



BloodHub

Stay up to date with UW blood drives



Designers



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Group 1: INFO 360 Section C

[View Design Spec](#)

Problem Statement

The lack of blood donations is an issue that is seriously afflicting those in need across the United States. In July of 2018, the American Red Cross was forced to declare an emergency blood shortage due to the fact that fewer people were donating blood, resulting in thousands less of blood units for hospitals (RedCrossBlood). Every two seconds, someone in the United States needs blood (RedCrossBlood). Despite the fact that each blood donation can save up to three lives, the demand for blood far exceeds the current supply.

Many blood collection agencies, such as Bloodworks Northwest and the American Red Cross, turn to college campuses like UW as a means of collecting blood. Unfortunately, after speaking with Wendy Chu, the BloodWorks Northwest representative for UW, she noted that the turnout at University of Washington campus blood drives is not as strong as it could be. After organizing countless drives and communicating with students on campus, Wendy Chu often finds that there tends to be a general lack of awareness from students pertaining to blood drives. UW students are unaware of when a blood drive is occurring on campus, where the drive will take place, and why donating is important for our community. Those who do see advertisements for a blood drive often do not find out in advance, and are unaware that there are tools to help incorporate donating into their busy schedule.

As a consequence, not only are companies losing donations, but lives are at stake. Current methods to inform and attract potential donors include the occasional email from those on a select list, random flyers, Facebook posts that generate few views (as seen in [Figure 1](#)), and sandwich boards advertising blood drives as they are currently taking place (as seen in [Figure 2](#)).

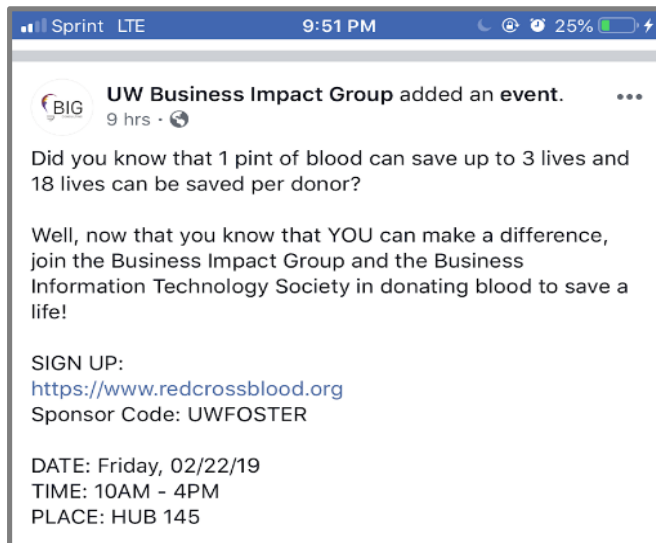


Figure 1

Facebook Post

- Only seen by students who follow this page already
- Must go to external site to schedule appointment

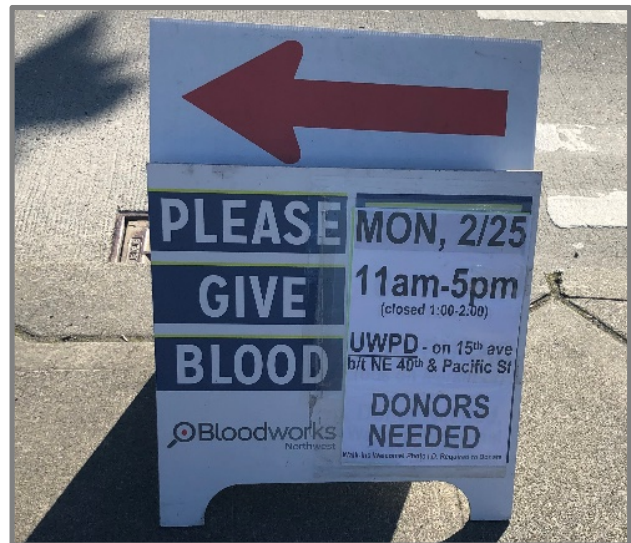


Figure 2

Sandwich Board

- Arrow merely points in a relative direction
- Does not inform students well in advance

The issue with these strategies is the lack of cohesion; information is shared in a wildly ineffective decentralized manner, forcing students to go out of their way to seek detailed information regarding blood drives specific to the UW campus. As [Figure 3](#) shows, these methods often leave students left with a great deal of confusion.

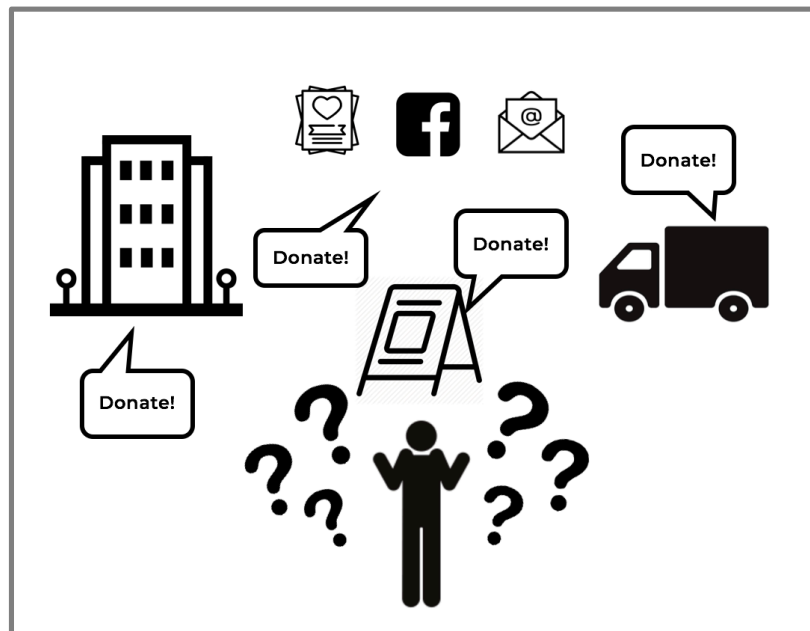


Figure 3
Overwhelming and Disperse Advertisements Lead to Confusion

By creating a mobile application that is easily available on-the-go, and one that shares information solely regarding UW blood drives, students will be able to stay informed and personalize their blood donation experience. [Figure 4](#) shows our primary goals for creating this application: first, generate awareness from UW students about the blood drives happening on campus, then, attract potential donors that might be particularly hesitant, and finally, establish routine donors who come back on a regular basis.

