

T8: Team Assignment #8 - Final Report and Interface

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Problem

The main problem we are trying to solve is the lack of mental health resources on college campuses and access to resources if they exist. Currently, students have access to University Health Counseling Services, which is known to be difficult. Students have to wait in line for hours to talk to a doctor, who will then end up referring them to someone outside of Northeastern. The process is lengthy and difficult for someone who is already facing mental health problems. Additionally, there is no way for students to schedule appointments online.

Recently, Northeastern partnered with FIND, a comprehensive mental health and wellness resource. With FIND, students can call a specialist to receive 5 free counseling sessions. This is a great resource, but many students do not know how to access it.

Lastly, it has been studied that writing daily helps people gain control of their emotions, and in return, helps their mental health. There are few daily writing platforms, and many are outdated or have too much information. We hope to create a solution that brings together mental health resources as well as offers a friendly writing platform to give students routine in their lives.

Users

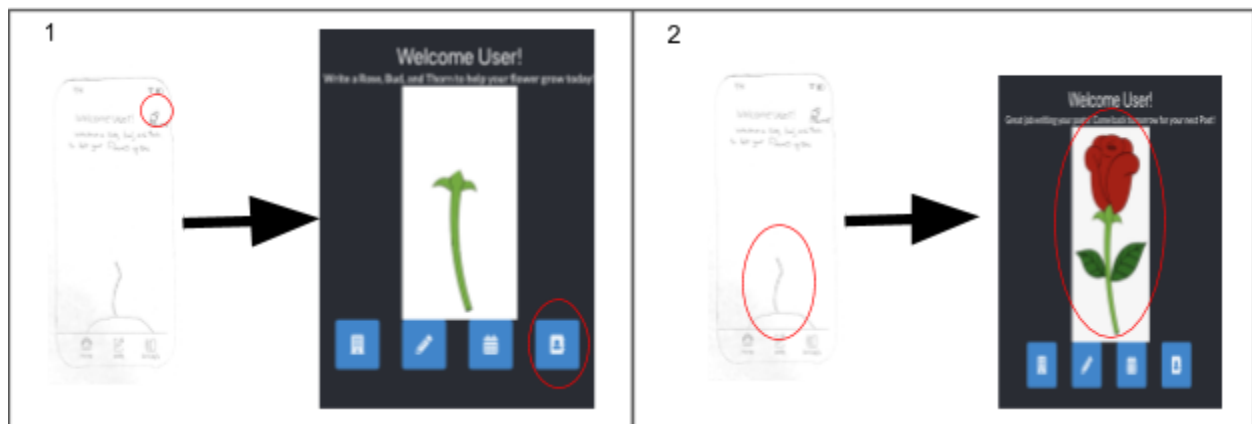
The intended users of this product would be students across all years at Northeastern. Mental health is a very serious issue and it is often not addressed for many people especially college-age students. In college-age students, Anxiety is the top presenting concern affecting roughly 41.6% of students followed by depression 36.4% and relationship problems affecting 35.8% according to a 2018 study conducted by the American Psychological Association. While suffering from anxiety or depression learning is affected due to the fact that anxiety and depression both significantly hinder working memory, which is essential for retaining new information and recalling previously learned information. Anxiety and depression negatively influence academic progress and encourage under-achievement leading to worse grades and overall worse learning experience at Northeastern. Secondary users might be friends, tertiary users might be parents of students as well as organizations like UHCS.

Tasks

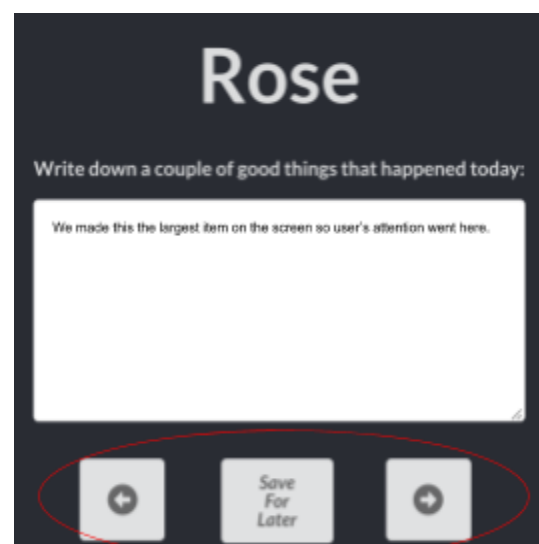
For this semester, we created a mobile application that allows students better access to mental health resources as well as gives them the ability to write daily. We hope that this combination is productive and beneficial for overall mental health on a college campus. We also wanted a place on the application where students can see mental health resources on campus. Our main user tasks involve **(1) writing a diary entry, (2) viewing past diary entries, and (3) accessing mental health resources.**

