# Group 8: Blubb

# "Personal support through meaningful connections."

List of Team Members

Audrey Ye (Project Manager) Winona Lisuallo (UX Designer) Zhaomin Li (Software Engineer) Derek Minno (Software Engineer)

# Introduction

Mental health is a prevalent issue that many individuals struggle with, yet most find it difficult to be honest with those around them regarding their personal struggles. While online communication provides a level of anonymity that makes it easier to be open about such matters, there is also a disconnect between virtual and physical reality that makes such connections feel less genuine. Blubb seeks to take advantage of the benefits of online communication and anonymity, while also grounding these connections in reality through the exchange of physical letters.

# Lean Canvas

Problem	Solution	Unique Value Pr	oposition	Unfair Advantage	Customer Segments
<ul> <li>It is difficult for people to be open with those around them regarding personal struggles with mental health</li> <li>There is a level of ingenuity and disconnect in exchanging messages virtually</li> <li>Existing Alternatives</li> <li>Social media</li> <li>Email</li> <li>Handwritten mail</li> </ul>	<ul> <li>Platform/system that enables people to build relationships</li> <li>Anonymous communication</li> <li>Physical exchange of letters</li> <li>Key Metrics</li> <li>How many physical exchanges take place</li> <li>Satisfaction rate of users struggling with mental health</li> <li>Amount of recurring users</li> </ul>	<ul> <li>A platform on v want to be hea support, or hav for human inter and send perso others who hav</li> </ul>	which people who rd, need personal re a special desire raction can receive onal letters with re a desire to listen, nd interact with	<ul> <li>Physical communication exchange vs virtual communication exchange</li> <li>Anonymity</li> <li>Channels</li> <li>Word of mouth</li> <li>Social media</li> <li>Online forums</li> <li>Advertisements</li> </ul>	<ul> <li>People struggling with mental health</li> <li>People practicing self-care</li> <li>People seeking for comfort</li> <li>People wanting to give comfort</li> <li>Early Adopters</li> <li>People looking for comfort and to comfort others</li> <li>College students</li> </ul>
Cost Structure <ul> <li>Server costs</li> <li>Human resources</li> <li>Marketing and advert</li> <li>Mail delivery fees</li> </ul>	tising		Revenue Streams <ul> <li>Kickstarter</li> <li>Donations</li> <li>Premium member</li> <li>Advertisements</li> </ul>	ship fees	

# Additional Notes for Lean Canvas

- What characteristics of your early adopters make them valuable to the product development?
  - Able to provide crucial feedback as the target demographic for the website
  - Easier to reach out to for user testing stages
  - Potential source of new ideas not previously considered by the team
  - Able to contribute to research surrounding their demographic
- Why are your channels effective in reaching your targeted early adopters?
  - Word of mouth and advertisements are generally applicable
  - Social media and online forums are commonly used by such users and inherently related to the project's platform
- How do the listed key metrics provide accurate evaluation of your product's success?
  - All listed key metrics involve measuring the frequency of use and thus the appeal of the product to the target demographic

# Value Proposition Canvas

# Product

Gain Creators	Product Features	
<ul> <li>Connecting users to other users</li> <li>Creating personal connections for mutual support</li> <li>Physical letters written as easily as email</li> </ul>	<ul> <li>Anonymous forum where users can post about their current situation</li> <li>Ability to reply to specific post writers without exchange of personal information</li> <li>View of posted personal station</li> </ul>	
Pain Relievers	personal stories sorted by tags	-
<ul> <li>Anonymity</li> <li>No stored personal data</li> <li>Convenience compared to traditional letter writing</li> <li>Tag system to act as trigger warnings</li> </ul>		

## Customer

Needs	& Goals	Tasks	
• • •	Improve mental health Avoid social isolation Emotional support Safe space and outlet to vent Privacy of information	•	Share stories of personal struggles Come to terms with experiences and worries Write messages to send Provide support for others Build meaningful relationships
Pains			
• • •	Discomfort with identity being known Struggle to be open about struggles Online communication does not suffice Breaches of personal data Personal triggers		

# Additional Notes for Value Proposition Canvas

- What customer pain does each product pain reliever address (and how, if not obvious)
  - Anonymity relieves customer discomfort with their identity being known and their struggle to be open about personal struggles
  - No stored personal data addresses the issue of potential breaches in personal data
  - Convenience compared to traditional letter writing addresses the issue of online communication not sufficing by making physical communication more accessible
  - The tag system addresses the issue of personal triggers by acting as trigger warnings
- What customer gain does each product gain creator address (and how, if not obvious)
  - Connecting users to other users aids the customer in avoiding social isolation and providing an outlet to vent while maintaining privacy of information
  - Creating personal connections aids in improving mental health and providing emotional support
  - Physical letters written as easily as email streamline the entire process for the previously mentioned gain creators