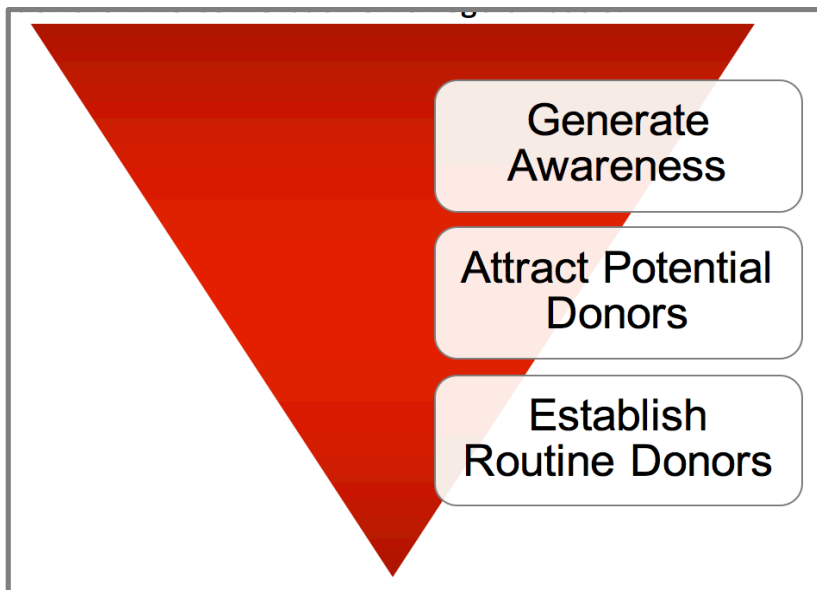


Figure 4
Primary Goals of BloodHub

Solution

To combat the lack of awareness from UW students surrounding campus blood drives, we plan to develop a mobile application that contains only the pertinent information for students congregated in a single location. This app will have six main features that students can easily and quickly access, as they keep up with their fast-paced college lives.

The first feature is our home feed; designed to be a continuous scroll of interesting stories, posts, and helpful blood and donor knowledge. Our home page will contain testimonials of those who have been positively impacted by receiving and or donating, helpful tips to know beforehand, and common misconceptions. Designed with similar elements as common social media apps, students will feel familiar and be more inclined to donate after learning more from this page.

Our next feature is a messaging system that not only allows students to connect with their fellow donating peers, but also allows for messaging to nurses collecting blood at donation sights. Questions can be answered in advance of arrival, eliminating nerves and confusion. Our feature to organize your own blood drive with friends from a group, work, or club, will also make donating much more enjoyable for students.

Many UW students that we interviewed complained of not knowing when, where, or even what type of drive was occurring (in a building or in a truck/mobile); because of this, we incorporated both a map and a calendar that clearly indicate the details of drives, and allow for scheduling in advance. Additionally, with features that remind students when they are next eligible to donate, and a rewards system that tracks the number of donations and provides incentives, we also aim to establish a routine donor.

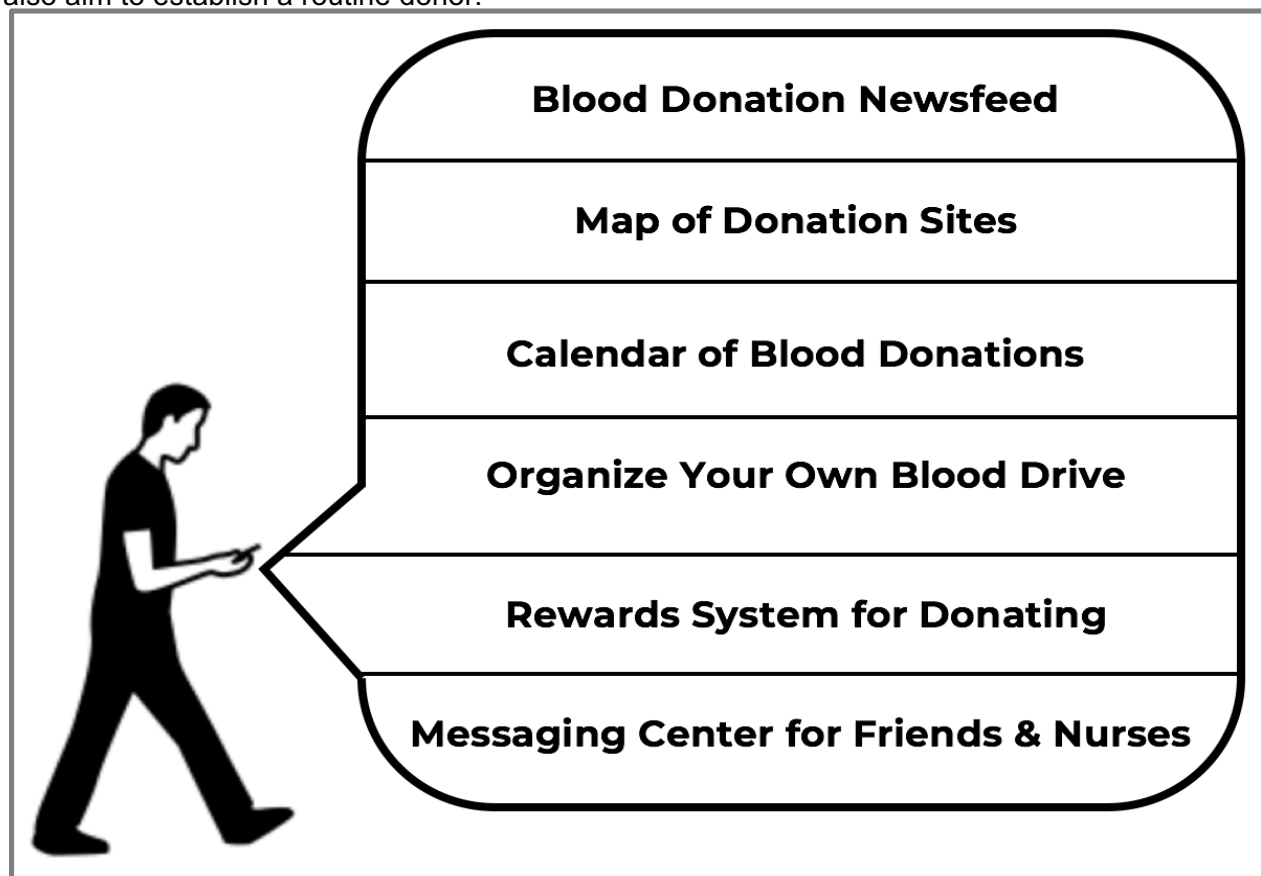
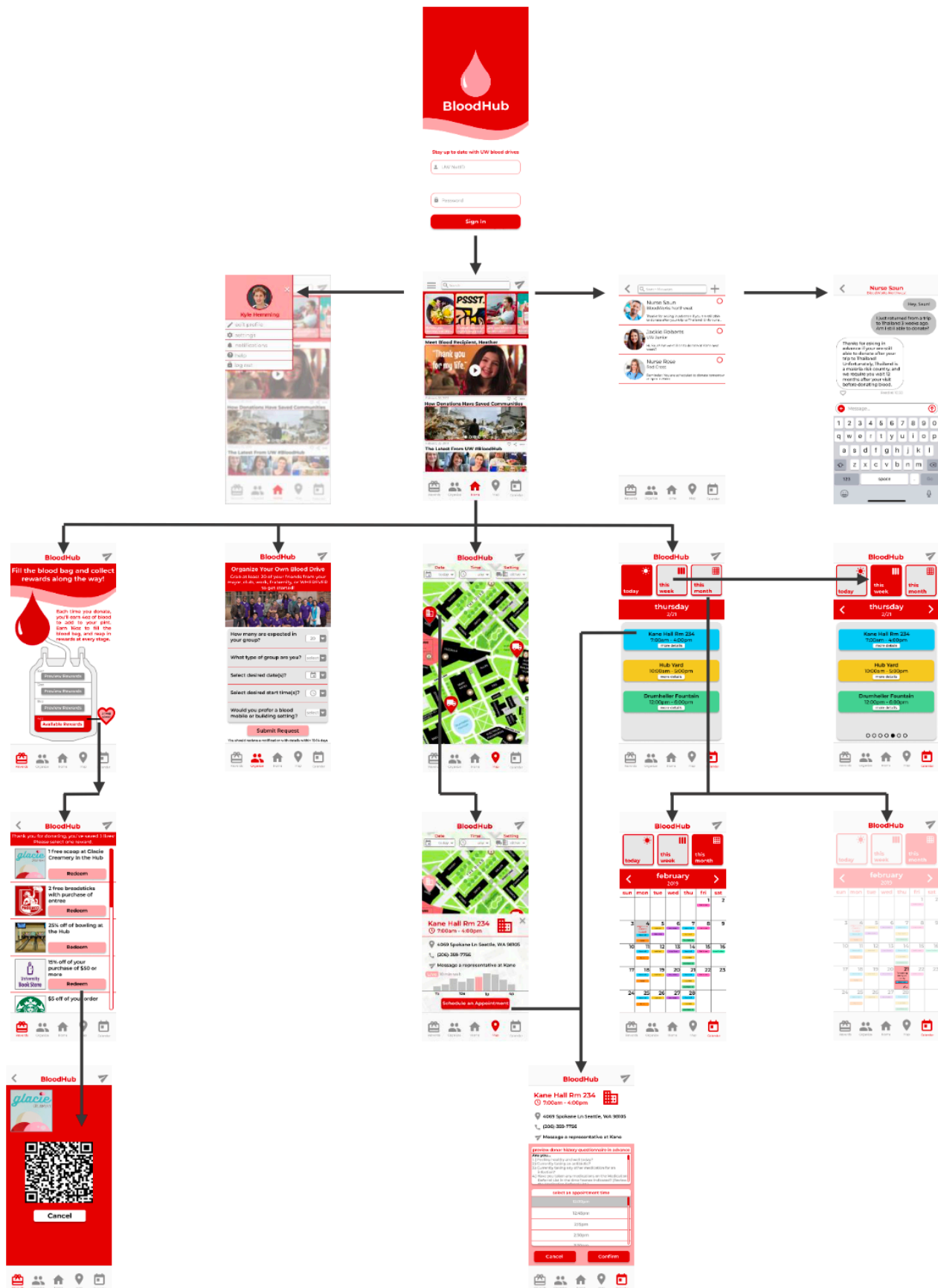


