

## **Supporting Writers: OutWrite**

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While writing fiction requires detailed development of plots and characters, there are few applications to help writers organize the details of their stories. Most authors use word processors, but many prefer to handwrite their initial ideas for better creative stimulation. Authors often write notes throughout their day on notebooks or mobile phones when inspiration strikes. These factors result in divides between digital composition, notes on a mobile device, and physical notes. Furthermore, common notation technologies such as Microsoft Word and OneNote provide no organizational assistance specific to developing plots and characters. OutWrite proposes a way to store notes, as well as organize plot and character development, that could be easily tailored to an author's writing routine. OutWrite's QuickNotes feature would enable authors to enter notes in their preferred format from a mobile device, either typing on the screen, writing with their finger or a stylus, or taking a picture of a handwritten note. All input formats would be recognized by the application as text, so authors could store their notes in a centralized platform without losing the creativity of hand-writing their thoughts. OutWrite would also provide the OutlineIt feature for organizing characters and plots in a more specific way than a generic word processor. Authors could add character bios with links to instances in their story's plot. The plot would be mapped on a plot graph, with plot points storing detailed information and containing links to related characters and notes. Since most authors write on a computer word processor, OutWrite would have a desktop extension that would automatically sync information with the mobile application.

## **Design Research Goals, Stakeholders, and Participants**

Participant AM is working on her first novel. We observed AM through contextual inquiry in a library, as she walked us through the steps of a typical writing session. She keeps a strict schedule in her writing, working for an hour every evening. Word processing is central to her routine; she writes all of her novel on Microsoft Word. However, she uses several different platforms for peripherals, including a Facebook group for character development, OneNote to sketch timelines, music playlists, and other Word documents for side plots. She also saves her work in Google Drive, which forces her to copy and paste from Word. While she backs up in Drive so she will not lose her work, she avoids writing in Drive because of the slower interface. AM's routine made us consider an application that would support storing notes and writing on the same platform while automatically saving to the Cloud, to avoid copying and pasting in different applications.

Participant CT is a professional writer, teacher, and staff member at Hugo House. We conducted an interview with her over email, asking open-ended questions so she could

elaborate on her writing process. Unlike AM, CT does not have a strict writing schedule, instead writing only when she wants or needs to. She uses Microsoft Word and Google Docs to store her writing, notes, and outlines. CT expressed a desire for more detailed version control that would allow her to revert sections of her writing to previous versions. She also noted that the students she teaches have trouble finding their own voice as beginners. Our interview made us consider a more specific outlining tool than a word processor, as well as how we might help beginning writers find their voice.

Participant AB is a graduate student in library and information science who has been writing diaries and poetry since high school and studied poetry and creative writing at the University of Oregon and the Attic Institute. We conducted an interview with AB at the Odegaard Writing Center. AB emphasized the impact of writing groups, which she attends for inspiration and feedback from other writers. AB does not keep a strict writing schedule, but she writes ideas in a notebook throughout the day, and then types the ideas into Microsoft Word. Handwriting in a notebook helps her be more creative than typing would. She is worried that using a writing tool might make her writing cliché, but she is interested in a tool to find similar works by other authors for inspiration.

We also contacted the Bricolage journal, others at Hugo House, and a writing professor, all of whom expressed interest, but did not respond to our requests for an interview. We also tried returning to the Odegaard Writing Center, but could not find anyone interested in participating. Unable to increase the quantity of our participants, we sought to improve the quality of our research by interviewing CT again, this time asking more detailed questions about her reasons behind her writing routine. In addition to the information above, she mentioned that she listens to music to get in the mood to write, similar to AM.

We chose the contextual inquiry method and the interview method to conduct our research. We thought contextual inquiry would allow us to observe each step of a writer's process, forcing us to consider in detail how the writer organizes their work. The interview method gave writers more privacy than observing them as they worked, so we found it to be a better choice for participants we did not know beforehand.

We decided soon in the design process to focus on fiction writers, since the concepts of characters and plot are less common in non-fiction. Initially, we wanted to conduct research with both experienced authors and those who were just beginning to write fiction. We hoped to take note of similarities and differences in the two populations, hypothesizing that experienced writers might be more firmly set in their routines, while new writers would be less confident. After conducting research, we realized that the two populations were not as different as we expected — one of the new writers we spoke with has a strict routine, while the most experienced of participants writes only when she feels the urge.

## **Design Research Results and Themes**

We noticed several common techniques among the participants. One of the main commonalities was the use of a word processor, especially Microsoft Word and Google Docs. Although some used other platforms for side notes, all of the writers used a word processor to write their main stories. We decided that a word processor should remain central. We

initially considered designing an application that was a word processor with additional features, but ultimately realized that existing processors provide sufficient support. We decided instead to focus on supporting outlining and note-taking, which do not have existing applications, but we expect writers to consider using their word processor of choice.

