TAGLINE

Andy Butler   Greg Kim   Alexa McLaughlin   Jeannette Yu

Problem & Solution

Despite passion and enthusiasm, many hobbyist writers have trouble writing as frequently and consistently as they would like. Outside factors such as education and work always seem more pressing, and when it comes to writing, losing one's train of thought is one of the worst things that could happen. Managing the balance between writing and editing is even more difficult when writing infrequently. For new writers, improving their writing quality often means tackling these two issues. Without any external pressure or support, these writers who are usually in charge of their own goals and deadlines often also succumb to lethargy and procrastination. We are creating TagLine to be the solution that gathers what writers need in a single word processor. Our design provides an intuitive way to create tags and notes while in the process of writing, allowing writers to continue their groove while simplifying both the editing and sharing process later. Furthermore, the dashboard visualizes the writer's successes and trials, as well as their ability to consistently meet their goals. Keeping the goals close to the writing reminds writers what they are accomplishing, and tags make certain that they never get lost in their story. Ultimately, TagLine is intended to keep writers writing.
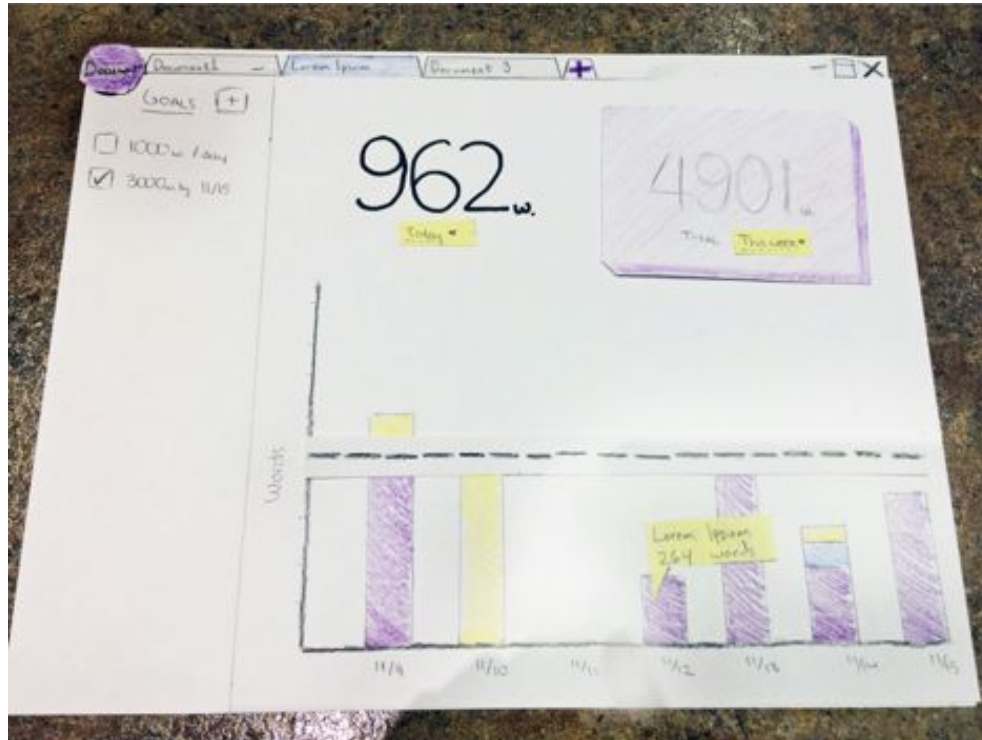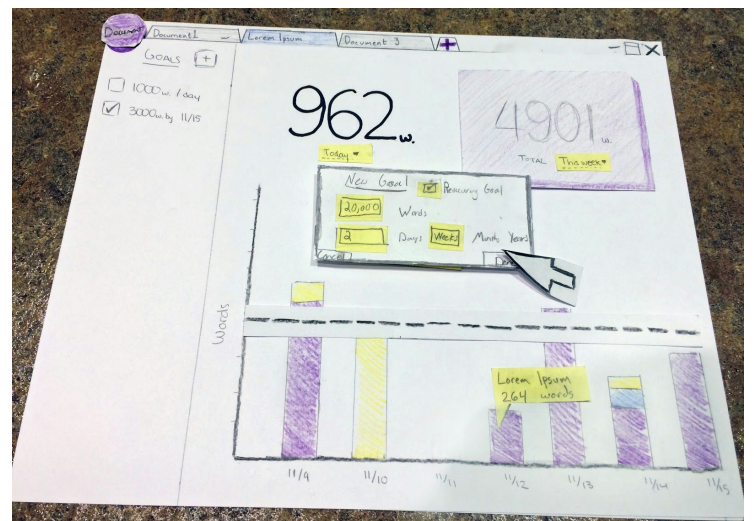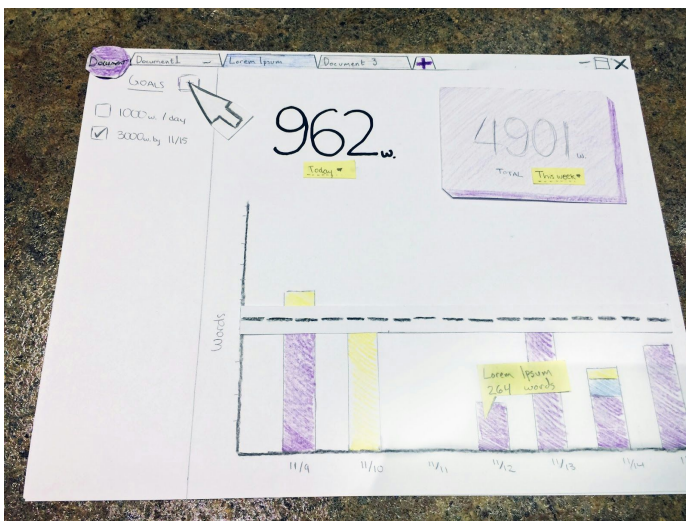
Initial Paper Prototype

Overview

TagLine is a word processor, targeting writers on the computer. Our prototype focused on the functionality behind allowing users to track their writing progress and tag parts of their stories.
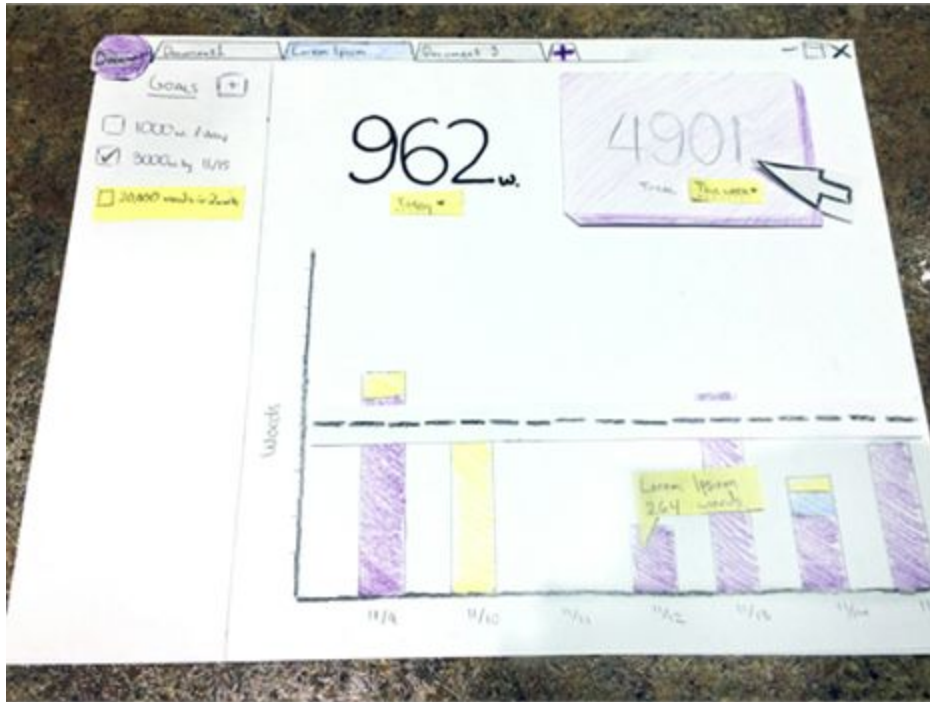
Task 1: Tracking Progress

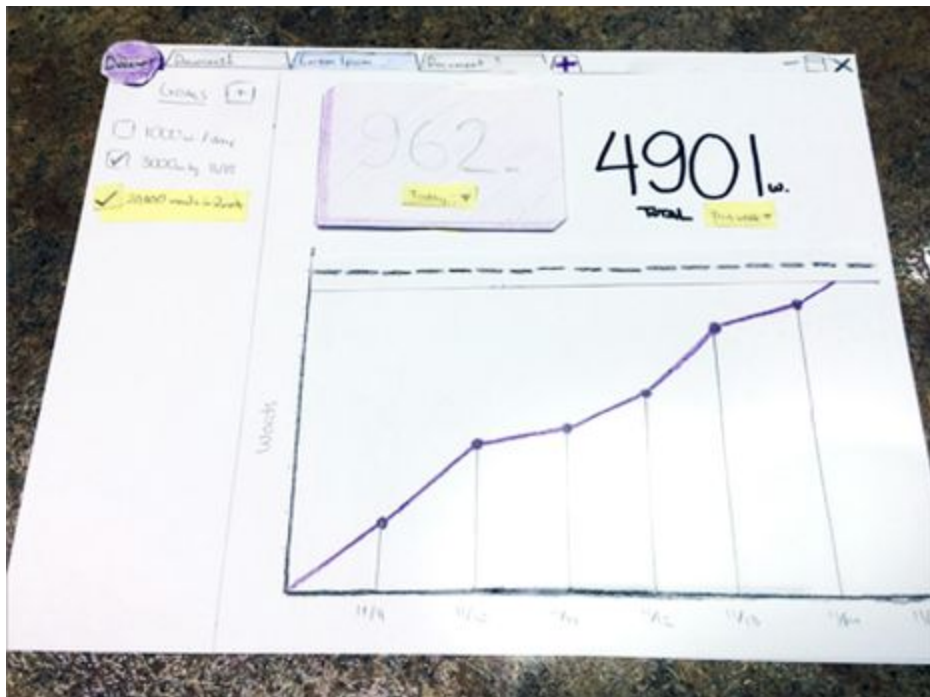*1.a - Main dashboard screen, where goals can be viewed and set.*

