

# Care Corner

Connect yourself with people who care.

CS-410 Copper Team  
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# What do you think about before you go out?

“My phone needs to be fully charged...oh and an escape plan. I didn't have an easy escape one time and it was one of the worst decisions I've ever made.”

[20]

“Check the backseat before getting in the car”

[21]

“I never go out by myself if it's past 9:00 PM.”

[21]

“Avoid wooded areas, even in the daytime”

[21]

“Park in well-lit areas”

[21]

61% of women regularly take steps to avoid being sexually assaulted [20]

7 out of 10 women say they always have their phone prepared when walking alone [20]



# BACKGROUND

“A lot of people who call the national hotline, **the first question** they ask is, ‘**Was I Raped?**’”<sup>[22]</sup>

- President of RAINN



“**I had no idea** police would get involved and care, or **anybody else would care.**”  
-Roia Atmar, *survivor*



Only **1/5** of rapes and attempted rapes are reported<sup>[17]</sup>

Reasons for not reporting include:

- **Afraid of judgement**
- **Confusion** on what happened
- Afraid of not being believed
- **Lack of evidence**
- **Not knowing who/how to tell** <sup>[22]</sup>

# THE PROBLEM

Too often, women feel unsafe in several situations and live with a constant fear of being attacked. If an attack does happen, confusion about how to find resources and report the crime is likely to follow.

# PROBLEM CHARACTERISTICS

When calling 911 is not an option (due to fear of getting caught by victimizer), individuals need another way of getting help.



Many individuals are not fully educated on the proper safety measures that help aid in the fight against sexual assault.

Many victims are confused about how to and what the right way to report is.



