

The Team

Mahir Kothary: International Liaison (user researcher and digital prototyper)

Rakib Mirza: Token Creative (sketcher and paper prototyper)

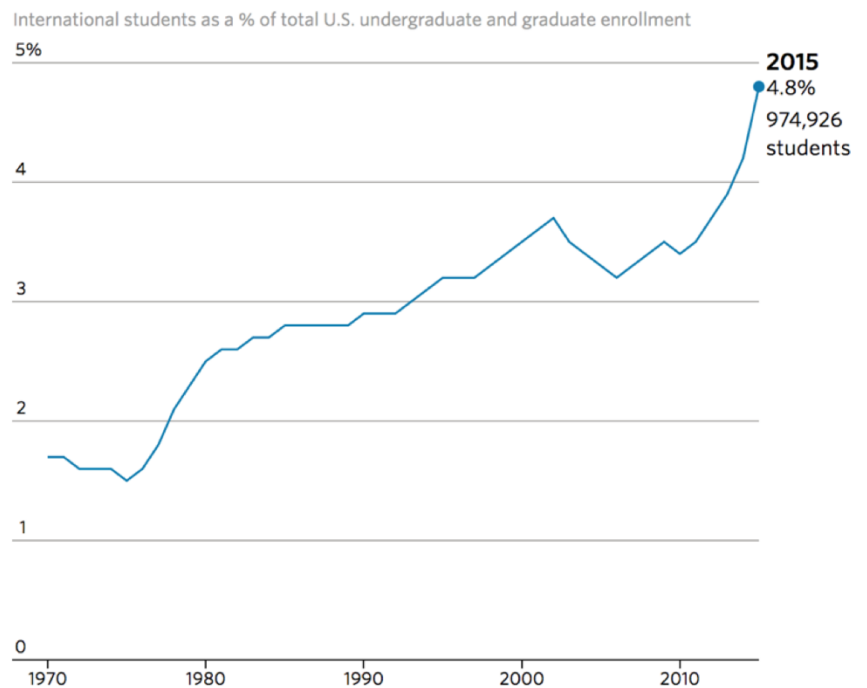
Erin McAweeney: Savvy Communication Specialist (writer and user researcher)

Amanda Chalfant: Director of Internal Affairs (project manager and writer)

Problem and Solution Overview

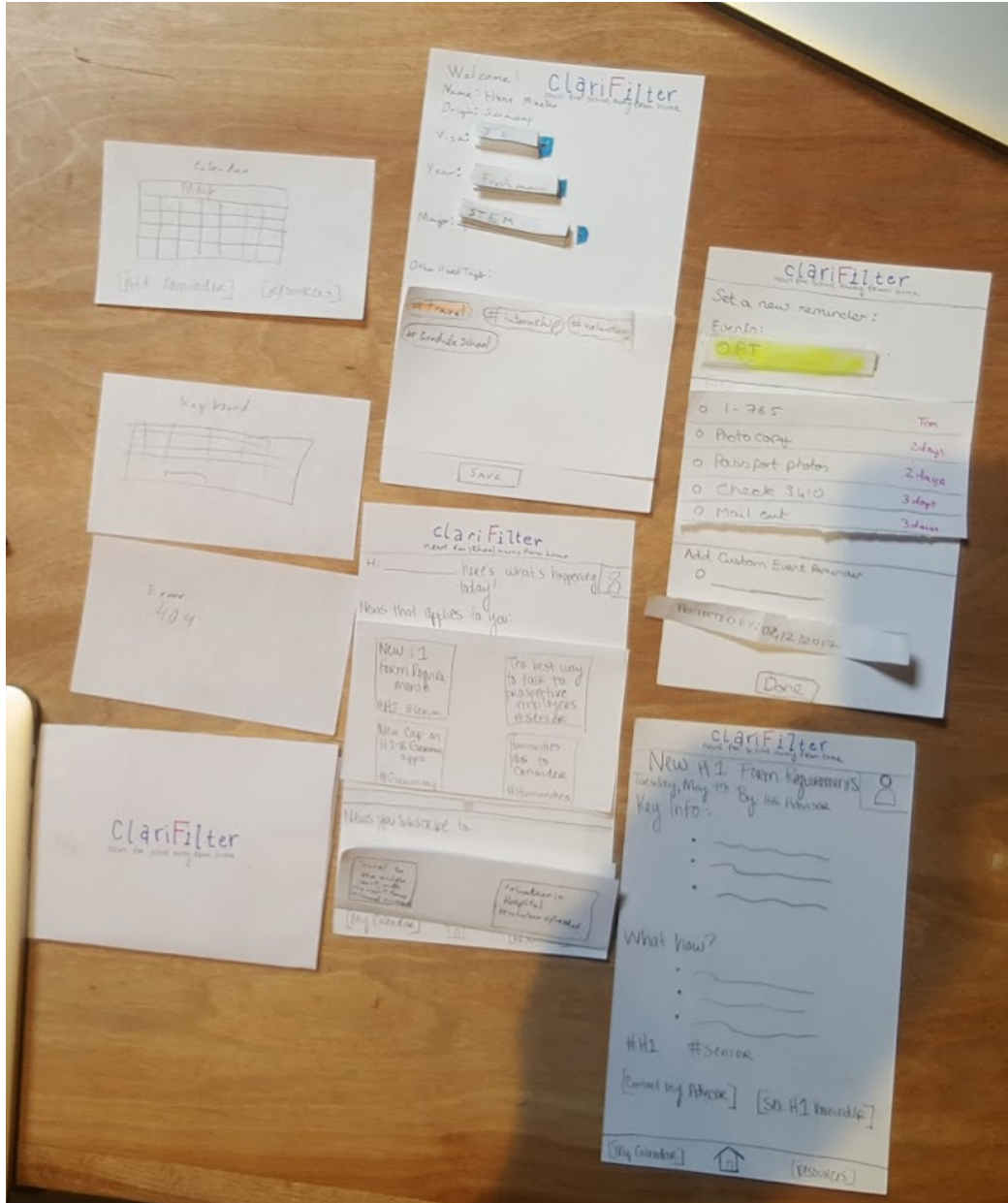
The population of international students traveling to the U.S. for college is rapidly increasing (see figure 1); at the same time, political tensions surrounding immigration issues are extremely high. In this chaotic and polarized time, international students can have difficulty in finding correct, reliable, and unbiased news information. Furthermore, once news is found that a user considers trustworthy, they must struggle to understand how to apply that information to their own personal situation. While the UW International Student Services provides up-to-date information for students to help make sense of policies that affect them, there is no clear pipeline for trusted information for updates from ISS advisors and trusted legal sources to reach students in a timely and effective manner. This often leaves international students to consult non-credible information online and more susceptible to believing rumors among friends. Our proposed

solution design for this problem involves a filtering system that connects information holders (ISS advisors, legal aids, etc.) with information seekers (international students) based on their personal information and chosen topics. By getting a student the exact information they need, nothing more and nothing less, they can feel more at ease in a hectic information environment and focus on other priorities. The format will also be comfortable, easy-to-use, and presented in ways that cater to our users' variety of cultures. Our solution includes tailored news alerts from ISS advisors and customized notifications that automatically indicate upcoming deadlines for forms and applications.



Note: Years represent the end of the academic year
Source: Institute of International Education Open Doors Report, 2015

Initial Paper Prototype Overview



Task Walkthrough

Task 1: filtered and personalized news

User is asked to fill out a profile. First they enter their name, country of origin, and dropdowns for visa status and year.

Welcome! ClariFilter
Name: Hans Mueller
Origin: Germany
Visa: FI
Year: Freshman
Major: Freshman, Sophomore, Junior, Senior
Other Used Tags: #Travel, #Internship, #Volunteer, #Graduate School
Save

The user also chooses from a dropdown list of majors.

Welcome! ClariFilter
Name: Hans Mueller
Origin: Germany
Visa: FI
Year: Senior
Major: STEM, Pre-Med, Fine Arts and Music, Humanit.
Other Used Tags: #Travel, #Business, #Volunteer, #Graduate School
Save

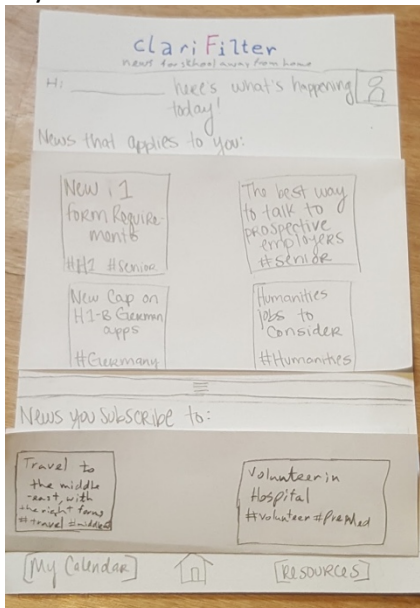
They also highlight other tags that they are interested in, such as #travel.

Welcome! ClariFilter
Name: Hans Mueller
Origin: Germany
Visa: FI
Year: Senior
Major: Humanit.
Other Used Tags: #Travel, #Internship, #Volunteer, #Graduate School
Save

The user will be able to see a new announcement from ISS advisers, which contains specific tags and information, as well as buttons to take action or get more information.

