A. User Experience Requirements

From Milestone 2, we have picked out the following to be the most relevant user stories followed by a brief justification:

1. *As a student, I want to see all my upcoming events as soon as I log into eLC so that I can quickly navigate to upcoming events and alert myself.*

   a. When a user logs into eLC, the sections immediately visible are the user's course and announcements. We believe that a user should be immediately met with information regarding upcoming events. A user does not stay too long on this page, usually going to one of their registered course pages upon logging in, so it is important that the user is able to be greeted with upcoming events to alert them to other important assignments or assessments they may need to complete.

2. *As an instructor, I want to click a plus sign in the top corner of my calendar so that I can add events with ease.*

   a. In order for a redesign to effectively work, we must make it easier for instructors to use the eLC calendar. Currently, three options are given to instructors: "Create Event", "Set Dates", and "Import Events". These options also only appear if the instructor is viewing the calendar from the course the user is enrolled as an instructor. By combining all these options into one button and one pop up, we hope this eases the process of creating new events.

3. *As a regular user, I want the steps to view the calendar by an (effective) means to be as few as possible so I can access my upcoming events with the least effort possible.*

   a. Currently, eLC has a short list of upcoming events on the main page. In order to access the calendar with minimal effort and check the upcoming events, we decided to add a visual calendar to that main page. And instead of marking

events with single blue dots, we will apply the heatmap to the calendar to provide intuitive and visible information to users.

4. *As a user, I want to represent my calendars in different views, so that I can see my events in different formats.*

   a. When a user wants to view their calendars in the "Day", "Week", and "Month" view, the event block does not always effectively communicate what the event is, often times cutting off the course name or the event title. The user must click on each event in order to know any useful information, so they cannot efficiently view their events in the view selected. All views available to the user should effectively communicate important information about an event.

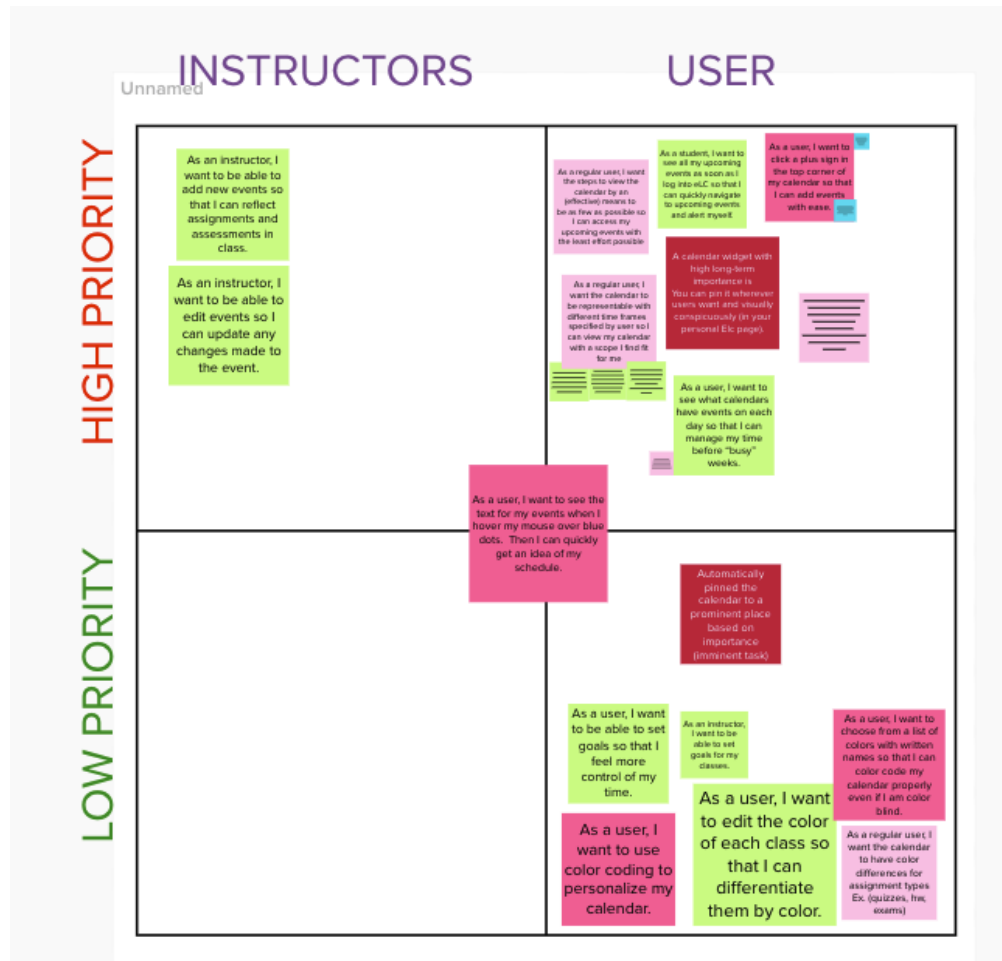5. *As a user, I want to see the number of events on each day so that I can manage my time before "busy" weeks.*

   a. On the Calendar page and the Calendar widget present on the eLC Home page & all course home pages, a blue dot represents if a given day has at least one event. However, it does not give any more information than that. We want to develop a heat map instead of the blue dot system currently in place. With a heat map, a user can visually see throughout the month when they have more assessments or assignments and manage their time more effectively leading up to these stressful periods.

6. *As a user, I want to edit the color of each class so that I can differentiate each one by color.*

   a. Color coding is important to time management. By assigning events by color, a user knows instantly one piece of information about the event, no matter the format. eLC does allow for users to edit the color of each course, but it is not user-friendly or immediately discoverable. Customization will help garner more use.

To help us organize our user stories we used Mural to collaborate. We first separated the user stories by instructor and any user. Users assigned as instructors in a course have the extra affordance of creating new events that a typical user does not, so we wanted to give special consideration to user stories assigned to instructors: if instructors are more likely to use the eLC calendar, then students are too. We then ranked the user stories from high to low priority depending on time needed and general importance.
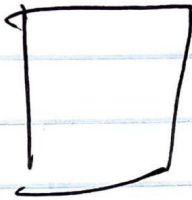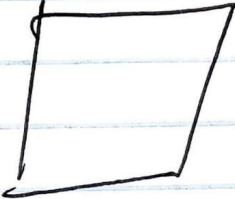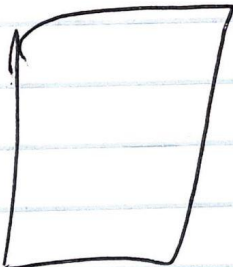
B. Ideation and Preliminary Designs

INSTRUCTORS   **USER**

Unnamed

HIGH PRIORITY

As an instructor, I want to be able to add new events so that I can reflect assignments and assessments in class.