# WHO IS AFFECTED?



## DIRECT STAKEHOLDERS

- ❖ Sexual assault victims
- ❖ Family and loved ones

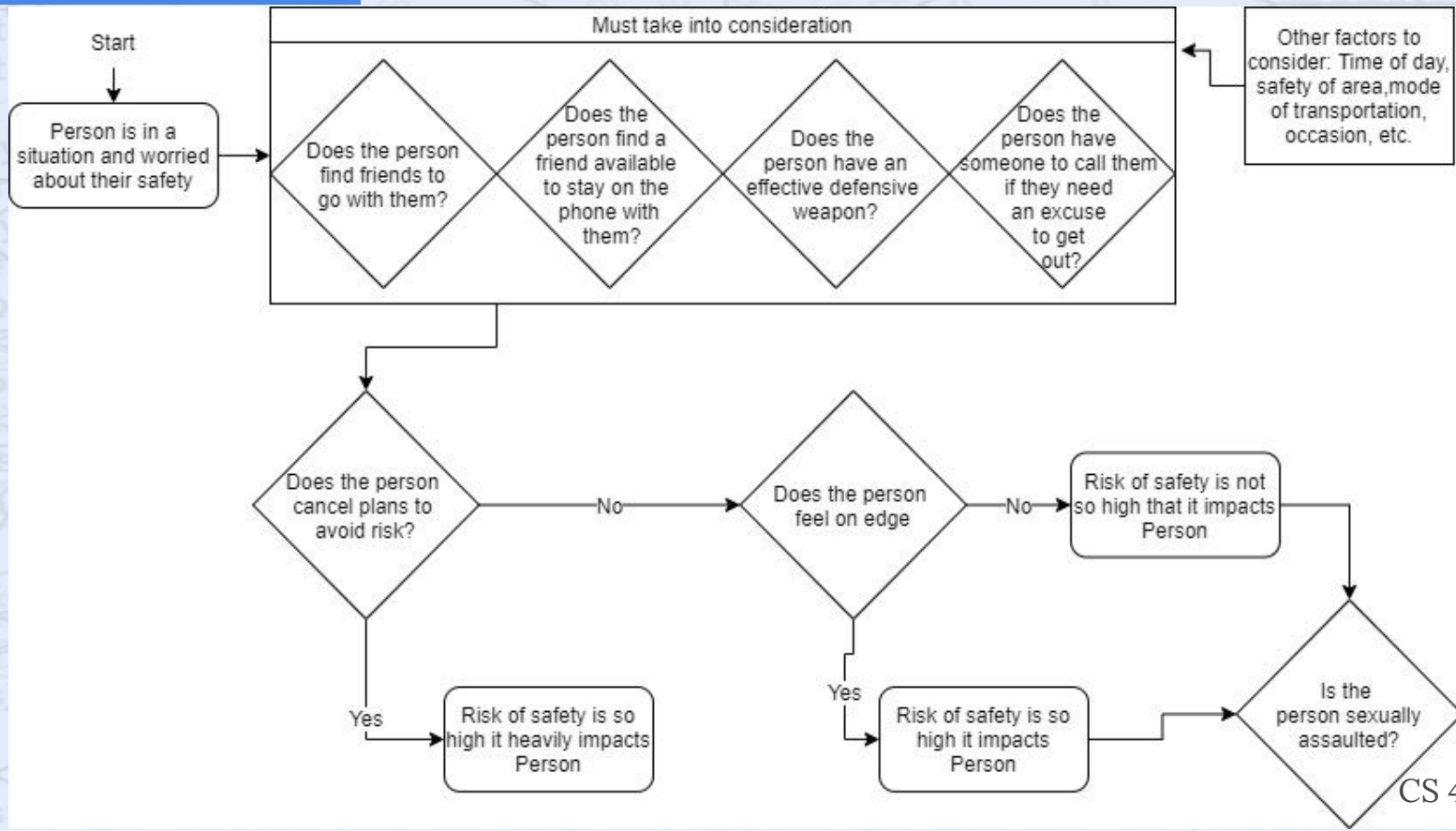


## INDIRECT STAKEHOLDERS

- ❖ Health organizations
- ❖ Authorities

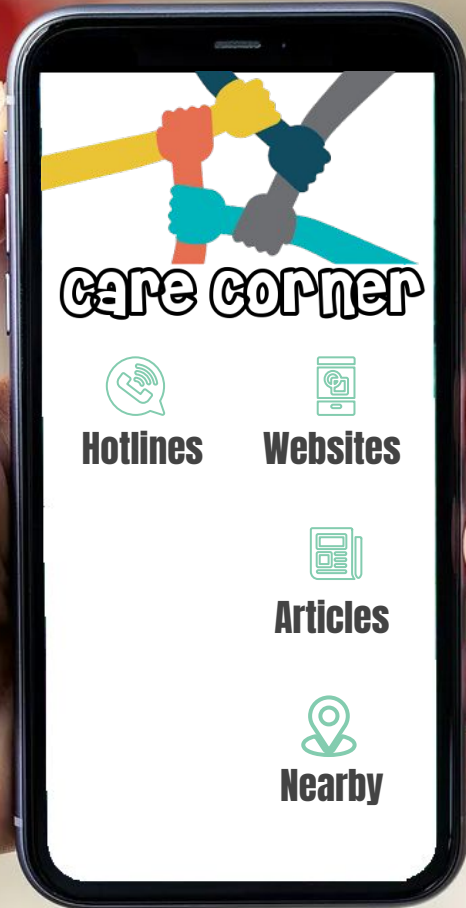


# CURRENT PROCESS FLOW



# THE SOLUTION

Care Corner is a mobile application that will provide safety features for potentially unsafe situations, aid in the fight against sexual assault, and assist victims of sexual assault through three key features: The Emergency Button, Fake Call, and Mom, as well as offer helpful resources, a journal, and information on how to report assaults.



# SOLUTION CHARACTERISTICS



## Emergency Button

When the Emergency Button is triggered it will send an alert to your trusted contacts as well as begin recording video and audio.

## Mom

Mom will analyze your words for keywords and return helpful feedback with relevant information to be cautious of.



## Profiles

Establish your profile to save your emergency contacts and journal.

# SOLUTION CHARACTERISTICS



## Journal

Users are provided a private Journal to assist in their recovery

## Resources & Education

Provides current hotlines, help sites, and other resources to help victims. From what to expect if reporting to how to get help.