# 3 × 3 × 3 Goals

### Three-week

- Goals/Minimum Success Criteria: have a clearly defined product, started implementation, first iteration of design or sketches/tech design, research on mental health/audience/tech, ready to begin development, early adopters identified
- Assessment Plans: review progress on implementation/research/design
- Agenda: discuss project concept with group, complete prototype of design, conduct research
- Main Risks: product details undecided, design incomplete or heavily flawed
- Results: all goals successfully reached

### Three-month

- Goals/Minimum Success Criteria: fully functional demo, beta testing complete, service has been used at least 50 times
- Assessment Plans: be thorough in testing with demo, review amount of traffic seen
- Agenda: implement core functionalities, find beta testers and test usability, make improvements based on feedback
- Main Risks: demo incomplete, unable to find enough beta testers, service not gaining enough attention
- Progress: basic interface and functionalities implemented excluding payment process for sending replies

### Three-year

- Goals/Minimum Success Criteria: more stylized UI, handwritten letter options, more premium options, availability as an add-on or mobile application
- Assessment Plans: evaluate all available customer options, check revenue streams
- Agenda: research new platforms, brainstorm new options, gather feedback from current users
- Main Risks: inability to afford new options, difficulty transitioning to mobile interface, lack of interest in premium features

# **Research Method 1**

Title: Identifying Early Adopters and Needs

### Method: Survey

### Method Summary:

A series of questions designed to understand target population's opinions on a specific topic. The University of California—Irvine utilizes surveys ("Teaching Evaluation") to understand students' experience in a particular class that they are taking and the effectiveness of the professor's teaching style and class structure.

### Research Design/Implementation:

We had 27 people who fit our target population take the survey. The survey was divided into three different parts: multiple choice, short answer, and a linear scale ranging from 1 to 5.

### Data Collection:

Three types of data was gathered through the survey:

- A. Demographics (gender and age group)
- B. Understanding of mental health
- C. Level of agreement to the following five statements:
  - 1. I am comfortable with sharing personal stories online.
  - 2. I prefer to be anonymous when posting about myself online.
  - 3. Physical letters feel more personal than online messages.
  - 4. I feel comfort when strangers reach out to me.
  - 5. I am more comfortable discussing my mental health with strangers than with people who know me.

Part A was designed as multiple choice section. Part B consisted of two short-answer questions, while Part C consisted of linear scales ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

### Analysis:

After three weeks, our group sat down and discussed the results of our test. We established the following:

- Most of the participants were female and were at most 22 years old (see *Graph R1.1*), which we generalized as college students. All of our participants were aware of mental health to an extent, but understood it as more of an *illness*, such as depression, anxiety, etc. (see *Image R1.1*). When asked if they had experience with mental *illnesses* (*Graph R1.2*), our 63% of our participants responded positively. We thus concluded that the reason for their description of mental health equalling to mental illnesses was due to a) the fact that most of our participants have or know someone with depression or anxiety and b) it having been popularized as such in modern media. Based on this finding, we decided to focus our MVP on mental illnesses rather than the broad topic of mental health.
- 2. We also found that while the majority (see *Graph R1.3–R1.5* below) feel comfortable anonymously posting personal stories online and think physical letters are more personal than online messages. On the other hand, though, 404% of all participants feel neutral towards discussing their mental health with strangers. Despite the neutral response, about there is still a majority that feels comforted when strangers reach out to them. Thus we concluded that our MVP still held significant value, as our target population were interested in sharing stories online, found great value in physical letters, and felt comfort when strangers reached out to them.

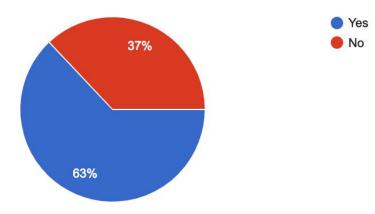


# Findings:

Graph R1.1 — Summary of demographics

affects alot bit caused check conditions dealing depression deteriorate different directly due emotional environmental etc everyday experience health illness important issue learn level life lifetime lot mental occurs people physical por presented psychology races school serious sickness Society something stigmatized sudden sure taken things toll treated ubiquitous upbringing ways whole

Image R1.1 — Word cloud identifying most common words used in participants' explanation on their understanding of mental health



# Do you have any experience with mental illness?

27 responses

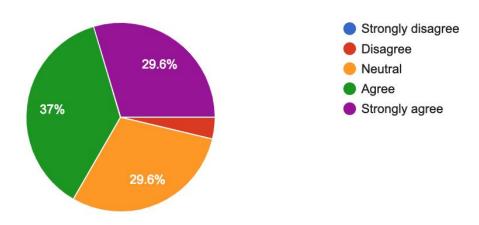
Graph R1.2 — Percentage of people who have experience with mental illness specifically, whether personal or someone they know



Graph R1.3 — Levels of agreement on comfort; 62.9% feel comfortable sharing personal stories online (left) while 70.3% stress importance of anonymity when doing so

# Physical letters feel more personal than online messages.

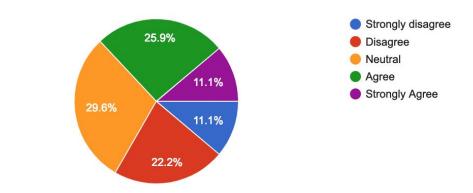
27 responses



Graph R1.4 — Measurement of value placed on physical letters; 66.6% agree letters are more personal than online messages. No one strongly disagreed with the statement.