1. b, 1.c - Click on the '+' button on the Goals sidebar and to create a new goal via the dialog box that appears.
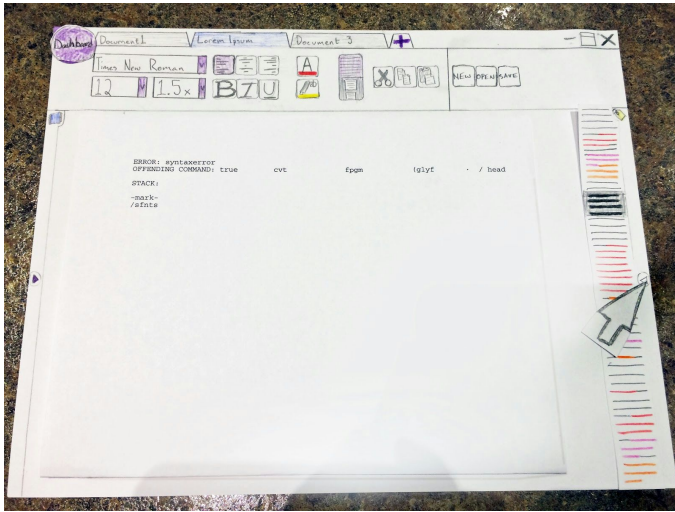
1.d - New goals appear in the Goals sidebar, as well as visually marked on the graph and are automatically checked when completed.
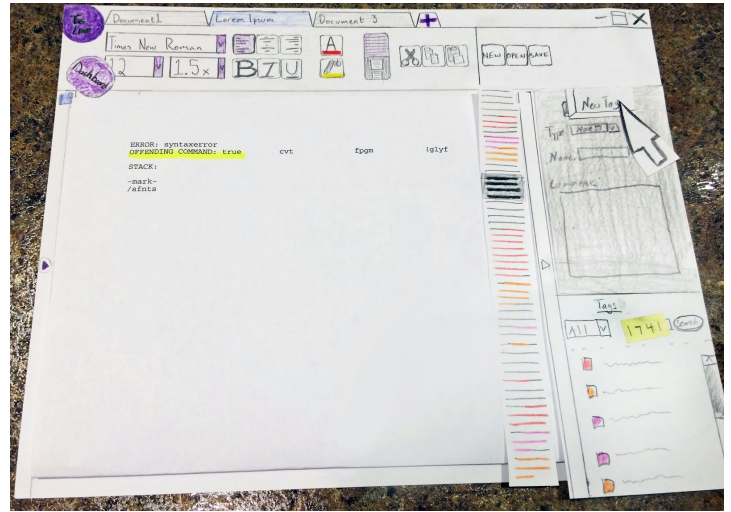

1.e - Toggle between viewing regular writing progress via the bar graph or total writing progress via the line graph.

Task 2: Tagging Sections

2.a - In the Document view, the Tagging panel can be toggled to view or add tags.
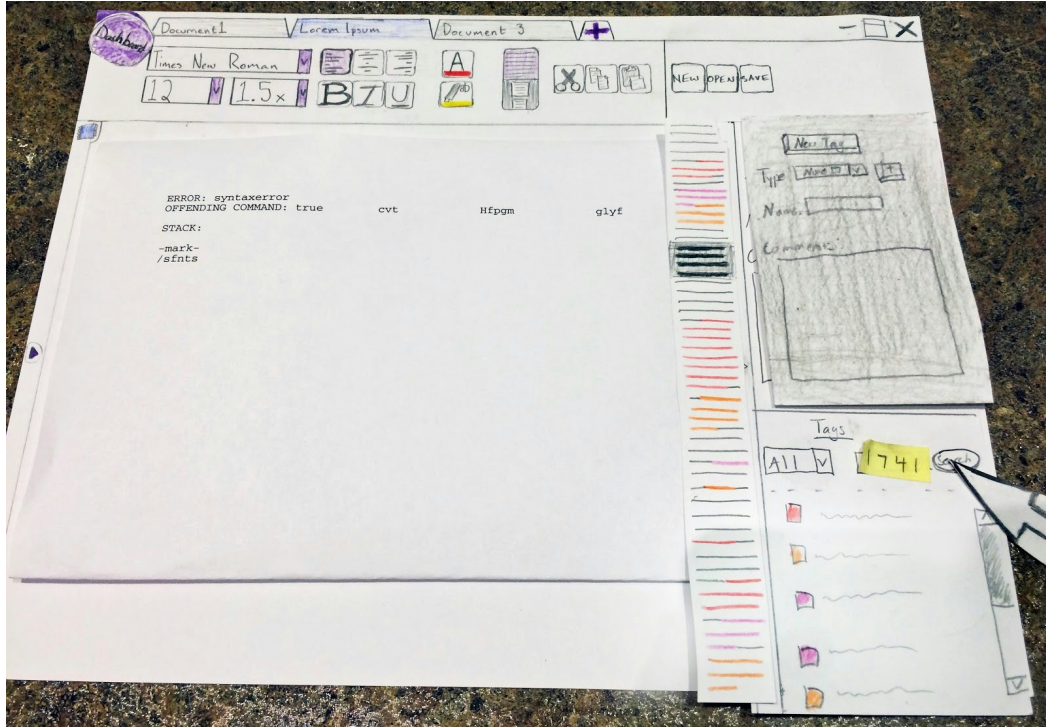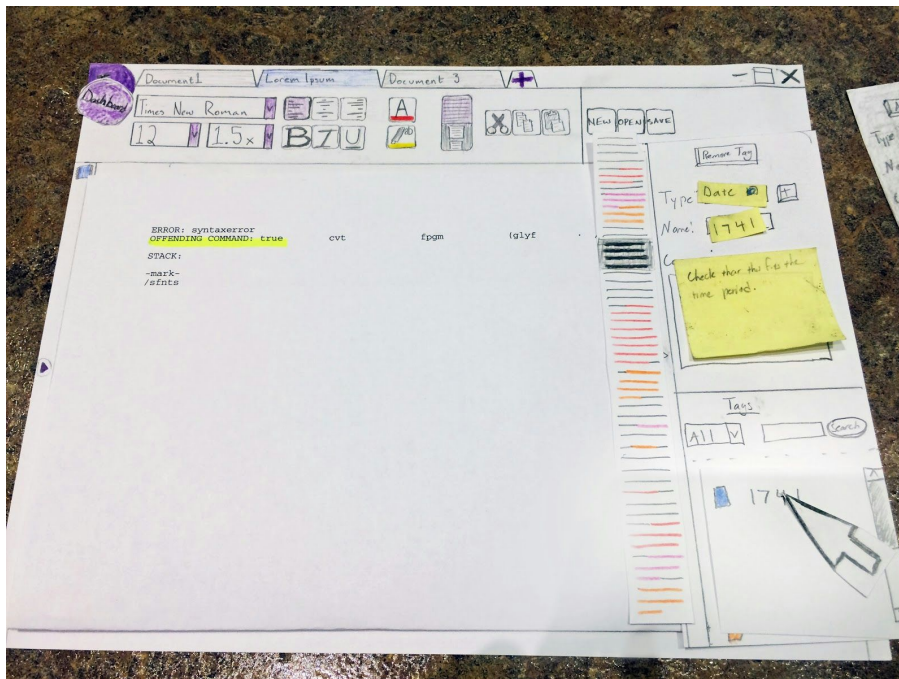

2.b - Highlight a section to add a new tag

2.c - New types can be created, and used to search tags.

2.d - Name, Type, Comment (optional)

2.e - The bottom half of the side panel allows for filtering and searching tags.

2.f - When a tag is selected, the page will automatically scroll to the tag's location and that tag can be edited or removed.

Testing Process

Our first usability test was conducted with Ginny, an Informatics student. Ginny was chosen as a student who would be familiar with writing applications, and because she has experience with design work and could be able to provide insight that the rest of us wouldn't have on the basic user interface.

The next participant was Cho, an English major who mainly uses Word and focuses on essays and analytical writing. She was chosen because she has experience with writing and editing longer projects, and could offer feedback on how TagLine functions as a word processor.

The final participant was Lord Voldemort, a creative writer who often writes on her phone (such as while on the bus). She has three novels published on Amazon, with another story in the works. Much like Cho, Voldemort was chosen due to her experience writing and editing, along with her experience working with numerous fiction novels.

Initially, we tested in a more linear method with precise commands. In the first test, we asked Ginny to highlight and add a date tag with the name 1741 to part of a Lorem Ipsum document, and then remove it from a different part of the document. We then switched to the goals view and she was instructed to add a new goal to write 20,000 words in a period of 2 weeks.