As an instructor, I want to be able to edit events so I can update any changes made to the event.

As a regular user, I want the steps to view the calendar by an [effective] means to be as few as possible so I can access my upcoming events with the least effort possible

As a student, I want to see all my upcoming events as soon as I log into eLC so that I can quickly navigate to upcoming events and alert myself.

As a user, I want to click a plus sign in the top corner of my calendar so that I can add events with ease.

A calendar widget with high long-term importance is You can pin it wherever users want and visually conspicuously (in your personal Elc page).

As a regular user, I want the calendar to be representable with different time frames specified by user so I can view my calendar with a scope I find fit for me

As a user, I want to see what calendars have events on each day so that I can manage my time before "busy" weeks.

As a user, I want to see the text for my events when I hover my mouse over blue dots. Then I can quickly get an idea of my schedule.

LOW PRIORITY

Automatically pinned the calendar to a prominent place based on importance (imminent task)

As a user, I want to be able to set goals so that I feel more control of my time.

As an instructor, I want to be able to set goals for my classes.

As a user, I want to use color coding to personalize my calendar.

As a user, I want to edit the color of each class so that I can differentiate them by color.

As a user, I want to choose from a list of colors with written names so that I can color code my calendar properly even if I am color blind.

As a regular user, I want the calendar to have color differences for assignment types Ex. (quizzes, hw, exams)

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1. *As a student, I want to see all my upcoming events as soon as I log into eLC so that I can quickly navigate to upcoming events and alert myself.*

For the eLC home page, we decided on a small change of moving the Calendar widget. This small change will allow a user to quickly glance at what upcoming events they may have in their classes. In the original layout, the Calendar widget was placed under the Announcements, which can potentially take up a lot of space. For a student, their main priority when logging onto eLC is to complete some task associated with one or more of their classes, so by having the Calendar clearly visible on the eLC Home page, a user can easily get to an assignment they may need to turn in, or be alerted to an upcoming event. Our top two design choices were to place the calendar above the announcements widget or at the top of the homepage:
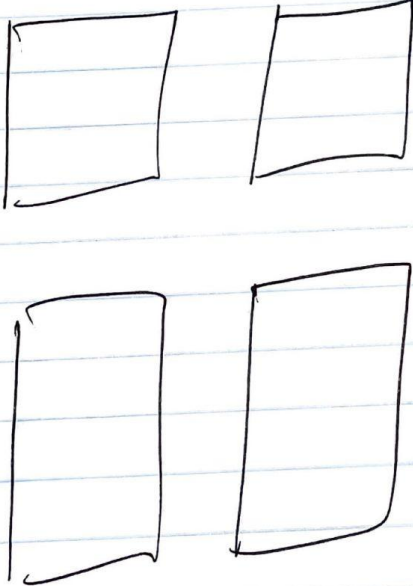
Welcome Student!

My Courses

Calendar ∨

Announcements ∨

Welcome Student!

Calendar ∨

My Courses

Announcements ∨

2. *As an instructor, I want to click a plus sign in the top corner of my calendar so that I can add events with ease.*

        a. We had two ideas for the placement of the plus sign. Both of them are pictured below:

Agenda	Day	Week	Month	List	+

<> Oct 14, 2021

Agenda	Day	Week	Month	List

<> Oct 14, 2021 +

We want a pop-up window to appear when the plus sign is clicked. This would allow the instructor to add the event's name, date, description, and level of importance. Here are our top ideas for the pop-up design:

Event Name

Event Date   12 pm -   1 pm

| Low Priority | Moderate Priority | High Priority |

Description

Event Name [_____]

Date [_____] at [____] pm – [____] pm

Importance [Low]   [Moderate] ✓[High]

Description
[   ]

3. *As a regular user, I want the steps to view the calendar by an (effective) means to be as few as possible so I can access my upcoming events with the least effort possible.*

    a. A big issue we identified with the current eLC Calendar is complicated accessibility to class information. One way to fix this issue is to make a small pop-up appear when the user's cursor hovers over a day on eLC's homepage calendar. Or, the user can click the day in order to see that day's events. This way, the calendar can clearly relay the due date, the event, or the course. The hovering pages reduce clicking time needed to find detailed class information. In order to accommodate

this change, the layout of the entire homepage needed to be redesigned. Our ideas and sketches for this redesign are the same as the ones from our first user story:

Welcome Student!

Calendar ⌄

My Courses

Announcements ⌄

Welcome Student!

