1. create a document in which you summarize:

    a. your idea, using the tools discussed in class (e.g., golden pitch canvas, customer personas, business model canvas, SWOT, Pestel, value proposition canvas, technology readiness scale, KANO model)

        i. Our idea: MuseBoard is an all-in-one encompassing board to store notes, images, and gifs. You can also jot down notes with a drawing feature. Think of it as a digital whiteboard. Why are we presenting this idea? We believe users need a way to store ideas in a way that doesn't interrupt their workflow and combines text and media for a more comprehensive and fun note-taking experience. MuseBoard can also be used to express your creative ideas in a free form way. MuseBoard is neat because the hardest part of doing any project is starting, and MuseBoard allows you to easily access the UI so you can start adding things to the space. MuseBoard is an intuitive all-in-one desktop solution that's quick, accessible, and simple to use with keyboard shortcuts.

        ii. After thinking about who we would want to sell this product to, there were ultimately 5 main types of customer personas we were interested in catering to.

            1. Researchers: Anyone working on a project involving extensive research can use this product. Researchers can benefit from our product because of our text and images features that allow you to jot down important information you come across while searching through sources. It's a good way to quickly type down information to look at later. There is even a hyperlink feature that allows you to include a link that you may want to visit or reference later. You can also use the drawing feature to annotate your notes using different colors. The visual representation of your research excels your focus and motivation by having a tangible intake of your work. An article from Harvard Health publishing says that doodling while note-taking can help improve retention of memory, focus, and relieve stress. Our drawing feature can help those researching take a mental break from time to time to ultimately progress their research.

            2. Artists: What a fun little way to express yourself while being on your technology! You don't have to just be good at drawing to express your creativity. You can use the space to store references for your art, like human body studies, or references of landscapes you might want to paint. You can store links to sites that also might have good inspiration for your art, like Pinterest or Tumblr. The whiteboard can be used like a collage to organize your ideas, like a vision board, or an aesthetic collage you'd see on Instagram.

3. Organized Individuals: If you are someone who loves to keep a to-do list or reminder notes for later, MuseBoard is a good way to start a list quickly. The implementation of pictures and gifs can be useful to reference examples, such as charts or diagrams. This can be useful if you're planning an event, and you need to keep lists of numbers, businesses, emails, or websites.

4. Students and Teachers: Students can use this in a way that the researcher would, but on a smaller scale. Students do have multiple classes, and with the ability to save multiple 'notes', students can keep their notes organized across their different classes. However, teachers can teach multiple classes, and with the ability to save multiple 'notes', teachers can organize their lesson plans for all the classes they teach as well. Teachers and students can save videos that are important to study. MuseBoard is an easy way to categorize study materials.

5. Project Managers: MuseBoard is a great way for project managers to set and track team goals, visualize progress on projects, and share data with their teams.

iii. Value Proposition Model

1. Customer Profile

a) Customer Jobs

- Notetaking

- Organize information, not just notes

b) Customer Pains

- Starting is the hardest part of any task

c) Customer Gains

- Convenient

- Multimedia options

2. Value Map

a) Products and Services

- Many options for media insertion in an easy and accessible way

b) Pain Relievers

- There aren't so many features that our product becomes overcomplicated. The placement of the app makes it easy to access.

c) Gain Creators

- Text, images, link, and draw features. Save feature.

iv. Business Model Canvas

Key Partnerships	Key Activities	Value Proposition	Customer Relationships	Customer Segments
In the future, we could work with companies like Google Workspace, Microsoft Teams, or Slack, which could enhance usability and expand the user base.	Type text, insert images, gifs, links, and draw.	A comprehensive, easy, and accessible way of notetaking that isn't overcomplicated. Combination of text and media allow users can express themselves freely.	Our customers can access our product via GitHub and either build off our product or give suggestions for future installments	Researchers, artists, organized individuals, students, teachers, and project managers. Anybody who has a computer can use our app.
	Key Resources Node.js, Npm, Electron, and JavaScript		**Channels** Our channels would most likely be through word of mouth or recommendation.	