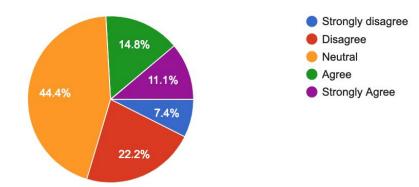
I feel comfort when strangers reach out to me.

27 responses



# I am more comfortable discussing my mental health with strangers than with people who know me.

27 responses



Graph R1.5 — Value of strangers reaching out; although 44.4% felt neutral towards discussing their mental health with strangers, a majority of 37% felt positively towards receive comfort from strangers.

# **Research Method 2**

### Title: Evaluating Design

Method: Moderated Task-Based Tests

### Method Summary:

A test utilizing one or more tasks to evaluate the effectiveness of a particular design or product. The tester is present during the time of testing, and will often ask users to explain their actions and thought process aloud while taking notes of user actions. TryMyUI illustrates in a video on their website a moderated task-based test on Zomato.com to evaluate the website's usability.

### Research Design/Implementation:

We asked 5 participants to complete two simple tasks that covered the *Posting a Story* feature and *Sending a Reply* feature, then to describe their thoughts after completing each task in a Google Form. The task details are as the following:

1. You have a job interview coming up, and you are extremely nervous. You would like to confide in your friends, but you don't want to bother them in case you are overthinking the situation. So, you decide to post your concerns anonymously on Blubb.

Please reenact the actions you would take on the website to create and submit a post. Please also describe your actions to us aloud as you complete the task, and tell us when you have completed the task.

2. It is a couple days after you posted your concerns, and you have received several letters. You feel comforted by this, and would like to pay the kindness forward. Because you have experience with anxiety, you want to reach out to someone who is currently dealing anxiety, too.

Please reenact the actions you would take on the website to send a letter in response to someone's post. Please also describe your actions to us aloud as you complete the task, and tell us when you have completed the task.

### Data Collection:

We were able to understand a user's thought process during both *posting* and *replying*, as well as obtain a cohesive evaluation on the usability of our design.

### Analysis:

Overall, our participants found the website to be intuitive and easy to use (see *Image R2.1*). The large *post* button clearly depicted how users were to proceed to complete their end goal, and the filters followed the standard filter design, which users were already familiar with. The biggest critique we received was not specifying that payment was involved until the very end (see *Image R2.4*). We decided that we would address the issue in an *About* section of the website so that users would become more aware prior to proceeding with their task. Another critique regarding we received was the lack of visual appeal. (see *Image R2.5*). After debating the topic, we decided due to time constraints to keep the minimalist design and focus on improving usability.

Findings:

# What did you think of the website navigation?

5 responses

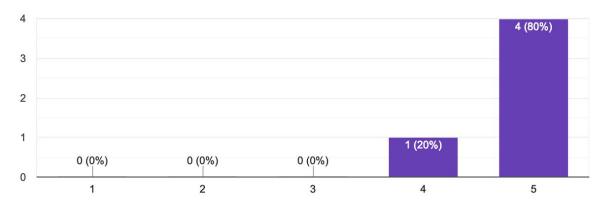


Image R2.1 — Posting Ease of Navigation results, where 1 is "Extremely Difficult" and 5 is "Extremely Easy"

Please explain your reasoning for your rating to the above question.

5 responses

The button for making a post is clear to see and making a post is very intuitive. Navigating back to he homepage is also easy.

It had a HUGE post button. When I click the post button, I get directed to a page that lets me put in my info and letter, and it's very easy to know where to write. If I click the "post" button, I expect to see a page that shows "your post has been submitted. Thank you!" so I know it has actually been submitted.

The button is obvious, straight-forward task

I didn't have any issues completing the task or knowing what to do.

the icon and the text on the icon are large and clear.

Image R2.2 — Posting Ease of Navigation reasoning; trend indicates strong liking of big post button

### What did you think of the website navigation?

5 responses

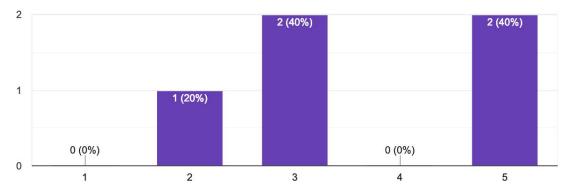


Image R2.3 — Replying Ease of Navigation results, where 1 is "Extremely Difficult" and 5 is "Extremely Easy"

Please explain your reasoning for your rating to the above question.