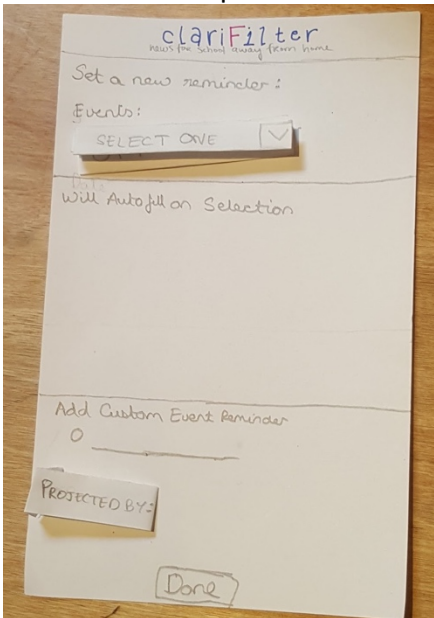
ClariFilter
New H1 Form Requirements
Tuesday, May 11th By ISS Advisor
Key Info:
•
•
•
What Now?
•
•
•
#H1 #Senior
[Contact My Advisor] [Set H1 Reminder]
[My Calendar] [Resources]

The user will be given a personalized window of news that applies to them, including the tags they chose.

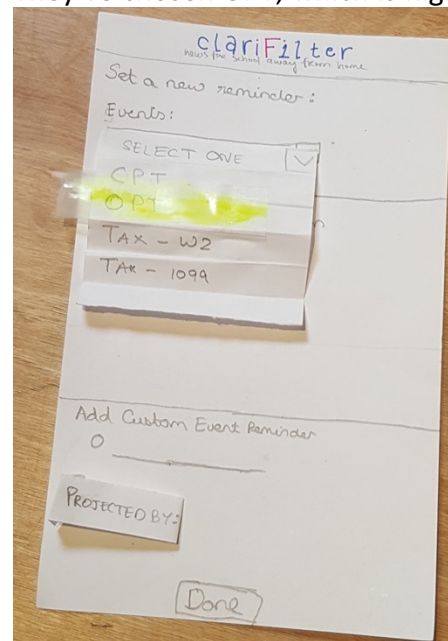


Task 2: setting reminders and deadlines

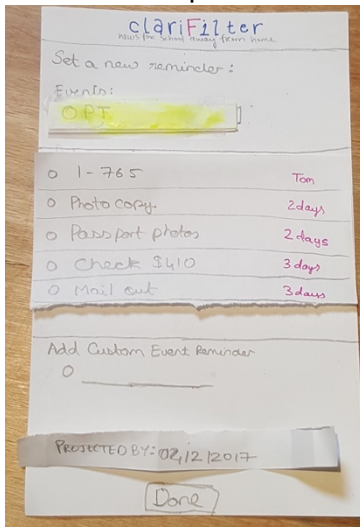
User wants to set a new reminder. They choose from a dropdown menu of events.



They've chosen OPT, which is highlighted.



Once the user chooses OPT, the checklist of items is auto-filled and they have a populated checklist of tasks to complete.



Testing Process

Heuristic Tests

In-Class Evaluation:

Evaluators: Hans, Facilitator/Notetaker: Erin, Computer: Mahir

Heuristic In-House Evaluation:

Evaluators: Amanda and Rakib

Facilitator/Notetaker: Erin, Computer: Mahir

Usability Tests

Test 1: Our first participant was an international student named Pranav (name has been changed) who is a junior studying Computer Science. He is here on an F-1 visa. We chose to do the testing at Cafe Solstice, a popular local coffee shop for students; this is somewhere that a student would conceivably be checking up on news on their phone, talking with friends, and is close to the ISS office's location. For the test protocol, we asked him to go through a first-time use of our app, creating a profile for himself. Then we asked him to complete our two main tasks: receiving news information and setting a reminder for himself. We learned during these tasks that we could be more specific in some of the actions that we facilitate. We also needed to ask more questions throughout about the usability and whether this is something he would use to receive news. Culturally, Pranav also preferred receiving some of the information as a video, which we took into account in our next iteration.

Our roles:

Facilitator: Erin

Note-taker: Amanda

Computers: Rakib and Mahir

Test 2: Our second test was done with Xukail, an international student from China. We picked him because he fit our target population as an international student and follows a culture where getting information in-person a more credible and trustworthy source than reading on an app. We conducted this in Cafe Solstice, because we want the app to be an experience they can use anywhere, and not just be able to use it at home. We kept the tasks more abstract, starting with signing in, reading some news and then to add a reminder.

Note-taker: Erin

Computer: Mahir

Facilitator: Amanda

Test 3: Our last test was done with Trisha, an Indian international student from Japan. We picked her because while she is Indian, the rules that apply to her are rules that apply to a Japanese citizen. We conducted this test indoors in a quiet scenario to reflect a home-ly setting. Similar to the first test, we kept the tasks abstract.

Note-taker: Amanda

Computer: Rakib

Facilitator: Mahir

Summary

The heuristic tests and test 1 was done with larger tablet sized paper prototype. Test 2 was on the small mobile sized paper prototype. Test 3 was done on an updated version of that mobile sized prototype. Most of the tests were free flowing and was dependent on the facilitator and the the participant performance. However, the tasks were always the same, so we put together a sample of script of the general flow of what we said.

Testing Results

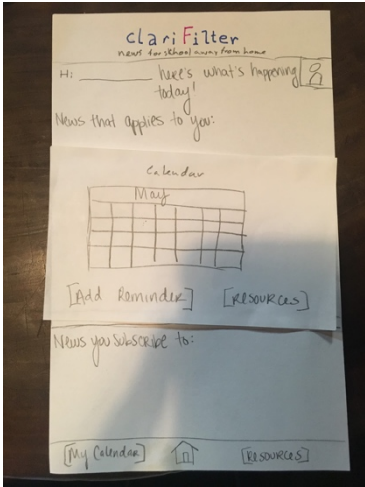
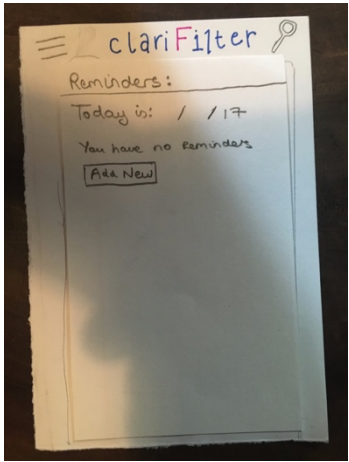
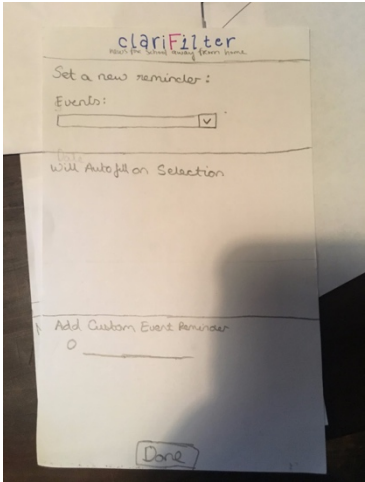
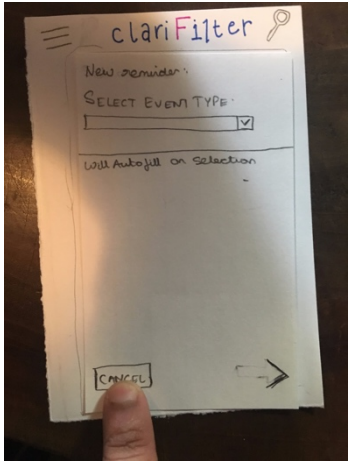
Heuristic testing

Summary of revisions:

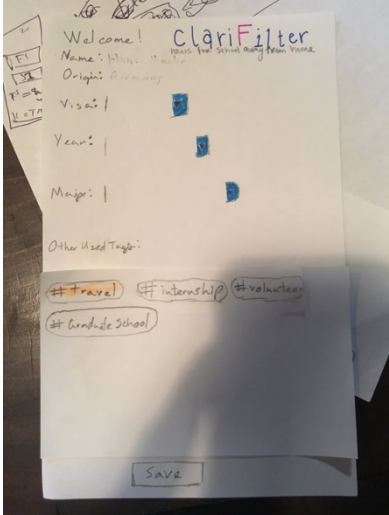
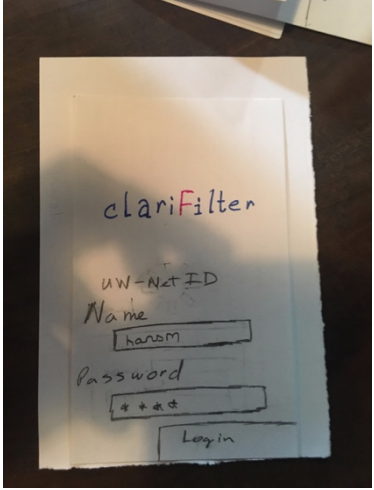
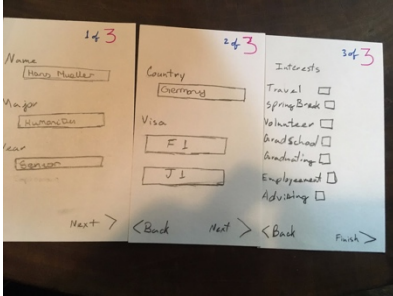
- Based on the results from our heuristic tests, we added a back button along with the home taskbar and a 'cancel' or 'undo' on the making new event page
- Our evaluations revealed issues with navigating the calendar and reminders page. We added more text on the calendar page to clarify the process and as well as a shortcut for reminders to the menu bar for better navigation. Reminders were also set to show up on calendar, so it's clear what was chosen.
- We added a back button on the profile page to discard changes and also a 'select one' as the default on the drop down menus.
- Since we didn't integrate patterns into our design yet, we at least wanted to create more unity to amongst the aesthetics of the whole app. From the testing this proved to be a problem because users couldn't identify the home page, and didn't associate the profile

set-up page with common features of a profile, like the fact that you only had to fill out information once on the profile setup page.