Figure 5

One App, One Location, Total Blood Donation Awareness

Information Architecture

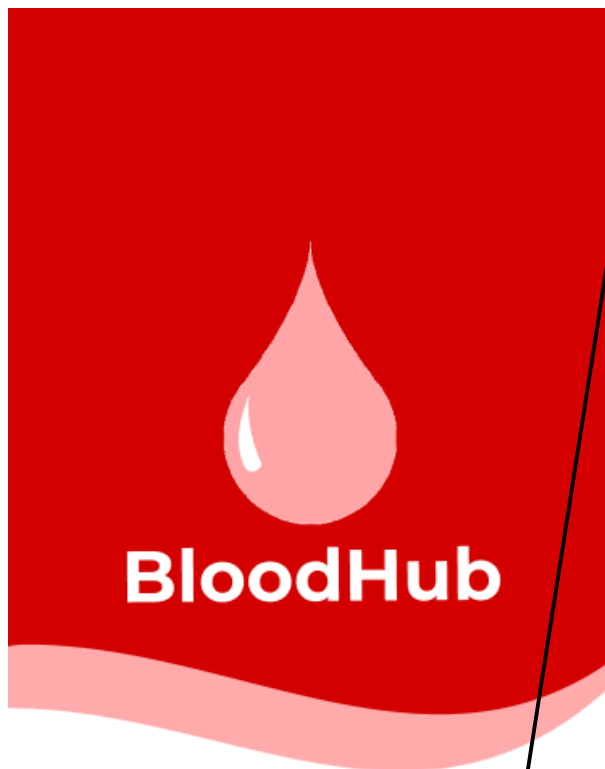


Mock-Ups

Attached below are the potential screens that would appear in our application, BloodHub, if we were to bring it to fruition. We have chosen a few design choices on each screen and explained our rationale for those choices based off of our interviews, research, and user tests that we conducted.

Check Out Our App: https://invis.io/J2R4573NPCU#/349969467_Log-In

Figure 3: Log-in page



Design choice #1: We are requiring users to use UW NetID and password to sign-in to the application or to sign up for an account.

Rationale: We decided that we wanted the scope of this application to be for UW students and faculty so by requiring their NetID upon using the application, this was a way in which we are ensuring that only our intended users are able to.