My Courses
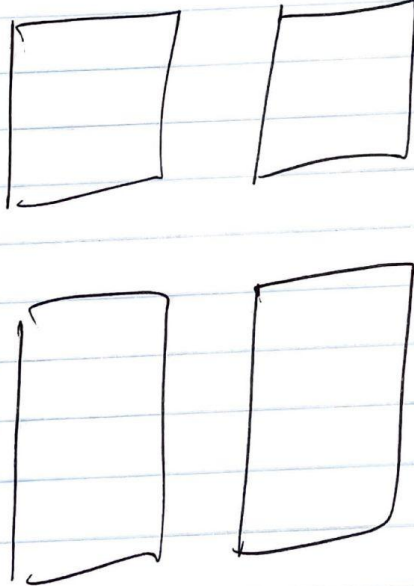
Calendar v

Announcements v
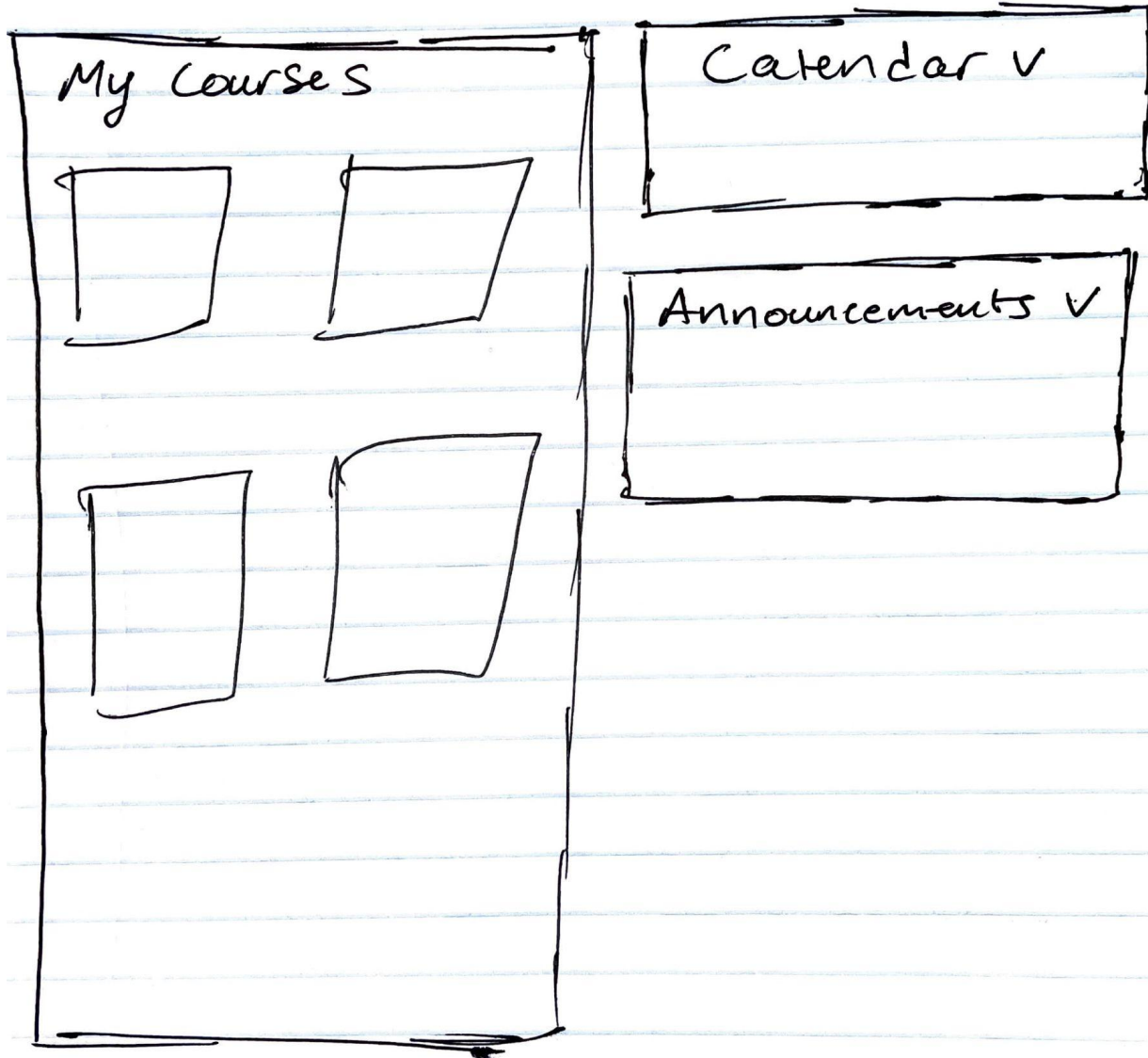
A sketch of the calendar together with the pop-up is pictured below:
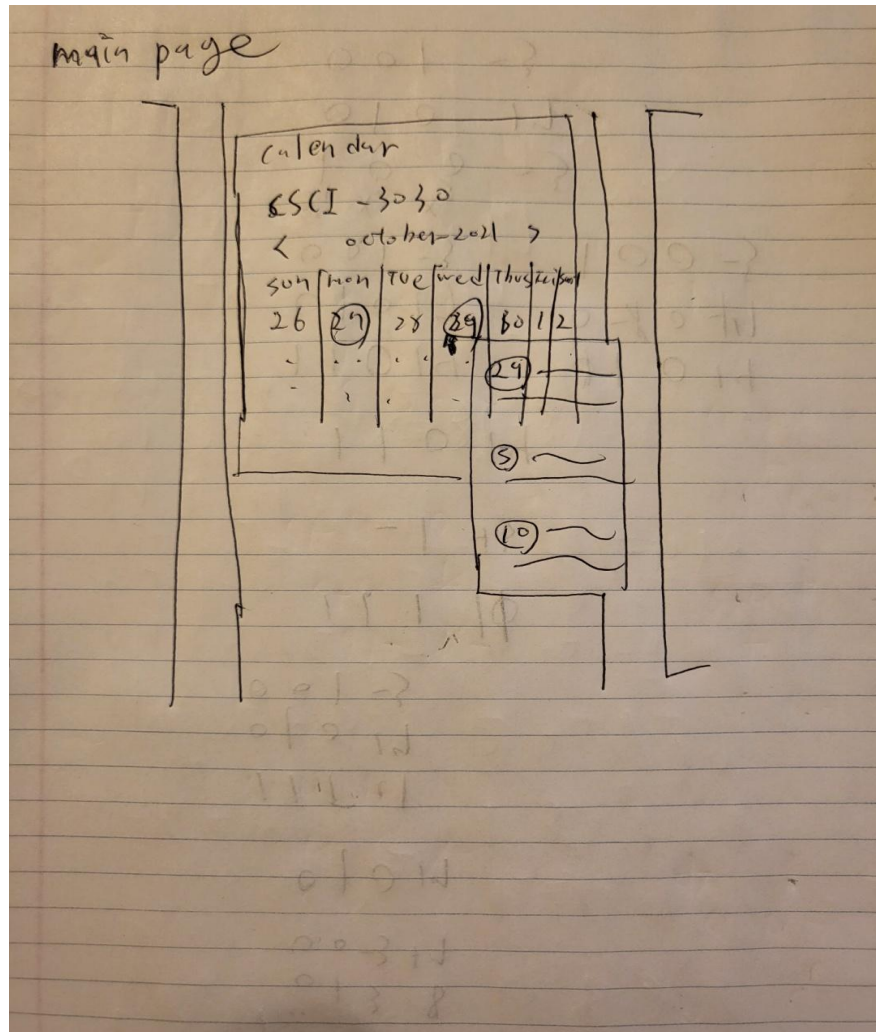
main page

calendar

CSCI - 3030

< october 2021 >

Sun	Mon	Tue	Wed	Thu	Fri	Sat
26	27	28	29	30	1	2

29
⑤
⑩

4. *As a user, I want to represent my calendars in different views, so that I can see my events in different formats.*

