileges:

- Create events
- Add/Remove any type of user (except Erica) to the system
- Edit events
- Download event data
- Delete events
- Add/Remove attendees from sign-ups

The actions to create events, edit events, download event data, and delete events are exactly the same as those of event leaders. Adding/removing a user allows admin to

add/remove users of any type (student, event leader, or admin) except for Erica. This feature is specially available to admin and is found in the “Administrator Actions” menu mentioned above. See the image below for an example of the modified menu for admins.



Example screenshot of “Administrator Actions” menu for admins

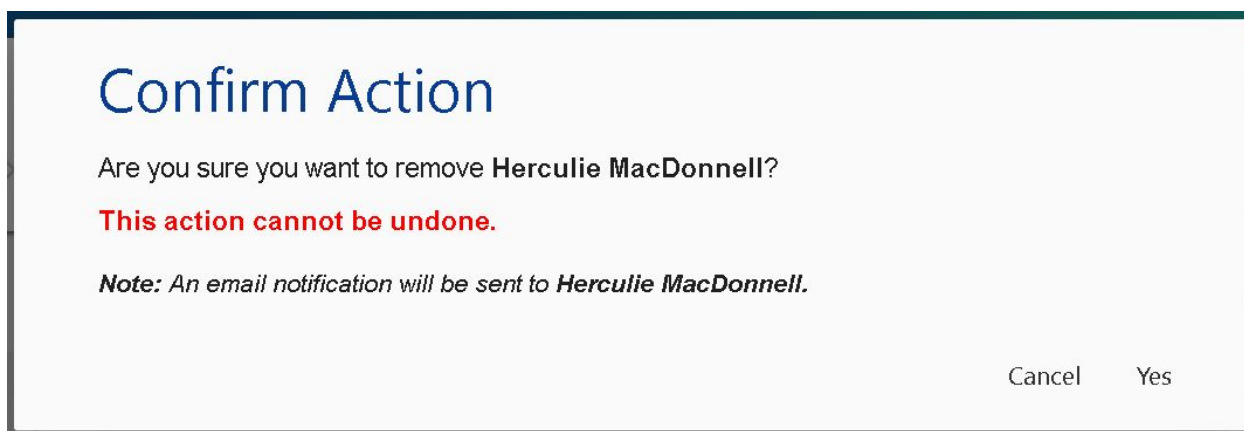
Another special privilege given to admin is the ability to add/remove attendees from both the sign-up list and waitlist. To add attendees to a sign-up list, admin simply need to click on the “Add Attendees” button located on the right side of the list. On the other hand, to remove attendees from the sign-up list, admin simply click the red “X” located next to an attendee’s name (similar to how regular students remove themselves).

Example screenshot of “Add Attendees”



Example screenshot of attendee’s name with red “X” to remove attendee

To prevent users from accidentally deleting students from the sign-up list, a confirmation pop-up appears (see image below), requesting users to confirm the deletion.



Example screenshot of confirmation pop-up for removing an attendee

6 User Testing Methods

6.1 Overview

User testing was performed to evaluate the user interface and the front-end implementation with regards to clarity and intuitivity. The team asked potential users (house assistant dean, residents, and students) to carry out specific tasks on the platform, such as finding a certain event and signing up for, or withdrawing oneself from an event. The overarching categories and questions used in evaluation are detailed in the next subsection. The team identified areas of improvement, both immediate and long-term. Front-end code was modified to reflect the immediately-addressable concerns that were discovered during user testing. The long-term recommendations will be documented for exploration by a future CS 5150 team that may choose to improve upon our software.

6.2 Categories and Questions

User testing scenarios and questions were divided into certain large categories, which are listed here along with the questions:

- Event Discovery - *How would you...*
 - Find an event that interests you?
 - Choose an event happening this week?
 - Go back to the home screen to see featured event?
- Detail Identification - *How would you...*

- Contact the event coordinator?
- Check out unfilled spaces
- Sign Up - *How would you...*
 - Sign up to a certain event on a given day?
 - Waitlist yourself for a filled event?
 - Drop out if you cannot attend an event?
- User Management - *How would you...*
 - Add a student (user) to the system?
 - Remove a user?
 - Edit profile to change a phone number?

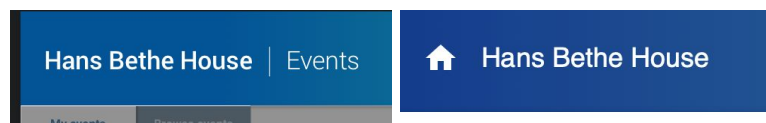
The team also asked users at the end of the user testing session for general feedback on the system.

6.3 Negative Responses

While many responses were positive and identified UI elements that were well-designed (covered in section 6.4), this section focuses on the negative responses first, to identify immediately addressable concerns.