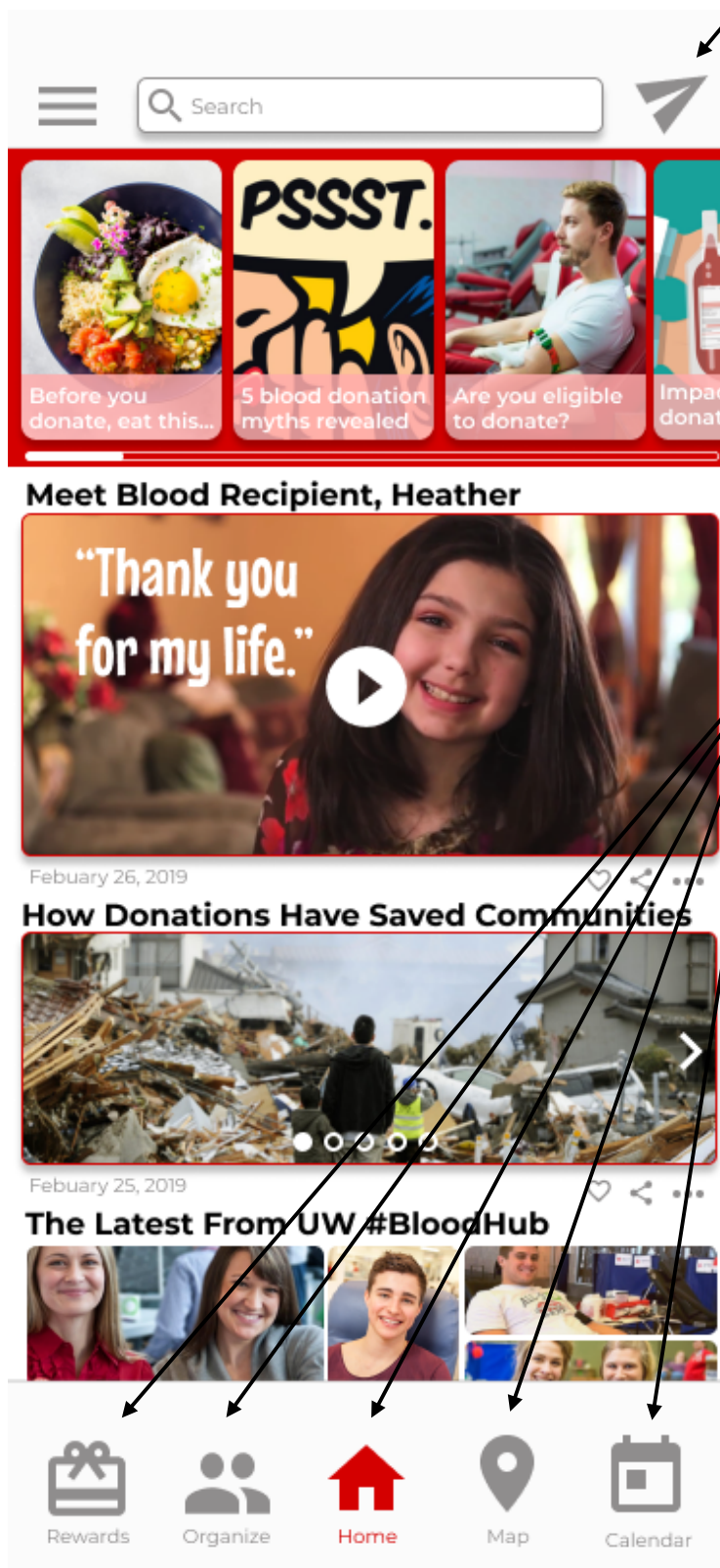
Figure 4.1: Home page



Design choice #1: We chose to provide all the information donors need including testimonials, current events, and articles as the home page.

Rationale: We chose to provide this important information as the home page so that users come across it every time they use the application, ensuring that they don't miss it. Users are able to scroll through this information to find answers to all their questions and concerns and to see how their blood donation is making a difference. By providing encouraging information about donating blood, we will attract users who are hesitant or had preconceived notions about donating blood.

Figure 4.1: Home page continued



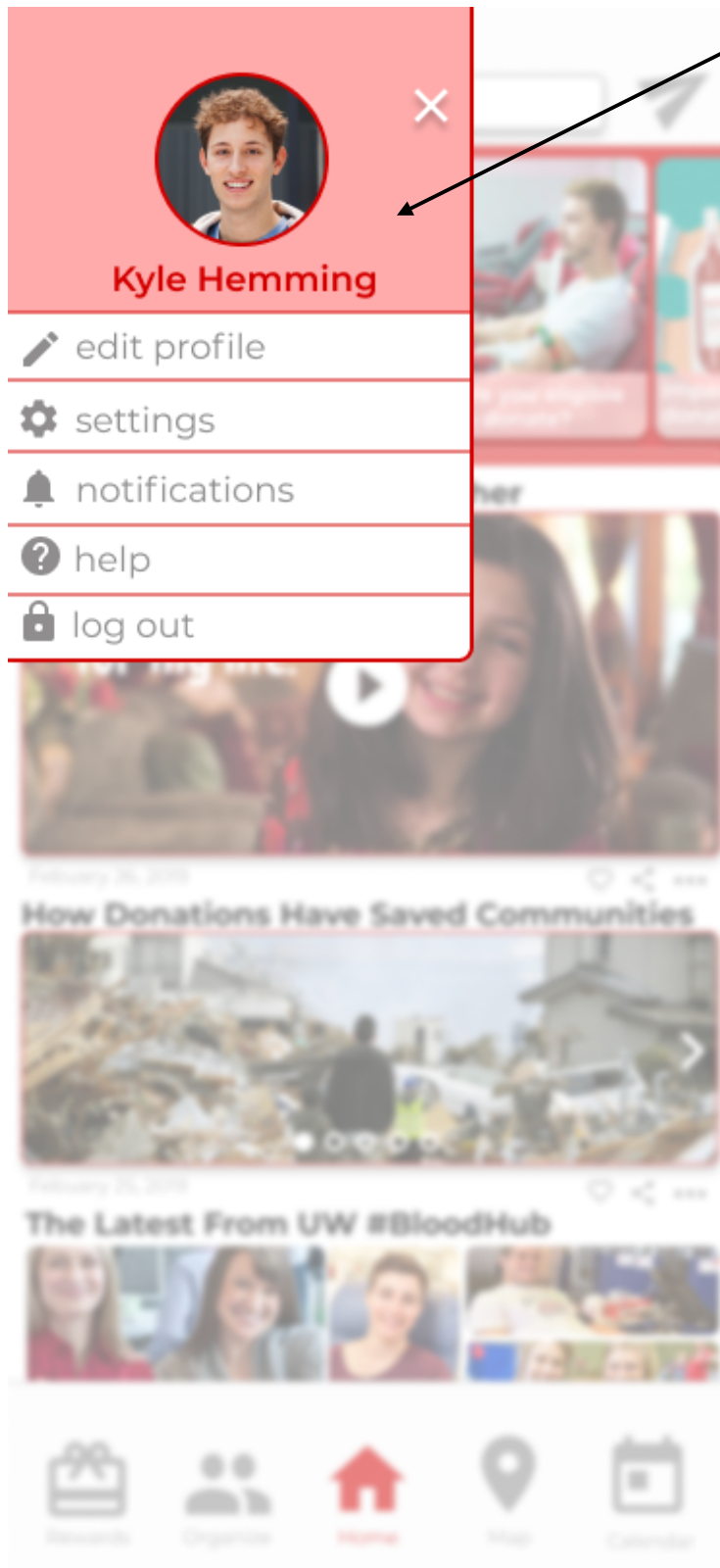
Design choice #2: We place a notification icon in the top-right corner on each screen that allows users to message with a nurse, fellow UW peers, or view reminders in real-time.

Rationale: We wanted to provide this feature on every screen so that it is always easy to find, allowing users to always get their questions and concerns answered right away.

Design choice #3: Icons at the bottom of the page that are highlighted to show you what page you are on. Labels are also included in case the icon is not clear enough.

Rationale: We have provided a menu bar at the bottom of the page so that users can easily navigate between pages. The icon is red symbolizes the page you are on while the icons in grey show what pages you can go to. These five icons reflect the five prominent features that users can interact with to find information regarding blood donations at UW.