5 responses

The ability to click on a post in order to send a letter didn't occur to me as there wasn't an indicator telling me I could. If I wasn't told by the task I probably wouldn't have noticed. Once on the letter page, however, it does become easy and intuitive to create and send a letter.

The "filter by" clearly shows the different categories of posts. I think it is easy to find and navigate. When I click on the post, it directs me to a page to write a response, and it is easy to write a response. The payment page is good too.

I didn't expect that I need to pay for send a online letter. Im wondering if I can handwrite my letter and scan it in.

It seems a bit incomplete right now. It's simple but there could be more clarity. Ex. Didn't know payment would be involved until the payment page.

same. Also I have some tech knowledge, so easier for me to navigate.

Image R2.4 — Replying Ease of Navigation reasoning; trend indicates need for clarification of payment requirement

### How do you feel about the prototype?

5 responses

It's a good prototype. Functional, simple and easy-to-use. I only have one other criticism regarding the features and it's a really minor one. I think the homepage just needs an additional button to clear filter choices as the only way to do so is to either refresh the page or go into the Post section and then go back. Of course, if it became more than a prototype then some more colour and web design aspects should be added to look more professional but that's not related.

The prototype is good. Move the "about" to the bottom or between "most recent" and "search" because it's not as important as the "filter by" stuff?

It is not very visual appealing, but clear

It's basic but it gets the job done.

clear, simple

Image R2.5 — Overall Opinion and Experience; trend indicates clear and simple idea but lack of visual appeal

# Prototype

Goal: Identify Usability Flaws and Design Effectiveness

### Summary:

The main features of the application, specifically *Post* and *Reply*, were implemented in this iteration. Additionally, we added a search and filter option, as well as a link to an *About* page in the sidebar menu. Posts were displayed on the main feed as clickable cards that will redirect users to *View Post* page. Finally, a dummy payment page was incorporated at the end.

Each interaction with the features mentioned above would be reflected by a new page change or "updated" feed. At this point, our project was still nameless, and thus a placeholder was used for the app name and logo.

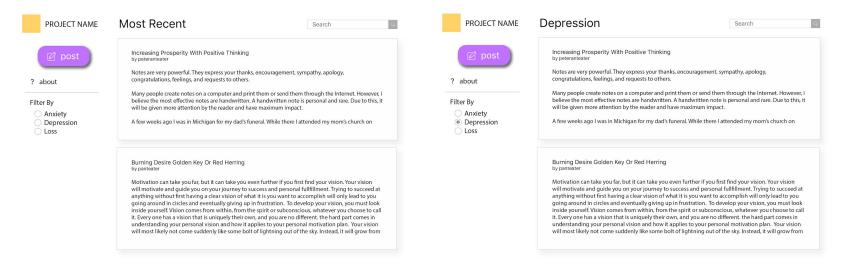


Image P1 — The Home/View Page, sorted by Most Recent on default (left) and after the Depression filter was implemented (right)

¢	PROJECT NAME				
		Write Your Story	,		
	Nickname			?	
	Address			?	
	Tag	Select a tag	▼	?	
	Post Title			?	
	Post Content			?	
			Post		
E	PROJECT NAME				
		Write Your Story			
	Nickname			() <	Your nickname is how other people will address
	Address			?	you. Please avoid using vulgar language in your nickname.
	Tag	Select a tag	V	?	
	Post Title			? ?	
	Post Content			0	
			Post		

Image P2 — Post Page; the bottom image depicts the consequence of hovering over the helper circles next to each input field

### **PROJECT NAME**



Increasing Prosperity With Positive Thinking by peteranteater

Notes are very powerful. They express your thanks, encouragement, sympathy, apology, congratulations, feelings, and requests to others.

Many people create notes on a computer and print them or send them through the Internet. However, I believe the most effective notes are handwritten. A handwritten note is personal and rare. Due to this, it will be given more attention by the reader and have maximum impact.

A few weeks ago I was in Michigan for my dad's funeral. While there I attended my mom's church on Sunday and met her... pastor for the second time. While talking to him, I learned that his mother died a few months ago and his dad was critically ill. On my way home to Virginia, I had a stop at Chicago O'Hare Airport. While waiting for my connecting flight, I pulled out a box of note cards and wrote several notes and mailed them. One of those was an encouraging note to my mom's pastor. I found out later that he was so touched by the note that he took it to his church and read it at a meeting. He made it clear to those in attendance how much of an encouragement it was to him. What I didn't know when I wrote the note was that during the following week not only did his dad pass away but his wife was diagnosed with cancer. I believe God used my note to help him during a very difficult time in his life. I also wonder how many others he talked to were changed because of that note. Maybe some of them are now writing notes as well. What if I hadn't written that note?v

I would encourage you to start writing notes regularly. What a simple way to influence people's lives in a positive way. If you are concerned about how to get started, the following two books on the subject have been the most useful to me:

- "The Art of the Handwritten Note: A Guide to Reclaiming Civilized Communication" by Margaret Shepherd

- "Business Notes: Writing Personal Notes That Build Professional Relationships" by Florence Isaacs Get a note card, pen and stamp. Write a note to someone who has been on your mind today. Only God knows how much that person, and the world, will change for the better due to the few minutes you take out of your busy schedule to write a few sentences.

send letter

Image P3 — View Post Page; contains an extensive view of the post when redirected from Homepage

# $\bigotimes$

### PROJECT NAME

Increasing Prosperity With Positive Thinking by peteranteater

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Many people create notes on a computer and print them or send them through the Internet. However, I believe the most effective notes are handwritten. A handwritten note is personal and rare. Due to this, it will be given more attention by the reader and have maximum impact.