The methodology for the other tests was changed somewhat from this initial approach as we both changed the prototype itself (including laminating the story text to make the tagging process more realistic) and we deemed the initial protocol too restrictive to see where actual snags in a participant's flow would be. By telling them the specifics of what to do, rather than the general situation, we were giving away how they would need to approach the problem.

The reworked protocol still asked for participants to add a new goal to write 20,000 words in a period of 2 weeks, but they were then asked to create a tag denoting a section of text to be rewritten, and then delete it from a different part of the document. This meant we could see any problems in switching between the goal-viewing and writing states that we hadn't been able to see when presenting them separately, as well test how clear the tag-creating process is.

Testing Results

Heuristic Evaluation

There were a small number of problems discovered in heuristic testing. These were primarily issues in communication:

1. The meaning of different bars on the Dashboard page was unclear without hovering over the bars.
2. There was no visible feedback for saving a tag, or even confirmation that a tag had been saved.
3. The method of switching between the active documents and the dashboard was unclear. The initial button didn't look like a button and didn't change much between the views.
4. Participants didn't figure out how to open the tag pane--or that there even was a tag pane.

Overall, the majority of the issues boiled down to not presenting users with the full information they would want or need to use the application.
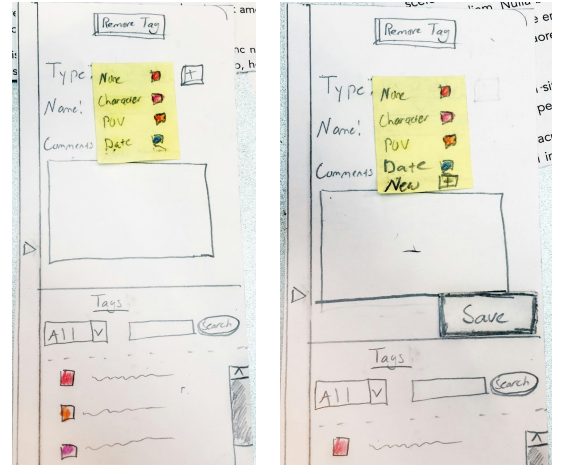
Revisions

1. Unclear meaning of the bars in the word count visualization
   Revision: We added a legend to the visualization clarifying to users that each color maps to a story project. This allows immediate understanding, and is especially helpful if there are numerous stories.
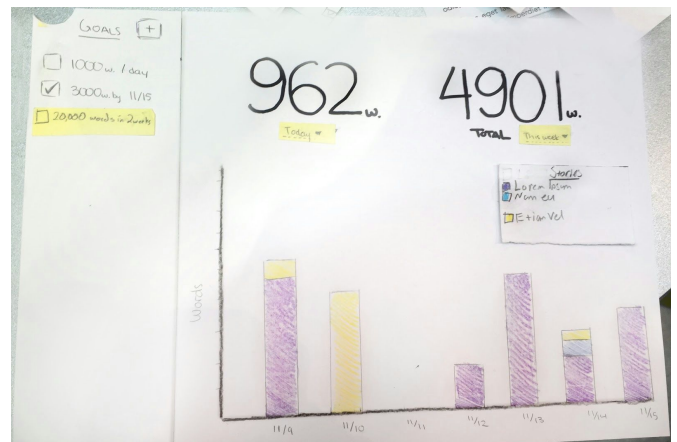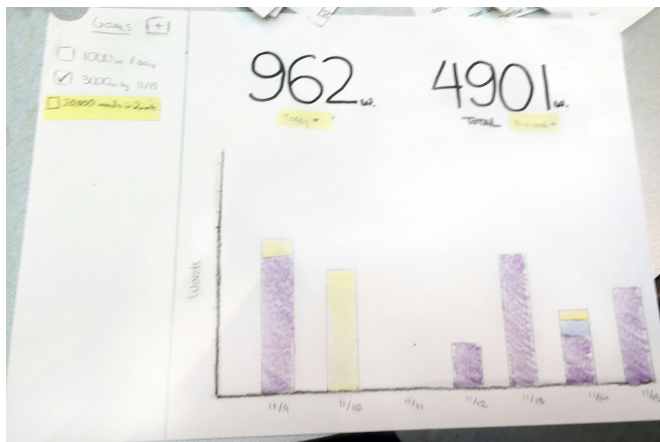
2.   The saved/unsaved status of a newly created tag was unknown, and the new Type button was ill-placed.

Revision: We added a save button to the Edit Tag sidebar, which will be enabled when a new tag is being created or edited and disabled otherwise (grayed out), clearly conveying its state.

3.   Users couldn't figure out how to switch states to the dashboard, or even back to the document because the function of the logo button was unclear and oddly similar to Word's option menu.

Revision: We did not make an immediate revision, but after later critiques, we changed it to be a larger Goals button that opens a modal rather than a different view, and making it clear that an 'x' exits the modal.
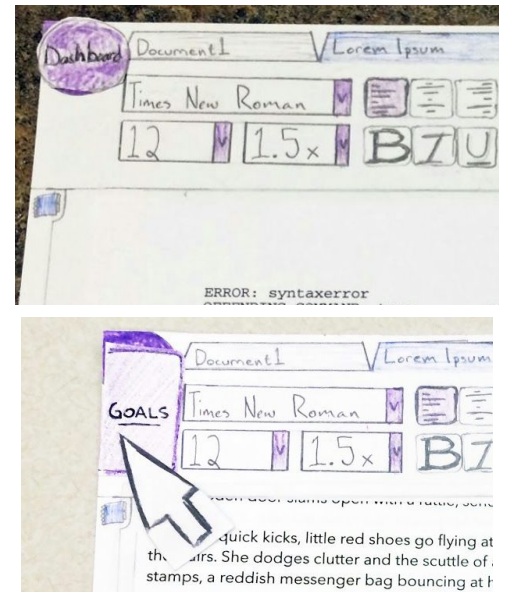
4.   The tag side panel in the Document view wasn't obvious in its existence.

Revision: We made the tag pane open by default, rather than hidden away. From there, users can easily discover how to hide it.

Usability Testing

Most of the changes we made during our three usability tests were minor and cosmetic. Aside from a more major functionality change in what fields are required to make a change, the rest were making the state of the application clearer. Overall, most of the problems continued to be in the same vein as those from heuristic testing: visibility of the application's status and displaying all the data the user needs to use the application.
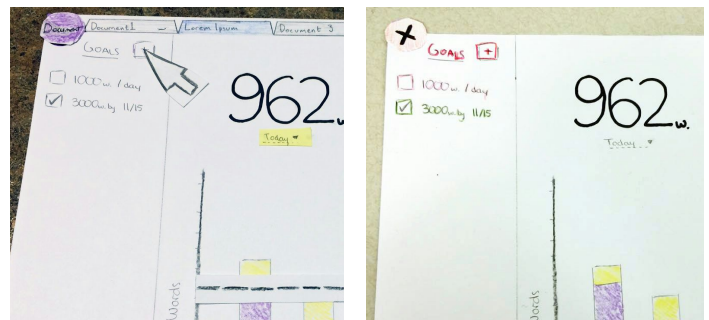
Revisions

1. Failure to recognize the tagging sidebar as non-interactable/greyed out

   Revision: We added a tip over the grayed-out sidebar telling the user to highlight text in order to tag if nothing is highlighted. Otherwise, this notice disappears and the New Tag button becomes clickable.
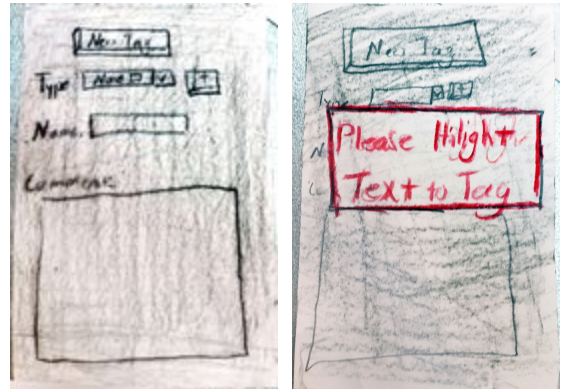

2. Unclear how to create a new goal

   Revision: This is a minor visual detail amplified by the fact it's a paper prototype, but we made the Goals header and plus button red to attract more attention, as well as color coding the goals.

3. Not sure about what the "Type" field in creating a tag means
Revision: After debriefing with Cho, we changed the name to Category to make its functionality clearer.
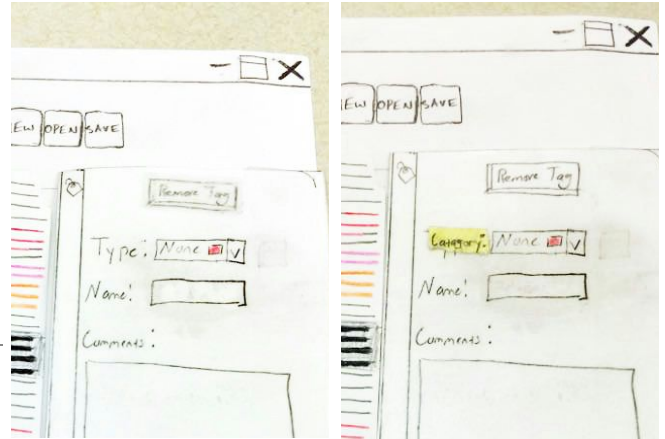

4. Required fields when creating a tag
Revision: As a functional change, we decided not to require both the Category and Name fields to be filled to save a tag. Tags are now immediately saveable, as the None category counts as valid, making a more descriptive category and name both optional.

