

SW Engineering CSC648-848-01 Summer 2023

Zenful

Team 2 (Spider Computer Scientists)

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Milestone 1

06/26/23

History Table:

Milestone's Versions	Date
M1V2	06/26/23
M1V1	06/12/23

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Executive Summary

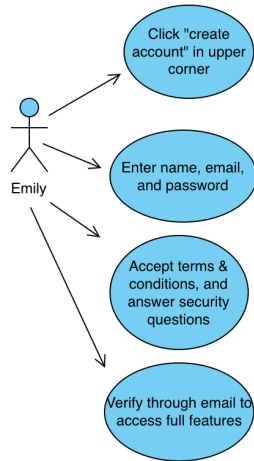
Are you feeling stressed, lonely, or lacking productivity? It seems as though it's either or, being productive with your tasks or relaxing. We have apps that help you relax, and we have apps that keep you to stay on top of your tasks. But there is never something that can help us do both. Why is it that one has to be over the other? Why can't both go together? It is said that stress might come from not taking action over something that you can have some control over. Why not create an application that focuses on this quote and takes it to another level, focusing on relaxation and productivity. This way, you can ease your stress in a double hit; one with being productive, and the other one by taking things slow and reflecting on where you stand mentally.

With our application, we can do both. This project is about a peaceful, mental-health positive app called "Zenful" where you can both be productive and have a relaxing session of journaling. The web app will feature a collection of calming sounds for you to play while you either make a productive to-do list, or journal about your different days. While you are doing this, accompanying you will be an animated friend that stays with you so you do not feel lonely. The importance of this application is that it is centered around you. This app takes both things that seem so parallel, relaxing and being productive, and it merges them into two. You never have to feel as though you are being unproductive while you are relaxing when you are Zenful. Everyone can create an account within the application, and you will come back to your progress as it is saved. You will have different tabs, one with a journal, one with a to-do list and one with a music listing. You can also pick your own music if you choose. Along with the music, you can pick an animated figure that will follow you in a corner so you'll never be lonely. The application will feature organized ways to write to-do lists, including a title, and crossing off the ones that are done. With your journal, you write the date and a title to also keep your progress in check.

This is unique because it encompasses a music feature, and an animated feature, both centered around comfort to help the user ease, as they continue to do what is productive for them. The relaxation advantages aspect of our application, mixed with our user-friendly features, topping it off with a productivity boost, makes our app the center of you.

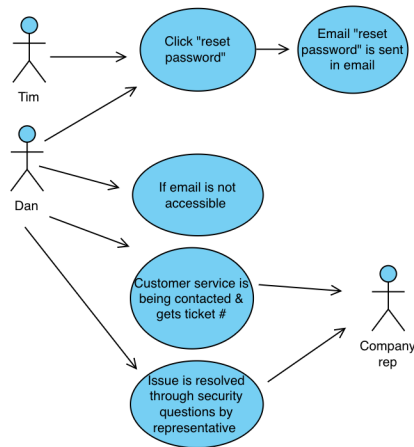
Main Use Cases

1. Use Case (Creating an account)



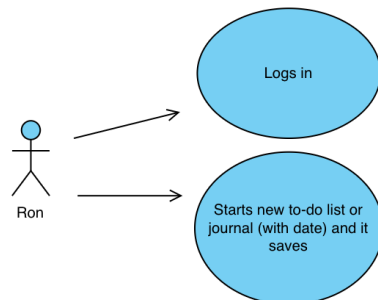
Emily loves to be productive but is having a hard time because it stresses her out. She found Zenful, and was intrigued by how you can both have a relaxing time, but be productive. She is taken to the front page where she is met by an introduction, and in the corner is a “login/create account” here. All she has to do is put her email, her name, sign terms & conditions, answer security questions, and put a password. She cannot access full features until verifying with her email.

2. Use Case (Customer support with account access issues)



Dan is having issues with his login. He could've sworn his password was right, but it is not giving him access to his account. He is worried because his email isn't working, so he cannot get a "reset password" message in there. His friend, Tim, also forgot his password, but he had his email so he had an option to reset the password. He, however, has to contact customer service with the correct email address. He gets a ticket # and the company representative assists him (will ask about his security questions).