Figure 4.2: Home page with settings



Design choice #1: On our previous screen, we used a hamburger menu in the upper left-hand corner which will bring you to this menu if clicked.

Rationale: We chose to include a profile option for our users so that their experience is customizable and unique to them, making the process of donating blood more comfortable for them.

Figure 5.1: Notifications

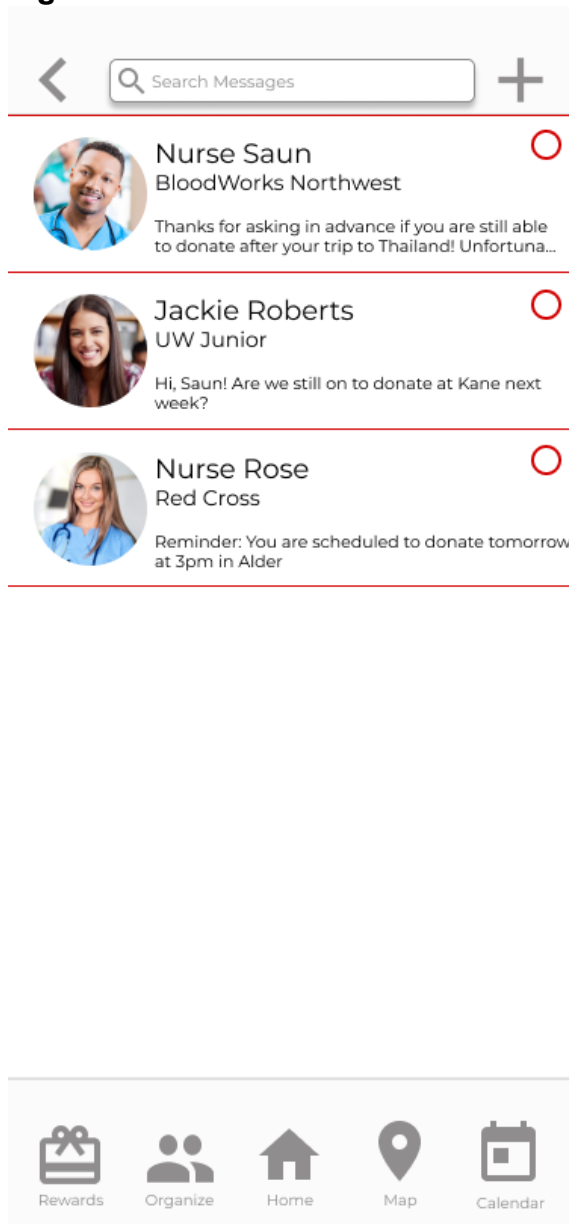
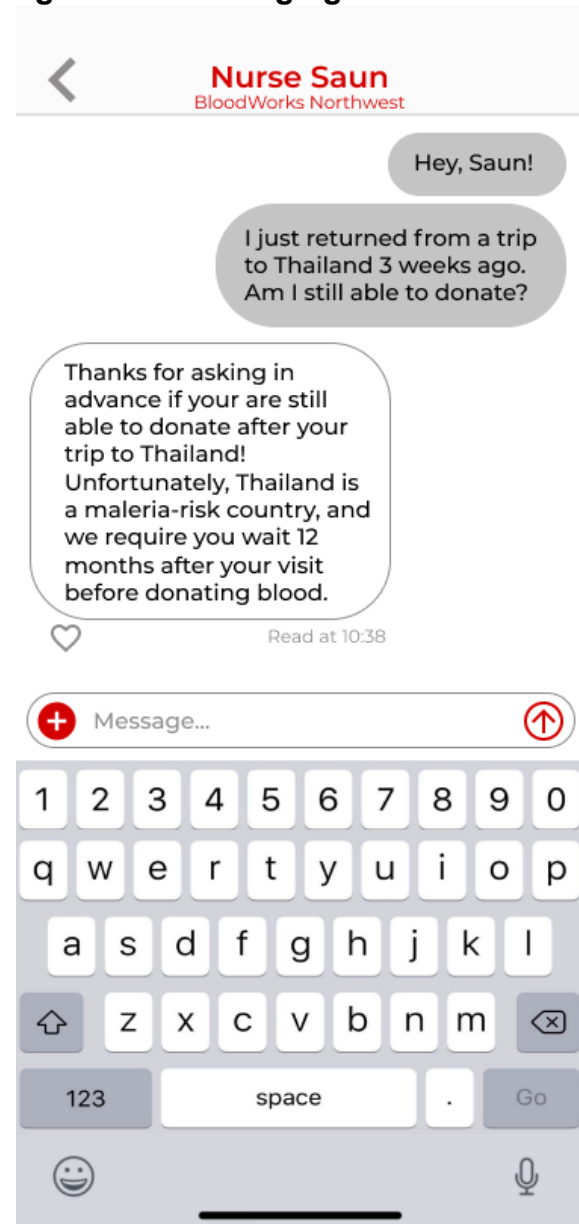


Figure 5.2: Messaging



Design choice #1: We are providing a messaging system that allows users to communicate with the UW blood donation community.

Rationale: Our messaging system follows standard design conventions which makes it easy and intuitive to use. We are providing this feature so that donors can get all their questions and concerns answered in real-time in addition to the ability to reach out to friends to make the process of donating blood less daunting.

Figure 6: Organize your own blood drive

BloodHub

Organize Your Own Blood Drive

Grab at least 20 of your friends from your major, club, work, fraternity, or WHEREVER to get started!

How many are expected in your group? 20

What type of group are you? select

Select desired date(s)?

Select desired start time(s)?

Would you prefer a blood mobile or building setting? select

Submit Request

You should receive a notification with details within 10-14 days

Rewards Organize Home Map Calendar

Design choice #1: We chose a set of five questions that the user has to fill out to request to host their own blood drive.

Rationale: We are providing this set of five, pre-determined questions for students and faculty to fill out to make the daunting task of organizing your own blood drive quick and concise.