5. The Remove Tag button is not near the other buttons, but at the top of the window pane.
Revision: We moved the Remove button down to the bottom of the pane, to the left of Save to be externally consistent.
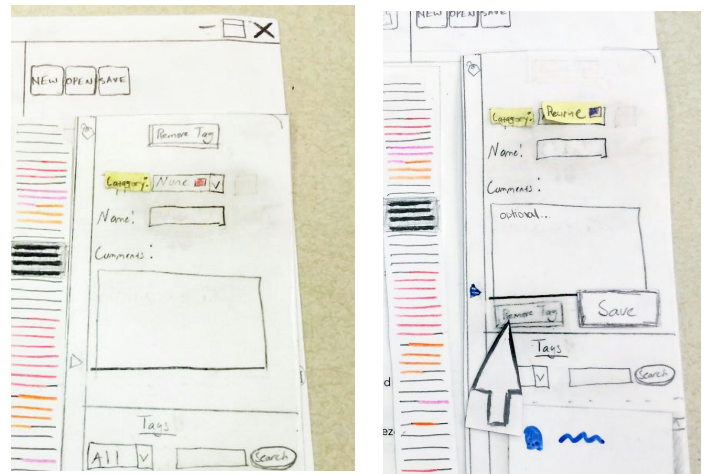
6. There was no way to cancel the creation of a tag and Remove would be ambiguous during the initial creation step
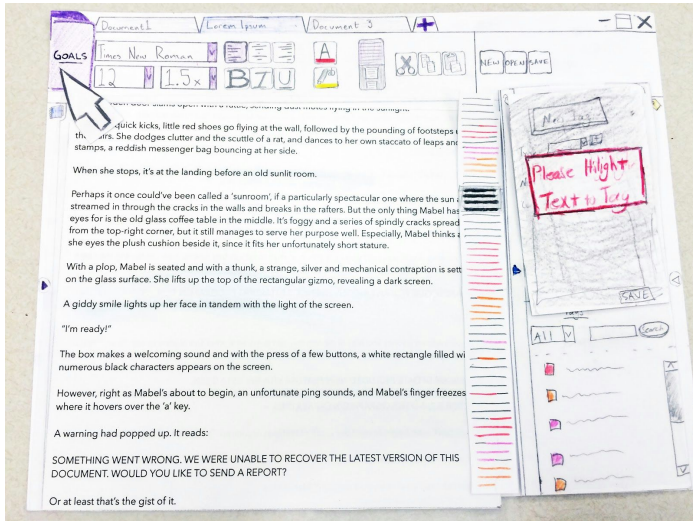**Revision**: We added a Cancel button that active instead of the Remove button when a tag is first being created or when changes have been made to the tag.
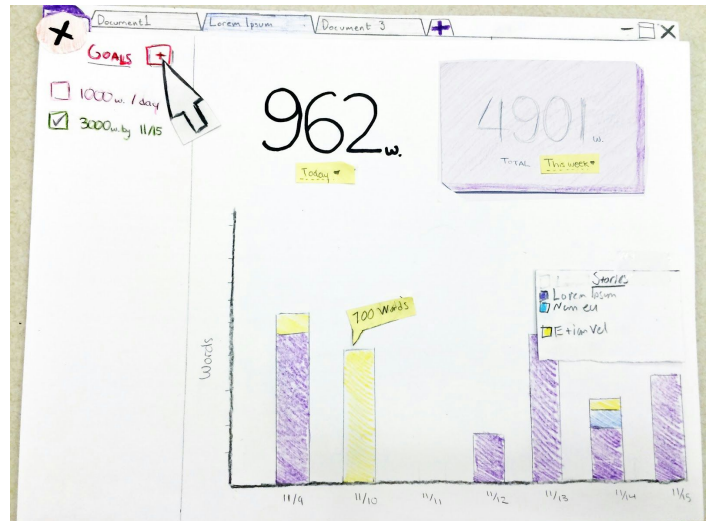
Final Paper Prototype