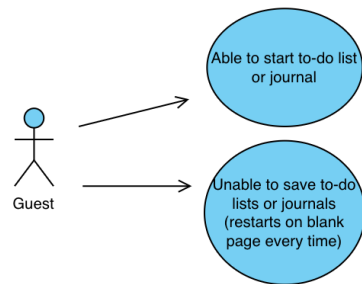
3. Use Case (Using to-do list/journal as a registered account)



Ron is a registered user in Zenful. He hasn't logged into the site for a long time because he was busy with his job, where he worked 12 hours straight. His job is

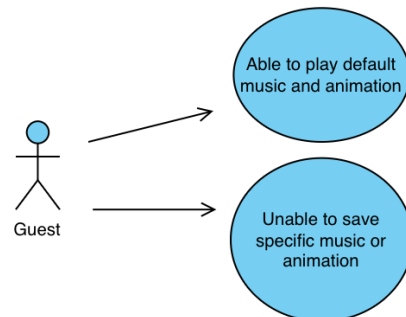
draining and he needs an escape. He wants to go inside his journals in this app to see how he was feeling before he joined this new job. He needs to log in. He opens his page and sees all his saved journals and saved lists.

4. Use Case (Using to-do list/journal as a guest)



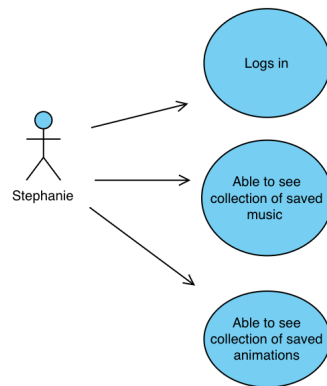
A user wants to try out an app just for a short term homework assignment that will take them 2 hours to do. It will take them 2 hours because they usually get very distracted. A simple task takes them a long time because they have ADHD. This user is able to write a to-do list, listen to music, and write a journal. This user, however, will lose all progress once the page is refreshed because they are not a registered user of Zenful.

5. Use Case (User using sounds/animation as a guest)



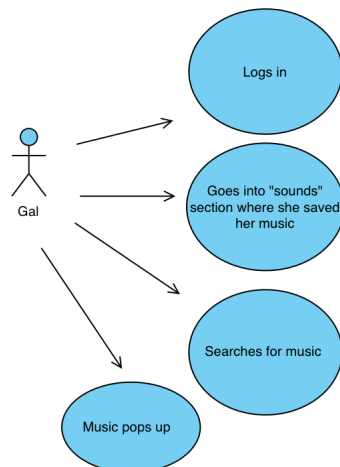
A user wants to play specific animation, as well as music while they color in their book they purchased from a store. They can listen to music and have animation on the site, but their progress will not be saved because they are not a registered user with Zenful. Every now and then, default animations and music might be discontinued so this user has no collection, and can only use the ones available now while they finish their coloring activity.

6. Use Case (User using sounds/animation as a registered account)



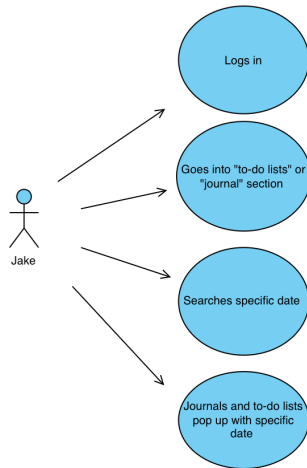
Stephanie has been a loyal user for a long time in Zenful. She enjoys being on the app because of the peace it brings her, while she stays productive but also relaxes. She had a rough day, and she was remembering how last month was a very relaxing month. She decides to log in with the intention of reading her past journal and listening to a saved song that is no longer accessible. She searches up the date of the month, and finds her past journal. She starts reading it, along with the song in the background and is awakened by hope.