Another theme common among all participants was the desire to back up work to avoid accidental deletion. All of the participants save copies in Google Drive except AB, who backs up only in Microsoft Word. We agreed that it would be easy to support backing up automatically to the Cloud to allow writers to avoid unnecessary copying and pasting.

Other themes were common among several writers, though not all. Two of the participants jot down ideas throughout the day, and one, AB, prefers handwritten notes because they are faster and more creative. We ultimately decided to support writing on the go even though only two participants mentioned it because the other participants mentioned making notes in Word or OneNote, so they could use this feature as well. Two of the writers we spoke with, CT and AM, make outlines and character data sheets in word processors on their computers. We decided to support these tasks in our design because word processors are very generic and offer little support specifically for organizing fiction outlines. Two of the writers, AM and AB, draw inspiration from writing/character development groups. We considered supporting this in our design, specifically by providing a role-play platform for character development, a forum for beta reading, or a program to find works to read for inspiration. Finally, AM and AB mentioned listening to music as they write. We considered supporting a playlist tailored to writers, as well as a tool for suggesting suitable writing music.

Ultimately, we realized that each writer has their own personalized system, so we wanted to create a design that allowed them flexibility rather than imposing a new structure. We chose to support note-taking and outlining because they seemed to be the most universal and generalizable tasks.

**Design Research Themes:** The interviews we've suggested many different new aspects of writing. Many writers use Microsoft Word to edit their works, so our application has to cooperate with Word or provide a similar user interface. One major common issue participants all have is the cumbersome steps needed to backup their works. To help with this problem, we can develop a backup system and introduce version control. In addition, some writers write down ideas in the day so that they can remember them when they get home, so help writers write notes on the go is another demand. Also, we saw the need to help writers write outlines, character biographies, time char, and ideas and store them in an organize way. Besides that, participants suggested the importance of meeting with people and discussing their work or characters with others. Thus, an online chat room or forum can be included to help people interacts with their friends or find new friends. All the informations like outlines, character biographies that writers have can be quickly shared with other writers. In addition, a check for writing voice is suggested by the experience writer, and we can consider it if our technology for recognizing writing voice is capable of doing the job.

## **Task Analysis Questions**

### **1. Who is going to use the design?**

Writers will use the design, mainly new, younger writers. It's geared towards fiction writers mainly, but it's usable for all writers.

### **2. What tasks do they now perform?**

Currently they perform a multitude of tasks individually including writing by hand, typing into a word processor, taking notes, keeping track of outlines and character biographies, figuring out external character development, and finding advice and sources of inspiration.

### **3. What tasks are desired?**

A few tasks we'd want to have would be to store an outline and character biographies for the different characters. We may want to have a chart or timeline of how the characters progress over time as well. We'd also want to have tasks for keeping track of character biographies and outlines, as well as timelines for where the character appears in the document and how often.

### **4. How are the tasks learned?**

We learned that the consumers wanted these tasks because they asked for features like this, and because they would be helpful for unifying the organizational structure of writers and allowing them to grow in their creativity.

### **5. Where are the tasks performed?**

The tasks are performed on an app, which can be running in the background of any existing word processor, and contains a cell phone version. The data syncs between the two, so that people are able to make notes and changes on the go, but import them into the story later.

### **6. What is the relationship between the person and data?**

The person is able to save as much or as little data as they want, and if they find that a feature isn't useful to them, they don't need to use it. The people don't need to share any of the data if they don't want to, and they are the only ones who have access to it, yet the syncing allows it to be used on multiple platforms

### **7. What other tools does the person have?**

They have an individual word processor, and pen and paper, or whatever their preferred means of writing is. They also have any sort of art mediums they use to design the character, and personality quizzes to help determine the type of character they are, though we may include one in the biography. Some of them use handwritten notes to write down ideas.

### **8. How do people communicate with each other?**

Through their own writing groups or individual writing forums. There is no way for them to communicate with each other built in as of yet, though if it is a popular feature we might implement a "send note to a friend" feature, but that would be a stretch goal added after the completion of the first project.

### **9. How often are the tasks performed?**

As often as desired, though daily if possible. Writing daily is one of the most well known writing tips, and even if the app isn't opened every day, the main writing piece should have at

least some writing in it done daily. Editing the biographies and events may be far less frequent, other than during editing points, possibly. It might be common to look back on the app to check in and see the progress made.

#### **10. What are the time constraints on the tasks?**

None besides what the writer sets and their daily schedule. The app is designed for the writer to break out of time constraints, allowing them to use the app on their own time, when they can't write as often as they want.