Table of resulting changes:

Image of Portion of Prototype	Identified Issue	Severity of Issue	Image/Explanation of Revision
	<p>The purpose of the calendar provided for reminders is unclear - our user kept clicking on the calendar and was confused that it wasn't responsive.</p>	<p>1</p>	<p>We now have a reminder list rather than a calendar.</p> 
	<p>We neglected to add a back or cancel button to many pages, making it difficult for users to prevent errors or undo their actions.</p>	<p>4</p>	

	<p>For our profile creation, we need to have default "select one" values for the elements like visa, major, and year.</p>	<p>3</p>	<p>Upon sign-in, we now have auto-fill values.</p>
	<p>Bar/separation between elements on the news page is unclear.</p>	<p>2</p>	<p>Users now have two distinct types of scrolling - horizontally and vertically.</p>

Image of Portion of Prototype	Identified Incident (positive or negative)	Severity of Issue (if negative)	Image/Explanation of Revision (if negative)
	<p>Sign-in screen when creating a profile is confusing - does not offer context for why user is inputting the information - negative</p>	<p>3</p>	<p>Revision offers clarification to what user is signing into.</p> 
<p>(same picture as above)</p>	<p>Sign-in process on one screen is not intuitive on a small screen - negative</p>	<p>2</p>	<p>We will have a 3-screen login process, linked with UW NetID.</p> 

	<p>Student requested having a video from ISS as an alternative to the written news report - positive</p>	<p>N/A</p>	<p>Added the video option, along with tags on the video.</p>
	<p>After sign-in, our app goes to the profile page rather than to a home screen - negative</p>	<p>2</p>	<p>Will go straight to the home screen following the sign-in.</p>

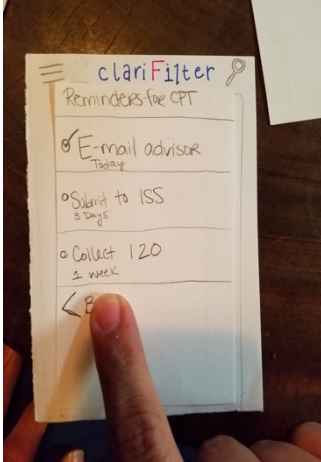
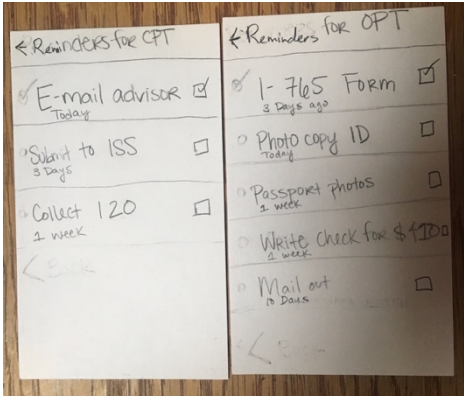
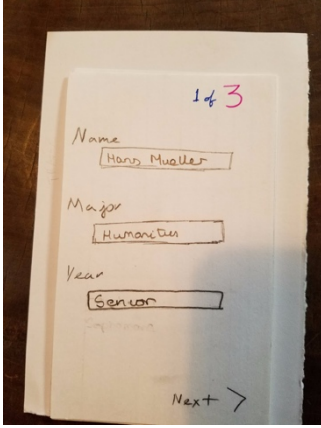
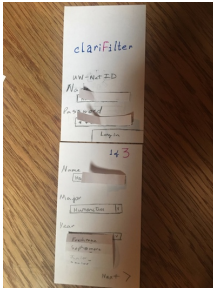
Usability testing

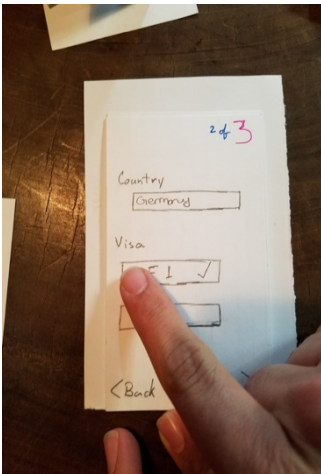
Summary of revisions:

- One of the most important initial changes we made was to modify our paper prototype's 'screen' size. The initial prototype was more the size of a small tablet, which made it difficult to assess whether the user was able to navigate our app properly. By changing our overall prototype to be more the size of a normal smartphone, we were able in our later user tests to focus less on this earlier flaw and more on what would and wouldn't fit on a phone screen. This impacted the design of our news tiles, as we had to make the tiles look clean on a more compact screen.
- At first, we had no back button. Next, our back button was on the bottom of the screen, which multiple users pointed out was inconsistent with both iPhone and Android system standards. This is an important change because it affects many of the pages of our app, and can have an impact on the user's ability to navigate between different aspects of a task. When the back button was omitted, our users were distressed when they couldn't cancel an action, so fixing this was necessary for people to prevent errors.
- From our user interviews initially, we received feedback that some cultures prefer to have news delivered by an actual person, rather than as an impersonal email or article. We were unsure exactly how to add this to our design, but during usability tests, a user

suggested that we include a video of the news delivered by an ISS officer, the same one who writes out the newsletter. This was a great addition, as it covers a cultural aspect of using our app that we had not previously addressed.

Table of resulting changes:

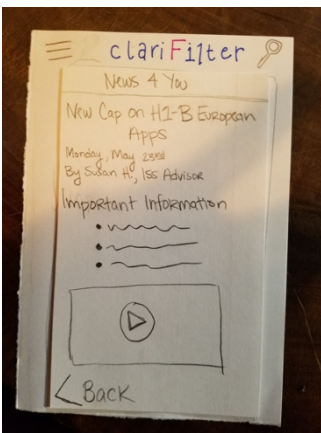
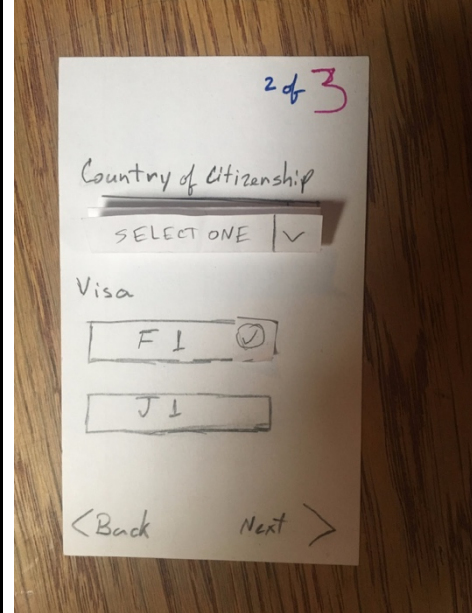
Image of Incident	Description of Incident	Severity	Revision
	<p>The checkboxes on the reminder page were not clearly labeled; some users thought the checks looked like radio boxes or bullet points.</p>	<p>2</p>	<p>We moved the checkboxes to the right of the reminder text, in order to be more clear.</p> 
	<p>The sign-in process still felt confusing to some users; they didn't like inputting so much information on a tiny screen.</p>	<p>3</p>	<p>Another frame was added to the flow of sign-in, to break down the process of entering a name. We also added a dropdown option for school year, to make user input quicker.</p> 



When a user types in their country of origin, they could spell it wrong or differently than someone else (USA vs. United States, for example), opening up possibility for error.

4

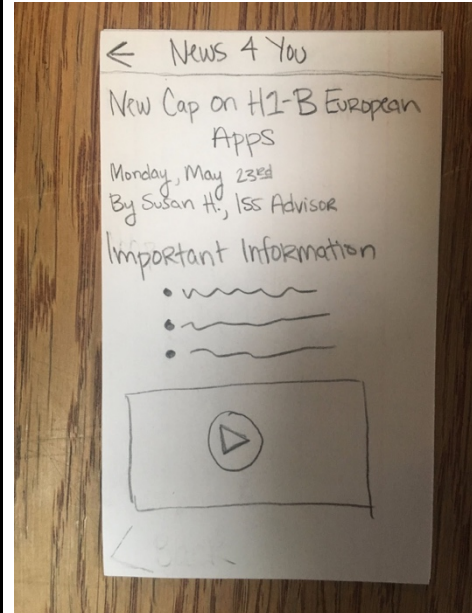
There is now a dropdown menu of countries from which a user chooses one option. We also specified this is the "Country of Citizenship".



Users disliked the inconsistency of the back button being on the bottom of the screen; this is different from both iPhone and Android system settings.

3

The back button is now on the top left corner, for ease of use.