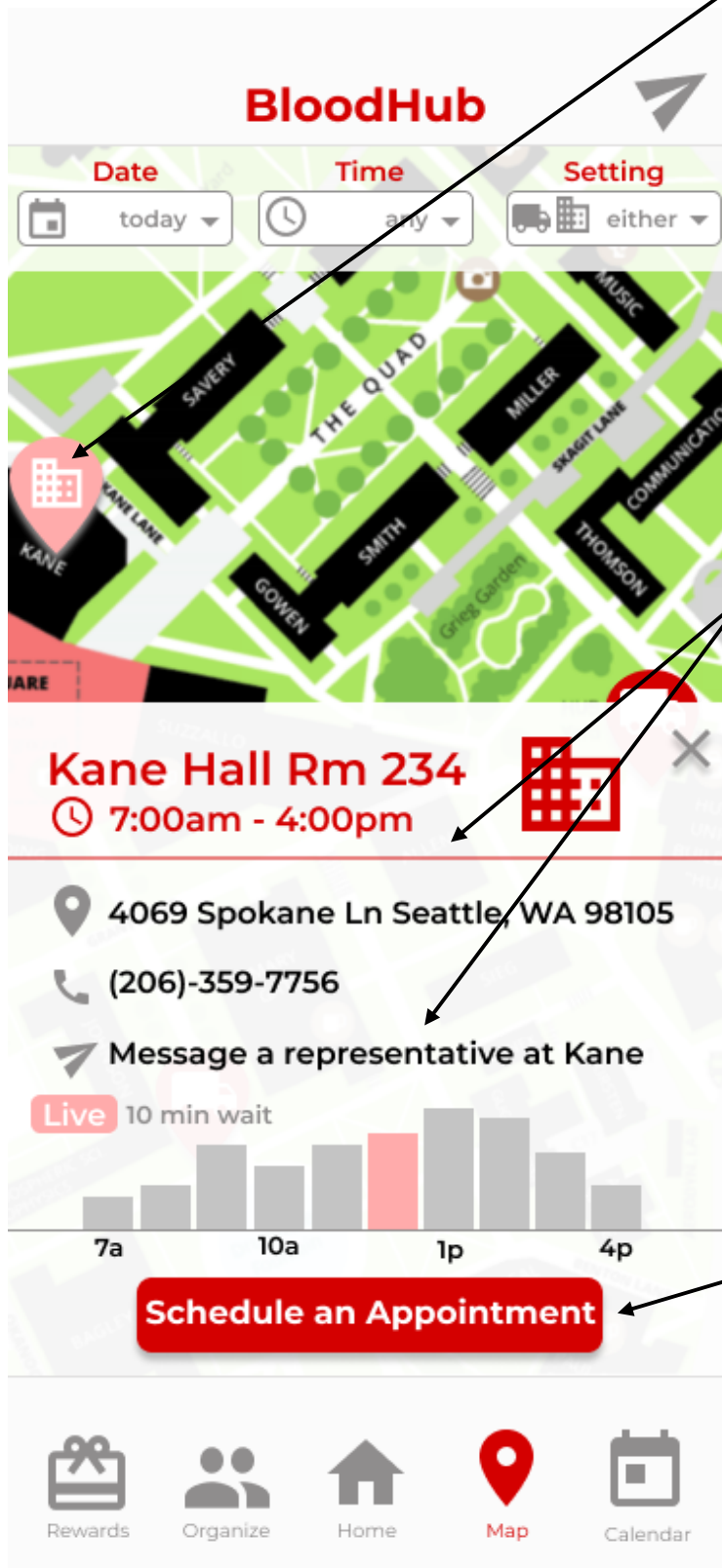
Design choice #2: We are providing drop down buttons for each question that will provide pre-selected options for each question.

Rationale: This page was designed for groups that appreciate the community and morale of donating with friends. We decided to use drop-down buttons because they will reduce confusion for the users since users will not be left wondering what kind of input the application is asking for and in what format. Additionally, users will be able to see if the time and day they want to host the blood drive is available before they send in the request because only available times and days will be offered in the drop-down buttons.

Rationale: We again decided to use drop-down buttons so there is no confusion making the application quick and easy to use. Allowing the user to select their preferences will filter the results and display blood drives that are familiar to them and fit into their schedule.

Rationale: We decided to use the same map in our application that UW uses because this is familiar for both students and staff since it is seen all over campus. Additionally, it provides a visual for users to see where these blood drives are behind held relative to them.

Figure 7.2: Map with more detail



Design choice #1: We put icons on the map that let the user know if the blood drive is being held inside a room on campus or the BloodMobile.

Rationale: We wanted students and faculty to be aware of whether the blood drive was being held in a room or the BloodMobile as soon as possible because many interviewees expressed that this impacted their decision. Using the building or mobile truck icon will let users know the setting of the blood drive before they make any other decisions.

Design choice #2: We added extra details about the blood drive including address, hours, wait time, and more if the icon is clicked.

Rationale: Students and faculty explained that they often don't have time to donate blood because they see the advertisements in inconvenient times so we added this feature because it allows students and faculty to decide if they have enough time to donate between classes or during their lunch break.


Design choice #3: We are providing students and faculty the option of scheduling an appointment to donate blood within the application.


Rationale: During our research, we saw that advertisements led students and faculty to an external site to schedule appointments which is inconvenient and unnecessary extra work.


Figure 7.3: Scheduling an appointment from the map


BloodHub


Kane Hall Rm 234

 7:00am - 4:00pm



 4069 Spokane Ln Seattle, WA 98105

 (206)-359-7756

 Message a representative at Kane

preview donor history questionnaire in advance

Are you...
1.) Feeling healthy and well today?
2.) Currently taking an antibiotic?
3.) Currently taking any other medication for an infection?
4.) Have you taken any medications on the Medication Deferral List in the time frames indicated? (Review the Medication Deferral List)

select an appointment time

12:00pm

12:45pm


2:15pm


2:30pm


3:30pm


Cancel


Confirm

 Rewards

 Organize

 Home

 Map

 Calendar

Design choice #1: We are providing users with the same questionnaire that donors have to fill-out when they show up in person when they make an appointment within the application.

Rationale: We are requiring donors to scroll through and read all the questions in advance to not only ensure that they are eligible before they show up, but it will also expedite the process when they show up in person since they won't need to take more time to fill out their paperwork.