#### **11. What happens when things go wrong?**

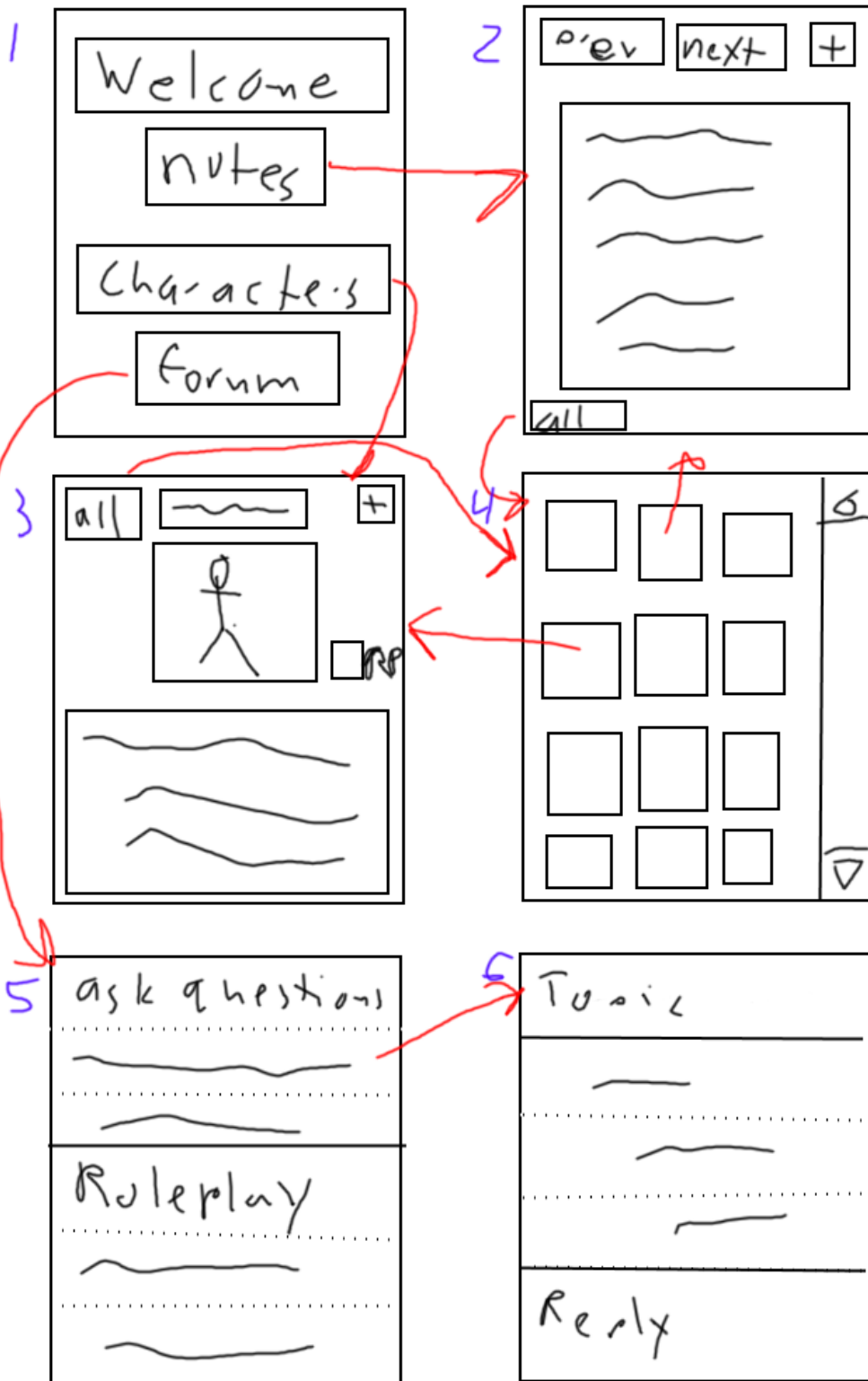
The biggest external threat to writers is that somebody could steal their ideas. By using this method, it's not possible, since there is no way to show their characters and plot in the original design, unless they go out of their way to do so of their own volition. The only other concern is if the app doesn't sync for whatever reason, in which case, the user would have to look over at changes made on the other device, rather than on their computer app, while writing.

### **Proposed Design Sketches**

#### **Design #1: App, mainly for phone use, but compatible across devices**

This design supports the tasks of a forum for roleplay, a forum for inspiration and feedback, keeping track of character biographies and storing notes. The app allows for users to write notes on the go, while still keeping track of what's going on, while the roleplay forum allows them to get involved and inspired wherever they are. Keeping the forums on phones also allow for quick answers to questions for anyone who is scrolling through the feedback portion. The character bio allows users to check if their roleplays and notes are accurate wherever they are, and they can, if they have time, add more details to be used later, when they're back on their home computer.

