

Care Corner

Connect yourself with people who care.

CS-410 Copper Team
Fall 2020

MEET TEAM COPPER

Casey Carpenter



Webmaster & UI Designer

Olayinka Adegun



Back-end Developer

Kyle Grissom



Full-Stack Developer

Thorrell Turner



Team Lead

Ernest Webb



Tech Lead

Tremain Young



Back-end Dev. / Tester

CONTENTS

01 THE BACKGROUND

- 4. The Background
- 5. How Important is Time?

02 THE PROBLEM

- 6. The Problem
- 7. Problem Characteristics
- 8. Who is Affected
- 9. Current Process Flow

03 THE SOLUTION

- 10. The Solution
- 11. Solution Characteristics
- 13. Solution Process Flows
- 16. MFCD (Major Functional Component Diagram)
- 17. What the Solution Will Not Do

04 THE MARKET & RISKS

- 18. Customer Risks
- 19. Technical Risks
- 20. Security Risk
- 21. Market Assessment
- 22. Conclusion

BACKGROUND

In 2018, over **10 million** Americans either contemplated, planned, or attempted **SUICIDE**

[13]

Since 1990, drug overdose deaths have more than **tripled**

[13]



"I had no idea police would get involved and care, or anybody else would care. If I knew I had the option, I would have left a long time ago." -Roia Atmar, survivor

Only **$\frac{1}{5}$** of rapes and attempted rapes are reported [17]

of the **21 million** Americans who suffer from addiction

90%

of them do not seek treatment [13]

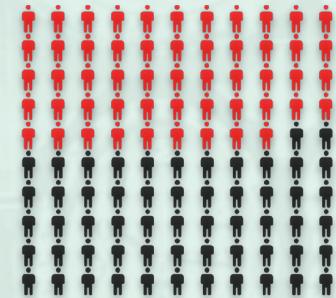
HOW IMPORTANT IS TIME?

Addiction can
“smack you in the face
at anytime, without warning”,
....and once it does, it changes
your life forever [24]

TIME IS CRITICAL
Help needs to be
immediate and easily
accessible.

There is a
suicide every
40 seconds [10]

48% of attempted **suicide** survivors
stated **only 20 minutes**
between
deciding &
attempting
suicide
[14]



“Finally, I made up my mind: I wasn’t going back. He managed to track me down. **He showed up at my doorway, and just like that, it was on again.** Mentally I was broken. He made me believe he was the only person who would ever love me.” -Tiffany’s story [22]

THE PROBLEM

Individuals experiencing traumatic events such as suicidal thoughts, domestic violence/sexual assault, and drug addiction, struggle to find effective help appropriate for their situation in a timely manner.

PROBLEM CHARACTERISTICS



Someone who's been through a traumatic event is often not in the right state-of-mind to actively search for the appropriate help.

Establishing a connection with a support service can be time-consuming, potentially causing them to give up.



Different searches are needed to find national and local help.



WHO IS AFFECTED?