Overview
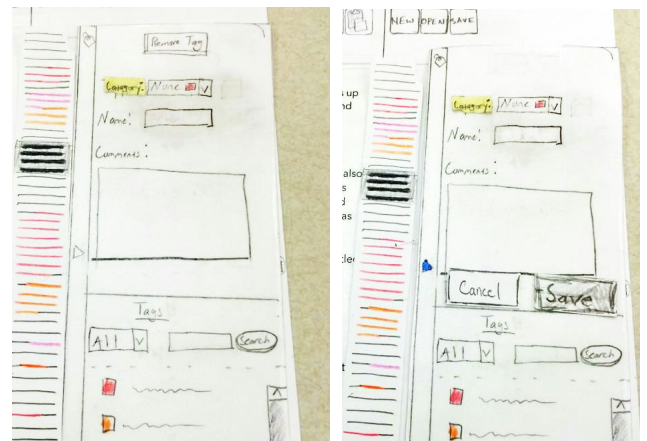
Task 1: Tracking Progress

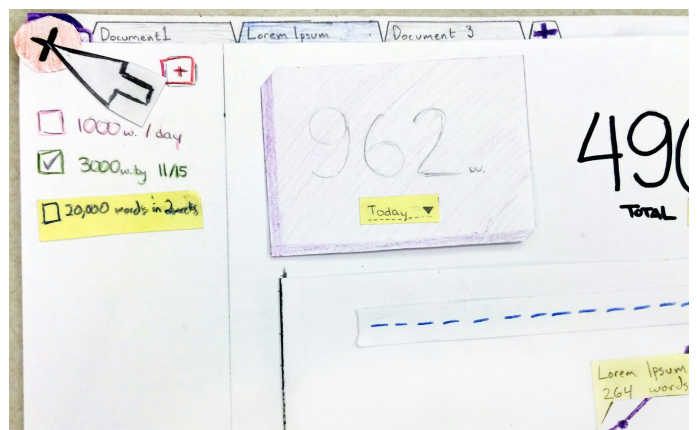*1.a - Open the Goals view*

1.b - Add a new goal
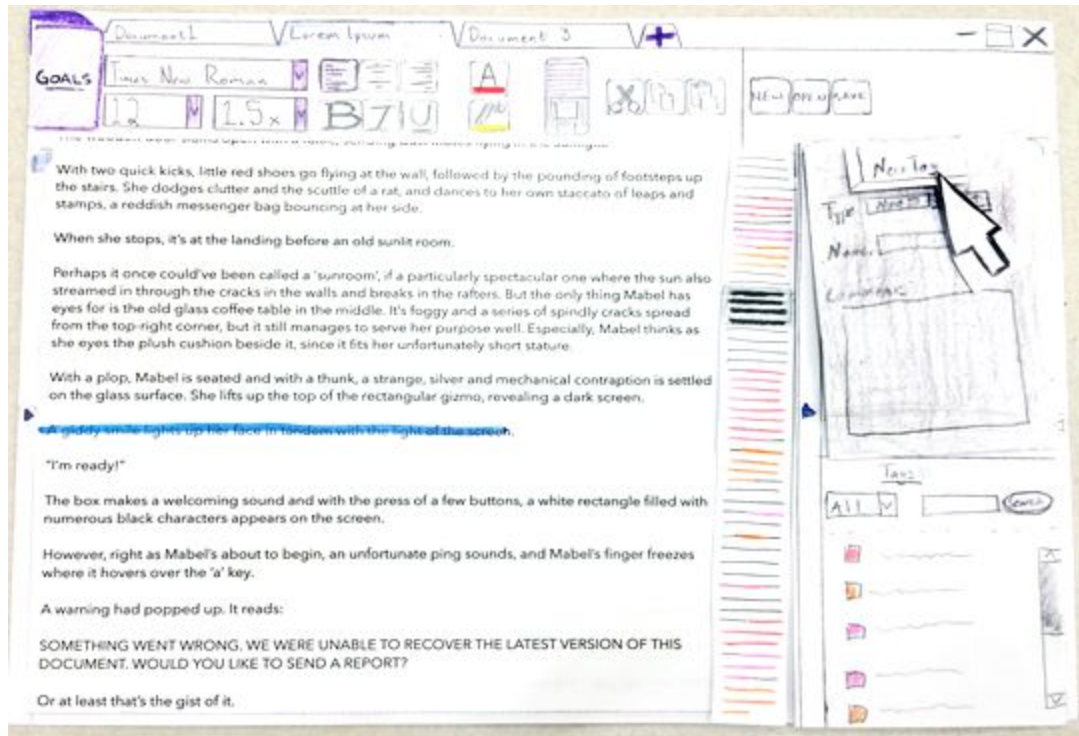

1.c - Enter the word total and timeframe

1.d - The new goal is visible on the sidebar and graph

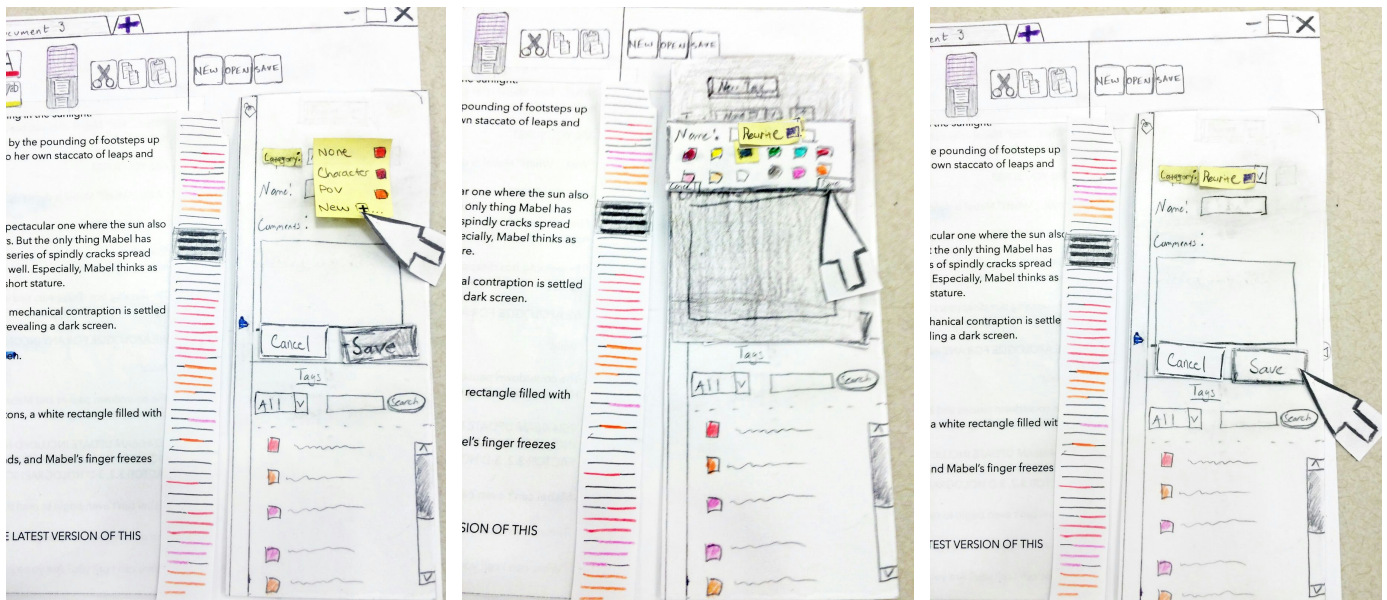*1.e - Click 'x' to close the Goals and return to the document*
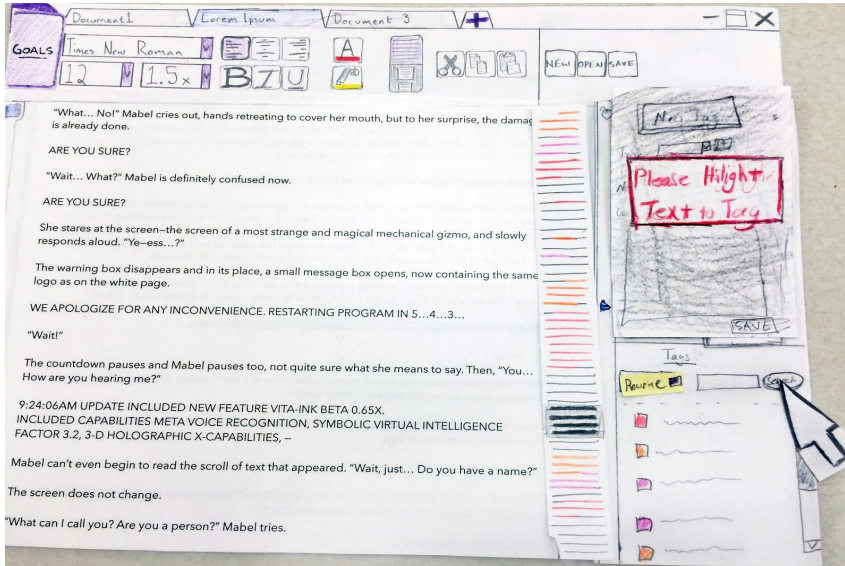
Task 2: Tagging Sections

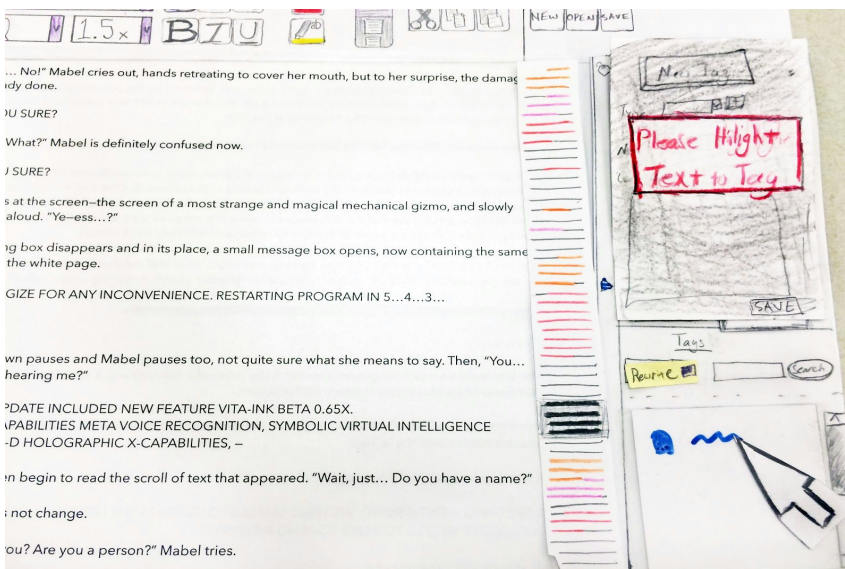*2.a - Add a new tag on the side panel after highlighting a section of text*

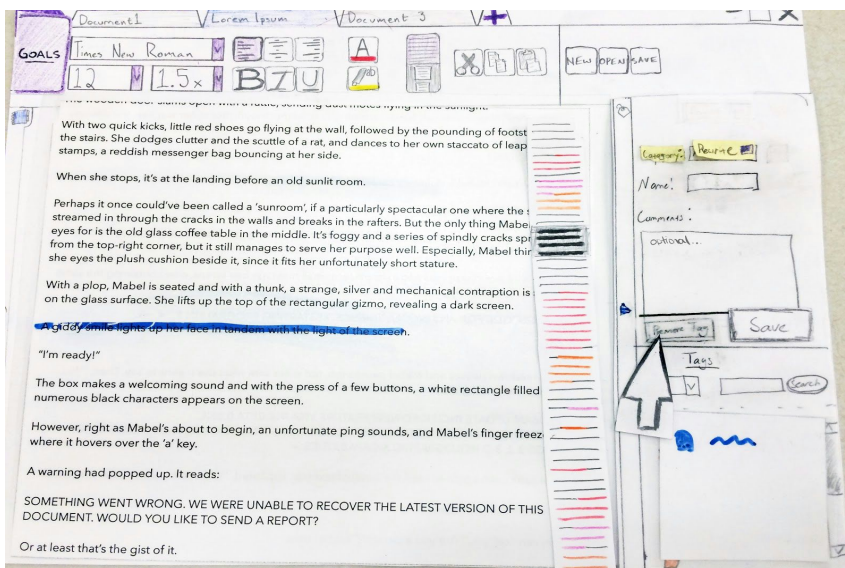*2.b, 2.c - Select a category or create a new one, giving it a Category Name and color*