A big issue we identified with the current eLC Calendar is the visibility of events in the different views, specifically in the Day, Week, and Month views. One way to fix this issue is making the space bigger. By allowing more room for the views, the event blocks can be larger and clearly relay the name of the event or the course. In order to accommodate this change, the layout of the entire page needed to be redesigned. By moving the new heat map calendar to the top along with the tasks, the different event views could take up more room underneath.
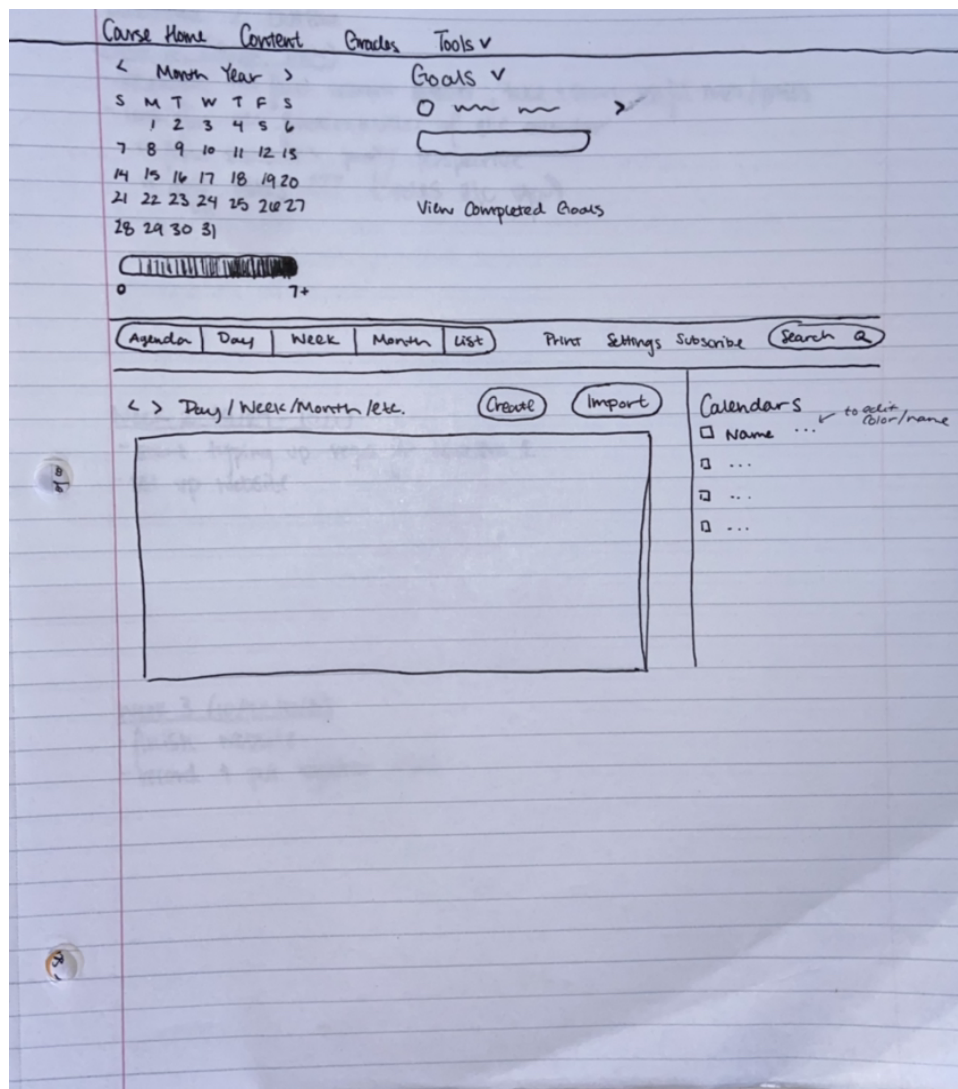
Original

all day	
8:00 AM	
9:00 AM	
10:00 AM	
11:00 AM	
12:00 PM	
1:00 PM	
2:00 PM	
3:00 PM	
4:00 PM	

Proposed

all day	
7:00 AM	
8:00 AM	
9:00 AM	
11:00 AM	
12:00 PM	
1:00 PM	
2:00 PM	
3:00 PM	
4:00 PM	

Calendar

all day	
7:00 AM	
8:00 AM	
9:00 AM	
11:00 AM	
12:00 PM	
1:00 PM	
2:00 PM	
3:00 PM	
4:00 PM	

All-day Event Block

❓ **Assignment Name** Class Name

30-min Block

❓ **Assignment Name** Class Name   00:00 PM

Calendar

	Sun 10	Mon 11	Tue 12	Wed 13	Thu 14	Fri 15	Sat 16
all day							
7:00 AM							
8:00 AM							
9:00 AM							
11:00 AM							
12:00 PM							
1:00 PM							
2:00 PM							
3:00 PM							

All-day Event Block

[?] Class Name

30-min Block

[?] Class Name

Calendar

Event Block

[?] Class Name

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
29	30	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31	1	2

~*~ All event are shown, the more events on a day, the bigger the week gets~*~

5
[?] Class Name

5
[?] Class Name
[?] Class Name

5
[?] Class Name
[?] Class Name
[?] Class Name

5. *As a user, I want to see the number of events on each day so that I can manage my time before "busy" weeks.*

One of the biggest changes we wanted to implement was a heat map to show users the amount of assignments they have on a given day in any month. In the original layout, eLC uses a month calendar view with blue dots to indicate that there is an event on that day, however, there is no way in telling exactly how many events you have on a given day unless the user either clicks on that day or toggles their Event Viewer to the day in question. With the addition of the heat map, this will allow all users to see how assignments, assessments, and other events are spread out in each month, allowing the user to plan accordingly for busier weeks.

Five gradient options were created to see which color options would be best for our new design. Those options are in the third square to the right. In all options, red was chosen to be the color of the most assignments, as red often invokes urgency as we discussed in class.
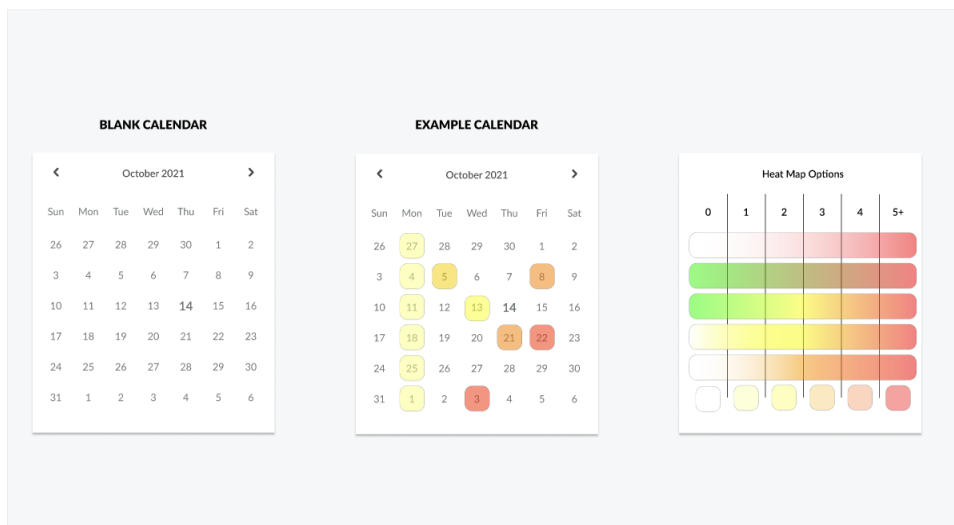
6. *As a user, I want to edit the color of each class so that I can differentiate each one by color.*

Currently, eLC uses a drop down option for users to change the color and edit which calendars are visible. With the drop down, the user cannot see what courses they have currently

visible and the color associated with them. Furthermore, it is difficult to understand how to change the color for a course's event.