The high level idea of the app design is that it's for writers who are on the go a lot. It's got features, such as a place to store character biographies and several questions down below, not shown in the sketch to help a person get to know their character better. The other feature of note is the quick note feature. These notes can be in a variety of formats, however the user likes. We can then allow the user to sync with a desktop version to allow them to access their notes on their computer at a later point. These notes and character settings are able to be used in offline mode, but can be synced across platforms, to allow users to use more than just device if they have it. The other two main features are rolled into the forum option. These features are both a forum to ask for advice or receive feedback and a forum to roleplay as characters that have been created in the app already using the biographies. The forums are rolled together because they are both similar in nature, appearance and how they are used.



## **Design #2: Stand-alone mobile phone application**

This design is a phone application that enables writers to work on the go through both organizational and creative features. The app includes note-taking and character/plot-tracking sections for organizational support. In addition, music and library sections allow writers to consume and find new music and books, respectively. We created this design after observing that several research participants write notes throughout their day.

### **Task 1: Write notes quickly on the go, in order to save current thoughts**

From the main screen, the consumer clicks on the “QuickNotes” button to reach the note-taking feature. They can edit old notes displayed on the left sidebar or add a new note, and they can either write with a finger/stylus or type on the phone keyboard. They can also take pictures of physical notes, which will be processed as text and added to the notes section for saving and editing.

### **Task 2. Keep track of outlines and character biographies**

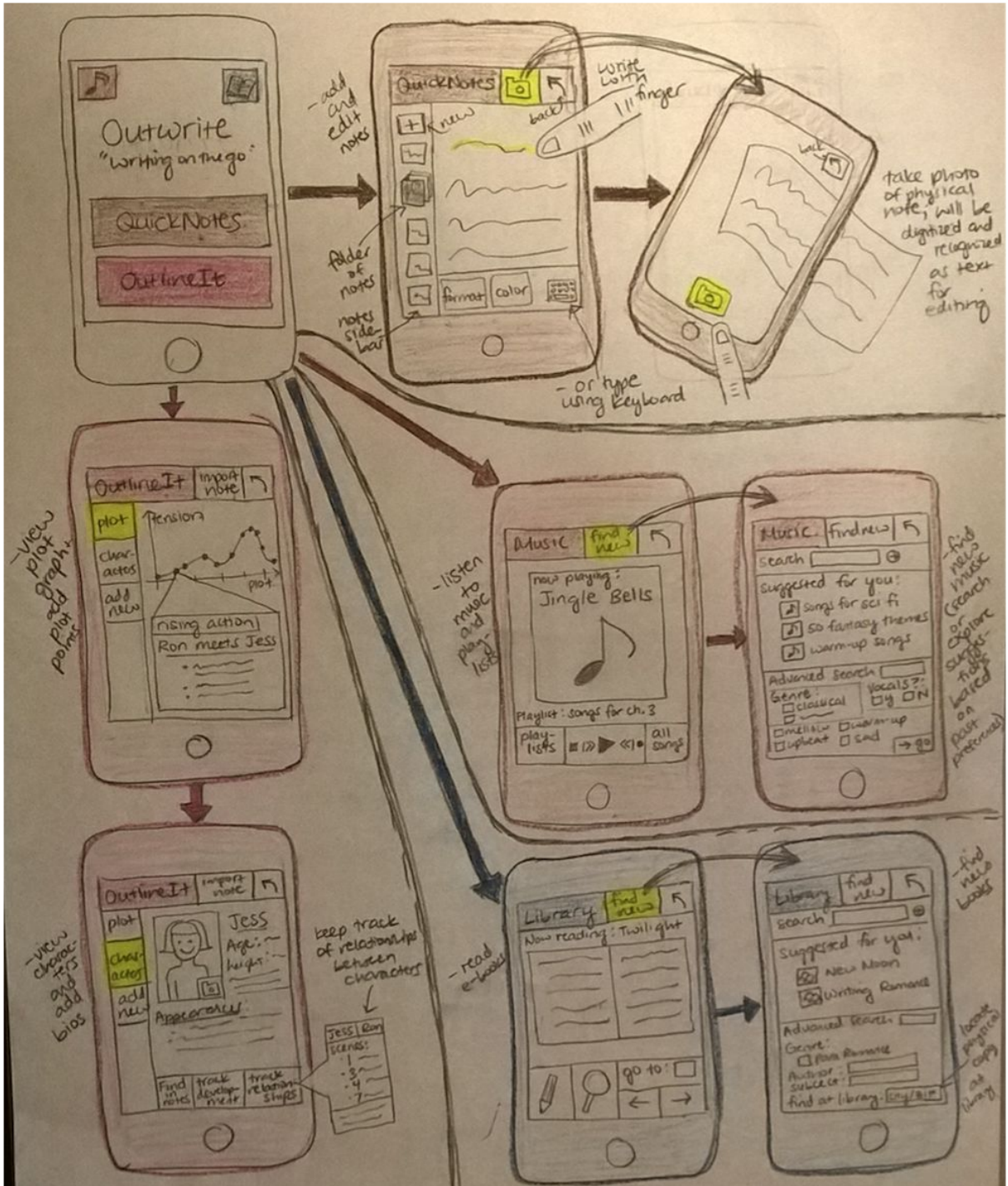
From the main screen, the consumer clicks on the “OutlineIt” button to reach the plot and character feature. In the plot tab on the left, they can see a visual graph of their plot as well as click on, add, and modify plot points along the timeline. In the character tab on the left, they can add and edit character bios, keep track of whenever a character appears in their work, and track relationships between characters.