DIRECT STAKEHOLDERS

- ❖ Trauma victims
- ❖ Family and loved ones

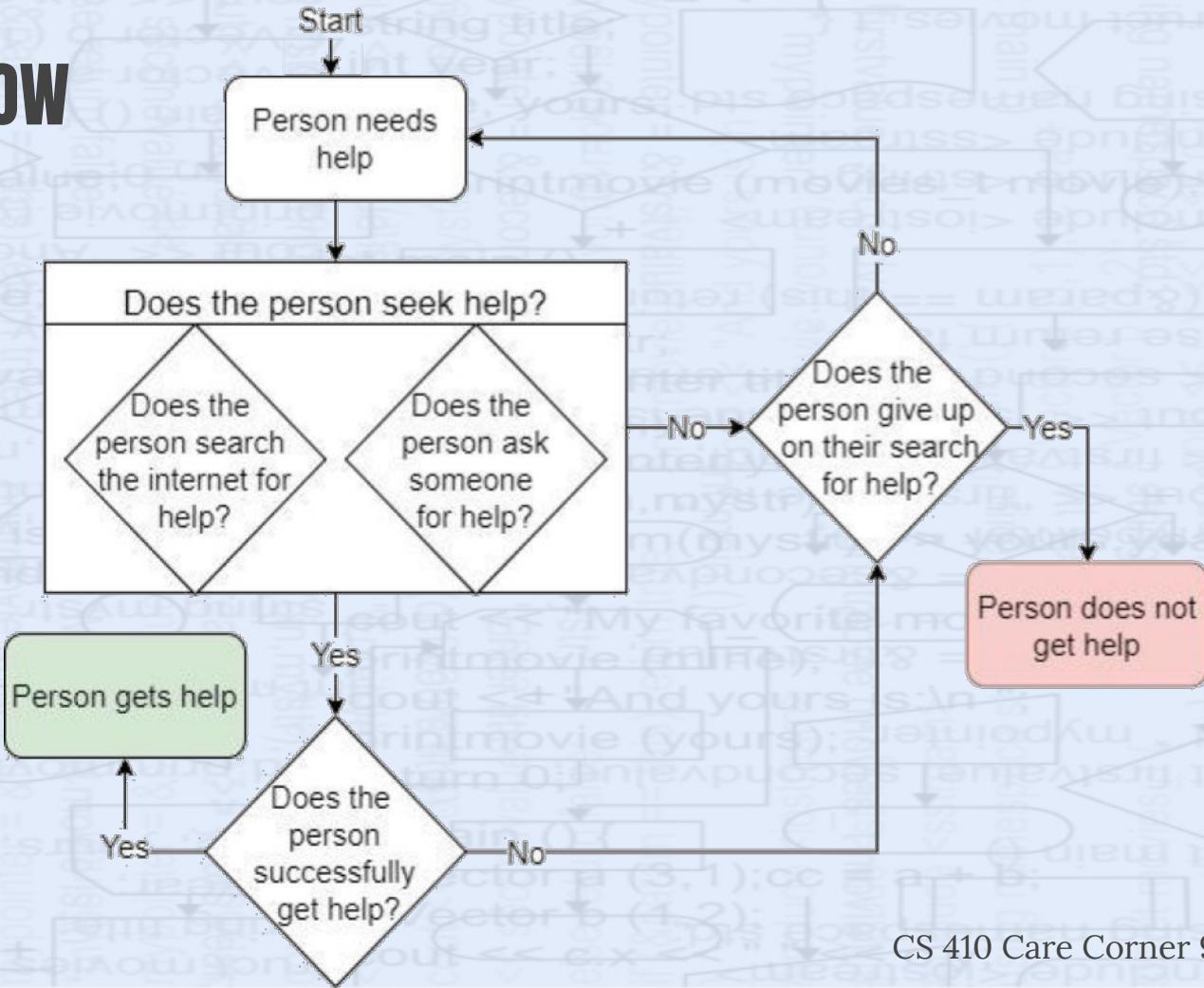


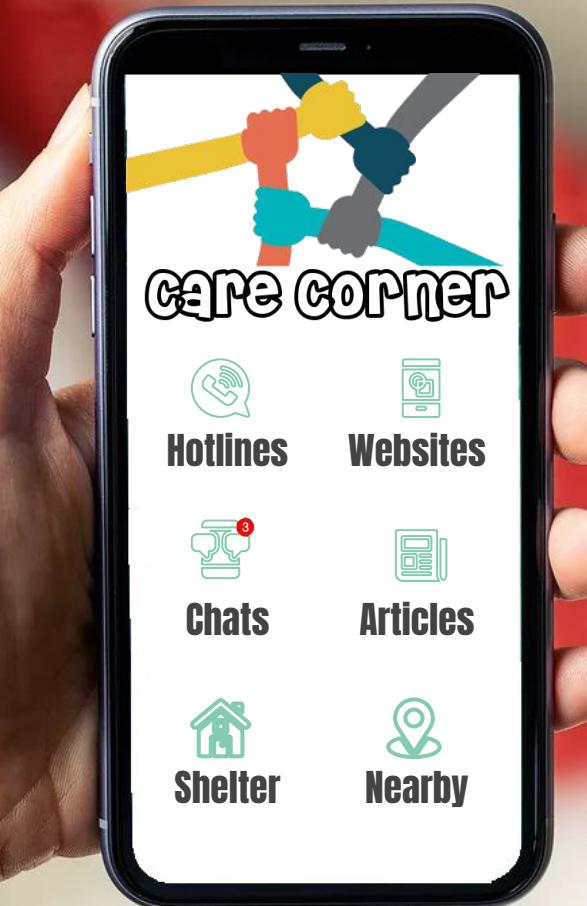
INDIRECT STAKEHOLDERS

- ❖ Caregivers
- ❖ First responders
- ❖ Health organizations

CURRENT PROCESS FLOW

Far too often **lack of time**, or **inability to locate resources**, leads to those in need of help giving up





THE SOLUTION

Care Corner is a mobile application that will quickly connect users to effective resources, that are suitable for their circumstances.

SOLUTION CHARACTERISTICS



Geo Location

Care Corner utilizes geo location to quickly locate resources in the vicinity of the user.

Chat Bot

Features a chat box that will search for and store appropriate resources based of your request



Profiles

Establish profiles to save you relevant resources without searching for them again.

SOLUTION CHARACTERISTICS



Journal

Users are provided a private Journal to assist in their recovery

Social Circle

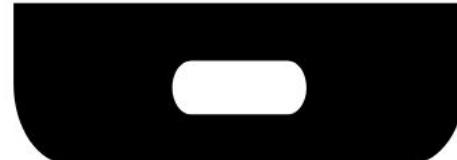


Stay connected with your social circle for aid from their friend & family on your journey to recovery.