Figure 8.1: Calendar – today

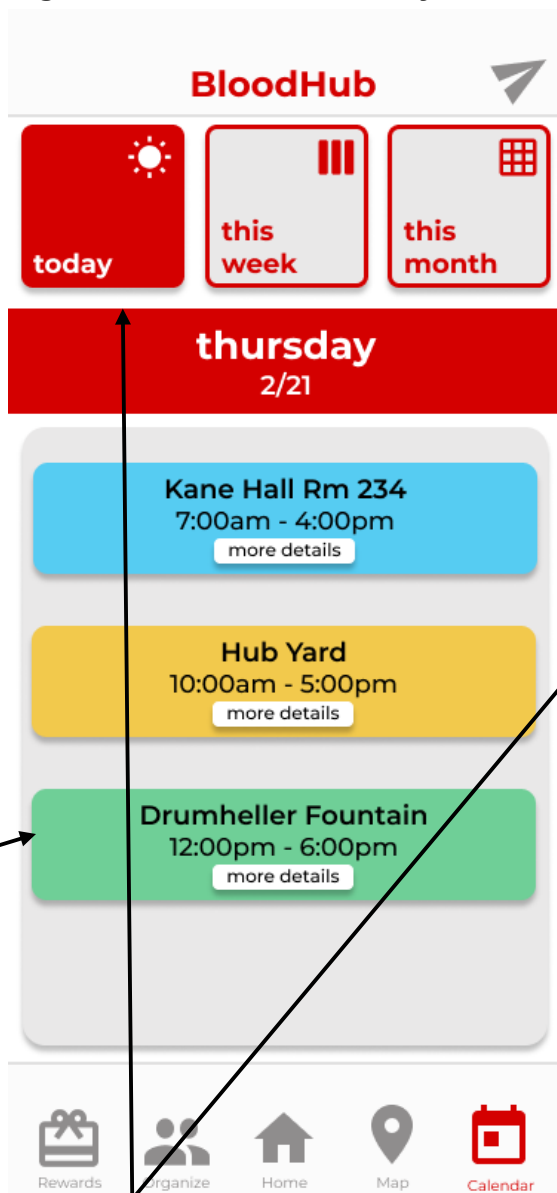
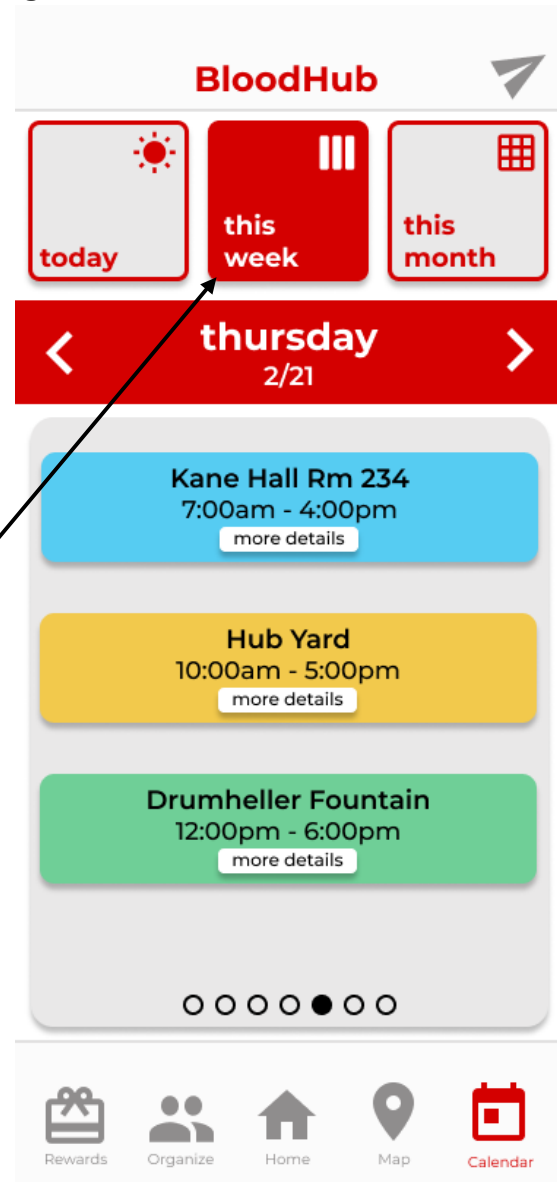


Figure 8.2: Calendar – this month



Design choice #1: We provided buttons at the top of the calendar page which allow the user to select whether they want to see blood drives happening today, this week, or this month.

Rationale: We chose to include these buttons because it allows users to filter the results based off of what fits in to their schedule. This will make the calendar page less cluttered and focused on what the user is looking for.

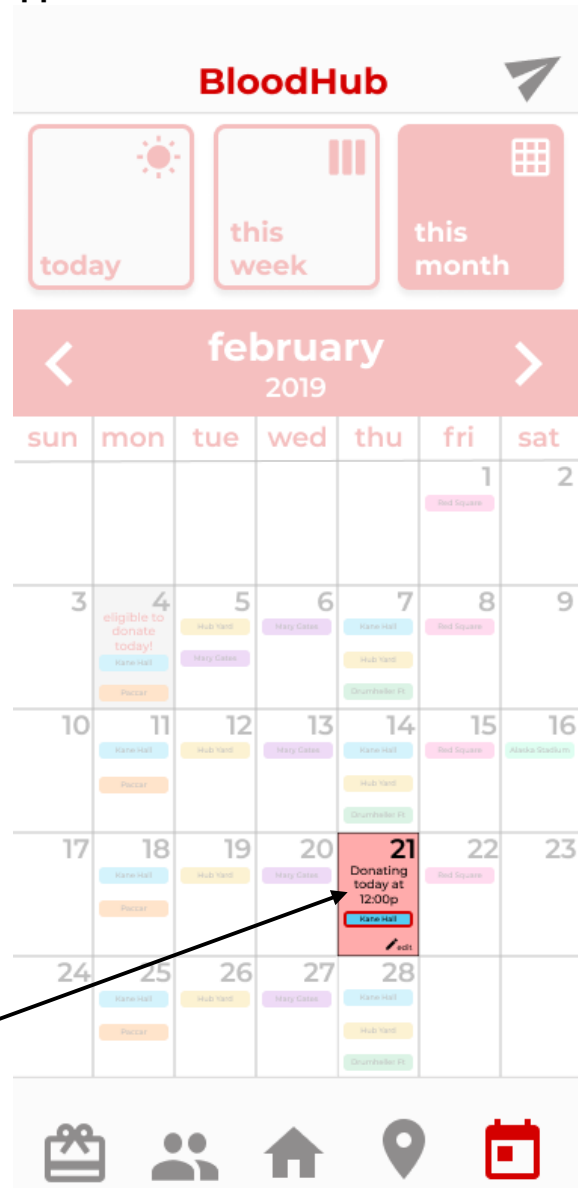
Design choice #2: We used different colored buttons to represent the different blood drives being held on campus.

Rationale: We decided to list all the blood drives being held on campus in different colors to ensure that users are aware that they are in different locations. These color choices are consistent throughout the calendar screens so that regular users will be able to quickly recognize where a location is based off of the button and its color.

Figure 8.3: Calendar with eligible donation date



Figure 8.4 – Calendar with scheduled appointment



Design choice #1: We have highlighted the dates that a donor is eligible to donate in grey and the dates that a user has an appointment scheduled in red on the calendar.

Rationale: Some of our main goals with this application are to raise awareness about blood donations and to establish routine donors after that. We chose to highlight the days that donors are eligible to donate or the days they have appointments scheduled so that they are easily recognized at a first glance. This will encourage students and staff to stay on track and donate whenever they can.

Figure 9.1: Rewards home page



Design choice #1: We have decided to implement a rewards system, in which users can track how many times they have donated and how many lives they have saved, through the blood donation bag.

Rationale: We wanted to implement a rewards system to incentivize students to routinely donate blood, thus increasing the amount of blood donations. We also highlight how many lives a student has saved thus far, so that students can see their efforts are making a difference. We picked a blood bag to mimic the actual process of donating blood so users can physically see their progress.