User testing identified the following concerns with details about the resolution of each concern noted in [blue](#):

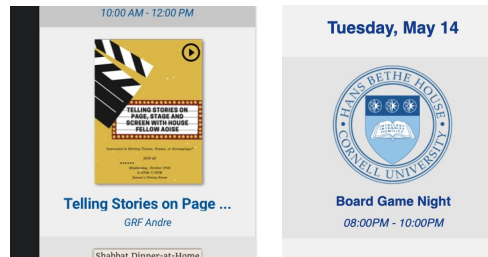
- First event poster clicked on required double-clicking as opposed to single-clicking - [bug fixed](#)
- Height of the poster images were slightly large and resulted in a considerable amount of scrolling - [height shortened](#)
- Attendees list did not clearly indicate how many spots were on the event roster - [empty rows marked with “Available to sign up” added to indicate blank spots](#)
- Not immediately clear if the waitlist was empty or not - [empty rows added to waitlist](#)
- Not immediately clear that clicking the Hans Bethe House logo in the top left returned users to the featured event page - [home icon added next to the “Hans Bethe House” logo](#)



Home icon added



- No clear indication that event posters in the sidebar are clickable - [on-hover](#)

shading and cursor change added



On hover shading

- Buildings were displayed next to attendees' names on the student page - buildings hidden for privacy purposes, only visible to event leaders and admin

Event attendees	
✕ 1 Esther Doe (ed1)  Bethe	
✕ 2 Angela Doe (ad1)  Bethe McFaddin	

Event Attendees		
1	Erica Ostermann	(e093)

Before and after of the information displayed on the sign-up list for student view

6.4 Positive Responses

Users provided the following positive feedback regarding the system:

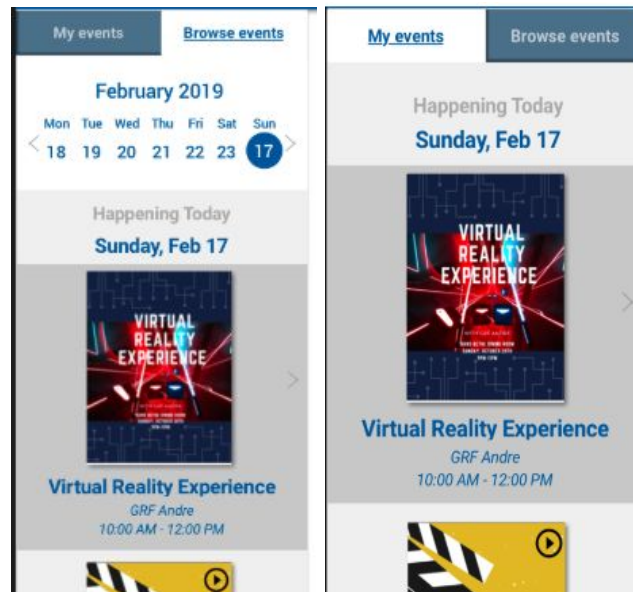
- Clean and intuitive design with smooth user flow
- Nuanced details including the color scheme and auto-fill feature
- Easy-to-navigate sidebar and effective use of screen space
- Appropriate level of detail in the event profile section
- Explicit waitlist feature
- Admin actions organized in one place

6.5 Future Directions

Finally, the following changers were identified as potential future design improvements:

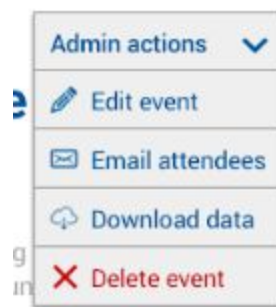
- Implementing a search bar that would allow users to search for event names, categories, descriptions or venues
- Integrating an in-system messaging feature to allow attendees to quickly communicate with event leaders or admin
- Implementing a mechanism for event leaders to select an event to be the featured event rather than immediately defaulting to the earliest event happening next

- Include two tabs in the sidebar (see images below): one called “My Events” in which only the events the user logged in has been signed up for are displayed in the sidebar, and one called “Browse Events” in which all events are displayed in the sidebar for the user to browse as the current system does now. Note the lack of a calendar in the “My Events” tab



Example of the sidebar tabs

- Adding an “X” button to the top right corner of modals as a clearer way for users to close pop-up forms (besides clicking out of the form)
- Adding a “Cancel” button to forms to allow users to cancel any changes made to forms
- Designing a better method of determining spot availability and removing yourself from the sign-up list or waitlist of an event with a hidden sign-up list
- Adding an “Email Attendees” feature to the “Event Actions” menu to allow event leaders and admins to send personalized emails to users signed-up for an event



Example of email attendees feature

- Design a more polished create account page for first-time users

Other suggested improvements are detailed in the final report given to the client by the team.