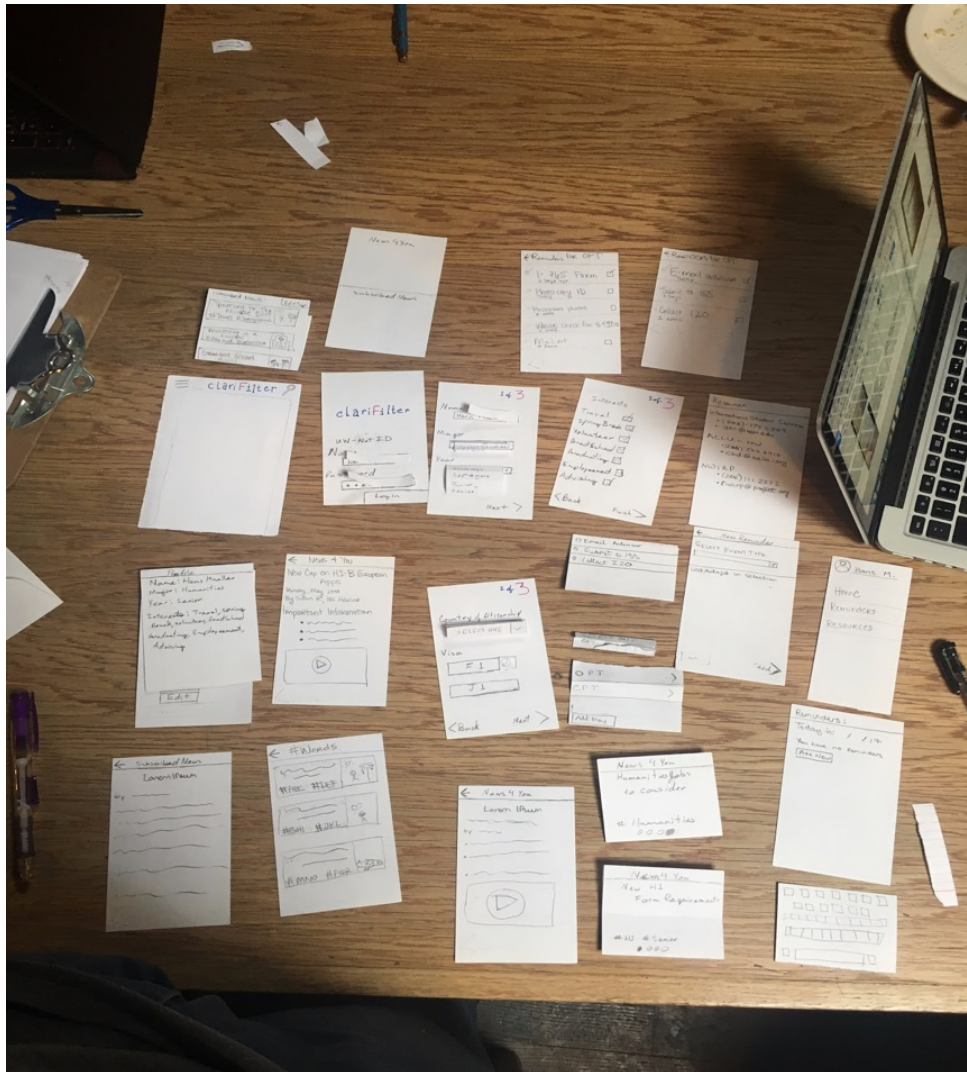
	<p>Users didn't like that they couldn't modify their selected tags after the initial signup; in order to remove or add a tag (such as #travel), they would have to go all the way back through the full signup feature.</p>	<p>2</p>	<p>There is now the ability to edit the tag subscriptions without changing the entire profile.</p>

Summary of changes on mock-up:

- We made some changes to how the Reminder screen works. On sketch we saw a pattern for adding list entries such as reminders. We changed to using the green circle with a plus to add entries, which becomes more intuitively interpreted as an add symbol once it is in the UI context (rather than just a plus sign on paper). The back button was changed from the bottom left to top left to follow mobile patterns users are more used to.
- Because of this, the hamburger menu, which is also in the top left, only appears on the “Main pages” where it was redundant to have both a back button and the hamburger menu. This also helped better constrain and simplified the options for user navigation.
- We also tweaked the hamburger menu layout (specifically the top profile section to use the common default picture) to match the conventional hamburger design pattern as well.
- Lastly, we had a search icon to look for specific news stories and hashtags, but didn't include a search page in our paper prototype. We decided to have the search button only on the newsfeed page, so the user would not be confused about what they are searching for on other pages (such as searching for a reminder on the reminders page).

Final Paper Prototype

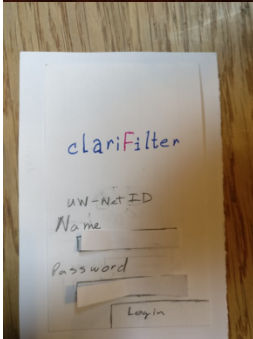
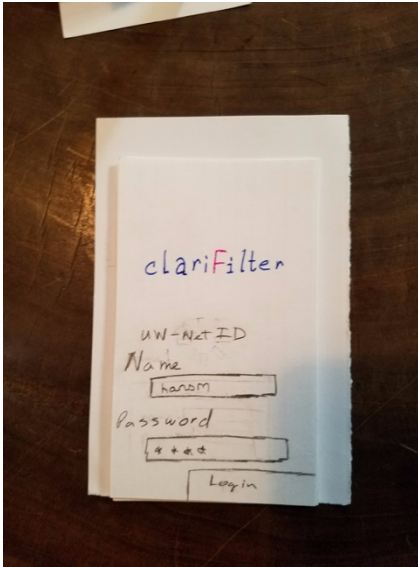
Overview



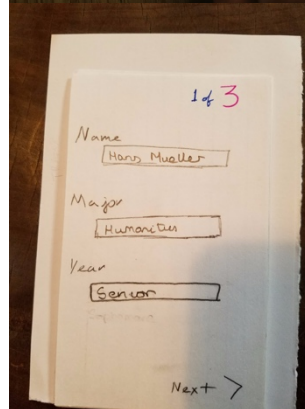
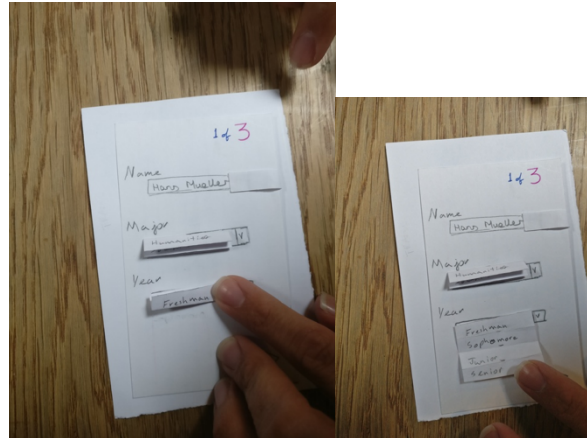
Task Walkthrough

Task 1: filtered and personalized news

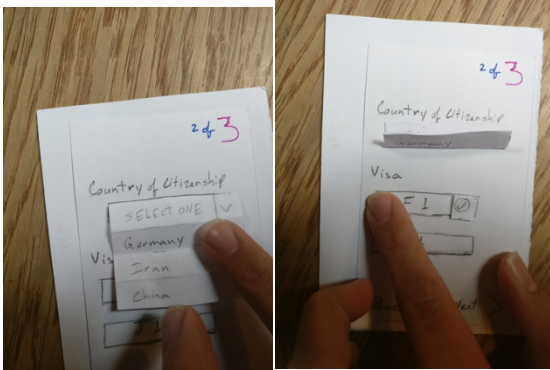
1. The user is greeted by the welcome page and signs in with UW email and password.



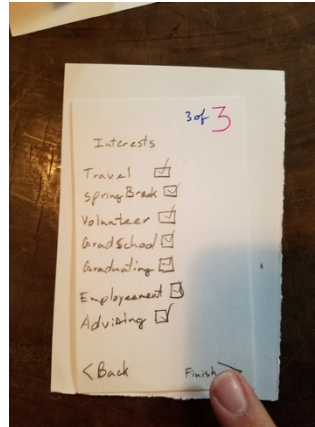
2. If they do not yet have an account, their profile is created. Information on their name, major, and year is fed from their UW account.



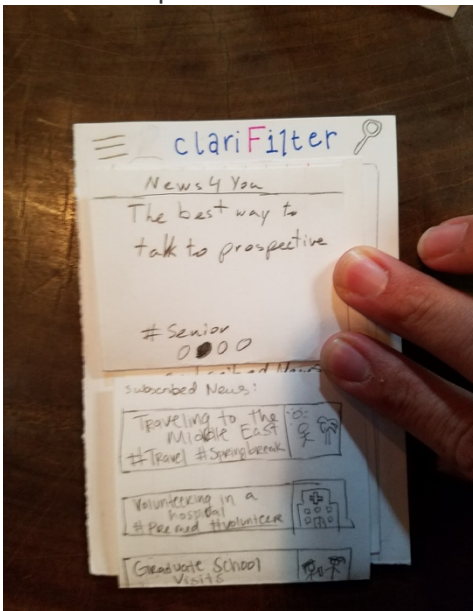
3. User fills in Country and Visa Type.



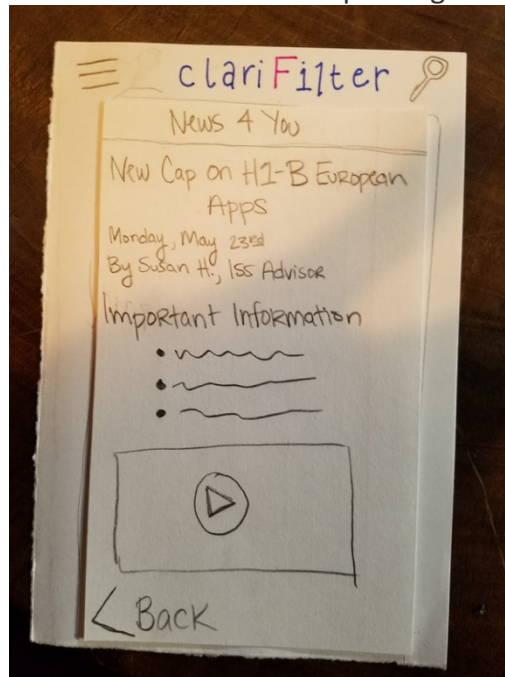
4. User selects their interests.