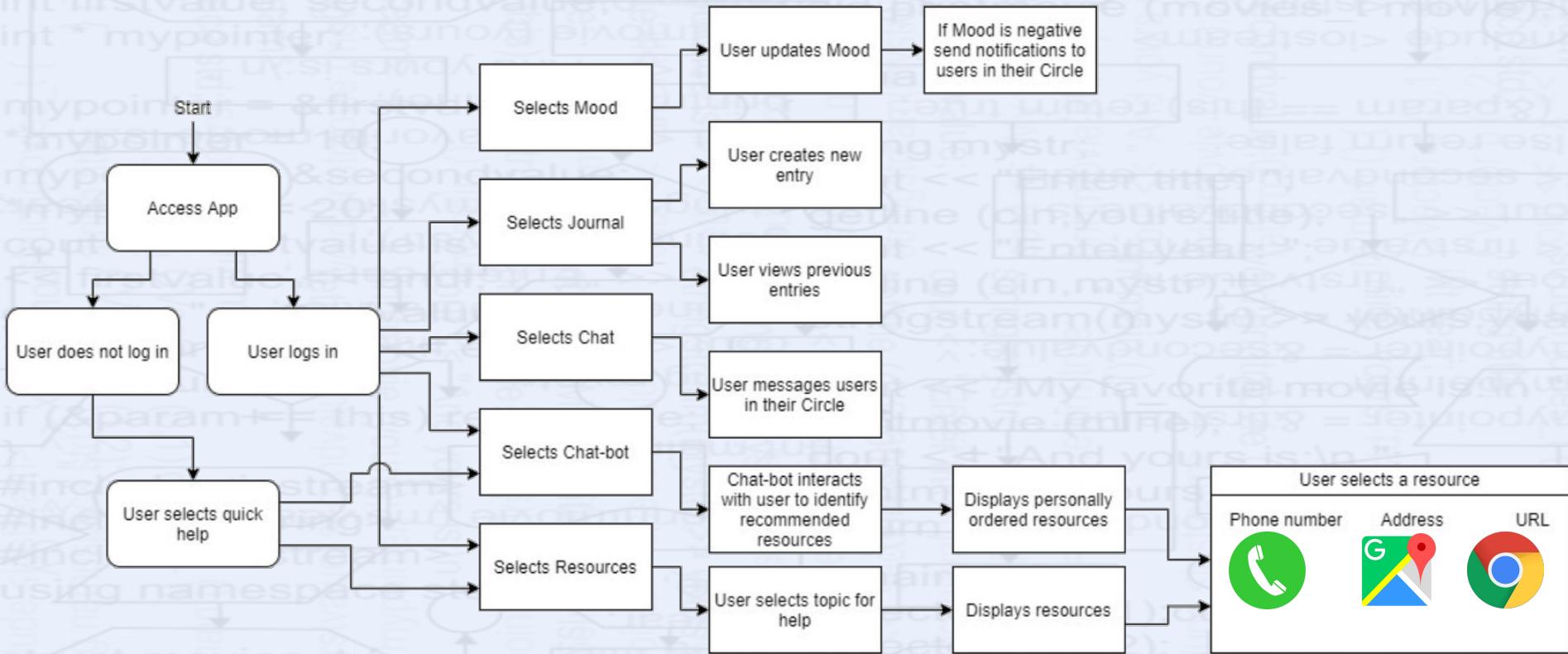


Support

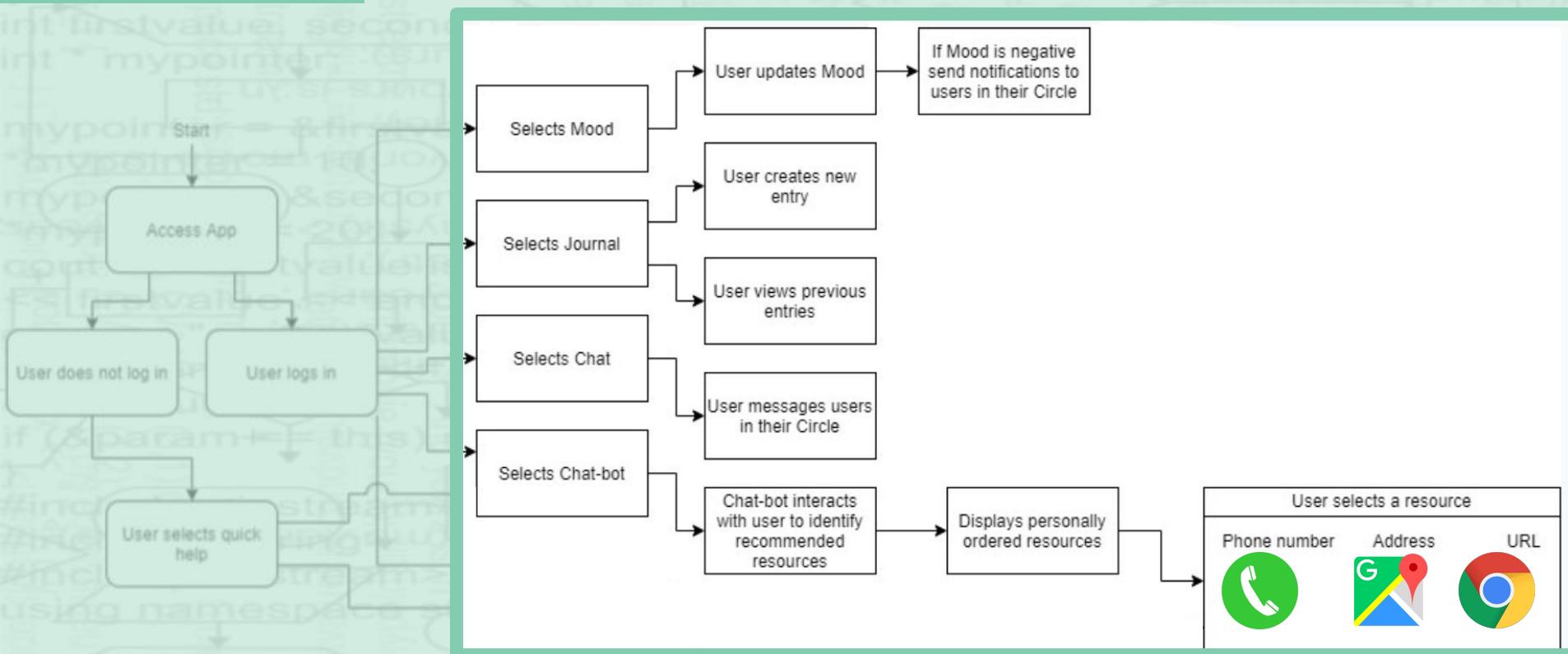
Friends and Family are provided relevant reading in addition to being able to private chat with user to provide support