Popular online calendars show all calendars directly on the page, and allow the user to make it visible by toggling a checkbox. With this layout, a user is always able to see what calendars are available to view and what color is associated with each one. This gives the user a constant guide to the color coding of their courses. We considered a one-column design and a three column design for this feature:

Calendars

☐	～	○
☐	～	○
☐	～	○
☐	～	○
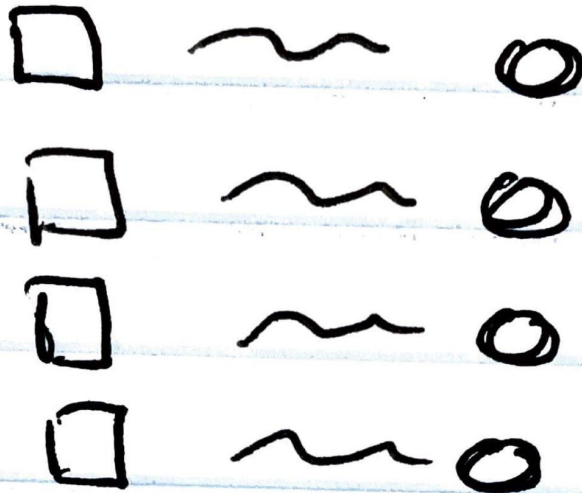
Calendars

☐ ～○	☐ ～○	☐ ～○
☐ ～○	☐ ～○	☐ ～○
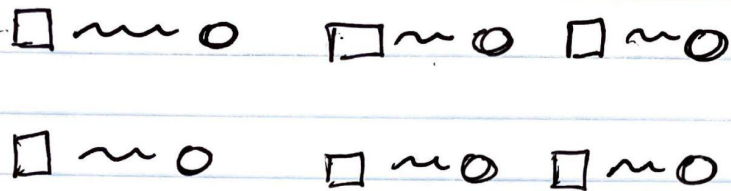
C. Detailed Designs

1. *As a student, I want to see all my upcoming events as soon as I log into eLC so that I can quickly navigate to upcoming events and alert myself.*

    a. We decided to move the calendar widget above the announcements so that the calendar can be more noticeable without taking attention away from the courses.