Cost Structure	Revenue
The most expensive part of our project was most likely time. All of our goals are/were achievable through many means of technology accessible to us, so our biggest constraint was time.	We would not see revenue with out product because all of the tools we used are available to the general public.

v. Technology Readiness Scale: We believe our product is between 6 and 7 on the technology readiness scale. We have a product that can be distributed to others through GitHub and users can download our app with an installer. Although we don't have all the features we hoped for, but our product is really fledged out can be functional right now to users.

vi. SWOT Analysis

1. Strengths:

a) MuseBoard is a comprehensive tool that combines multiple functionalities like notetaking, visual organizational,

scheduling, ability to add pictures or links, etc. This allows us to appeal to a diverse crowd of users like researchers, artists, students, teachers, and project managers.

b) The visual elements of our product attract visual learners who appreciate engaging and dynamic organizational tools.

c) The flexibility of our product allows users to use our product in a way that suits them best. The versatility of our product allows anyone to use it.
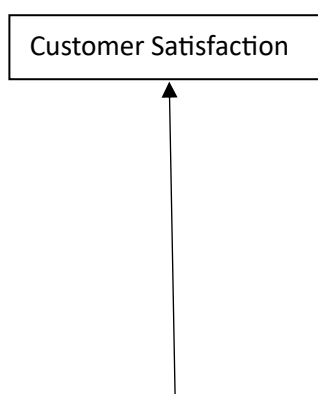
2. Weaknesses:

a) There are many products like MuseBoard that are more established and with more features than MuseBoard. This isn't exactly an untapped market.

b) As a new competitor in the market, we would need to invest and spend on marketing, which is difficult and requires expertise.

c) Our product might be too complex or overwhelming for some users to work with.

3. Opportunities

a) With the rise of remote work and digital nomadism, there's a growing demand for digital productivity tools that facilitate online collaboration and organization.

b) As digital tools become more accessible, new segments of users, such as older adults and younger students, are increasingly adopting these technologies.

c) Opportunities exist to integrate with other platforms like Google Workspace, Microsoft Teams, or Slack, which could enhance usability and expand the user base.

vii. KANO Model: We put or product in the quadrant between customer satisfaction and expectations met because our users really liked our product, but wanted more features or disliked one aspect of the layout and we met all our expectations, but did not exceed them. There even still are some features that could be implemented in the future.

Customer Satisfaction

| Expectations not met | ←————————————————————————————→ | Expectations exceeded |

Customer dissatisfaction

b. your prototyping strategy (from the first to the third prototype), including why, how, and what you tested with your users, and your findings. To this end, you want to use both quantitative (e.g., X users found feature A very useful) and qualitative methods (e.g., user A said that they were not able to get to menu X).

   i.   First Prototyping:

      1. The point of our first round of interviews was to gauge if users understood how the app was supposed to work. For our first prototype we asked these questions:

         a) Click the arrow to expand the window

         b) What is your initial feeling opening the app?

         c) Type something down, whatever you want

         d) If you were to add a picture, what icon would you select?

         e) If you were to add a hyper link, what icon would you select?

         f) If you wanted to draw a picture, what icon would you select?

         g) If you were to add a moving picture, what icon would you select?

         h) If you wanted to add text, what icon would you select?

         i) Click the arrow to hide the page

         j) What would you use this for? Why would you use it? Or why would you not use it?

k) Is there anything you like about the app?

l) Is there anything you dislike about the app?

m) Is this app easy to understand? Is it difficult to interpret?

n) How usable is this app to you?

o) Is there anything you would like to see? Anything you would change?

p) Can you exit the app?