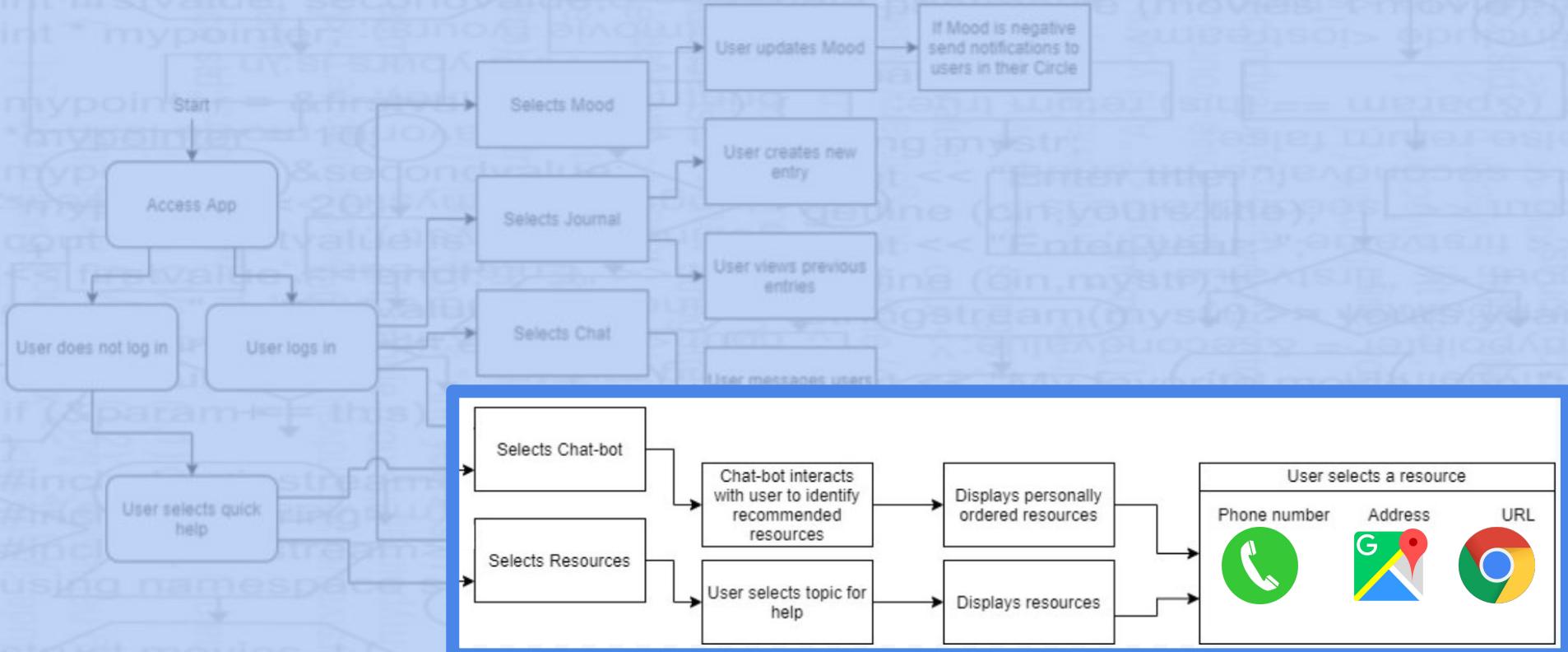
THE SOLUTION FLOW



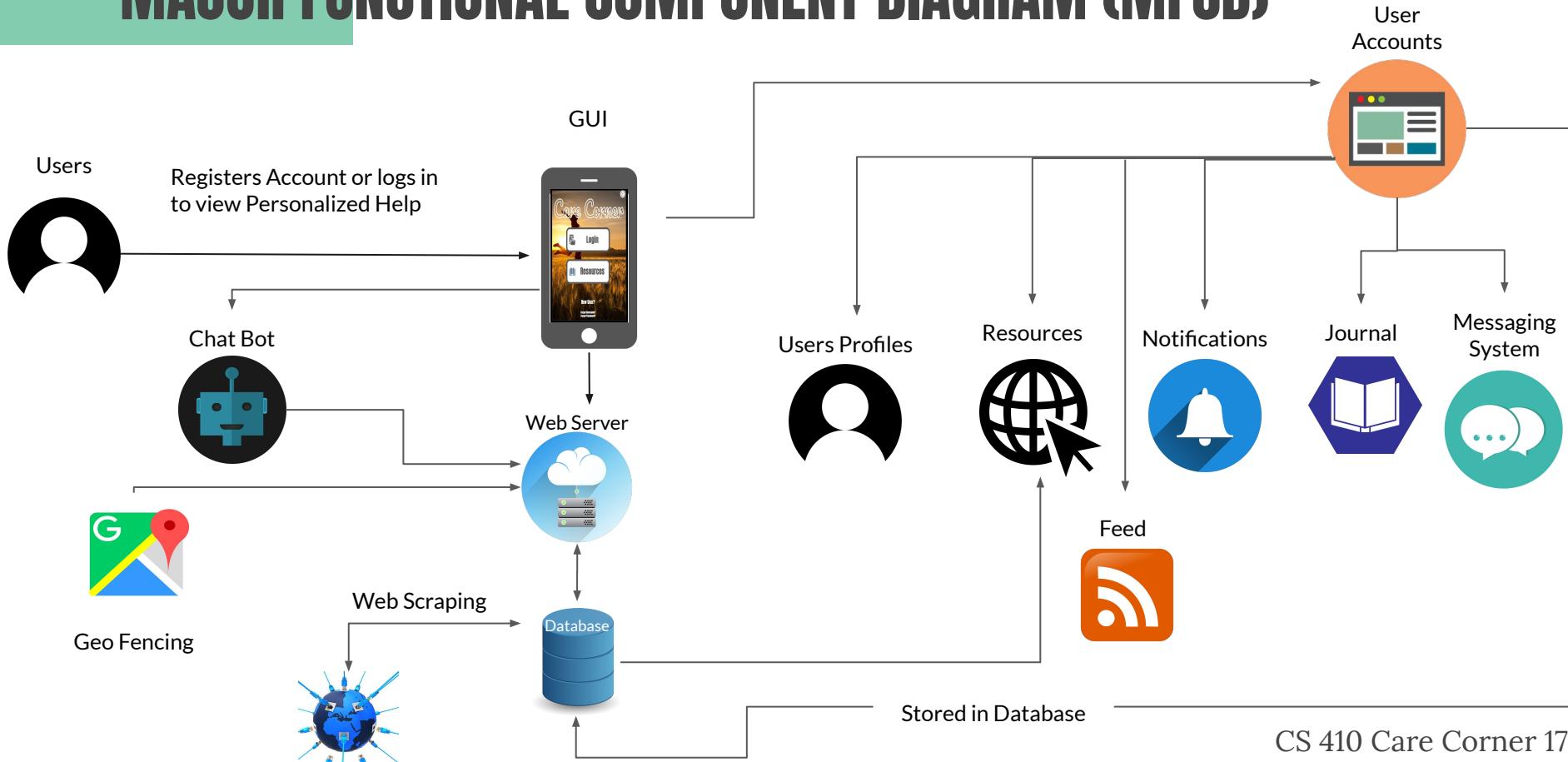
THE SOLUTION FLOW: SUPPORT



THE SOLUTION FLOW: RESOURCES



MAJOR FUNCTIONAL COMPONENT DIAGRAM (MFCD)