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pastor for the second time. While talking to him, I learned that his mother died a few months ago and his dad was critically ill. On my way home to Virginia, I had a stop at Chicago O'Hare Airport. While waiting for my connecting flight, I pulled out a box of note cards and wrote several notes and mailed them. One of those was an encouraging note to my mom's pastor. I found out

### Write Your Letter Write your personalised letter for peteranteater.

From

# Message

Image P4 — The Reply Page; contains the original post on the left of the screen for reference while drafting a reply.

### PROJECT NAME

Letter Preview edit

### PROJECT NAME write about support

0 1 1 6

Letter Preview edit

	Order Information	4	ey peteranteater,					Order In	ormation	
Hey peteranteater,		\$0 0.54	ey peteranteater,					Letter Stamp		\$0 \$0.54
The Law – Everything is energy. Choose to believe this law. You must accept it.		Th	he Law – Everything	is energy. Choose to	believe this la	w. You must acc	ept it.			
Your thoughts, your feelings, what you focus on are all energy. Do you understand that you have created the person you have become and created the quality of life you have.	Total \$1	th	our thoughts, your fe nat you have created ou have.						Total	\$0.5
Take a good look at what you have created. You, and only you, are responsible for your present level of success in life.			ake a good look at w our present level of s		d. You, and onl	y you, are respo	onsible for			
Right now, reflect on ways to make a positive difference in the quality of your life. First, choose the area of life you want to focus. It can be your relationship, your career, your health; your finances just to mention a few. The most important thing to remember is to focus on just one area to start.		Fil	ight now, reflect on v irst, choose the area areer, your health; yo o remember is to foc	of life you want to f our finances just to	ocus. It can be mention a few.	our relationshi	ip, your			
Julia							Julia			
<u>va</u> 💷 📟 📖 🚑 CE				<u>VISA</u> 🔜 🖷	DISC VER Disc Disc VER	. <b>15</b> C				
Card Number			Card Number			_				
Tag Month Vear V			Tag	Month 🗸	Year					
CSV Number What's this?			CSV Number		Wh	at's this?				
Cardholder Name		Ca	irdholder Name							
Billing Address			Billing Address							
Cancel Submit			ancel				submit			

Image P5 — Payment Page; the right image depicts the consequence of hovering over the helper button. Additionally, a red cancel button was implemented in accordance to the standard for negative responses (i.e. error, cancellation)

### Link: https://invis.io/5MQ8IXVWC89#/343834365\_view

Assessment: We tested the prototype ourselves and outlined the steps to *Post* and *Reply*. We also conducted a usability test with five participants (see *Research Method 2*).

Data Collection: Through the assessments above, we managed to measure the quality of the design and identify its problems.

Analysis and results:

After comparing our observations through the cognitive walkthrough and common user opinions formed during and after the usability test, we found three main problems in regards to our prototype:

- 1. Surprise Payment Page; Users were unaware payment was involved until they were ready to send their letter.
- 2. Hidden Reply; Lack of obvious *reply* button in contrast to the large *post* button made *Replying* an unintuitive task.
- 3. Simple Design; Simplistic design was unappealing to the eye.

Despite these results, we established that the problems did not take away from our agenda.

Lessons Learned:

- 1. The simple interface design, while not a priority in our 3-month plan, highlighted how simple our overall design was, and made it unappealing to our user base.
  - $\rightarrow$  We decided to add an updated and more stylized UI to our 3-year plan
- 2. Any form of payment must be outlined *clearly* and *obviously* prior to sending the letter.
  - → Due to time constraint, we were unable to implement a Payment method. However, when we do implement this requirement in the future, we will detail it clearly in the *About* section on the homepage.
- 3. The reason why the *Reply* feature was unintuitive despite mimicking social media post conventions was the lack of an indicator on the actual post card itself on the Homepage. Twitter, for example, has a little speech bubble at the bottom of the tweet to indicate an ability to reply to the post. Because our posts on the Homepage did not have such a feature, users did not think it was possible to reply to a story by clicking on the post to view it in its entirety.
  - → We indicated an ability to interact with a story by removing the borders of a post when the mouse hovers over it. This should indicate to users a more available action on another page.