https://www.figma.com/file/K4tDIFkFcNBvCfjBXTVixp/eLC-Calendar?node-id=31%3A192

https://www.figma.com/file/K4tDIFkFcNBvCfjBXTVixp/eLC-Calendar?node-id=82%3A12
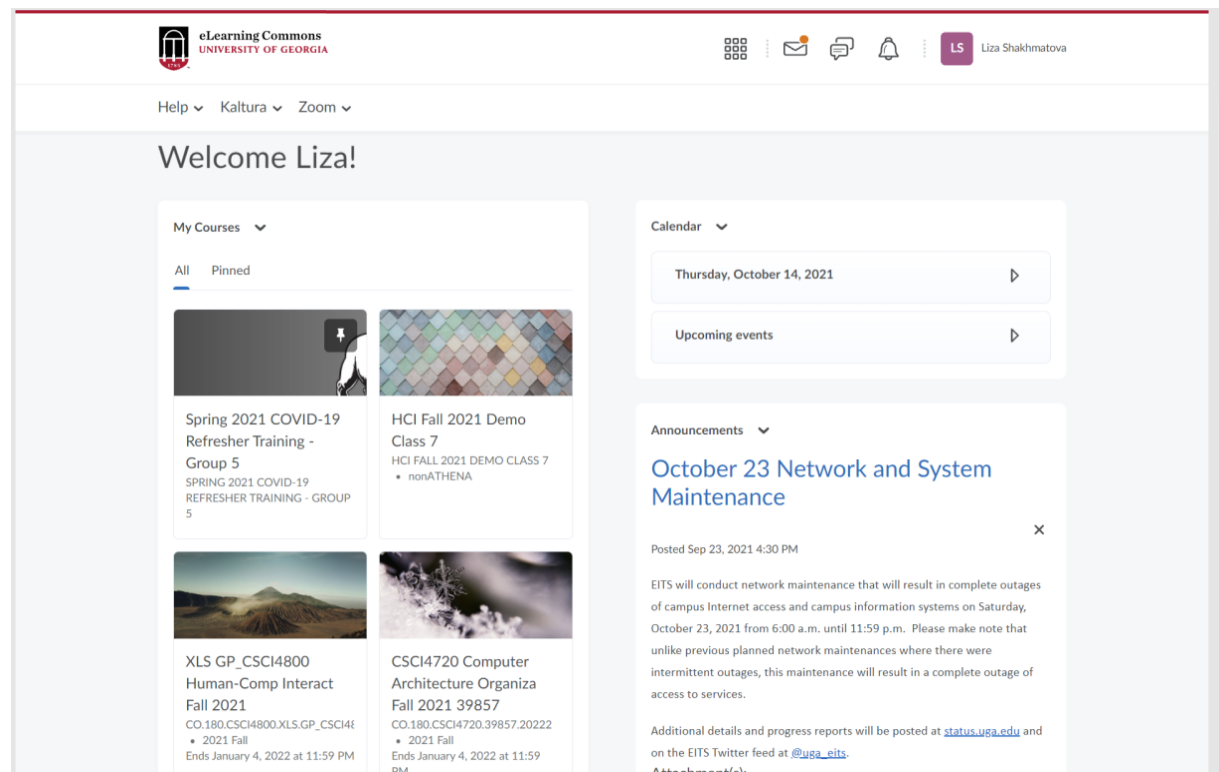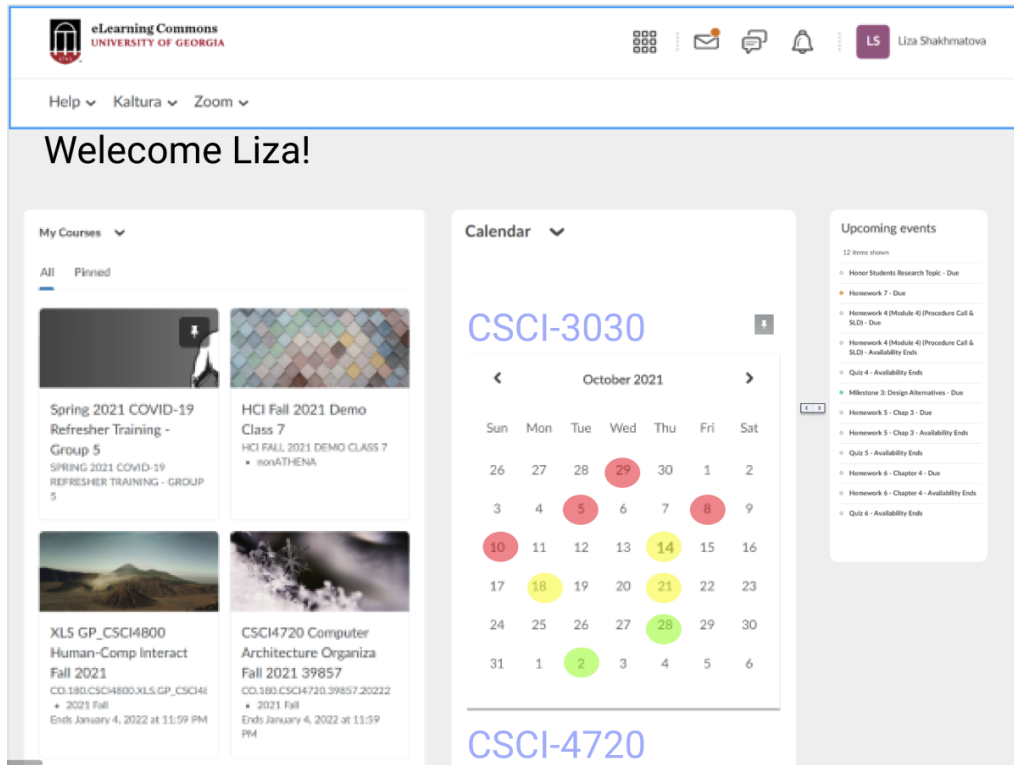
We have also added a minimization feature for all announcements to make space management even easier, thus allowing the calendar to freely take up more space on the homepage. Now when a user logs into eLC, they can easily see the calendar readily available up top, as opposed to the bottom.
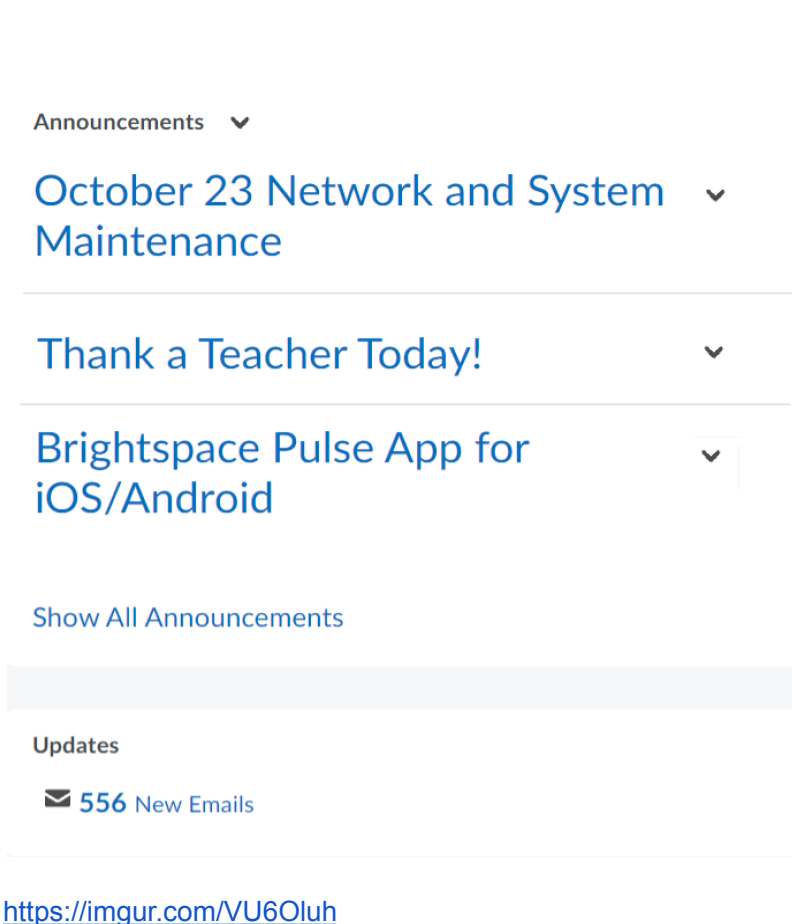
Announcements ⌄

October 23 Network and System ⌄
Maintenance

Thank a Teacher Today! ⌄

Brightspace Pulse App for ⌄
iOS/Android

Show All Announcements

Updates

✉ **556** New Emails

https://imgur.com/VU6Oluh

2. *As an instructor, I want to click a plus sign in the top corner of my calendar so that I can add events with ease.*

   a. We chose this design because it looks cleaner than the other wireframe. When users type the event's name, the "Event Name" text will disappear. When users click on the date, a small calendar will appear so that they can click on a day in order to set the date of the event. This feature is shown in the second picture.

Event Name

Monday, November 1   12pm — 1pm

Low Priority   Moderate Priority   High Priority

Description

https://www.figma.com/file/K4tDIFkFcNBvCfjBXTVixp/eLC-Calendar?node-id=64%

3A29

Event Name

Monday, November 1   12pm — 1pm

<		October 2021				>
Sun	Mon	Tue	Wed	Thu	Fri	Sat
26	27	28	29	30	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31	1	2	3	4	5	6