7. Use Case (Searching sounds for registered account)



Gal has too many saved sounds and animations. She always does this, she hoards things because of the emotion they hold and now her Zenful account is very overwhelming. She wants to be able to search up ones that are from a while back, and possibly get rid of some. She is a registered user, so she logs in. All she needs to do is search up the key words and they will pop up. She now can clear her space and focus on the most important memories.

8. Use Case (Searching dates for to-do list/journal as a registered account)



Jake is a registered user and has many journal entries. He wants to find the one that was on his birthday. He wants to do this because he doesn't remember what some of his friends got him due to some drinks he had later that night. He knows he received all the gifts, but we forgot who gave him what. He loves his friends and wants to send them all thank you cards. He logs in, and types in the date of his birthday, and sees his journal entry. Now he knows who got him what, and was able to reminisce.

List of Main Data Items & Entities

General User: can access only the Home page. Needs to login/register to use Zenful.

Registered User: can access Journal and To-do list. Needs to login to use Zenful.

Admin: can access all data and modify database. Needs to login to access data.

Home Page: accessible to all users. Contains buttons to sign-in and register.

Registration: accessible to all users. Registers a new user into the system.

Login: accessible to all users. Logs in registered users.

Journal: accessible only to the specific registered user that created the journal, and the admin.

To-do List: accessible only to the specific registered user that created the to-do list, and the admin.

Features: includes animations and music. Accessible to all registered users, and the admin.

Initial List of Functional Requirements

1. General User
 - 1.1. The system shall display the Home Page for all general users.
 - 1.2. The system shall provide the option for all general users to register.
2. Registered User
 - 2.1. The system shall provide the option for all registered users to login.
 - 2.2. The system shall provide the registered user access to Zenful once they are logged in.
3. Admin
 - 3.1. The system shall require the Admin to login before accessing Admin permissions.
 - 3.2. The system shall provide the Admin with all data access.
 - 3.3. The system shall allow the Admin to access and modify the database.
4. Home page
 - 4.1. The system shall display step-by-step instructions to use Zenful.
 - 4.2. The system shall display log-in and register options for the user.
5. Registration
 - 5.1. The system shall record the user's first name.
 - 5.2. The system shall record the user's last name.
 - 5.3. The system shall record the user's email address.
 - 5.4. The system shall record the user's username.
 - 5.5. The system shall record the user's password.
 - 5.6. The system shall display whether the user's username is available.
 - 5.7. The system shall display whether the user's email is available.
 - 5.8. The system shall display whether the password matches the confirmed password.
 - 5.9. The system shall display that the user needs to choose a different email if their email is unavailable.
 - 5.10. The system shall display that the user needs to choose a different username if their username is unavailable.
 - 5.11. The system shall display that the password and confirmed password fields must match in order to register.
 - 5.12. The system shall generate a unique user identification number for each registered user.
 - 5.13. The system shall allow the user to edit their registration information before submitting the registration form.

6. Login
 - 6.1. The system shall allow a registered user to login.
 - 6.2. The system shall require a registered user's username to login.
 - 6.3. The system shall require a registered user's password to login.
 - 6.4. The system shall allow the registered user to select "forgot password".
 - 6.5. Forgot Password: The system shall allow the registered user to enter their email address in order to receive an email with instruction to reset their password.
 - 6.6. The system shall record the current signed-in registered user status.
 - 6.7. The system shall allow a registered user to logout.
 - 6.8. The system shall allow a registered user to change their password.
 - 6.9. The system shall allow a registered user to view and edit their account details.
7. Journal
 - 7.1. The system shall record journal entries.
 - 7.2. The system shall display existing journal entries for the registered user.
 - 7.3. The system shall allow a registered user to edit their journal entries.
 - 7.4. The system shall allow a registered user to search for a journal entry.
 - 7.5. The system shall allow a user to select a journal entry for editing.
 - 7.6. The system shall allow a registered user to create a new journal entry.
 - 7.7. The system shall allow a registered user to delete a journal entry.
 - 7.8. The system shall allow a registered user to add a 4 digit passcode to a journal entry for privacy.
8. To-do List
 - 8.1. The system shall record to-do lists.
 - 8.2. The system shall display existing to-do lists for the registered user.
 - 8.3. The system shall allow a registered user to edit their to-do lists.
 - 8.4. The system shall allow a registered user to mark tasks as complete or incomplete on their to-do lists.
 - 8.5. The system shall allow a registered user to search for a to-do list.
 - 8.6. The system shall allow a user to select a to-do list.
 - 8.7. The system shall allow a registered user to create a new to-do list.
 - 8.8. The system shall allow a registered user to delete a to-do list.
9. Features
 - 9.1. The system shall display an animation if animation is toggled on by a registered user.
 - 9.2. The system shall allow a registered user to toggle their animation on or off.