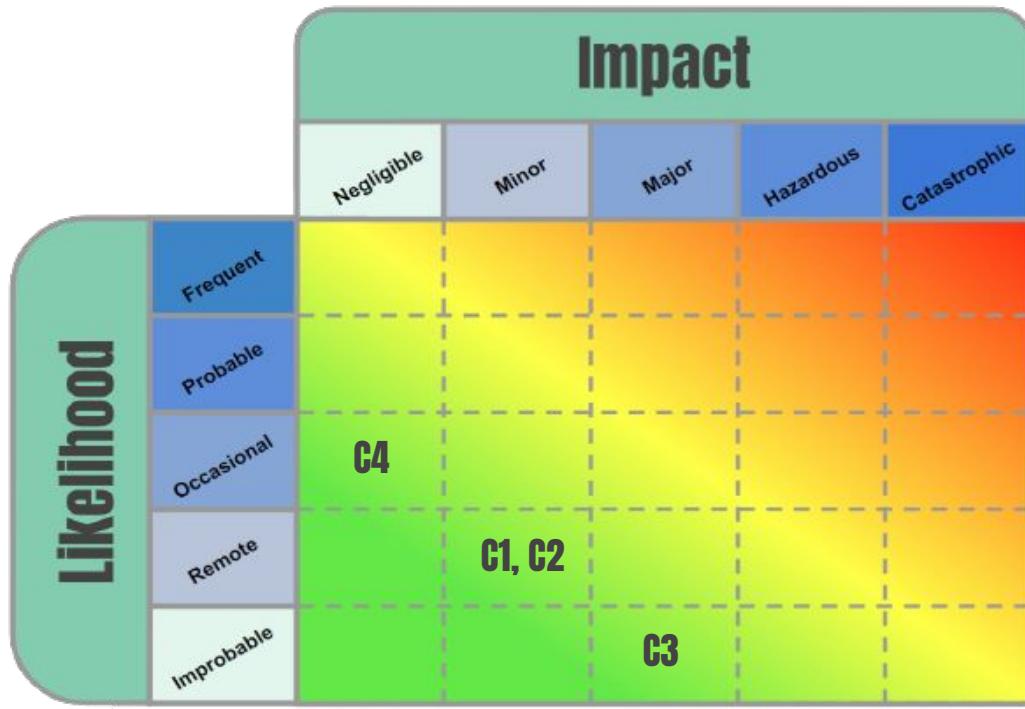
WHAT CARE CORNER WILL NOT DO

- This application will not alert the authorities
- This application will not provide medical advice
- This is not a replacement for seeking professional medical advice
- This application is not to be used in the case of life-threatening emergencies.
- This is not a social network platform
- This is not a general purpose messaging app

CUSTOMER RISK

Risks

- **C1 - Location Not Enabled:** Customer prefers not to enable their location data
- **C2 - No Internet:** Customer Loses internet Access
- **C3 - User Unfamiliar With C.C.:** User unsure how Care Corner works
- **C4 - User Doesn't Like the Chatbot:** User refuses to, or doesn't like, using the chat box



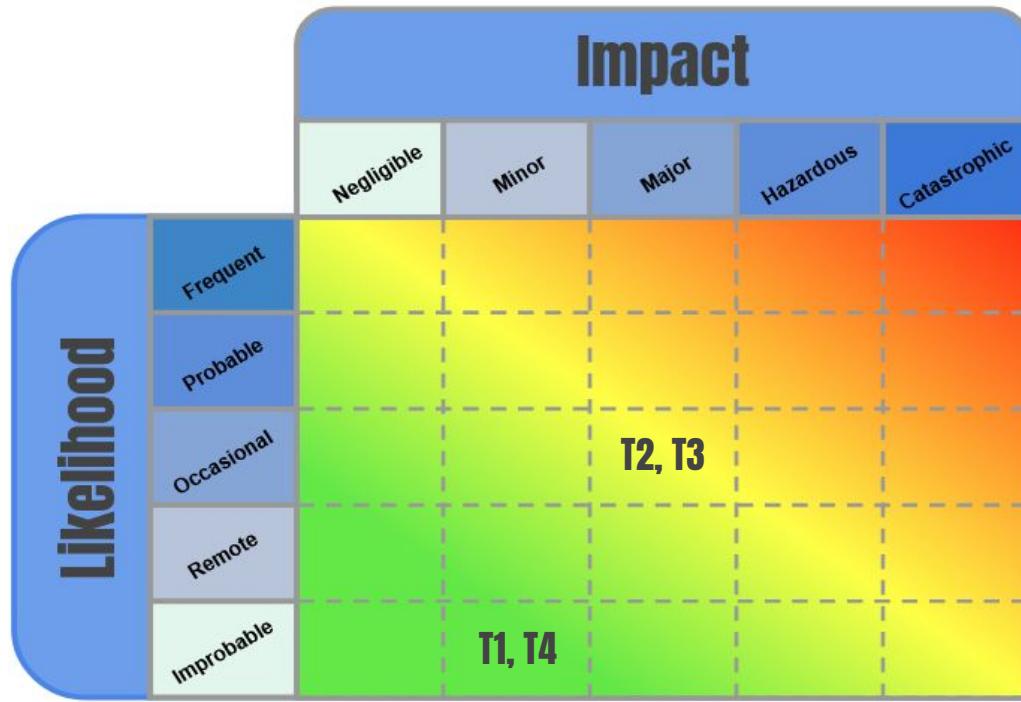
Mitigation

- **C1** - User can manually submit an address or zip code to query. Or, manually search through resources
- **C2** - previously located resources information will be stored on the phone. A list of National services accessible in any location will be stored on the phone during installation
- **C3** - User's are walked through an optional tutorial when setting up new account. This and standard help and FAQs will be available and included in the initial installation
- **C4** - Provide search and filter options in the resources menu for user to manually search for information