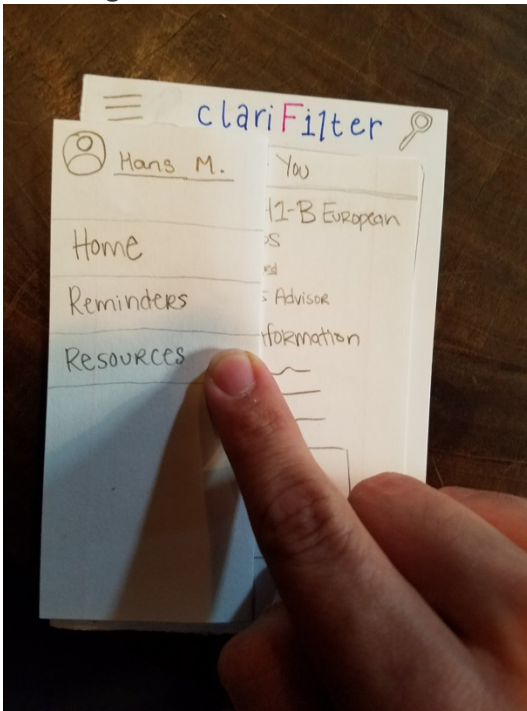
5. User can scroll through newsfeed of "News 4 you" and "Subscribed news" based on filters from profile and interests.



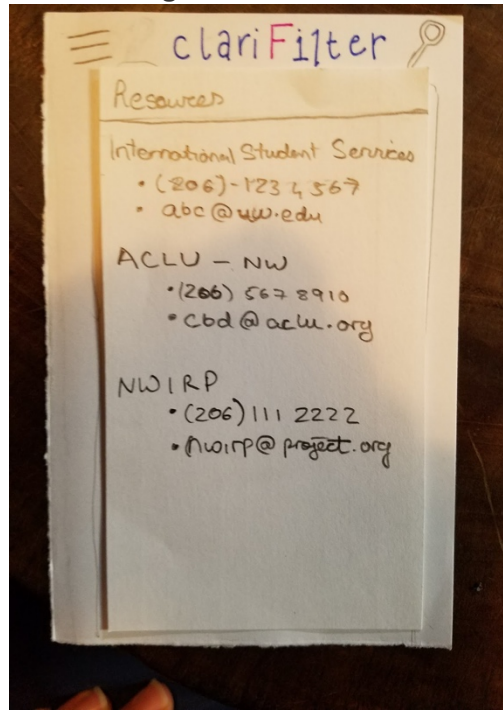
6. Specific news stories can be chosen, written by ISS advisors or other resources, with bullets and a video of them explaining the points.



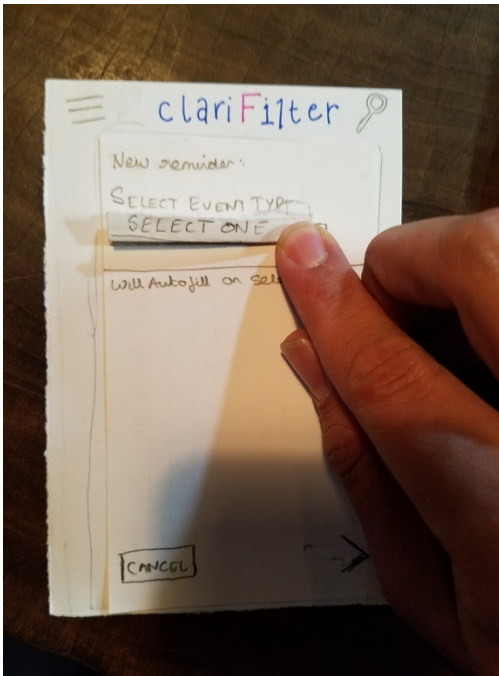
7. User can go to resources from the hamburger menu.



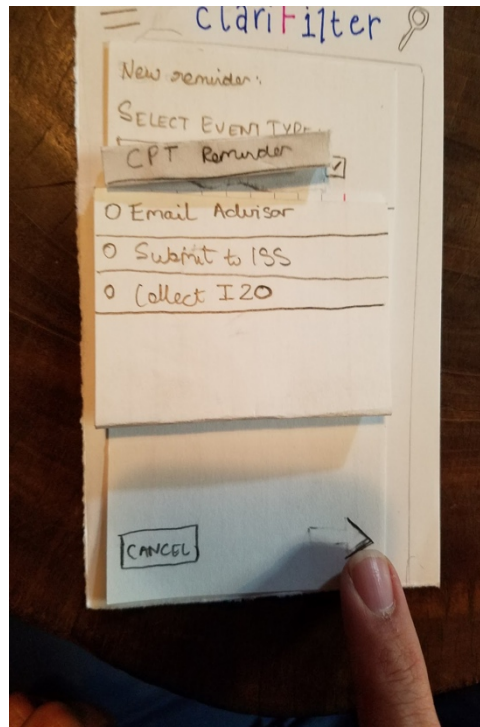
8. Helpful resources for further information and aid are given.



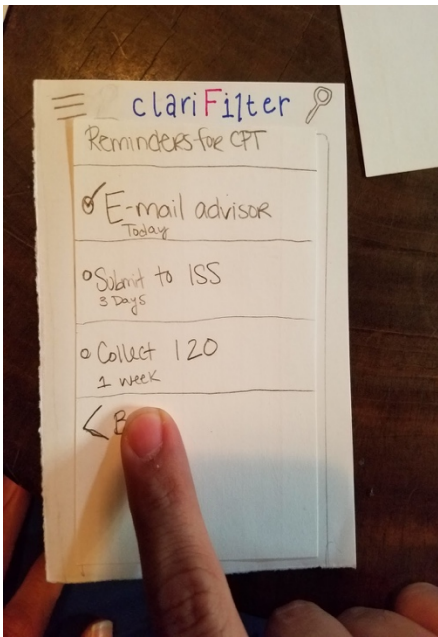
9. User uses the hamburger menu to go to reminders.



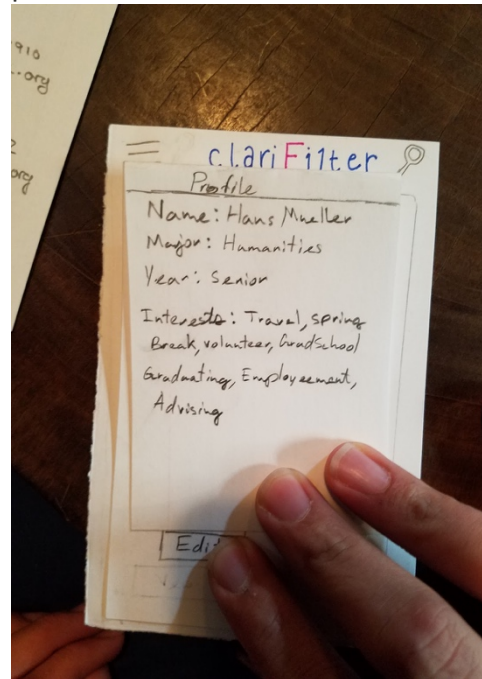
10. CPT related reminders are shown.