- 9.3. The system shall allow a registered user to choose from available animations.
- 9.4. The system shall allow a registered user to upload their own animations.
- 9.5. The system shall allow a registered user to play music through Zenful.
- 9.6. The system shall allow a registered user to pause music.
- 9.7. The system shall allow a registered user to listen to available music.
- 9.8. The system shall allow a registered user to upload their own music.
- 9.9. The system shall record uploaded music.

List of Non-Functional Requirements

1. System Requirements

- 1.1. Web app should be available on personal computers and laptops.
- 1.2. Web app should be able to service a few thousand clients.
- 1.3. Will take about 100 GB of bandwidth a month.
- 1.6. Web app will be easy for anyone to use.
- 1.7. If there is a delay on using site user should only experience a few seconds delay.
- 1.8. There should be enough storage for users to upload music to the website.
- 1.9. There should be enough storage for users to have hundreds of notes and or journal pages.
- 1.12. If there is maintenance there will be a banner on the website for all to see.

2. Coding Standards

- 2.1. All code is written in JavaScript.
- 2.2 All code will have notes attached for easy maintenance on scheduled days.

3. Content and Appearance

- 3.1. Landing page should have a neutral background.
- 3.2. The forefront of the page should be a highlight reel for the sites features.
- 3.3. There will be the site name and or logo in left hand upper corner.
- 3.4. Middle top will have maintenance schedule.
- 3.5. The upper right hand side should have the login/signup option.
- 3.6. The highlight reel will be in the middle of the page.

3.7. Site will have a neutral and cool toned theme for the website until user chooses their own theme for their usability.

3.8. There will also be a setting for light or dark.

3.9. There will be an option for logging in on the upper right hand side of the page with links to account settings.

3.10. Under the logo will be the header on the left hand side: Notes, Journals, Music, Avatar, Themes, Account.

3.11. On the bottom of the page shall be links to about us, faqs, contact us, terms of use, privacy policy.

3.12. The side should have a menu option to flip between the music section and the current page.

3.13. The companies information: name, address, establishment, last time site was updated should be on the bottom of the page.

3.14. Above companies information should be the Faq, About Us, Contact Us, Terms of use, Privacy Policy.

3.15. When in the notes tab, there will be title of note, date, saving function on the left hand side.

3.16. The title and date will be larger than the saving function.

3.17. Under the title of the note will be the file options, edit, insert, format, and help.

3.18. File options, edit, insert, format, and help should be slightly smaller than the title and date.

3.19. Under file options should be the Font, Zoom, Text Style, Text Size, Highlighter, Template, and Print function.

3.20. On the left hand side there will be a area where the titles of notes are listed.

3.21. On the right hand side there will be the Account function.

- 3.22. The header from the dashboard will be visible in the middle of the top of the page.
- 3.23. At the bottom of the page is the links to About Us, Faqs, Contact Us, Terms of Use, Privacy Policy. The company information and last update of site/feature.
- 3.24. In the bottom right should be the animated gif/animation.
- 3.25. The music player should be in the bottom left.
- 3.26. The background should be user pick and in the foreground should be the 'paper' the user is typing on.
- 3.27. When in the journaling tab, there will be a date at the top left hand side.
- 3.28. There will be the choice to add a title or leave just the date.
- 3.29. There will be the files, insert, format, edit, and help functions under the date.
- 3.30. The date should be larger than the files, insert , format, edit, and help functions.
- 3.31. Under files, insert, format, edit, and help should be font, font size, zoom, and print function.
- 3.32. On the right hand side should be the account function as well as the passcode toggle.
- 3.33. At the bottom of the page should be the About Us, Faqs, Contact Us, Terms of Use, Privacy Policy, Company Information and last update of site/feature.
- 3.34. In the bottom right should be the animated gif/animation.
- 3.35. The music player should be in the bottom left of the screen.
- 3.36. The background should be the users pick.
- 3.37. In the foreground should be the 'paper' the user is typing on.
- 3.38. When in the music tab there should be a mini player in the top left hand side.