TECHNICAL RISK

Risks

- T1 - Resource Website Unavailable:** Care Corner uses as a resources goes down
- T2 - External Dependency Unavailable:** 3rd party API/Service Care Corner uses goes down
- T3 - Database Failure:** Care Corner's database becomes unavailable
- T4 - Location Data Unavailable:** GPS/Location Data is not available to use in a query



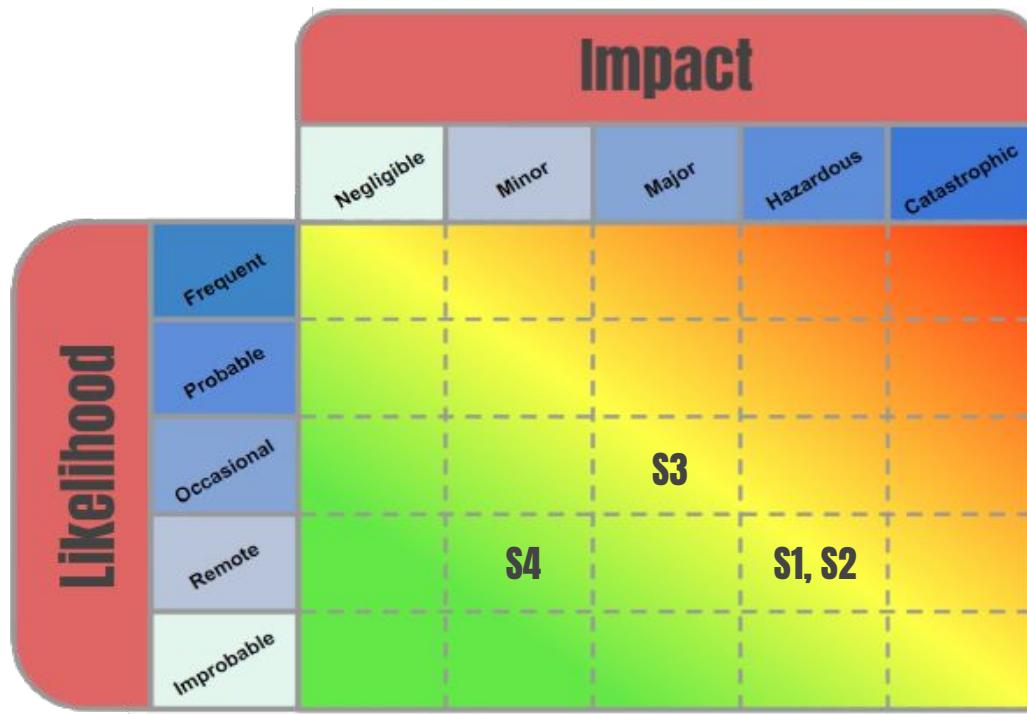
Mitigation

- T1** - Store relevant data from sites in our database so it is still available to the user
- T2** - Try to limit external dependencies by gathering relevant data and storing it in our database for users to access
- T3** - Relevant data will be stored on the user device in order to run with app with limited functionality. In addition, some data relevant to the user will also be stored on their device, including: previously queried resources, journal entries, and previously received messages
- T4** - Users can manually submit their location to use in query

SECURITY RISK

Risks

- **S1 - Database Attacked:** Database could be wiped in a cyber-attack
- **S2 - Database Injection Attack:** Database information is maliciously edited in cyber-attack. For instance a SQL Injection
- **S3 - Phishing Attack:** Messaging is used as a medium for phishing attack via direct message, or by intercepting/altering transmissions
- **S4 - Data Exposure:** User's data could be exposed during transmission or while stored on their device



Mitigation

- **S1** - Access to the database will be limited/controlled. Database will be monitored and regularly backed up
- **S2** - Database queries will be written with properly-formatted prepared statements so attackers cannot change the intent of the query.⁽¹⁹⁾
- **S3** - Users can only be messaged by their selected social circle. User login info will be stored in hash functions so attackers cannot access it to message users
- **S4** - Minimal sensitive info will be requested of user. All transmitted data, and private data stored on device, will be encrypted

MARKET ASSESSMENT

	Care Corner	Stay Alive	My 3	Seeking Shelter
Provides quick access to external resources that support recovery/prevention				
Uses Geofencing to locate assistance in your local area				
Has an interactive bot to assist in locating help				
Stores resources relevant to the user for immediate access in time of need				
Has private journal for users				
Allows users to store encouraging images, articles, or messages they acquire				
Allows users to create a support circle of trusted family & friends				
Has private messaging to people in your support circle				

CONCLUSION

- **Accessibility and time** are two factors that **need to be improved** within the mental health community
- **Care Corner will help solve these issues** through providing a quick, easy, and secure way to navigate to:
 - Hotlines
 - Chats (Text & Hands-free)
 - Local help & shelters
 - Personalized Social Circle
 - Journal
 - Mood updates
 - Personalized profile

Thank you for listening to our presentation!