11. User navigates to CPT reminders checklist to see upcoming dates and checks off first reminder.



12. User uses hamburger menu to review profile.



Digital Mockup

Overview

clariFilter
news for school away from home

JW NETID USERNAME

JW NETID PASSWORD

Login

1 of 3

Name
Hans Mueller

Major
Humanities

Year
Senior

1 of 3

Name
Hans Mueller

Major
Humanities

Year
Freshman
Sophomore
Junior
Senior

1 of 3

Name
Hans Mueller

Major
STEM
Humanities
Fine Arts
Pre-Med

Senior

2 of 3

Country of Citizenship
Select One

Visa Type
F1 Visa
J1 Visa

2 of 3

Country of Citizenship
Select One
Germany
Iran
China

Visa Type
F1 Visa
J1 Visa

> < > < >

12:30

2 of 3

Country of Citizenship

Germany

Other Interests/Subscriptions 3 of 3

Travel

Spring Break

Volunteer

Grad School

Graduating

Employment

Visa Type

F1 Visa ✓

J1 Visa

< > < Finish >

12:30

3 of 3

Other Interests/Subscriptions

Travel

Spring Break

Volunteer

Grad School

Graduating

Employment

< Finish >

12:30

← CPT Reminder

Email Advisor
Today

Submit I20 to ISS
1 week

Collect I20
1 week

12:30

← Edit Subscriptions

Travel

Spring Break

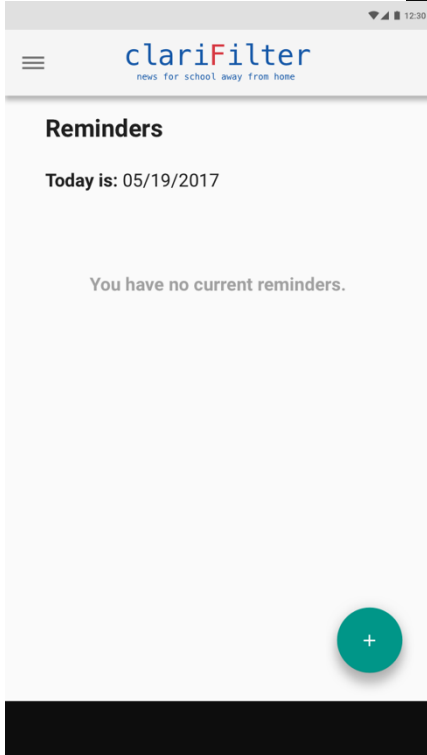
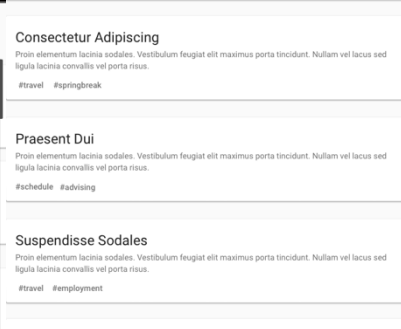
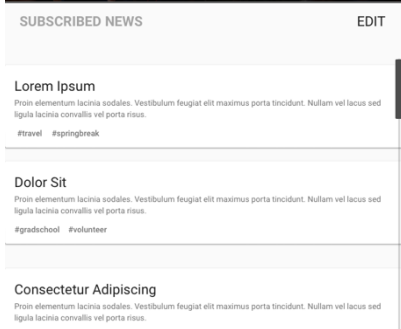
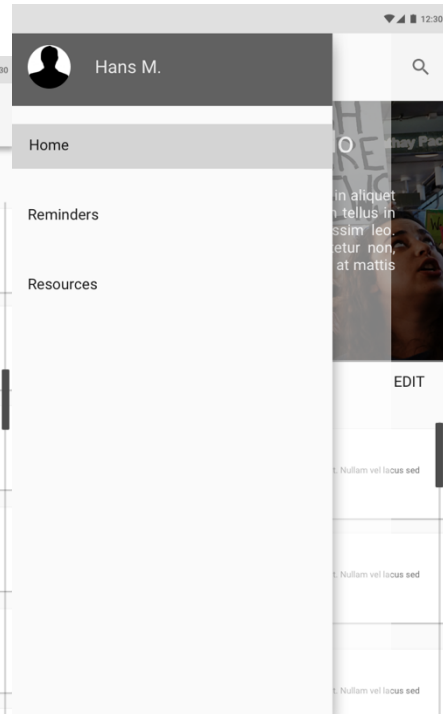
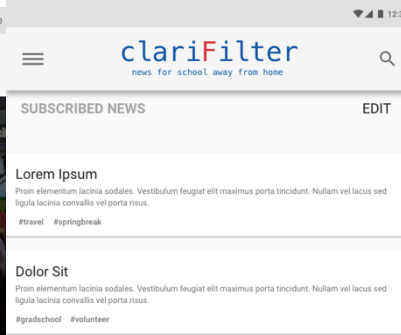
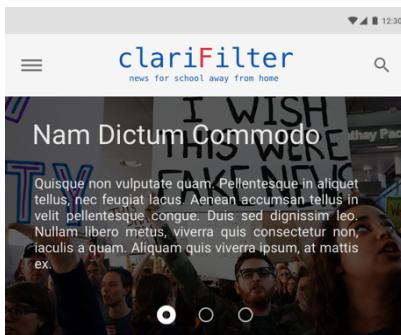
Volunteer

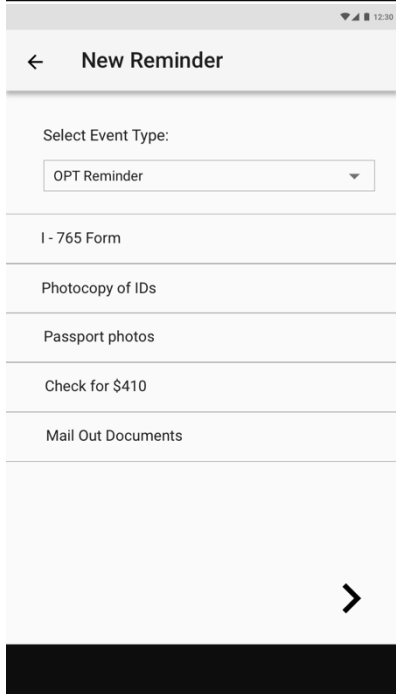
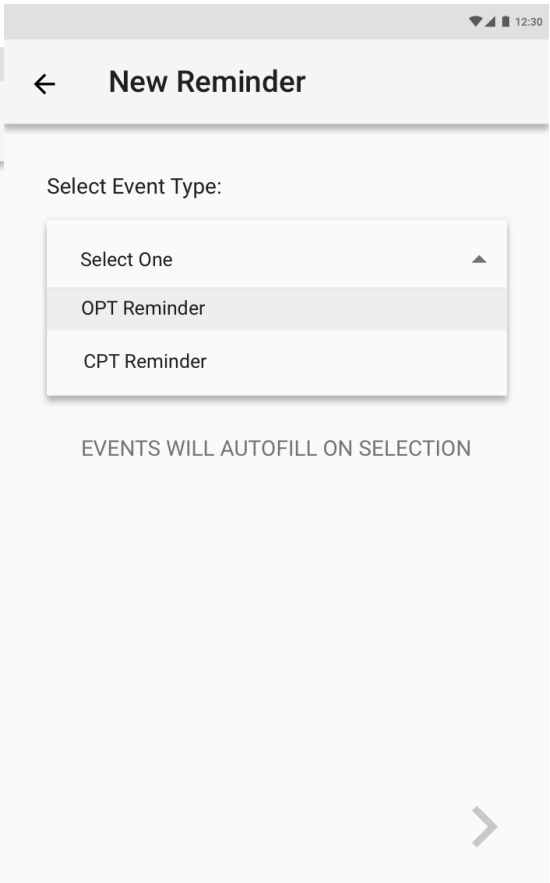
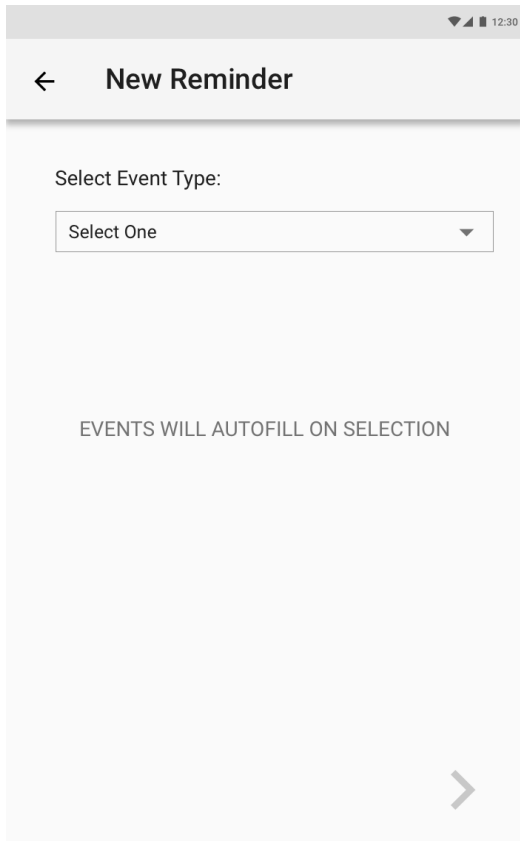
Grad School

Graduating

Employment

DONE





New Reminder

Select Event Type:
CPT Reminder

Email Advisor

Submit I20 to ISS

Collect I20

OPT Reminder

- I - 765 Form 3 days ago
- Photocopy of IDs Today
- Passport photos 1 week
- Check for \$410 1 week
- Mail Out Documents 10 days

clariFilter
news for school away from home

Reminders

Today is: 05/19/2017

- OPT Reminder >
- CPT Reminder >

+ (floating button)

clariFilter
news for school away from home

Reminders

Today is: 05/19/2017

- CPT Reminder >

+ (floating button)

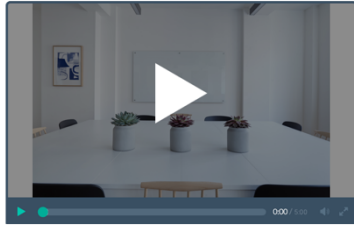
News for You

Nam Dictum Commodo

05/06/2017 By: ISS Advisor

Important Information

1. Donec cursus maximus posuere.
2. Phasellus nisi purus, efficitur a pellentesque non, viverra et diam.
3. Sed pharetra ipsum ut est ullamcorper.