Lo   e Priority   High Priority
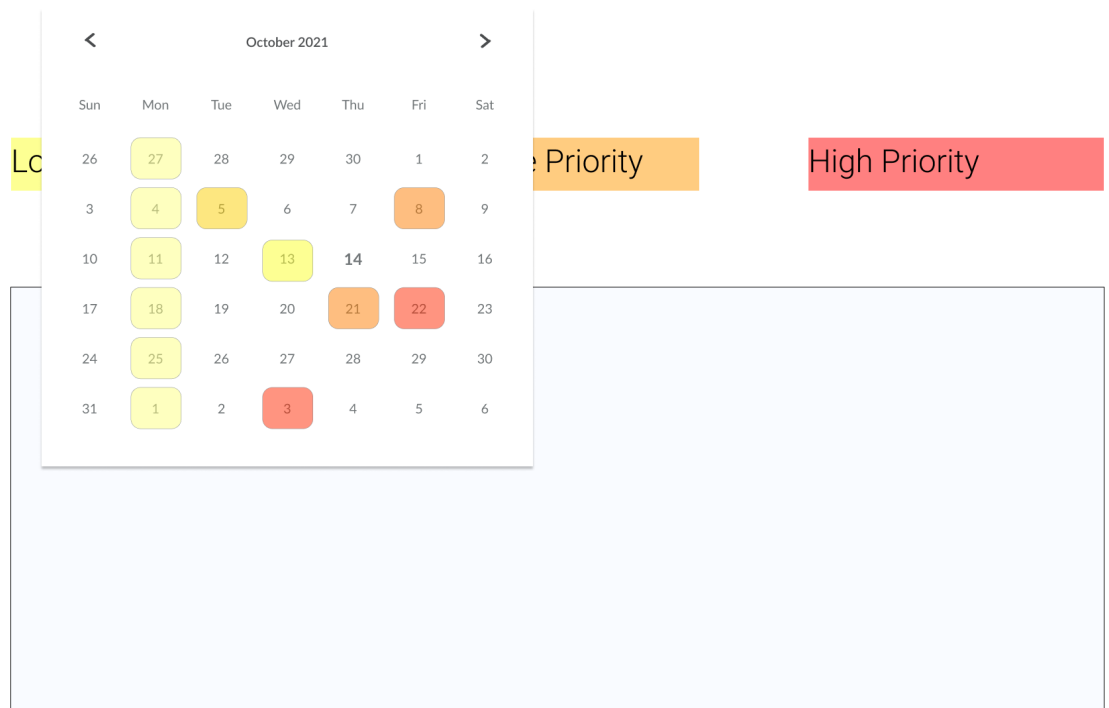
https://www.figma.com/file/K4tDIFkFcNBvCfjBXTVixp/eLC-Calendar?node-id=81%3A54

We chose to put the plus sign next to the tabs because that makes it a bit easier to see.
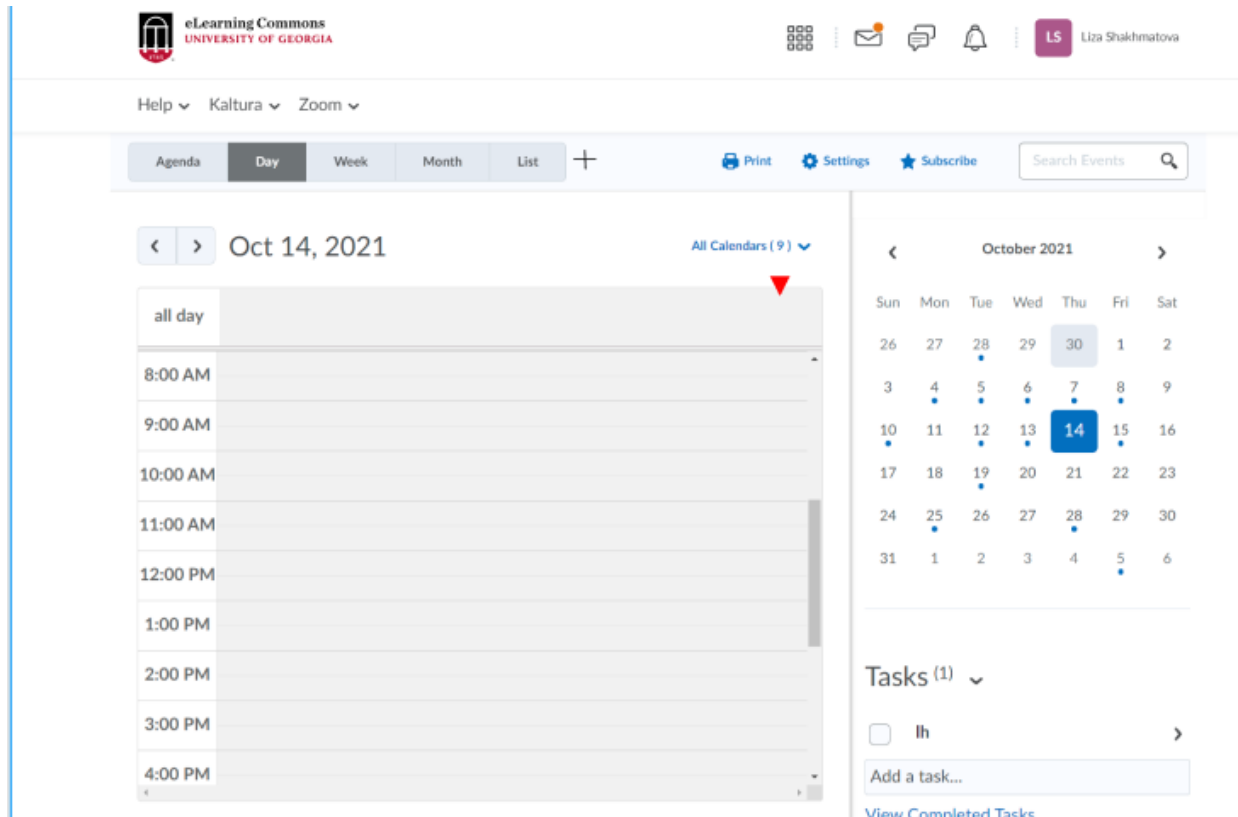
https://www.figma.com/file/K4tDIFkFcNBvCfjBXTVixp/eLC-Calendar?node-id=64%3A18

3. *As a regular user, I want the steps to view the calendar by an (effective) means to be as few as possible so I can access my upcoming events with the least effort possible.*