2. Our second prototyping we had users look at the second iteration of our prototype and gave them a general rundown of how the product would work, and then ask what they liked about our product, what they didn't like, if they had any suggestions for future improvements, if they understood how to use it, and if they thought it was easy to use.

a) Our users appreciate the ability to be able to have dark mode and to customize the theme of the program.

b) Users liked that they could save and auto-save their work

c) Users want the ability to customize the formatting of the text.

d) Some users wanted spell check

e) Users want the ability to bullet point or number their text

f) Users expressed concerns with clear button, worried about accidently deleting things.

g) Users would like the ability to have a confirmation before clearing the board.

h) Users also want the ability to be able to delete things individually.

i) Users wants the ability to have a undo/redo feature.

j) Users would like a tutorial or quick tooltip for first time users.

k) Users want to be able to easily access this app

l) Users preferred the idea of tabs or folders rather than scrolling with pins or bookmarks

- Although the inclusion of scrolling with bookmarks was not entirely shunned

3. These are the questions we asked users for our third prototyping:

   a) Do you understand the App without a guide or walkthrough?

   b) Was it easy to use?

   c) What do you like most about the application?

   d) What do you dislike about the application?

   e) Where was the point of most friction or resistance?

   f) Where was the point of least friction or resistance?

   g) What feels like its missing from the application?

   h) What might you use this application for?

   i) Would you be willing to pay for this application (OTP)? If so, how much would you pay?

      - Overall, we learned that our users did really like our app and saw the intended use as well as the potential for the product. They really worried about the clear functionality and the ability to produce more notes. Also the UI could use some changes and the app itself does not move very fast when moving objects around the space.

c. How did your idea change from the beginning of the course? (e.g., different customer personas? different features? different idea? different use?)

   i. Our idea hasn't changed much from the start of the course. Our method of delivery initially changed from a standalone desktop application to a web application that runs on the desktop. We have also evolved our idea into having a few more features and tweaks than originally thought.

d. What you wish you had done differently (if any)?

   i. There is one major thing we wished we did differently. That was the organization of our code. We would have liked to compartmentalize our code to keep it organized and easier to work with. It would have prevented some smaller bugs, cut down on edge cases, and overall made it easier to work with and read.

e. your current status: use screenshots to describe the UI of your product, and storyboards to detail key workflows.

f. Our plan moving forward

   i. What are the key features that users want, based on user research?

1. One feature that users wanted was allowing separate tabs to be present within the webapp. Another feature is to move the line thickness and color settings to be under the Draw button to allow for easier distinction. Users would also like a basic integrated tutorial that explains basic functions. Users requested the ability to delete individual objects instead of deleting everything at once. Users also wanted the ability to adjust the UI elements to their own preferences.

ii. What do you need to test next?

1. Our next test would be polishing up some of the non-critical bugs that are lingering in the project. One example is how the arrow is incased in a window from top to bottom that prevents clicks. This would involve restructuring our codebase to allow for multiple windows to be present at once. This would then pivot into usability testing to clear up some smaller pain points users might encounter.

iii. How much effort (e.g., time/resources) would it take you to create an actual prototype? (clearly, this is just an estimate)

1. We believe our current iteration to be an actual prototype. It does exactly what users want. Most of the features users wanted such as being able to draw, embed links, add pictures or gifs, note taking, and saving their progress are all present within the project.

iv. Would you pursue this idea in real life? Why? Why not?

1. Yes, we would pursue this in real life. The feedback from users clearly indicates a clear demand for our product. Users are seeking a flexible note taking app that isn't super complex yet has all the features users need. With some additional refinement, we believe our project has strong potential for real world success.

g. the specific contribution of each member of the team.

h. what you learned from the course

i. We have learned a great deal in this course. One takeaway we all had was how challenging it is to cater to everyone. Users come with varying needs, preferences, and limitations. The Clovernook guest compounded this as we got to see real world applications, but also the struggle of designing stuff for the visually impaired. It is very hard to be inclusive and sometimes catering to one specific group of people can end up making it harder for others. We also learned how to understand our target audience and customer personas. Our project then emphasized this because of how broad our product is.

2. create a video (max 15 minutes) in which you present the content of the document. All the members of the team must present (each member should contribute to a part of the video - avoid having each member record the whole thing). Each member should also explain their specific contribution and what they learned from the course.

Teacher's Responses

Do you understand the app without a guide or walkthrough?

Yes, I think the app's layout and the labels and icons are very self-explanatory. They give you the general gist of what the app does just by looking at it. The functionality is clear from the design and the toolbar.