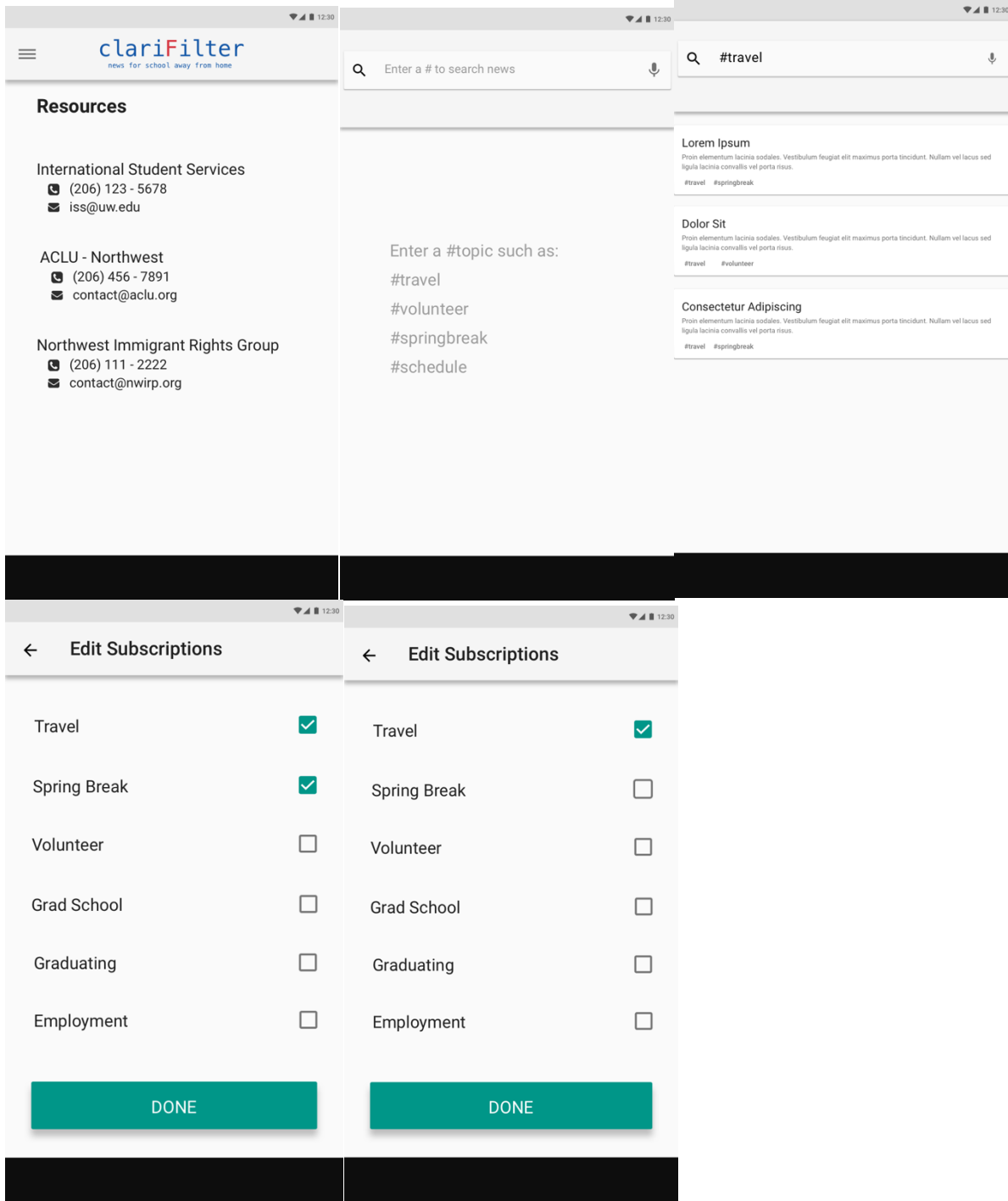
Subscribed News

Lorem Ipsum

05/01/2017 By: Author

Vestibulum ac tellus ac justo porttitor fringilla. Vestibulum nec tellus et mauris ultricies tincidunt. Aliquam erat volutpat. Suspendisse potenti. Sed vel interdum erat. Vivamus vehicula pellentesque sem, non sollicitudin eros euismod et. Proin sed viverra risus, convallis pretium felis. Suspendisse quis facilisis quam. Curabitur arcu sapien, tempus vitae arcu ac, finibus auctor lectus. Nulla ac sapien et magna venenatis dapibus sagittis at odio. Ut accumsan lectus at molestie ornare. Mauris odio magna, imperdiet sed turpis et, imperdiet dictum dolor.

Nam dictum commodo felis non euismod. Quisque non vulputate quam. Pellentesque in aliquet tellus, nec feugiat lacus. Aenean accumsan tellus in velit pellentesque congue. Duis sed dignissim leo. Nullam libero metus, viverra quis consectetur non, iaculis a quam. Aliquam quis viverra ipsum, at mattis ex. Sed imperdiet, massa eget pellentesque aliquet, arcu ex cursus lacus, vel viverra libero nisi in ligula. Phasellus porttitor semper feugiat. Etiam volutpat ligula vel ante volutpat consequat. Vivamus vel nulla et velit rhoncus dictum eget vitae diam.



INTERACTIVE LINK ----->>> <https://invis.io/U4BSTTFGA>

Task 1: Filter/personalize news results

Task 2: Set reminders for important deadlines

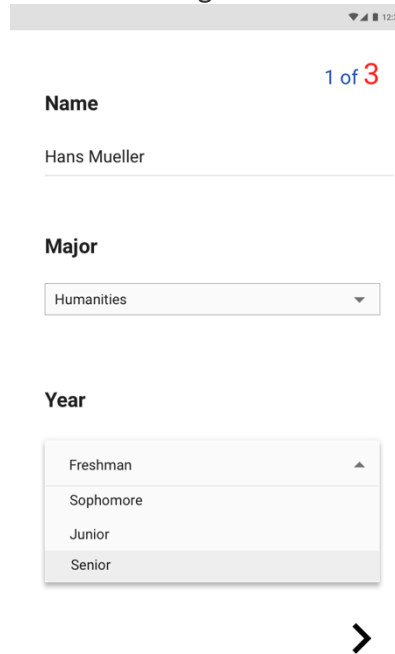
Task walk-through

Note: Because the flow is similar, some old photos were kept and small changes such as the back button are not represented. These changes can be seen above and the overview picture.

1. The user is greeted by the welcome page and signs in with UW email and password.



2. If they do not yet have an account, their profile is created. Information on their name, major, and year is fed from their UW account. If the information is not up-to-date, the user can change their preferences.



3. User fills in Country and Visa Type.

The screenshot shows a mobile application interface for step 2 of 3. The title is "Country of Citizenship" with a progress indicator "2 of 3". There are two main sections: "Country of Citizenship" and "Visa Type".

- Country of Citizenship:** A dropdown menu is open, showing options: "Germany", "Iran", and "China". The selected value is "Germany".
- Visa Type:** Three buttons are visible: "F1 Visa" (highlighted in green with a checkmark), "J1 Visa", and "J1 Visa".

Navigation arrows are visible at the bottom: a left arrow, a right arrow, and a double left arrow.

4. User selects their interests.

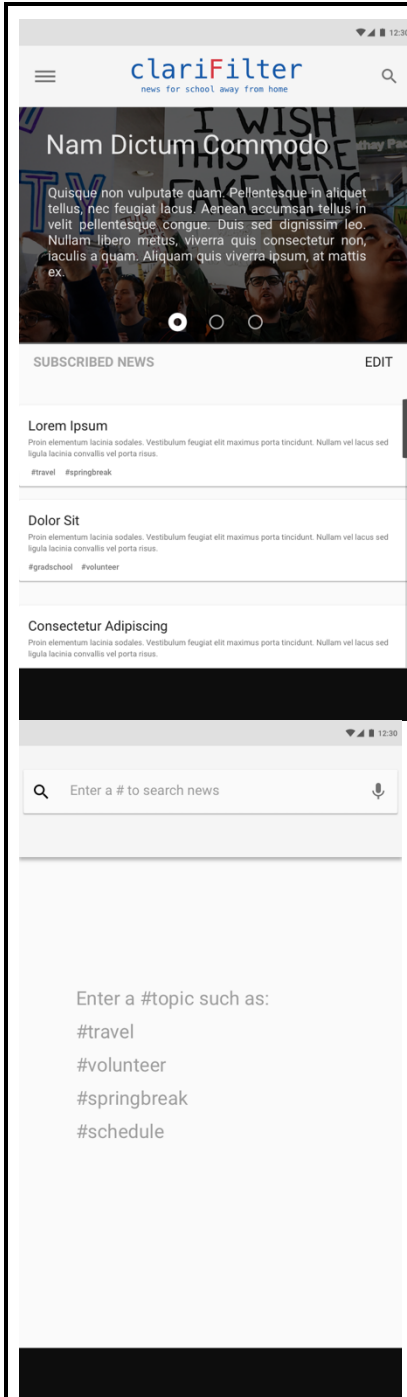
The screenshot shows a mobile application interface for step 3 of 3. The title is "Other Interests/Subscriptions" with a progress indicator "3 of 3".

- Interests List:** A list of interests with checkboxes to the right:
 - Travel
 - Spring Break
 - Volunteer
 - Grad School
 - Graduating
 - Employment

Navigation arrows are visible at the bottom: a left arrow, the word "Finish", and a right arrow.

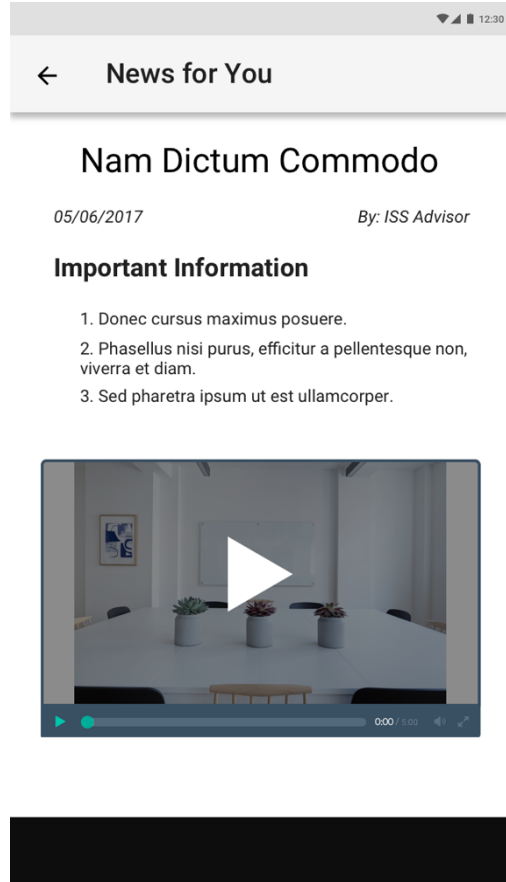
5. User can scroll through newsfeed of "News 4 you" and "Subscribed news" based on filters from profile and interests. Or can search for news using the tool.