Design

Throughout our design process we were able to come up with various important and intentional design decisions. The purpose of many of our design decisions were to draw the user's attention to the important part of the screen as well as to allow the user to have complete navigational control over the app as intuitively as possible. One of our design decisions that was motivated via the prototyping process was in our initial paper prototyping our resources button did not exist within our navigation bar but instead existed as a button in the top-right of every screen (1). Initially we thought this was intuitive but upon user testing it was made clear that this picture came off as more of a notification or non-essential page within the app which was not what we were aiming for. In order to counteract this we ask the users where they would think it should go knowing its importance and through obtaining this knowledge as well as testing various locations we determined that in the navigation bar amongst the other important pages was the best most intuitive spot for this to go. Another addition that was motivated by the paper prototyping in heuristic evaluation was to add color to the visual feedback on our diary entry task completion (2).

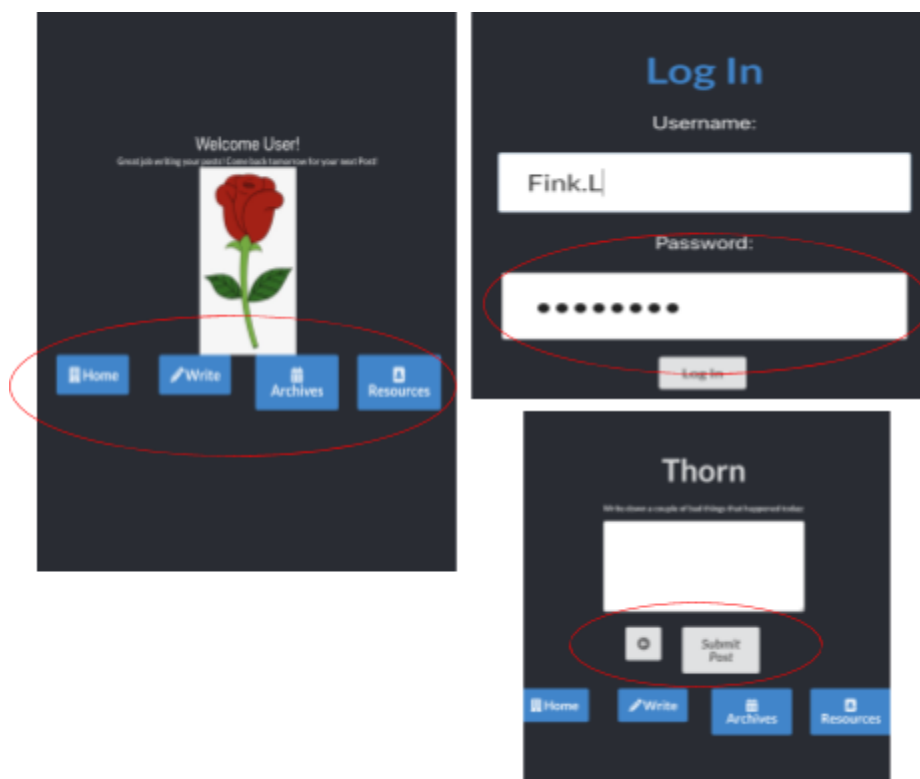


During our paper prototyping process we learned a lot about what works, what doesn't work, and what was confusing with our initial design. One of the things that we learned was very confusing was the cycling buttons within our Rose, Bud, and Thorn pages. These buttons that were intended to allow other users to cycle between the different entry Pages turned out to be more confusing to users as they were not sure whether the buttons would take them to the next entry page or whether it would take them back to the home screen. Another thing that was confusing about this was that the center button that was not labeled properly that was designed to save the current entry to be complete later users thought it was saving their card input before they



went to their next page (1). Additionally, we learned that our initial plan for a calendar page that would allow other users to look at old diary entries with the rose icon within the date was not clear. Many people thought that it meant there was a post from that day and users were not sure how to cycle between the different months. In order to deal with this we changed the page to be a listing of old posts that the user could scroll through rather than a calendar.