2.d - Optional Name or Comment before saving

2.e - Filter by category or give a search term to locate tags

2.f - Select a tag to automatically scroll to that tag's location


2.g - When selected, tags can be edited in the side panel or removed

Digital Mockup

Task 1: Tracking Progress

Tracking word count over time and allowing an author to create writing goals and track their progress towards those goals allows the author to easily visualize their progress in writing. Seeing the progress and meeting their goals will help ensure they write daily and provide a visual reminder of how far they've come.
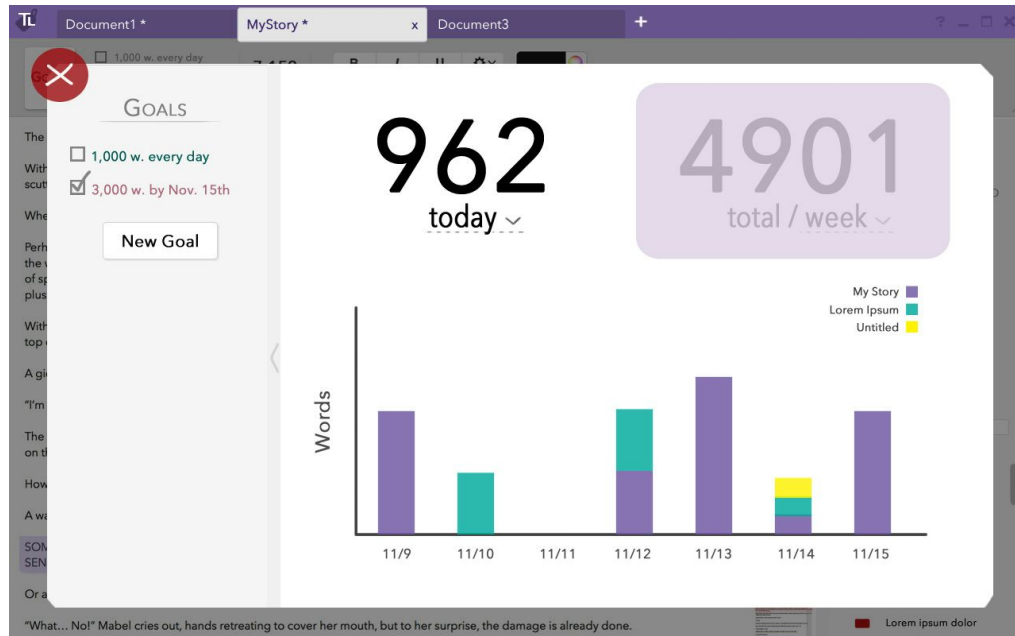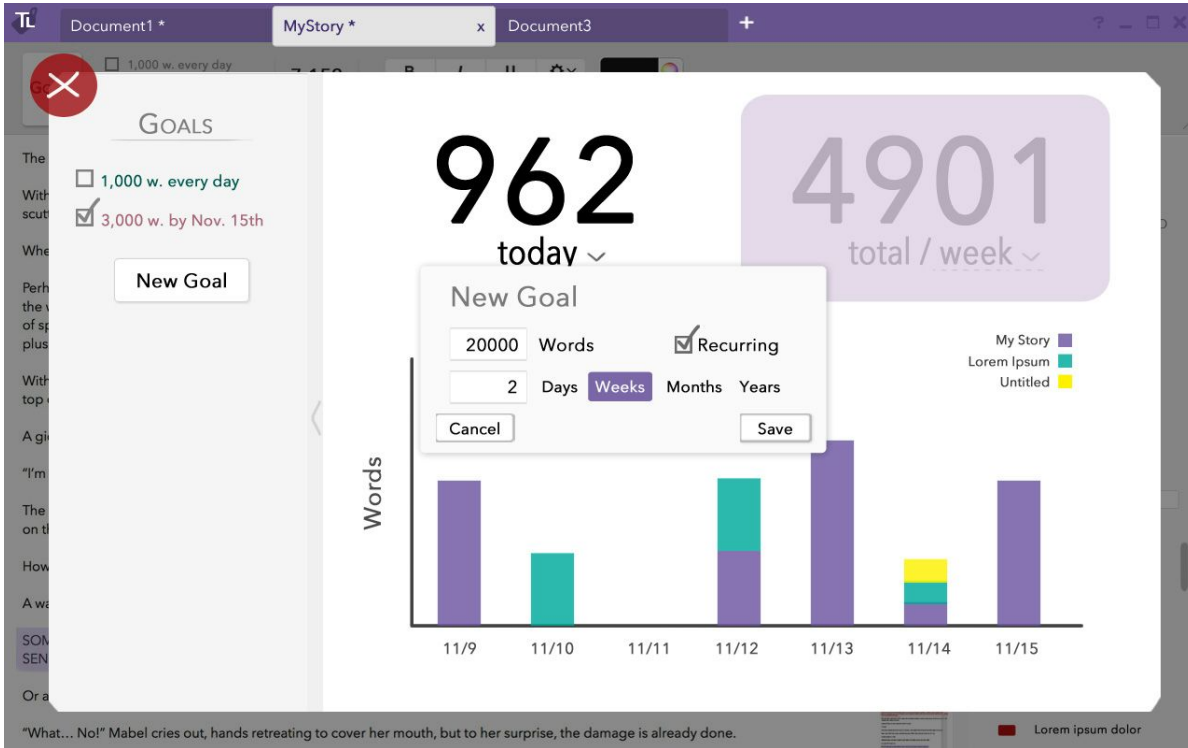

1.a - Goals view
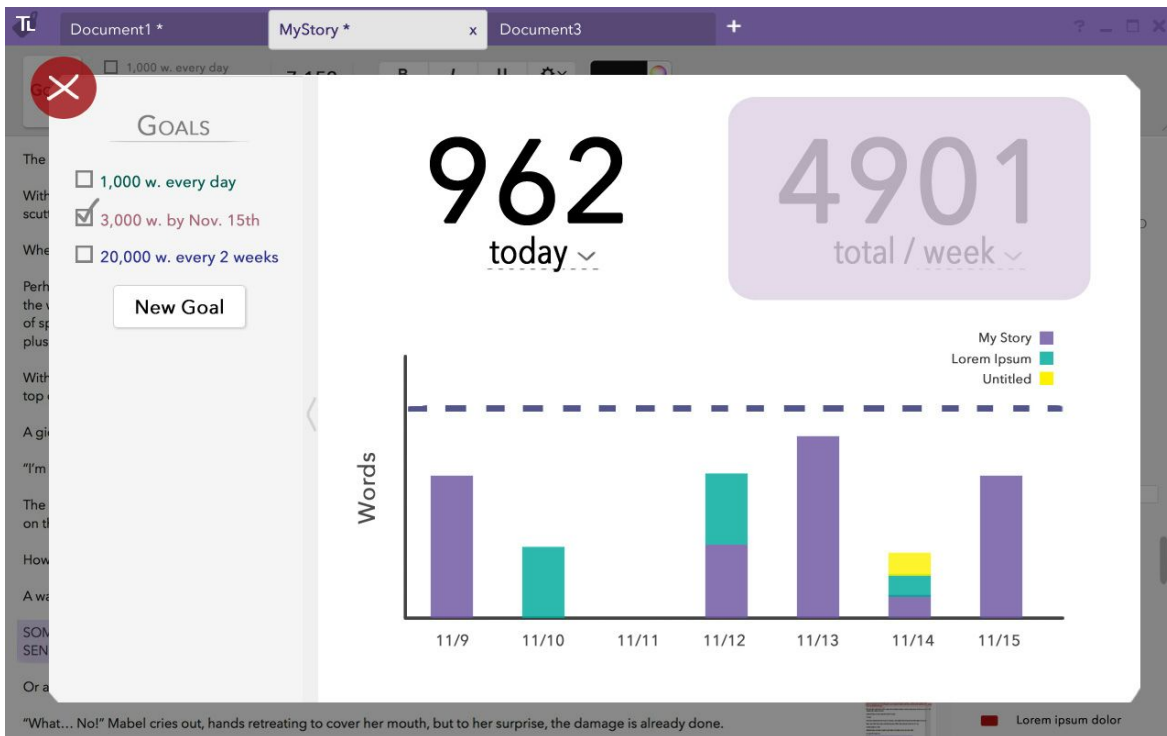*1.b - 'New Goal' button opens the New Goal dialog box.*
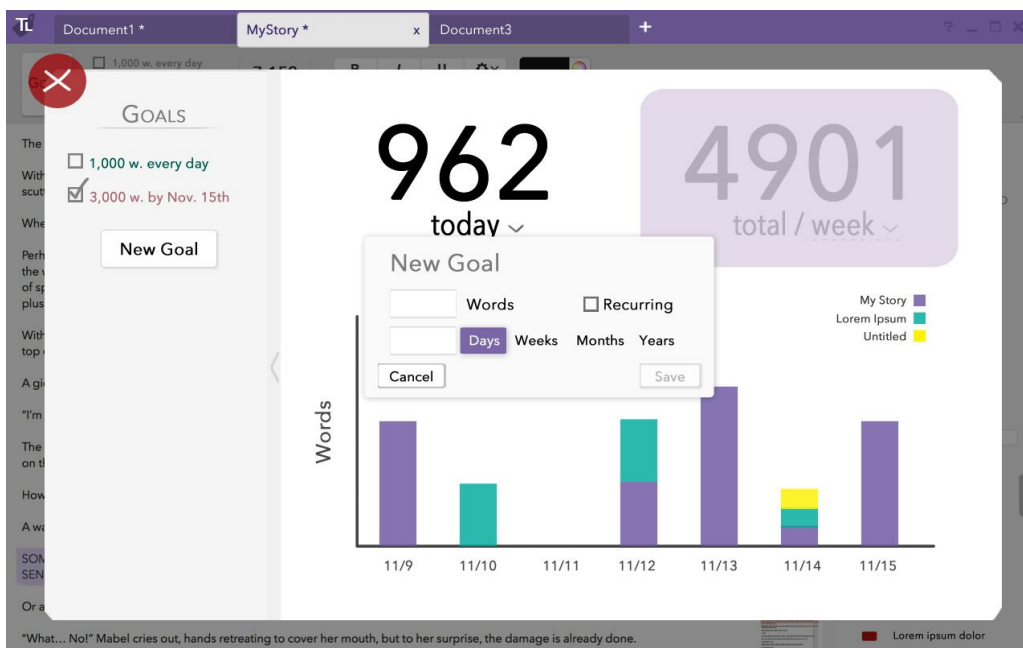
1.c - Setting a recurring word count goal of 20,000 words for every 2 weeks