### **Task 3. Listen to music while writing to set the mood**

From the main screen, the music note icon takes the consumer to the music player, where they can listen to music from their saved playlists. Selecting “find new,” they can view suggested music based on their past preferences and genre, with all suggested music designed to help the writing process. They can also search for songs in genres and moods.

### **Task 4. Read from other writers for inspiration**

From the main screen, the open book icon takes the consumer to the reading function, where they can read e-books stored on their device, as well as make notes on the books. Selecting “find new”, they can view suggested books and search for new ones, as well as find hard copies in local libraries.





### **Design #3: Stand-alone desktop word-processing application**

This design is a desktop application that enables writers to use a platform that has specifically been designed for creative writing. The application includes a main word-processing window containing multiple tabs switch between, and a side-pane for controlling and discovering music.

#### **Task 1: Writes notes quickly on the go, in order to save current thoughts**

Although the application does not necessarily support writing notes quickly on the go unless the user carries a laptop to write with, the fact that documents are loaded onto the main window as tabs means if the user has these notes created, they can easily load them as an extra tab. Even if the notes are handwritten, a snapshot of the notes can be loaded as a tab. These streamlines the process of going back to notes that have been written on the go, in order to transfer the ideas onto the main document.

#### **Task 2: Keep track of outlines and character biographies**

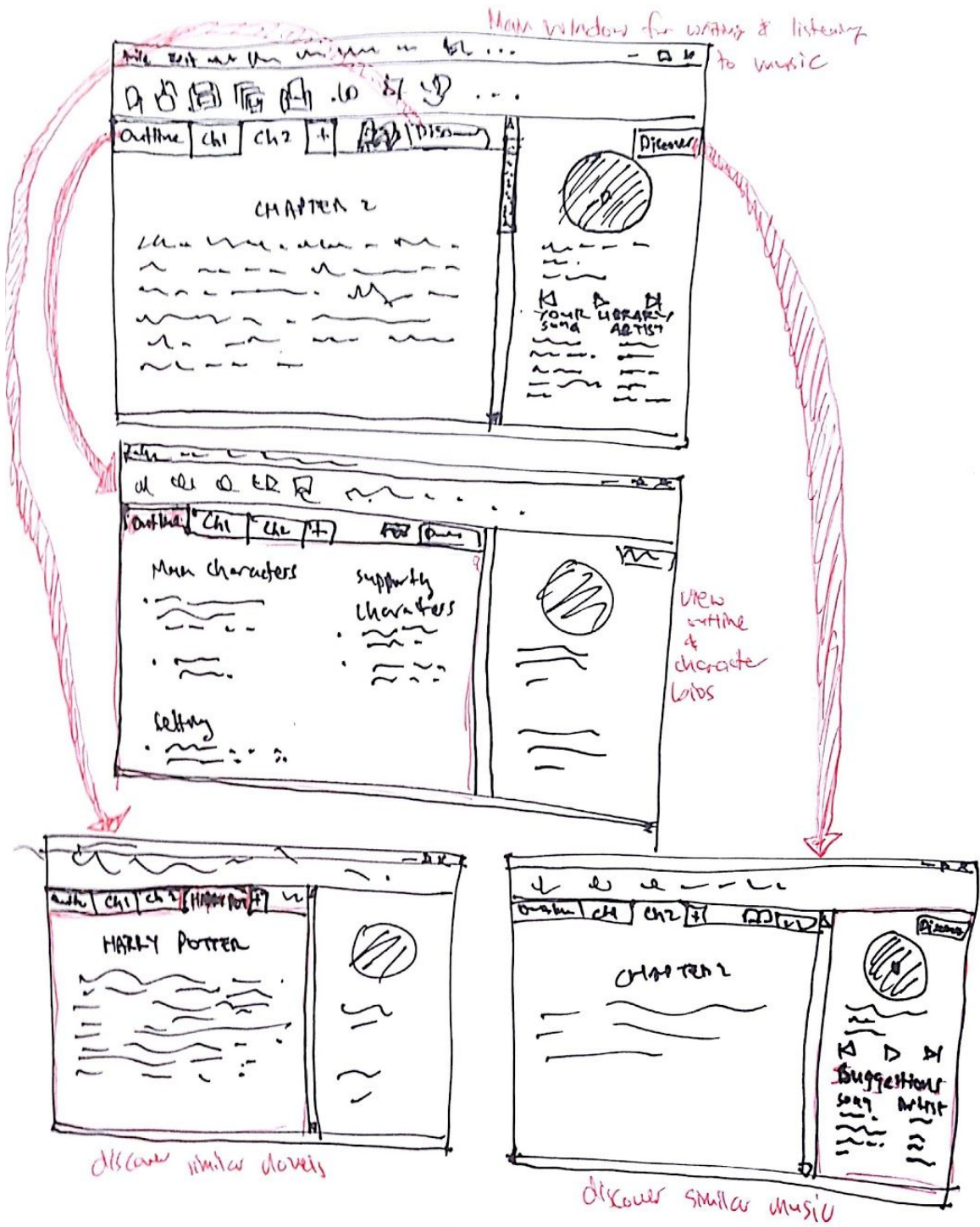
If the user has created a typed document or a snapshot of handwritten notes containing outlines and character biographies, these files can be loaded onto the application as another tab to choose from. They can annotate and edit these notes using the tools included in the app. The navigation is kept consistent with most other desktop applications – navigate to “File”, “Open”, then choose a document from the file explorer menu.