- 3.39. It should have a play, pause, and back and forth function.
- 3.40. On the top left under the player should be the functions: Playlist(s), Browse, Just for You, Trending.
- 3.41. On the main page should be the pages that are toggled.
- 3.42. The page should show the background that the user has chosen.
- 3.43. At the bottom of the page should be the About Us, Faqs, Contact Us, Terms of Use, Privacy Policy, Company Information and last update of site/feature.
- 3.44. In the right hand side should be the account function in the upper right.
- 3.45. In the bottom right should be the animated gif/animation.

4. Security

- 4.1 The user will need to login in order to access any of the files on the server.
- 4.2. This will enable them to ensure their information is kept private and not open for strangers to engage with their work.
- 4.3. When toggled on the user will be prompted to enter a four number code for their passcode.
- 4.4. Users data should be stored on site storage.

5. Marketing

- 5.1. To market this product we will provide information on the key aspects of the site such as the ability to have a little animated friend that will help keep users motivated to use the app.
- 5.2. We will also tote about how you can add your music to the library and ensure that they can customize the page in preset themes.
- 5.3. The big point is that the app is able to have music, an animated gif or animation in the corner, customizable page themes, journal and note taking and the ability to passcode notes.

6. User Data

6.1 User data that will be collected is as follows: music genres liked by user, user age, user gender.

6.2. This information is gathered to help further the understanding of what the users enjoy and what can be added in the future for more user engagement.

6.3. This information is only used for the furthering of user enjoyment and is not sold to any outside parties.

6.4. User information is tracked through cookies.

6.5. User's have all rights to their privacy information and can opt to decline accepting trackers.

6.6. If a user decides to decline having their information stored, their information will be placed on a list of do not track.

6.7. Any change to the privacy policy will be sent out in an email to all users for them to accept again and or decline.

6.8. As well as a notice placed on the website header.

6.9. Last update to privacy policy will be placed at the bottom of the page.

6.10. The user has the right to request a copy of what information we have collected from them at any time.

6.11. Registered user will be able to accept or decline terms of conditions upon registering.

6.12. User will have to right to retain their information and usage data.

6.13. User shall have access to privacy policy upon registration

6.14. User will have access to privacy policy in a link at the footer of the page.

7. Performance and Scalability

- 7.1. Web app will be reliable at all times and few crashes.
- 7.2. There will be a fast and efficient switch between page options.
- 7.3. Web app should be able to handle 10 times its capacity.
- 7.4. The website should be up at all times unless there is maintenance.
- 7.5 Peak loads are expected to be about 5000 users.

8.Environmental

- 8.1. The environment should be compatible with web browsers of all kinds.
- 8.2. The environment should support a filter with dates for journal/to-do list
- 8.3. The environment should support a filter with animation/sounds
- 8.4. The environment should support a stable internet connection.

Competitive Analysis

Feature/Company	Spotify	Apple notes	Mimi cute notes	Pandora	CollaNotes
strength	can upload music Access to thousands of music Access to other people's playlist Light/dark mode Save playlists Make playlists Suggests songs based on previous plays Connect to Facebook	can use Apple pen On Apple products No limit Lock feature Can scan work in Light/dark mode Can title notes Can draw notes No ads	cute 100+ themes Onboarding message Can request new themes Sticky note appearance of all notes to choose from Can title notes Customize notes background Customize app theme Passcode lock Can change font No ads	on multiple platforms Listen to music you like Keep collections Podcasts For you section Personalizes what plays next	import notes Import files Folders Annotation Light/dark mode Records audio Translation Collab with others Digital planner Can add links Can present on app Can use stylus No ads
weakness	limited skips in free mode Playlists confusing No notes No customization of background Not a planner Ads	only on Apple Can't customize background No music Hard to insert files Not a planner	no music No animation Limited to backgrounds author makes Font can be hard to read initially No stylus use Can't insert files Not a planner	no notes Can't customize background Can't upload music Limited skips in free mode Not a planner Ads	no music No customization of backgrounds Apple only No lock