After making all these changes we then moved on to the heuristic evaluation page where we learned a lot more about our application. The cosmetic issues we were told about included that passwords were not hidden, our navigation bar needed text, and that the submission button on the thorn page was unclear (1). These were simple fixes and the final version is shown below.



The next section included the minor issues to the interface and were also mostly easy fixes. The first Issue was that a user could log in with any credentials. This was a bug that upon having more time we would fix by creating a database of all accounts and assuring that any log in attempt had an account but because of our lack of time we did not fix this issue, next was some button feedback was linking to the wrong page and this was an easy fix as we just corrected the button paths. Finally we had a confusing calendar which was also a major issue and in order to fix this we scrapped the calendar in total and created a new table format for viewing an old post that would update upon each of the post's completion. This change is pictured below.

Archives

Date	Rose	Bud	Thorn
3/14/20	I met my dog for the first time!	I get to be home with my family soon!	My dog nipped me when we were playing
3/7/20	I did really well on my first exam!	I will meet my dog next week!	I am still worried about my up coming exams
3/5/20	I was very productive in my studying!	I am almost done with exams	I am over stressing and it is causing me to not eat as much as I should

[<](#) [1](#) [2](#) [3](#) [4](#) [>](#)

[Home](#) [Write](#) [Archives](#) [Resources](#)

Implementation

We implemented our user interface using React native. Since neither of us had a lot of experience with mobile app development, we decided to make a React web app that would be sized responsively. Implementation was difficult and added some levels of complication to our original user interface. We used some premade React libraries to create buttons, calendars, containers, etc. These libraries do not accurately reflect some of the aesthetic design decisions we had decided upon our paper prototypes. For example, certain color schemes, icons and even workflows had to be compromised for the purposes of this project. One of our tasks for finding an old entry utilized a calendar view. In terms of implementation, we struggled to fully implement this. The result is a more simplified archive that is not as intuitive as we wished.

Evaluation

Since we had the opportunity to do heuristic evaluation through expert evaluation (our classmates), we would want to do in-field user testing next. This would involve qualitative and quantitative testing of students who might be active users of the app. To get this information, we would host user interviews and some think aloud sessions. This could help us better understand how the user would walk through certain tasks. It would be important to test the effectiveness of our workflows over a longer period of time. One of the main goals of the app is to get users to use it regularly. It would be important to study how often users continue using the app, and how we could make this feature better. Additionally, we have considered doing an experiment for certain workflows by providing slightly different buttons/placement to see what might work better for a user to achieve the correct actions.

Next Steps

One possible usability problem that we did not get the time to solve was the aspect of remembering to use the app. One of the most important parts of this app is to create a routine, which involves writing in it every day. In order to achieve this, we would have liked to create a

notification workflow that was thought through. This could benefit the users greatly by being able to get them to use the app daily. We considered having different types of notifications based on the users notification preferences. Since notifications are somewhat personal, having a personalized message on the user's home screen could have been a solution.

Reflection

We discussed this a little bit above, but definitely exploring the user notification system would be very interesting. It is really important for us to ensure that our users continue using the app on a regular basis. Going off of this, it would be interesting to add a mood tracking feature within the application. This way, the daily qualitative entries would be accompanied with a more quantitative measure of feelings. Many user testers suggested that this could be a useful feature for people to continue using the application. This feature might require a lot of research since there are a lot of ways to capture mood/feelings/mental state. It could be interesting to prototype different scales of measuring these states and conduct experiments to figure out the most successful scales of measuring emotional states. Then, we could incorporate that into our application. Evaluating the results would probably involve longer term user studies that could track user retention for the application.

Code

Link to Prototype: <https://github.com/Liam-Fink-NEU/RBT>

Startup Instructions

In order to run this project you must have node installed on your laptop. Please refer to the following resources to install node.js.

Node: <https://nodejs.org/en/download/>

After installing node, please download the repository from github. Navigate to that directory. In your terminal window run the following command:

```
npm start
```

If you run into any issues, try running:

```
npm install  
npm start
```

References

<https://www.urmc.rochester.edu/encyclopedia/content.aspx?ContentID=4552&ContentTypeID=1>
<https://collegestats.org/resources/mental-health-guide/>