#### **Task 3: Listen to music while writing to set the mood**

The side-pane contains a music player, which can be linked to the user’s profile on music streaming services such as Spotify and Soundcloud, and contains buttons to allow the user to control their music. Selecting the “Discover” button allows the user to find other suggested songs based on their past preferences. They can also search for songs in genres and moods.

#### **Task 4: Read from other writers for inspiration**

From the main window, the open book icon takes the user to the reading function, where they can read e-books stored on their device as well as make notes on the books. Selecting “Discover”, they can view suggested readings based on their past preferences or writing style.



## Written Scenarios

### Scenario 1:

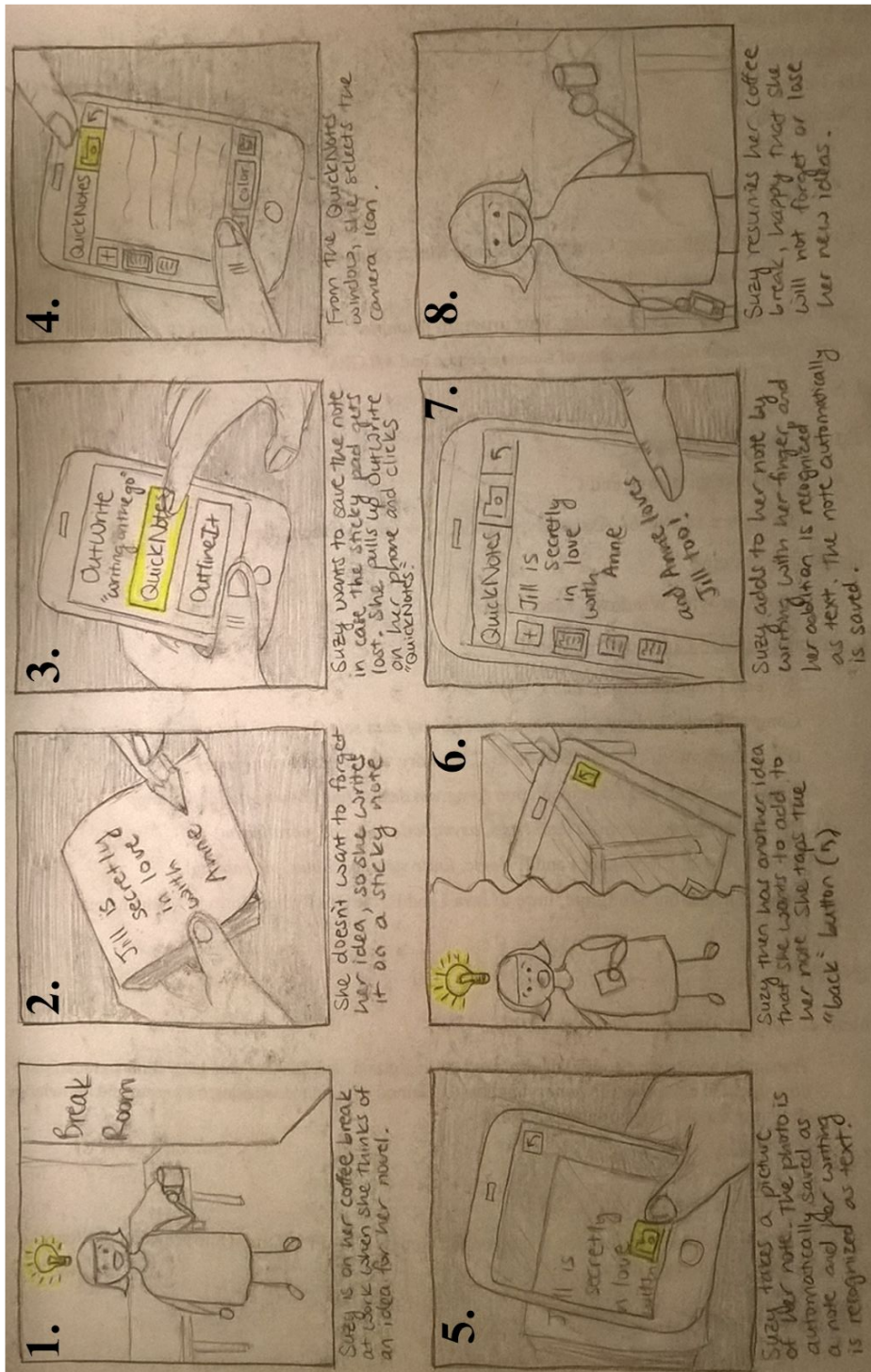
Suzy is working on the first draft of her second novel. She has an office job, so she goes to work during the day and writes a chapter each night she comes home. During the day, she often gets ideas about her book, and she wants to save her ideas so she won't forget them without taking too much time. One day, she gets an idea about her characters' relationship while on her coffee break (1). She jots down her idea quickly before she forgets it, writing with a pencil on a sticky note pad she finds on the table (2). Suzy then adds her idea to her writing plan in OutWrite. She pulls out her phone and opens the OutWrite app, then taps the QuickNotes button from the main screen (3). Inside the QuickNotes feature, she selects the camera icon (4). She takes a picture of the sticky pad (5). Suzy is about to turn off her phone when she gets another idea that adds onto her first. Still in camera mode, she touches the back arrow to return to the QuickNotes page (6). The picture she has taken has been automatically saved as a note, and her writing has been recognized as text by the application. She adds to the note by writing on the screen with her finger, and her addition is also recognized as text (7). Automatically, OutWrite tags the note with the names of the characters mentioned in it, so when she views the characters on OutlineIt, her new note will be linked. Suzy closes OutWrite, satisfied that she has saved her idea and that it is already automatically integrated into her outline (8). She returns to work and plans to reference her note when writing that evening.