Was it easy to use?

I think it is easy to use. To me, it has a very intuitive design that seems simple and natural.

What do you like most about the application?

I like how easy it is to access. It can be annoying to switch between windows when working, as it can disrupt focus. Being able to pull it up from the side at any time is super convenient.

What do you dislike about the application?

It needs an autosave feature. I'm someone who forgets to save frequently and needs to rely on autosave to avoid losing work.

Where was the point of most friction or resistance?

I would like a way to style the text—adding headers, bold text, and other formatting options would be helpful.

Where was the point of least friction or resistance?

The slide-out design is very intuitive. I just looked at it and immediately understood what to do based on the layout.

What feels like it's missing from the application?

A way to change the background could be cool. It would also be helpful to have boards I've already saved show up on the side for quick and easy access, similar to how Microsoft Word works.

What might you use this application for?

For jotting down notes throughout the day when I'm at my computer. I often forget things, so having an easy way to write things down would be helpful.

Would you be willing to pay for this application?

No, I don't think so. I would like to see more features before paying for it. I'm also someone who prefers free software alternatives in general.

Researcher's (Journalist's) Responses

Do you understand the app without a guide or walkthrough?

I think so, yes. It all makes sense to me. At first, I was confused about what the slider on the right side was for, but after experimenting with the app, it became clear it was for drawing.

Was it easy to use?

It seems straightforward enough. However, I think a tutorial on the first boot-up would be helpful, especially for users who are less technologically experienced.

What do you like most about the application?

It's impressive how many media types it supports. I've seen similar note apps, but most focus solely on text. This app supports multiple data types, which is great.

What do you dislike about the application?

It doesn't have many ways to organize information. It feels like throwing a bunch of separate items together without much structure, which could lead to messiness.

Where was the point of most friction or resistance?

The save option should be more accessible, rather than hidden behind another dropdown menu. Autosave is crucial to prevent accidental data loss. Additionally, the clear-all button worries me because it's so easily clickable, making accidental deletion a concern.

Where was the point of least friction or resistance?

It's very easy to add elements. A simple button press and a prompt for some features make the design straightforward and user-friendly.

What feels like it's missing from the application?

A way to organize notes—right now, it feels very unstructured.

What might you use this application for?

As a journalist, I'd use it to jot down story ideas and collect sources, images, and related materials. It would be nice to have these accessible on the side for reference.

Would you be willing to pay for this application?

Not really. I'm generally not inclined to pay for apps like this unless I truly need them. While this app is nice, it doesn't feel essential enough for me to spend money on it.

Interview (Student):

1. Do you understand the App without a guide or walkthrough?
   Yes, I think that its straightforward enough that someone can generally figure out the function of each button on their own.

2. Was it easy to use?
   Yes, it was very easy to use. I think that the more that I use it, the more fluent the use of it will be. But still it was very easy from the start.

3. What do you like most about the application?
   I like the ability to be able to move the text and the page content around the page to wherever you'd like. I also like the detail that comes with the drawing feature like the size color, shading, etc.

4. What do you dislike about the application?
   I didn't like that you need to fill in the default text in the text box when you put it on the page. I also want to be able to edit the images more, like the sizes of them.

5. Where was the point of most friction or resistance?
   The very start when learning what the buttons do, but that is something people always run into.

6. Where was the point of least friction or resistance?
   Identifying the function and buttons just by looking at them. The visuals were super straight forward in what I was going to get.

7. What feels like its missing from the application?
   Maybe the more functions with the text, so like bold, italic, indenting and easy to use bullet points that don't manually have to be put in.

8. What might you use this application for?
   I would use this at work, at school and for personal use. What appeals about this app is its applicable to many parts of your life and can be used in many ways.

9. Would you be willing to pay for this application (OTP)? If so, how much would you pay? (edited)
   Yes, I would be willing to pay for this application although I wouldn't pay a lot. I would probably only pay 1.99 since there are not a lot of features in the application.

Interview (Researcher):

1. Do you understand the App without a guide or walkthrough?
   Yes, I do understand the app quite well after using it. It is so much easier to use after testing your prototype last. Everything seems to have text and an Icon so its super easy.