pricing	free and paid Premium individual - \$9.99 a month Duo-12.99 a month Family- \$15.99 a month Student - \$4.99 a month	free	free Sticker library - \$1.99 a month / \$25.99 a year	free and premium Pandora plus - \$4.99 a month / \$54.89 a year Pandora premium - \$9.99 a month / \$109.89 a year Pandora premium family- \$14.99 a month/ \$64.89 a year Student premium - \$4.99 a month / \$59.88 a year Military premium - \$7.99 a month / \$87.79 a year	free
social media	music app Twitter Facebook	notes app None	notes app Twitter	music app Twitter Facebook	notes app Twitter Facebook
onboarding	given info first the shown how to sign up Tour after sign up	none	welcome note on homepage	given info then shown to sign up	option of beginner tips

Feature	Spotify	Apple Notes	Mimi - Cute Notes	Pandora	Zenful
Journalling	-	+	+	-	++
Music Playlist	++	-	-	++	++
Customization	-	-	+	-	+++
Animation	-	-	+	-	++

Zenful is a user-friendly web app that will allow for the personal note and journaling of individuals. When landing on the front page users will be given information about how the website works and all the key features like allowing them to upload music, customize background, passcode feature, and animated friend. Users will then be prompted to sign up for an account in order to start the service. Music section on Zenful will allow users to use the preselected music or make their own playlists of their own music. Users will be able to customize their backgrounds from preselected backgrounds. There will be a light and dark mode as well. Zenful will allow users to insert pdfs, insert pictures, draw, and create a journal book that has a passcode feature. There will be preset templates as well as a blank page for notes and journals.

Weakness: No social media aspect with others. No planner feature. Unable to present with a website. Unable to use a stylus. Unable to change font.

High-level System Architecture & Technologies Used

Server Host: Google Cloud 18.0.0

Operating System: Ubuntu 23.04

Database: MySQL 8.0

Web Server: NGINX 1.25.1

Server-Side Language: Javascript (1.11)

Additional Technologies:

Web Framework: React 18.2.0

IDE: VS Code Codespaces

SSL Certification: Lets Encrypt (Cert Bot)

Checklist

Team found a time slot to meet outside of the class

DONE

Github master chosen

DONE

Team decided and agreed together on using the listed SW tools and deployment server

DONE

Team ready and able to use the chosen back and front end frameworks and those who need to learn are working on learning and practicing

DONE

Team lead ensured that all team members read the final M1 and agree/ understand it before submission

DONE

Github organized as discussed in class (e.g. master branch, development branch, folder for milestone documents etc.)

DONE

List of Team Contributions

Team member	Contribution to checkpoint #1	Contribution to checkpoint #2	Score
Jada	<ul style="list-style-type: none"> • Worked on sections in M1 • Brainstormed design ideas 	<ul style="list-style-type: none"> • Verified stack information • Pushed html page 	9
Kimon	<ul style="list-style-type: none"> • Worked on sections in M1 • Brainstormed web app features 	<ul style="list-style-type: none"> • Researched versions of stack (most up to date) • Pushed html page 	9
Braden	<ul style="list-style-type: none"> • Worked in section for M1 • Brainstormed extra features 	<ul style="list-style-type: none"> • Helped with site cloud deployment • Pushed html page 	9
Lucas	<ul style="list-style-type: none"> • Helped come up with main ideas for web app • Reviewed M1 	<ul style="list-style-type: none"> • Developed stack information • Pushed html page 	9
Edward	<ul style="list-style-type: none"> • Helped come up with aesthetic ideas for web app • Reviewed M1 	<ul style="list-style-type: none"> • Verified stack information • Pushed html page 	9

(All separate emails were sent)