# MVP Visual Design and Specifications

### Product Hypothesis:

We believe that by giving people with mental illnesses or mental health concerns a platform to create strong, physical relationships in an online world, we can give them the support system they need. This web-based application will allow people to share their experiences, concerns, and thoughts to the world while remaining anonymous, but also receive physical and personalized letters as a response to their post. We will achieve this within 3 months, and we will know we have completed our goal when our service has been used at least 50 times.

Implication: As our hypothesis focuses on providing support for people with mental illnesses or mental health concerns, throughout development, we must be mindful of the language, design, and space established in our application. Thus, each iteration must be tested thoroughly using similar metrics and success criteria in order to accurately understand the level of comfort, emotional attachment, and effectiveness of the MVP.

### Evaluation

- Metrics:
  - Percentage of users interested in a) sharing personal stories online anonymously, b) receiving words of comfort from strangers and/or c) find more value in physical letters in comparison to online messages/comments
  - Positive response when using app (keywords: words relating to emotion, [raising] awareness of mental health, removing stigma or biases against mental health)
- Data Collection:
  - Second iteration of survey with larger data pool for Quantitative Testing
  - Moderated Task-Based Tests on MVP for Qualitative Testing, with a speak-aloud protocol implemented during testing
    - Participants will also fill out a Comment form similar to the one described in Research Method 2
- Assessment Plan:
  - Calculate the mean of the first survey (see *Research Method 1*) and second survey combined; success if more than 50% in all categories (see *Metrics* above).
  - Frequency of keywords (see *Metrics* above) both during the test (through the speak-aloud protocol) and the Comment participants filled out post-test. Then, analyze which words indicate on emotion, and what types of emotions were evoked during and after testing.

### Design

The design of our MVP very closely mimics our prototype (see *Image P1–P5*), except that the *Post* page now allows users to add more than one tag to their post (see *Image D1*). Also, at the time this document was completed, we had to remove the hover icons on the *Post* and *Reply* pages due to time constraints. However, we will be adding those on as soon as possible, as we think it is very important to explain to the user what will happen to their information, i.e. their address and payment information.

Additionally, we could not implement the Payment method by the time this document was completed. We did, however, capture the main specifications of the Payment page, allowing us to easily add a card information form for checkout in the future.

<u>فق المالية</u>		
G	Write Your Story	
Nickname		
Tags	Anxiety 🗢 📩	
	depression x anxiety x	
Post Title		
Post Content		
Address	h	
City		

Image D1 — Updated Post Page with ability to add more than one Tag

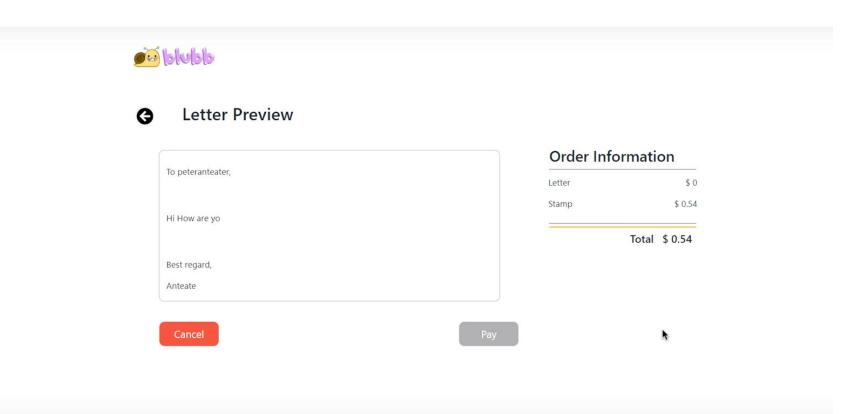


Image D2 — Payment Page without card information form and dummy order information component

Specifications

- Home/View Page: displays all existing posts, filtered by Most Recent as default
  - $\circ \quad \text{Top bar}$ 
    - Logo
    - Search bar
  - Sidebar menu
    - Large Post button

- About
- Filters
- Posts
- Post Page: form where users can draft a story and post it to the website
  - Nickname
  - Tags
  - Post Title
  - Post Content
  - Send Address
    - Street Address
    - State
    - City
    - Zip Code
- View Post Page: full view of post
  - Header
    - Logo
  - Back button
  - Body
    - Post title
    - Post author (Nickname)
    - Post content
    - Send Letter button
- Reply Page: form where users can draft their reply letter
  - Header
    - Logo
  - Back button
  - Body
    - Left screen

- Original post title
- Original post author (Nickname)
- Original post content
- Right screen
  - Title
  - Instructions
    - $\circ$  Italics
  - From
  - Message
  - Send button
- Payment Page: where users confirm their order (letter)
  - Header
    - Logo
  - Back button
  - Body
    - Letter Preview
      - To [Original Post Author]
      - Letter content
      - From
    - Cancel button
    - Pay button
    - Order summary