1.d - After saving, it appears on the sidebar and can be viewed on the graph

Task 2: Tagging Sections

Tagging sections of writing allows an author to keep track of issues or ideas that are spawned by their writing, while writing, without breaking out of the flow of the writing process. The tagging pane directly to the side of the editor itself lets the author leave notes, highlighting the relevant passage, without breaking stride or needing to go to another application, allowing them to keep a controlled balance between writing and editing without getting lost in one without the other.
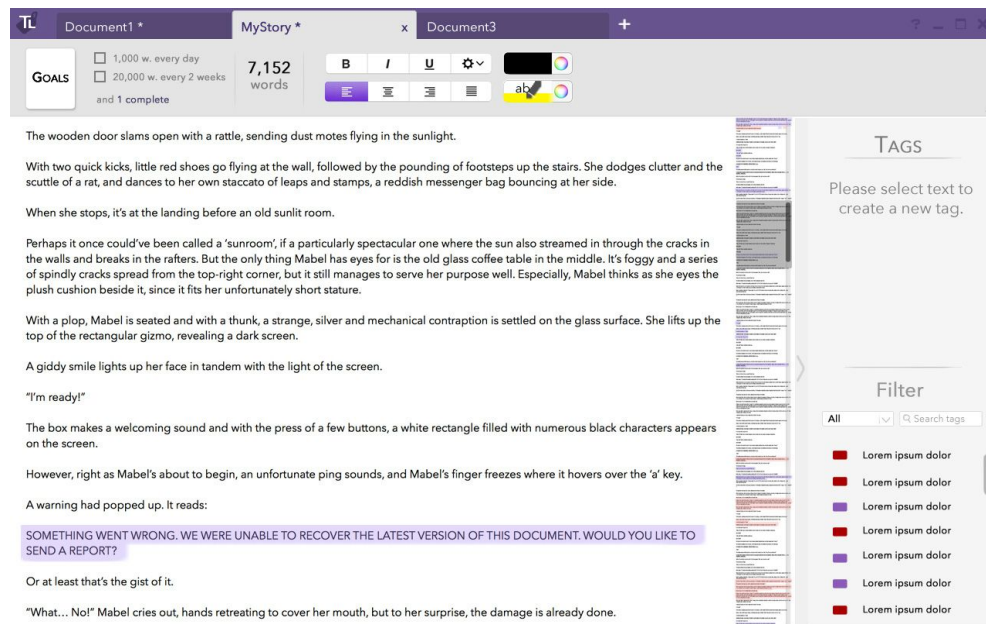
2.a - 'Select text to create a new tag' instructs user from the Tagging sidebar.
2.b - New Tag button appears after text is selected.
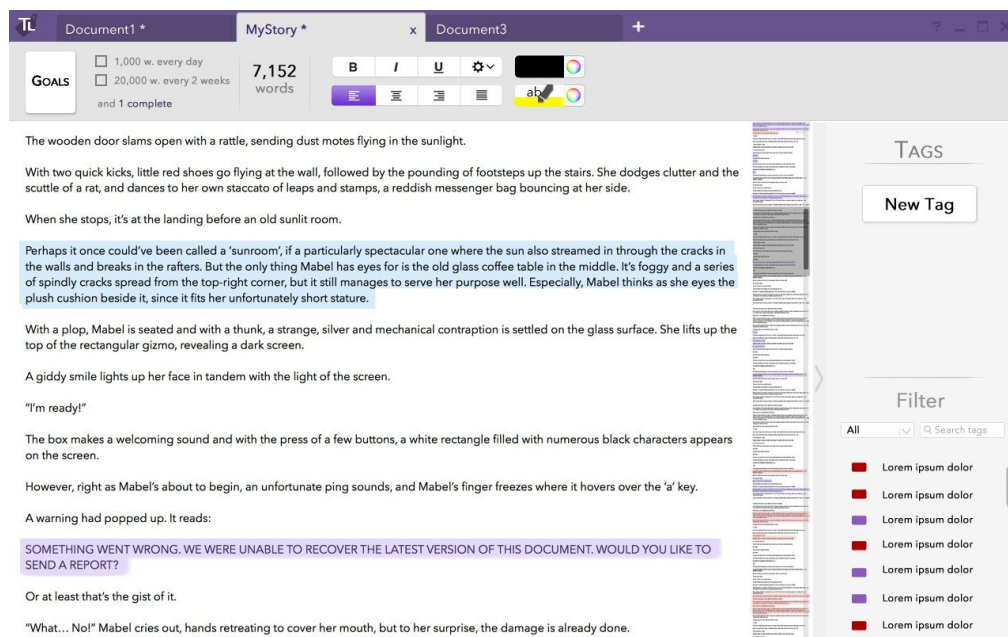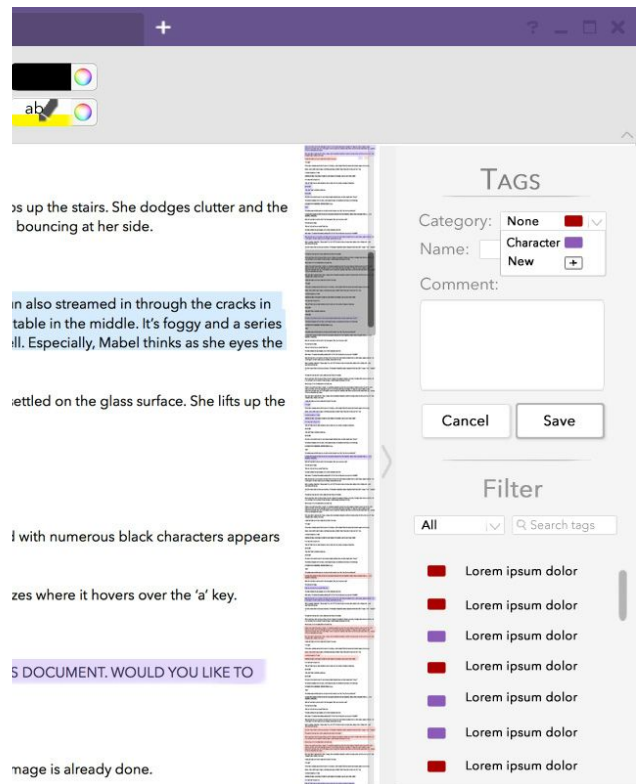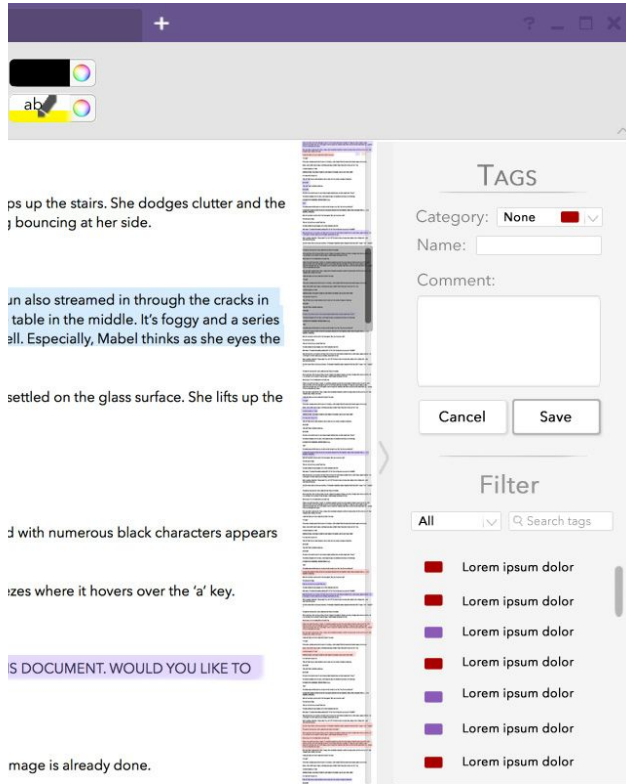
2.c, 2.d - Default category is 'None'. Name and Comment are optional.

2.e - New categories can be created.　　　　*2.f - Cancel or Save.*

2.g - Saving creates the tag, highlighted in the category color on the page. Selected tags can be removed.

2.h, 2.i - Tags can be searched or filtered, automatically scrolling to any selected tag.