6. Specific news stories can be chosen, written by ISS advisors or other resources, with bullets

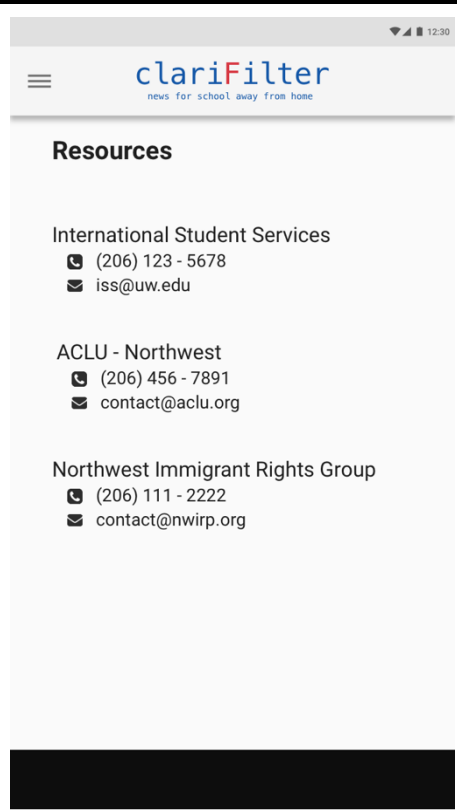
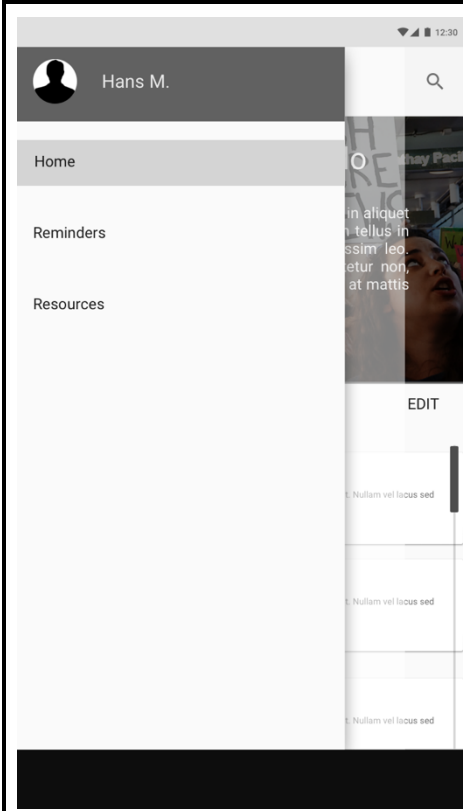


7. User can navigate back to the newsfeed and go to resources from the hamburger menu to seek out more information on the recent news event.

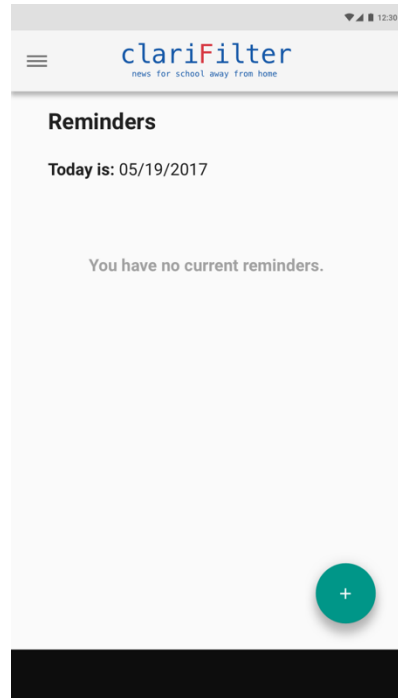
and a video of them explaining the points.



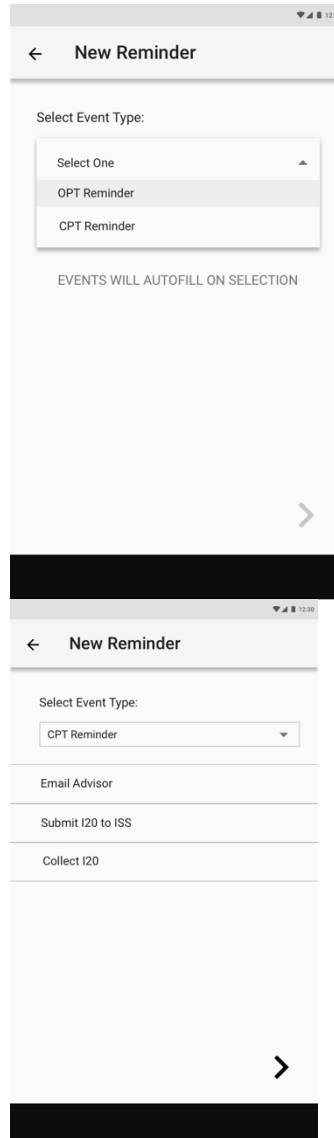
8. Resources and contacts for further information and aid are given.



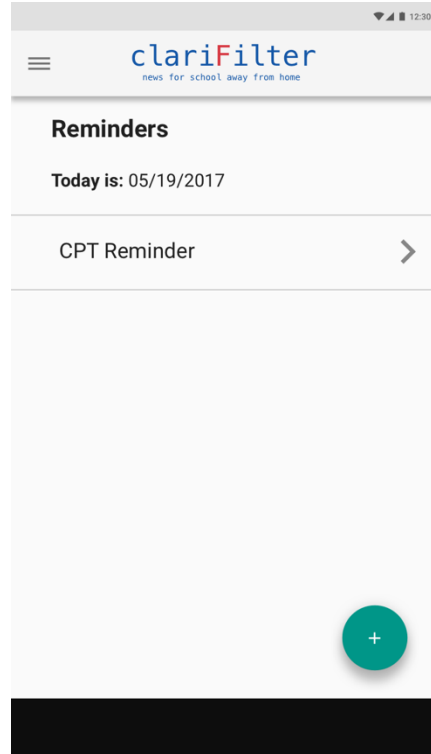
9. User uses the hamburger menu to go to reminders. User can click on the add button to create a new reminder.



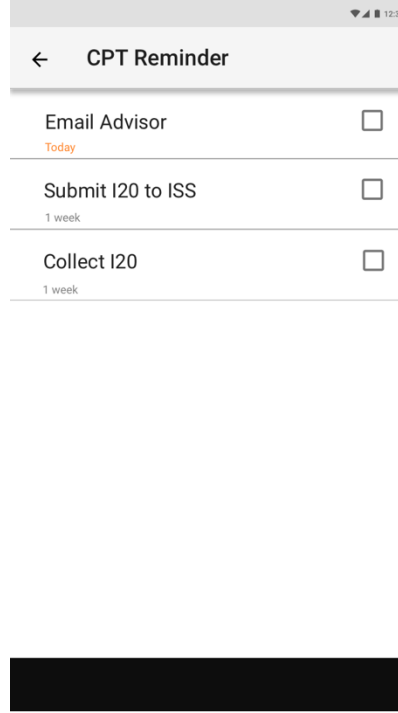
10. User chooses CPT reminders from menu. CPT related reminders are shown. User selects the 'next' arrow button.



11. The user is taken back to the updated reminders page with CPT reminders added.



12. User navigates to CPT reminders checklist to see upcoming dates and can check off that he/she emailed the ISS advisor today.



Design Changes

We made some changes to how the Reminder screen works. On sketch we saw a pattern for adding list entries such as reminders. We changed to using the green circle with a plus to add entries, which becomes more intuitively interpreted as an add symbol once it is in the UI context (rather than just a plus sign on paper). The back button was changed from the bottom left to top left to follow mobile patterns users are more used to. Because of this, the hamburger menu, which is also in the top left, only appears on the “Main pages” where it was redundant to have both a back button and the hamburger menu. This also helped better constrain and simplified the options for user navigation. We also tweaked the hamburger menu layout (specifically the top profile section to use the common default picture) to match the conventional hamburger design pattern as well. Lastly, we had a search icon to look for specific news stories and hashtags, but didn't include a search page in our paper prototype. We decided to have the search button only on the newsfeed page, so the user would not be confused about what they are searching for on other pages (such as searching for a reminder on the reminders page).

Discussion

From iterating through this process, we learned that no design is perfect the first time it's developed; our initial flaws ranged from the glaringly obvious, such as a lack of cohesive theme, to the subtler, such as cultural preferences for consuming news. The first round of inspection and heuristic evaluations revealed problems with our paper prototype that could be fixed by using design patterns and consistency across each screen of the interface. For instance, by including platform standards such as a hamburger menu on the left side and cancel buttons on certain pages, we helped fix problems related to system visibility and user control.

The process of interviewing users on their experience working with our prototype influenced a lot of the final layout of our design. We realized that users were accustomed to certain buttons and functions in certain places; the back button was moved to the top left as many mobile users are familiar with, and the checkboxes on the reminders page were placed on the right, which was more natural. We also modified the physical size of our paper prototype based on feedback from the TAs. Before, our prototype was larger than an average smartphone, which did not represent a reliable mockup to test on. By making the prototype smaller, we got more of a feel for how the buttons and page layouts would look on a normal smartphone screen.

Our two tasks - setting reminders and receiving reliable news - stayed generally the same, but our approach to giving users the best experiences was tweaked through usability tests. For instance, we received feedback that culturally, some users would be more receptive to receiving news in a video format. Thus, we added a video option to view the ISS officer's news in addition to the traditional text view. We also fully fleshed out the idea of having a search feature for the news tags. In our initial prototype, we had a search icon, but had not fully considered the idea of how the search would work. After users tried to use our search feature, we realized how important this functionality was, and added more information about it.

We believe that the number of iterations of our design was fully intentional for the scope of this class. With the design diamond model, it is necessary to generate an appropriate number of divergent designs, and then refine accordingly on the best of those designs. This refinement, which was the theme of this third assignment phase, had a good number of iterations of the design. I think that with any more iterations, our design would have gotten too fixated on small issues. With any fewer iterations, we might have missed some glaring usability flaws in our designs.

Appendix

General Script

Hello, _____. Thanks for agreeing to test our paper prototype. This app is called clariFilter. It is an app designed to give accurate filtered news from the ISS to you an international student.

In this scenario, you are Hans Mueller, a german exchange students, but do tell us if there is something would be substantially different if you were using the app. Please login.

You are now setting up your account, The autofill said you are a freshman. This is an error from myUW. Change it to senior and proceed with the rest of the setup.

Now you are on the main page. It is a newsfeed specifically tailored for you. Please browse the headers, Then click on H1-B new european cap.

This article has reminded you that you need to fill out your CPT. How do you think you can set up a reminder? (Guide them to hamburger menu)

Set a reminder.

(Then we moved on to individual questions on particular behaviour based on the user's performance)