QUESTIONS?

RESOURCES

“About 211.” 211.Org, www.211.org/pages/about. (1)

“List of Hotlines.” Please Live, Davo Productions, 15 Jan. 2020, www.pleaselive.org/hotlines/. (2)

Amin. “Step by Step Guide on Scraping Data from a Website and Saving It to a Database.” How PC Rules My Life, 13 Dec. 2017,

howpcrules.com/step-by-step-guide-on-scraping-data-from-a-website-and-saving-it-to-a-database/. (3)

Miles, Stephanie. “5 On-Demand Apps for Emergency Services.” Street Fight, 1 Apr. 2016, streetfightmag.com/2016/04/01/5-on-demand-apps-for-emergency-services/. (4)

Self-Care for Friends and Family. (n.d.). Retrieved September 27, 2020, from
<https://www.rainn.org/articles/self-care-friends-and-family>. (5)

Staff, Psyche Central. “Common Hotline Phone Numbers.” Psych Central, 6 Mar. 2019, psychcentral.com/lib/common-hotline-phone-numbers/. (6)

RESOURCES

Tips for Talking with Survivors of Sexual Assault. (n.d.). Retrieved September 27, 2020, from
<https://www.rainn.org/articles/tips-talking-survivors-sexual-assault>. (7)

Questions & Answers on Sponsorship(2019). Alcoholics Anonymous World Services, Inc.
https://www.aa.org/assets/en_US/p-15_Q&AonSpon.pdf. (8)

Jain, A. (2019, April 09). Database Hacking & Its Prevention. Retrieved October 07, 2020, from
<https://thecybersecurityplace.com/database-hacking-its-prevention/> (9)

“Suicide Statistics and Facts.” SAVE, save.org/about-suicide/suicide-facts/. (10)

“Preventing Suicide |Violence Prevention|Injury Center|CDC.” Centers for Disease Control and Prevention, Centers for Disease Control and Prevention, 21 Apr. 2020,
www.cdc.gov/violenceprevention/suicide/fastfact.html. (11)

“The Relationship Between Mental Health Care Access and Suicide.” RAND Corporation,
www.rand.org/research/gun-policy/analysis/essays/mental-health-access-and-suicide.html). (12)

RESOURCES

“Addiction Statistics - Facts on Drug and Alcohol Use.” Addiction Center, 18 Sept. 2020,
www.addictioncenter.com/addiction/addiction-statistics/. (13)

Duration of Suicidal Crises.” Means Matter, 7 Mar. 2017,
www.hsppharvard.edu/means-matter/means-matter/duration/. (14)

Renninson, Callie. “Rape and Sexual Assault: Reporting to Police and Medical Attention.” Bureau
of Justice Statistics (15)

“Why Don't They Tell?” Nctsn.org. (16)

What Is Sexual Abuse?” Hope Alliance, www.hopealliancetx.org/sexual-assault-statistics/. (17)

50 Obstacles to Leaving.” The Hotline,
www.thehotline.org/resources/50-obstacles-to-leaving/. (18)

RESOURCES

“Find Support.” Aspergillosis Patients and Carers, 29 May 2020, aspergillosis.org/find-support/. (19)

“Support Groups.” MHA Screening - Mental Health America,
screening.mhanational.org/content/support-groups. (20)

Basler AG. “Sales and Support: Basler.” Basler AG, 7 Oct. 2020,
www.baslerweb.com/en/sales-support/. (21)

“The US System Didn't Protect These Women - so Now They're Taking a Stand for Others.” Amnesty International, www.amnesty.org/en/latest/news/2019/10/gun-violence-report/.(22)

Davey, Melissa. “Domestic Violence: Five Women Tell Their Stories of Leaving - the Most Dangerous Time.” *The Guardian*, Guardian News and Media,
www.theguardian.com/society/ng-interactive/2015/jun/02/domestic-violence-five-women-tell-their-stories-of-leaving-the-most-dangerous-time.(23)

“How Long Does It Take for an Addiction to Develop?” *Drug Rehab*,
www.drugrehab.com/addiction/how-long-does-it-take-to-develop/.(24)

RESOURCES

“SQL Injection Prevention.” OWASP, Open Web Application Security Project,
cheatsheetseries.owasp.org/cheatsheets/SQL_Injection_Prevention_Cheat_Sheet.html.
(19)