Design Changes

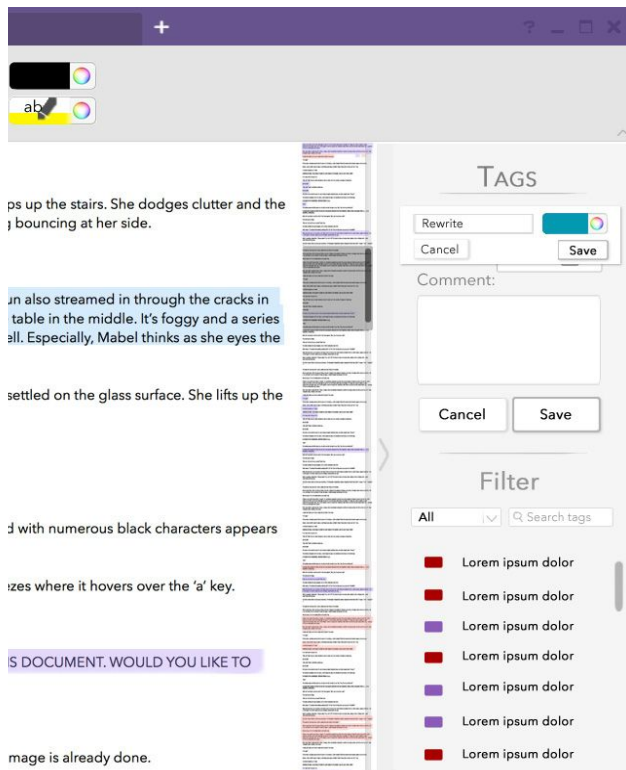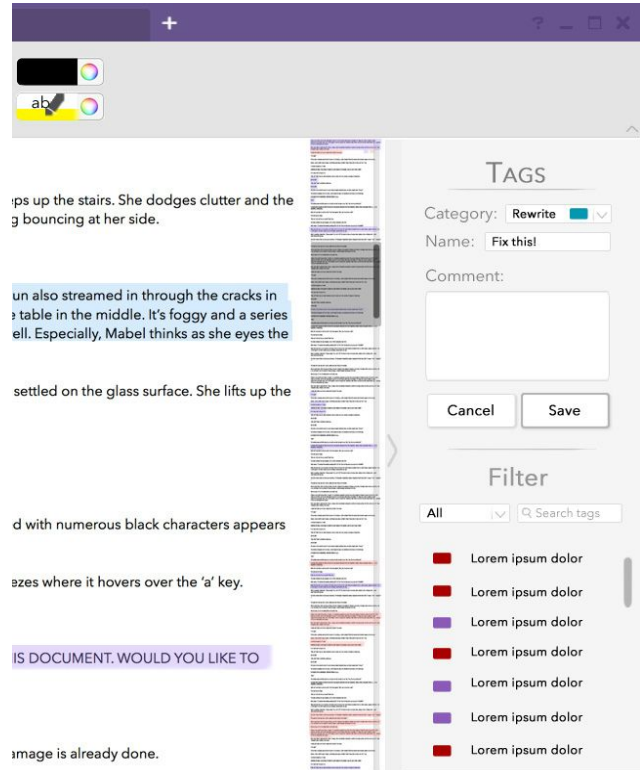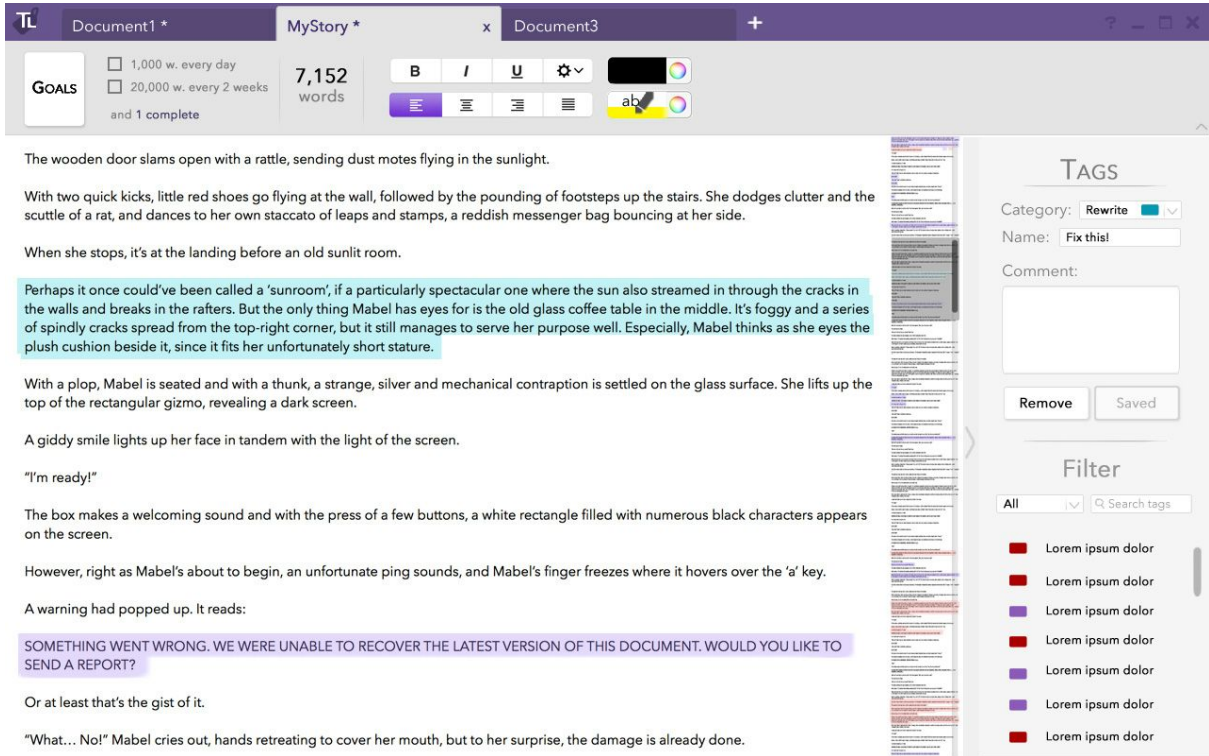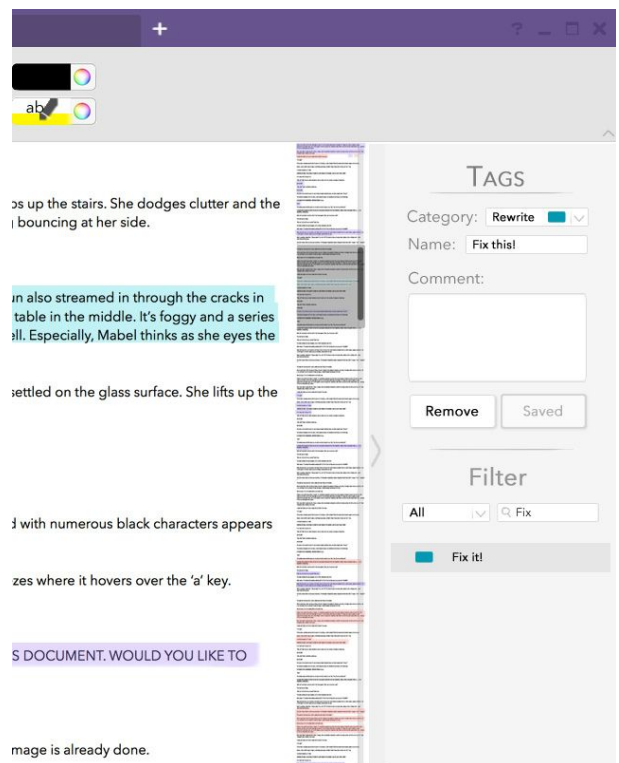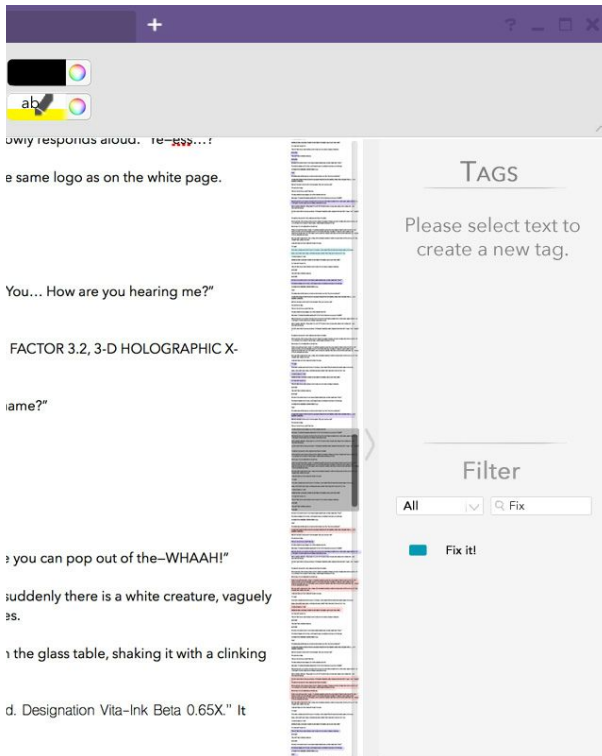Our digital prototype is nearly identical in form to our paper prototype, with mostly only minor revisions made in the transition, since most of our larger changes were done during paper prototype iterations.

- In the paper prototype, the upper left-hand corner of the editor window was a simple button with the word "Goals" on it, taking the user back to the goals page. In the digital mockup, we had a lot more space in that area that could be used. We made the goals button a bit simpler and added a quick reference version of the goals so that writers can see their uncompleted goals while remaining in the document. We also added a total document word count in the same area so the user can easily check the total word count without losing their place.

- We removed the grayed out version of the tag creation window until text is selected. Multiple participants had difficulty recognizing the area was not interactible, and by removing the form altogether, we can avoid any errors. We also made the text displayed in this area less eye-catching because it would likely be distracting to writers in the previous gigantic, bright red state.

- When adding a new tag we now allow the user to chose a tag color from a color wheel rather than providing them a set list of colors. This allows for more variety, based on the user's desire.

- We have also changed the button to add new goals. It is now at the end of the list of goals rather than next to the goals header. The small plus button was harder to notice, and our new button is much bigger and in a more intuitive place, internally consistent with our button to add a new tag.

Discussion

The process of iterative design taught us how to make decisions from one iteration to the next. We realized that with any number of people greater than one, each member will have very strong ideas about how something should look or behave, and those ideas often conflict with one another. Often, we would argue for long periods of time, which can be a healthy process, but in cases where we had to move on, we had to find ways to overcome differing opinions. We learned that the easiest way to decide between multiple design options was to look at our research, interviews and user testings to base our designs in concrete evidence rather than subjective opinions.

Throughout the design process, our application never went through a major overhaul, but rather saw small tweaks in its design. For example, we changed where buttons were placed depending on how visible and easily findable they were, we highlighted and colored certain features for the same reason. The reason we only applied small, cosmetic changes was because of the way user tests were framed. We asked our participants to complete tasks and watched for any difficulties they faced. We did not ask them if the tasks themselves were tasks they wanted to perform as writers. We had left that stage of the design process and were looking to polish our design rather than restructure it. Thus, the changes that resulted from the testing reflected our purpose in doing the tests.

We think we could have made more iterations on our design, but not the same kinds of small iterations that we made in this stage of the design process. Several of our group members wanted to restructure our application in a bigger way after seeing the user prototype and conducting the initial user testings. We wanted to add a new sharing/social media aspect to the application, but we didn't have the time to redo our paper prototype and redo the user testings we had conducted already. The ideas to add a social media aspect came about because after we made the paper prototype, we saw that the two tasks we chose did not work in a very cohesive, coherent manner in the same application. While this class seems to support a single design diamond (due to the time constraints of a quarter), we felt it would be natural to explore a fundamentally different design after having refined our ideas into the first design. That being said, we feel satisfied with our product, and believe it supports the tasks we chose for it.

Appendix

Guide Script for User Testing:

- We are working on a word processor application called TagLine, targeted towards helping writers to write more often
- Specifically, we want to support setting and tracking writing goals and also tagging sections of text to make it easier to return to some sections
- We are looking for areas in our prototype that are unclear or difficult to use, so as you go about the tasks we ask you to complete, it would be helpful to use if you spoke aloud any concerns, questions, or confusions you may have
- We are testing our application, not you, so don't worry if something is confusing. That would be a failing on our design, and it will be helpful to know where our design falls short.

For the first task, try to add a goal of 20,000 words for every two weeks. Let us know when you think you've got it.

For the second task, tag a section of text with the 'Rewrite' tag. Then, search for that tag in your text and remove it.