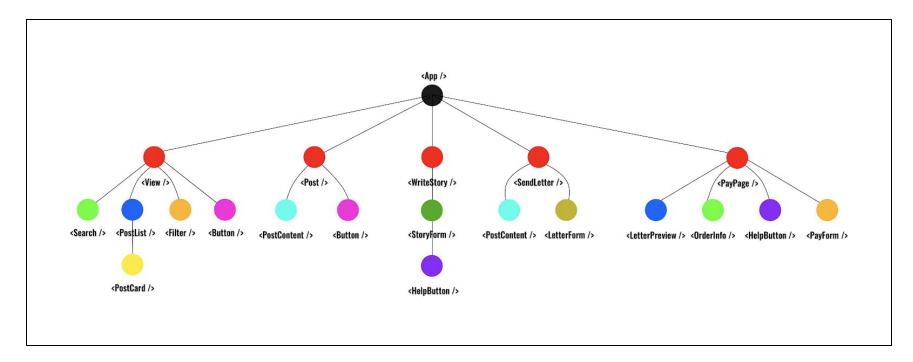
# Implementation Documentation

**Technical Description** 

Frontend:

We use React framework to construct our frontend. We select React since we consider this framework to be one of the most intuitive frameworks with low flooring and high ceiling. Besides the React, we implement the bootstrap for component design and interface layout. We use FlexBox to improve the component placing. And we use the pre-designed icon in FontAwesome.

Since we choose the React framework, we program our frontend in HTML, CSS, and JavaScript.



Component Hierarchy

PROJECT NAME	Most Recent		Search	
🖾 post	Increasing Prosperity V by peteranteater	Vith Positive Thinking		
? about	Notes are very powerful. congratulations, feelings,	They express your thanks, encourageme and requests to others.	nt, sympathy, apology,	
		s on a computer and print them or send e notes are handwritten. A handwritten r		
Filter By		ion by the reader and have maximum im		
<ul> <li>Depression</li> <li>Loss</li> </ul>	A few weeks ago I was in Michigan for my dad's funeral. While there I attended my mom's church on			
0				
	Burning Desire Golden	Key Or Red Herring		
	by panteater Motivation can take you	far, but it can take you even further if yo	u first find your vision. Your vision	
	will motivate and guide y anything without first ha	you on your journey to success and person ving a clear vision of what it is you want	onal fullfillment. Trying to succeed at to accomplish will only lead to you	
	inside yourself. Vision co	nd eventually giving up in frustration. To mes from within, from the spirit or subco that is uniquely their own, and you are r	onscious, whatever you choose to call	
	understanding your pers	onal vision and how it applies to your po suddenly like some bolt of lightning ou	ersonal motivation plan. Your vision	
			norman en	

View Component



WritePost Component

€	Increasing Prosperity With Positive Thinking
	Notes are very powerful. They express your thanks, encouragement, sympathy, apology, congratulations, feelings, and
	requests to others. Many people create notes on a computer and print them or send them through the Internet. However, I believe the most
	effective notes are handwritten. A handwritten note is personal and rare. Due to this, it will be given more attention by the reader and have maximum impact.
	A few weeks ago I was in Michigan for my dad's funeral. While there I attended my mom's church on Sunday and met her pastor for the second time. While talking to him, I learned that his mother died a few months ago and his dad was critically ill. On my way home to Virginia, I had a stop at Chicago O'Hare Airport. While waiting for my connecting flight, I pulled out a box of note cards and wrote several notes and mailed them. One of those was an encouraging note to my mom's pastor. I found out later that he was so touched by the note that he took it to his church and read it at a meeting. He made it clear to
	those in attendance how much of an encouragement it was to him. What I didn't know when I wrote the note was that during the following week not only did his dad pass away but his wife was diagnosed with cancer. I believe God used my note to help him during a very difficult time in his life. I also wonder how many others he talked to were changed because of that note. Maybe some of them are now writing notes as well. What if I hadn't written that note?v
	I would encourage you to start writing notes regularly. What a simple way to influence people's lives in a positive way. If you are concerned about how to get started, the following two books on the subject have been the most useful to me:
	- "The Art of the Handwritten Note: A Guide to Reclaiming Civilized Communication" by Margaret Shepherd
	- "Business Notes: Writing Personal Notes That Build Professional Relationships" by Florence Isaacs Get a note card, pen and stamp. Write a note to someone who has been on your mind today. Only God knows how much that person, and the world, will change for the better due to the few minutes you take out of your busy schedule to write a few sentences.
	send letter

ViewPost Component

Write Your Letter
Write your personalised letter for peteranteater.
From
Message
······································
send