Figure 9.2: Available Rewards

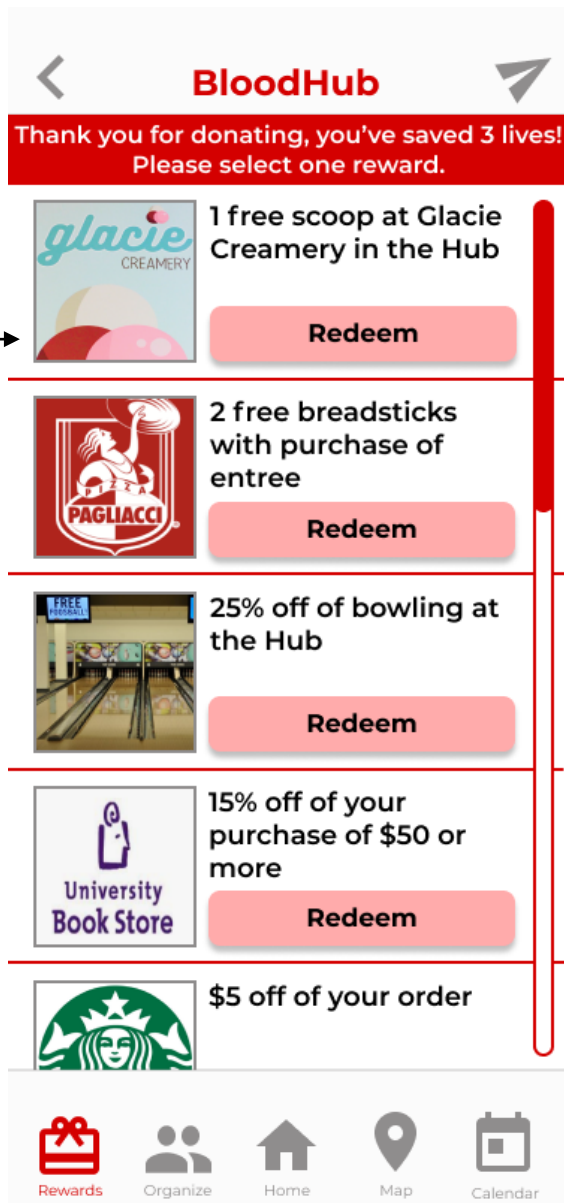
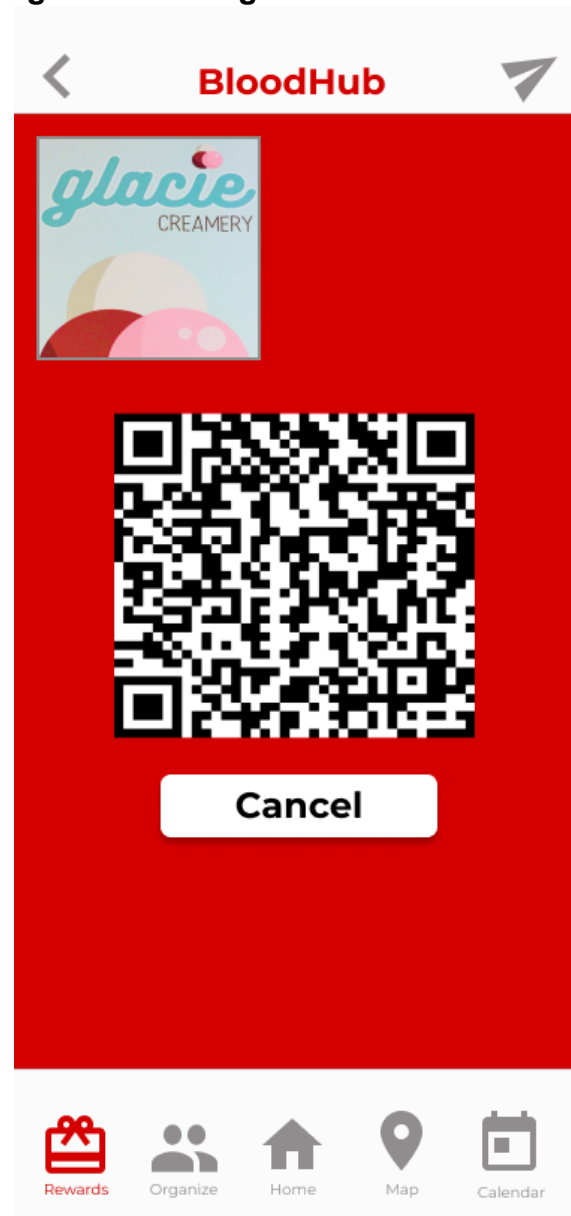


Figure 9.3: Using Reward



Design choice #1: We implemented a scrollable list of potential rewards to redeem, with recognizable photos and a brief description of the offer.

Rationale: We wanted a list that students could easily browse through. We chose rewards that are relevant to UW campus life, with locations either on or near campus, and emphasized the picture/logo so that students could immediately recognize the rewards, enticing them to further donate.

Design choice #2: After the selection of a reward has been made, we wanted to put the logo in the corner, and a scanable QR code in the center.

Rationale: By having the logo appear on this screen, students can easily identify what they have selected. The QR code can then be scanned at checkout, as one normally would proceed, to redeem its offer.

Evaluation

Upon designing *BloodHub*, we contacted Wendy Chu, the Seattle and UW representative for BloodWorks Northwest. She expressed her desire that there be a sole club or organization on campus that could manage UW blood donation affairs, making it easier to communicate and report back to her. As of right now, Wendy is responsible for contacting campus groups individually to talk about organizing drives, and notes that her tactics for attracting UW donors is arguably scattered.

After conducting several usability tests and a thorough heuristic evaluation of our design prototype, we shared our final result with Wendy. Wendy was elated to see that the application was a centralized place for students to attain information, communicate, and even request organizing blood drives. She felt that the specificity of a UW blood donation app not only captured the essence of what she had hoped a single club organization could do, but it eliminated the need for one entirely. Wendy shared our belief that *BloodHub* would be an extremely efficient and effective mechanism for UW students and blood collection agencies to interact and increase donations.

We made several adjustments throughout our usability tests, including icon changes, labeling buttons, and changing the calendar flow, according to what our users found difficulties with originally. Our original interviewees were pleased to see the final product contained resources that were applicable to their needs, and information that made them aware and motivated to donate blood, such as motivational stories, scheduling resources, and a rewards system.

Limitations

When creating *BloodHub*, we made several assumptions in order to create the most useful possible app for UW students. The first assumption we made when designing *BloodHub* was that students will be able to log into the app using their UW net ID. This assumes that the University has the capability and willingness to allow for log-in compatibility between the school and our app.

Another assumption we made is that there will be a backend application created for blood collection organizations like BloodWorks Northwest and The Red Cross. This would allow for donation information to be shared with *BloodHub*, and ultimately UW students on the app. The messaging system of our app also relies on the ability to contact individuals from these collection organizations.

Sources

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