### Scenario 2:

Doug is a journalist with flexible work hours, so he writes novels on his laptop at home during his free time (1). As he is writing on a word processor, he finds that he cannot remember when a certain character is introduced in the story (2). To avoid introducing inconsistencies, he opens the OutWrite application on his desktop. The desktop app is synced to his phone, so both devices include up-to-date plot and character outlines. From the welcome screen, Doug clicks on the link to the OutlineIt tool (3). Inside OutlineIt, he is automatically directed to the plot tool, so he clicks on the Characters button on the left sidebar (4). This takes him to the character info page. He scrolls through the list of characters along the top bar until he finds the character he is unclear about. He clicks on the character's name to open the character bio. The bio contains basic information (age, appearance, etc), as well as the character's role in the story, including links to first and last appearance (5). He clicks on the link to the character's first appearance and is redirected to the plot function, where the annotation for the chapter where the character is introduced pops up on the screen (6). Now that Doug knows when the character is introduced, he closes the OutWrite application and resumes typing his novel on a word processor (7).

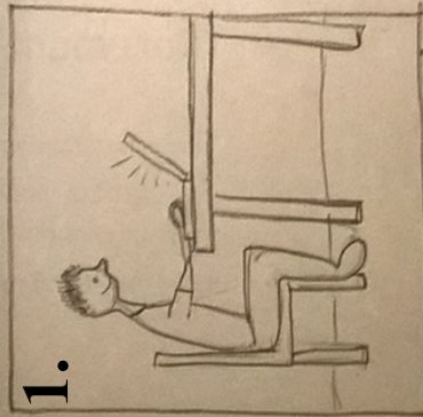
## Storyboards of the Selected Design

Our selected design is a phone application for taking notes on the go and organizing characters and plots. After receiving feedback during section, we decided to add a desktop application that syncs automatically with the outline and notes on the phone. Discussing in section made us realize that having the persona take out his phone to look at his outline while working on a computer is less logical than supporting a desktop extension. The second storyboard has been update to include this change.