SendLetter Component

10	edit				
Hey peteranteater,		Order Informa			
The Law – Everythi	ig is energy. Choose to believe this law. You must accept it.	Letter Stamp	\$0 \$0.54		
Your thoughts, you	r feelings, what you focus on are all energy. Do you underst ed the person you have become and created the quality of	stand	Total \$0.54		
Take a good look a your present level	what you have created. You, and only you, are responsible f success in life.	≥ for		(DevDerre /	d la la Duttau
Right now, reflect o First, choose the ar career, your health,	n ways to make a positive difference in the quality of your a of life you want to focus. It can be your relationship, your your finances just to mention a few. The most important th scus on just one area to start.	ar and a second s		<paypage></paypage>	<helpbuttor< td=""></helpbuttor<>
Wienieniber is Gr		Julia			
Payment 💿					
Tuyment				<payform></payform>	<orderinfo< th=""></orderinfo<>
	VISA 📖 🚃 📖 💭 💶				
Card Number					
Tag	Month Year 🔽				
CSV Number	What's this?				
				<letterpreview <="" td=""><td>&gt;</td></letterpreview>	>
Cardbaldar Nama					
Cardholder Name Billing Address					

PayPage Component

### Backend:

For the backend, we choose to use Node.js and Express Framework since they can suitable with the React structure and easy to implement. Due to the backend framework we pick, we program our backend in JavaScript.

We connect our system to the Lob API. Lob is a commercial API which offers the service to deliver physical mails. We utilize its API to achieve some of our software's functionalities without re-invent the wheel.

In the future, we will add Strip API for payment.

### Database:

We are currently using Firebase database since it is a on-cloud database with automatic updates on data manipulation and synchronous data delivery. In the future, we may use the advanced version of Firebase or develop the local database on server.

### Implementation Plan

(tasks may be processed simultaneously)

- Design the component structure, document the designs.
  - One two weeks
  - $\circ$   $\,$  Assigned to Ricky
- Construct the database, including constructing the metadata and adding test data.
  - One week
  - Assigned to Zhaomin
- Design and build the backend in JavaScript and Express framework, including designing the backend routers, APIs, and connecting to the database.
  - $\circ \quad {\sf Two weeks} \\$
  - Assigned to Zhaomin and Ricky
- Design the view component and its related services.

- One week
- Assigned to Ricky
- Design the write component and its related services.
  - One week
  - Assigned to Zhaomin
- Design the viewPost component and its related services.
  - $\circ$  One week
  - Assigned to Zhaomin
- Design the sendLetter component and its related services.
  - $\circ$  One week
  - Assigned to Zhaomin and Ricky
- Design the payPage component and its related services, including connecting to Lob and Stripe APIs.
  - $\circ$  Two week
  - Assigned to Zhaomin and Ricky

# Latest MVP

### Link: A brief introduction to Blubb

https://drive.google.com/a/uci.edu/file/d/1il5jKJeQ9J05j7PvYevToBJCvSahlDuc/view?usp=sharing

Findings:

We believe that by giving people with mental illnesses or mental health concerns a platform to create strong, physical relationships in an online world, we can give them the support system they need. This web-based application will allow people to share their experiences, concerns, and thoughts to the world while remaining anonymous, but also receive physical and personalized letters as a response to their post. We will achieve this within 3 months, and we will know we have completed our goal when our service has been used at least 50 times.

Based on our survey result, most of the people consider the physical letter would be more personal than electronic mail. This means that our approach to use physical mailing would be creative and retrieve positive experience. However, a lot of people do not fully agree that they are comfortable when strangers contact them or when they discuss their mental illness with strangers. Therefore, we may add more user interaction between users, besides sending mails, to build their friendship bridge.

# Conclusion

Following our group's initial discussion and conception of the idea for our project, we each worked on versions of the Lean Canvas, Value Proposition Canvas, and Vision Statement individually. Points from all versions were then compiled and updated to produce the final versions included in this report. We defined our 3 x 3 x 3 early in the development process and rarely changed it beyond specifying a few new goals we identified later in the process, and implementation was conducted gradually alongside visual design in order to maintain a reasonable pace.

We conducted usability testing in order to gather feedback regarding our existing designs, affirming that our planned functionalities and user interface were appropriate and appealing to our target users' desires. Through testing and research, we were reassured that our design was user-friendly, and that the core concept of our project was sound. We received a fair amount of feedback for potential improvements and alternative options, but given the deadlines and scope of this course, we chose not to implement them at the current time. However, much of it did align with our vision for the future suggested in our 3 x 3 x 3.

The final stages of implementation were focused on including the key functionalities of the project, that being the abilities to write and reply to posts. Implementation was successful for the most part with the interface and user experience shown in our Invision prototype being recreated almost exactly. However, the payment process tied to the final step of replying to posts was postponed in favor of completing all previous steps.

# Contribution and Acknowledgement

Task	Contributor	Notes
Lean Canvas	Audrey Ye	49%
<ul> <li>Value Proposition Canvas</li> <li>3 x 3 x 3</li> </ul>	Winona Lisuallo	17%
	Zhaomin Li	17%
	Derek Minno	17%
<ul> <li>Research Methods</li> <li>Prototype</li> <li>MVP Visual Design and Specifications</li> </ul>	Winona Lisuallo	100%
Implementation Documentation	Zhaomin Li	50%
Latest MVP	Derek Minno	50%
Additional Notes and Sections	Audrey Ye	100%