2. Was it easy to use?
   What was easiest for me to understand was the tools in the tool bar because they were symbols accompanied by their names.

3. What do you like most about the application?
   What I like most about the application is the fact that it can hide away by pressing the arrow button on the outside. I work with a lot of tabs open at once and this is the perfect solution for me.

4. What do you dislike about the application?
   What I disliked about the application was some content things on the page like images and links are toggle based when moving them around so you have to click twice, not drag and drop which made it confusing at first.

5. Where was the point of most friction or resistance?
   As I mentioned in your last question, the point of most friction was trying to figure out how/why dragging things around works how they do.

6. Where was the point of least friction or resistance?
   I would say the point of least friction or resistance was understanding what each button does as it is very user friendly and straight forward.

7. What feels like its missing from the application?
   What feels like is missing from the application is maybe some more text features so that it's not just text. Like maybe different font sizes and cases?

8. What might you use this application for?
   I do a lot of research around computer science and I keep many sticky notes on my desk and sometimes I lose them, so I believe this would be a great solution for that issue I'm having.

9. Would you be willing to pay for this application (OTP)? If so, how much would you pay? (edited)
   You know I usually like to go with open-source software, however, if I really like an application or it helps me a lot I'll pay for it. I'm on the fence right now due to how primitive this application is, however if I were to pay for it, I'd pay 0.99 cents.

Interview (Organized Individual):
1. Do you understand the App without a guide or walkthrough?
   i. It took a few minutes to get used to, but yes I can figure out how to use the app.
2. Was it easy to use?
   i. Everything is relatively easy to use, but the click and drag feature is kind of wonky.
3. What do you like most about the application?
   i. Likes where the settings are placed.
4. What do you dislike about the application?
   i. The thickness and color feature only work for the drawing feature, so they should be under the draw button
5. Where was the point of most friction or resistance?
   i. The click and drag feature didn't completely work. It was also frustrating when all of my work was deleted when hitting the clear button.
6. Where was the point of least friction or resistance?
   i. Overall the app is easy to understand, so there is no confusion on features.
7. What feels like its missing from the application?
   i. There should be additional features for typography like font size and family.
8. What might you use this application for?
   i. Would use this to store links for social media
   ii. Would use it to set goals, like a vision board
   iii. Would use as whiteboard
9. Would you be willing to pay for this application (OTP)? If so, how much would you pay?
   i. No because there are other options for notetaking with more features, rather than MuseBoard.

Team Member Contributions:

Jacob: I contributed to MuseBoard by developing several key features and conducting a few interviews to gather insights. Specifically, I implemented the drawing functionality, designing its elements to ensure a smooth and user-friendly experience. Additionally, I worked on integrating support for images and GIFs, enabling users to enhance their workspaces with rich visual content.

Cody: I contributed by working on the settings and save features. I also conducted interviews to do some user research for our project. Additionally, I was the team leader, so I facilitated team communication and planning to ensure our project went smoothly.

Ben: How I contributed to this project and product is I assisted in the initial planning of what our product would be and then created a throwaway prototype to visualize what our product will look like. Following this, I did the majority of the coding for our first prototype and then I did a complete overhaul of the UI, shifting our prototype to version 1 of our product. As our product developed, I integrated several features such as inputting text, links and a settings menu (the UI of it). I also redesigned several UI features and points of interest in the application such as the toggle open and close button to look more visually appealing. Lastly, I assisted wherever I could when working on the documentation and the writing side of the project, as well as conducted several user interviews.

Alli: My contributions involved conducting many interviews for our prototypes. I came up with interview questions for group members to ask their interviewees, for our first prototyping and for our mom question interviews. I helped the team lead with documentation and coming up with the team's work timeline. I've helped Cody make the PowerPoints used to present our project by filling out our findings based on user research and our future goals for our project. I recorded demonstrations of our PowerPoints. I've come to class to present our prototype. I came up with the basic design and core idea for our product, which I discussed with team members and expanded upon.