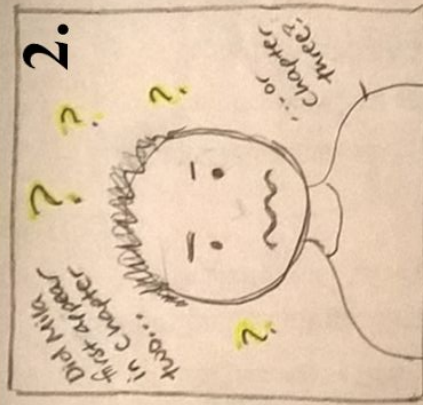


1.



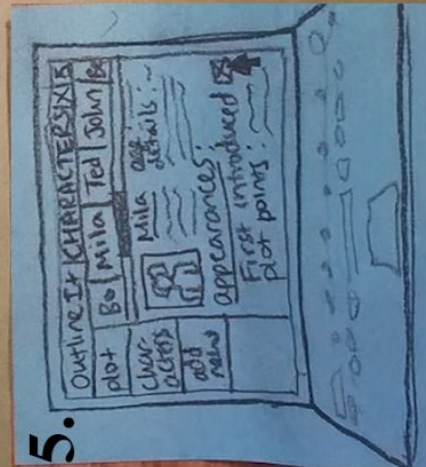
Doug is at home writing his novel on his laptop.

2.

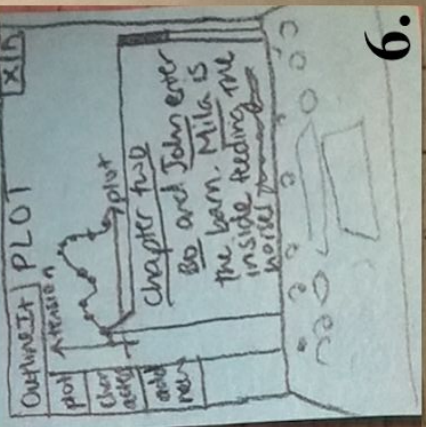


He gets stuck when he can't remember a detail about his story.

5.



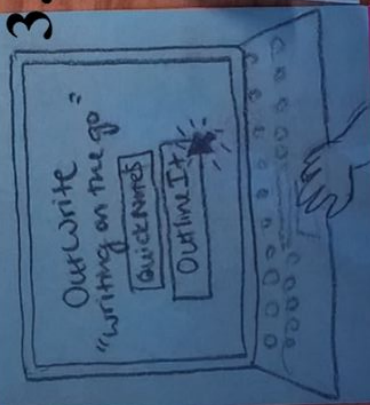
He finds Mila on the top bar of characters, then clicks on a link to her first appearance.



6.

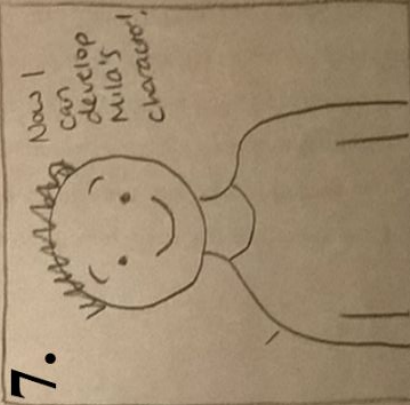
Doug is redirected to Mila's first appearance on the plot timeline.

3.



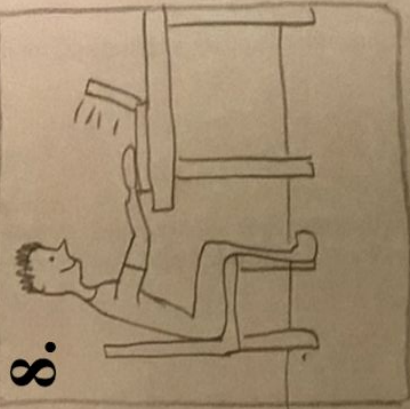
Doug starts the OutWrite app on his laptop, selecting Outline It. The app has been synced to his phone.

7.



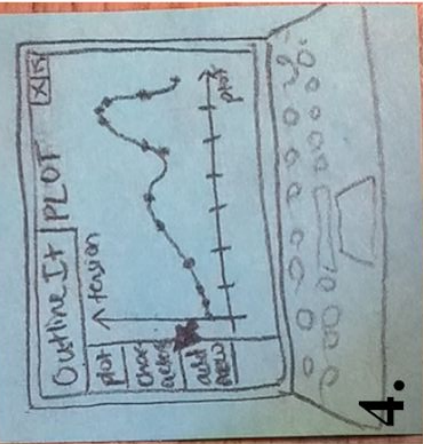
Doug is no longer stuck, having found the detail he needs.

8.



Doug goes back to working on his laptop.

4.



Doug selects the "characters" tab