    a. With this design, students can view all of the content in their calendars with a single click. If you show the calendar on the main page and bring the cursor into the calendar, you can see the detailed class schedules through the hovering window. Students can check their due dates as soon as they log in. A wireframe for this feature is attached below:
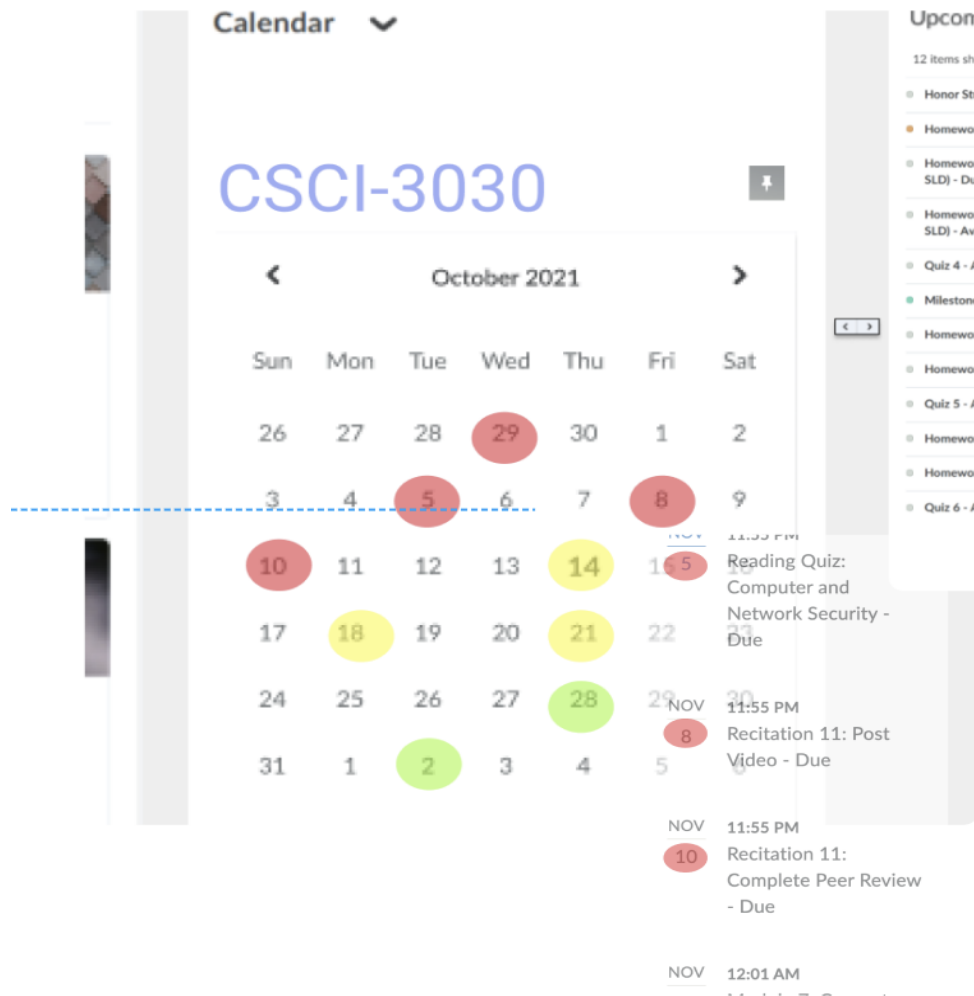
4. *As a user, I want to represent my calendars in different views, so that I can see my events in different formats.*

    a. We were happy with our first sketch of the views, but we decided that the goals section was unnecessary. So we removed it. The wireframes attached below are the month view, week view, day view, and agenda view respectively.

https://www.figma.com/file/K4tDIFkFcNBvCfjBXTVixp/eLC-Calendar?node-id=45%3A1020

https://www.figma.com/file/K4tDIFkFcNBvCfjBXTVixp/eLC-Calendar?node-id=45%3A731

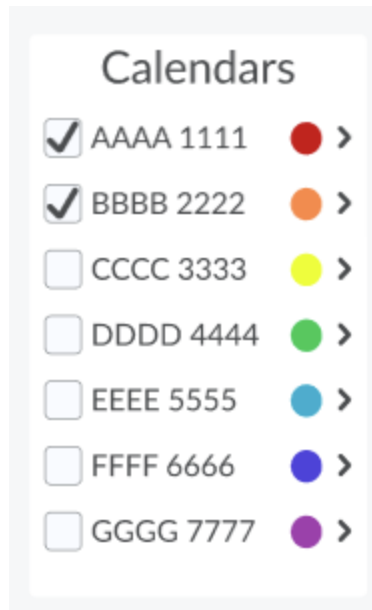https://www.figma.com/file/K4tDIFkFcNBvCfjBXTVixp/eLC-Calendar?node-id=45%

3A534

5. *As a user, I want to see the number of events on each day so that I can manage my time before "busy" weeks.*

   a. After viewing the options, we decided against zero assignments having a related color, as it could make the heat map tool overpowering and overstimulating. Instead, zero assignments would be represented by no color, or white, to convey the

message that the user has no events ongoing that day. For our color scale, we chose

the fourth option from the top, a gradient from white to yellow to red. For users

without color impairments, they will be able to visualize increased urgency as the

colors progress towards red. This heat scale also is differentiable for users with color

impairments, after testing the options in a color blindness simulation.
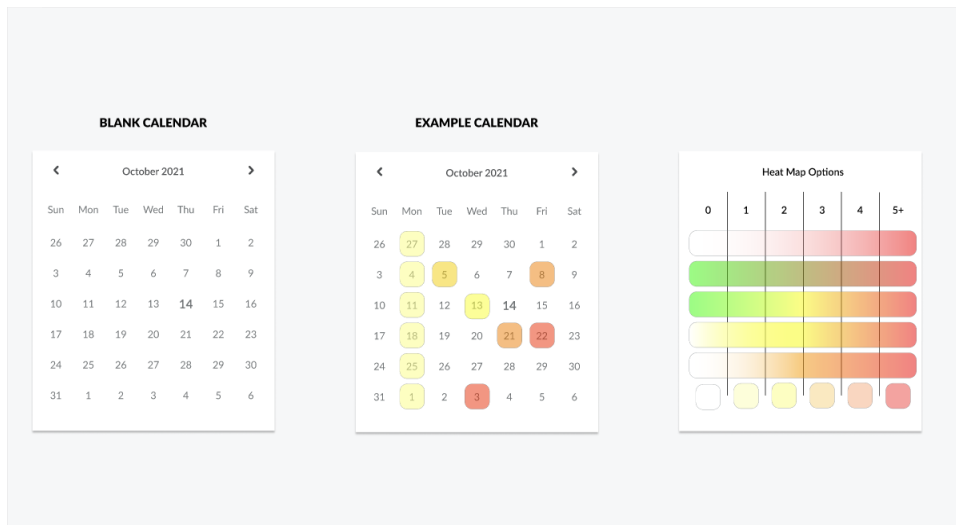
https://www.figma.com/file/K4tDIFkFcNBvCfjBXTVixp/eLC-Calendar?node-id=45%3A250

6. *As a user, I want to edit the color of each class so that I can differentiate each one by color.*

    a. When we looked at both of our sketches, we decided that the one column design

    is easier on the eyes, especially since colors are involved. Our wireframe is

    pictured below:

Calendars

- ☑ AAAA 1111 🔴 ›
- ☑ BBBB 2222 🟠 ›
- ☐ CCCC 3333 🟡 ›
- ☐ DDDD 4444 🟢 ›
- ☐ EEEE 5555 🔵 ›
- ☐ FFFF 6666 🔵 ›
- ☐ GGGG 7777 🟣 ›

https://www.figma.com/file/K4tDIFkFcNBvCfjBXTVixp/eLC-Calendar?node-id=45%3A251