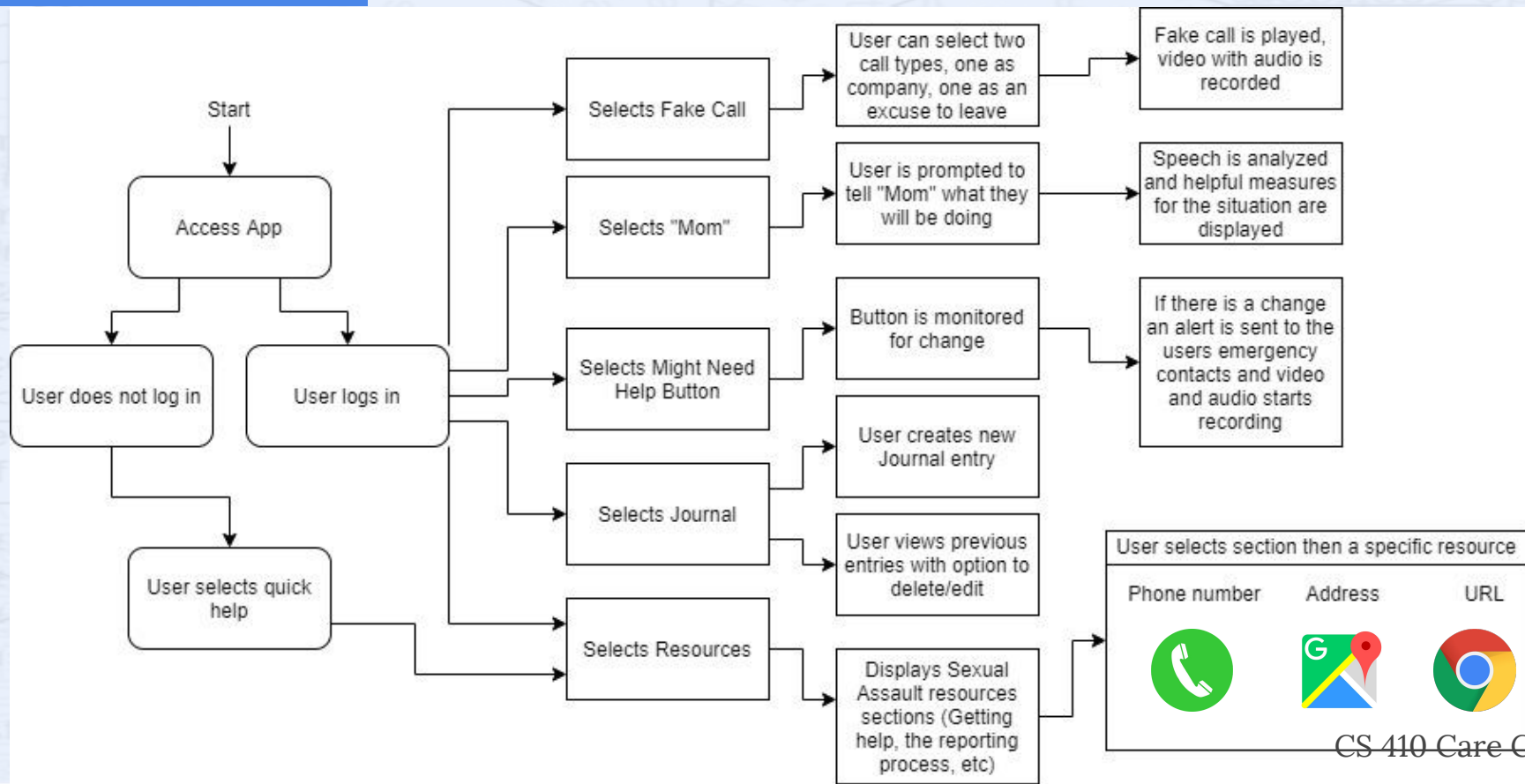


## Fake Call

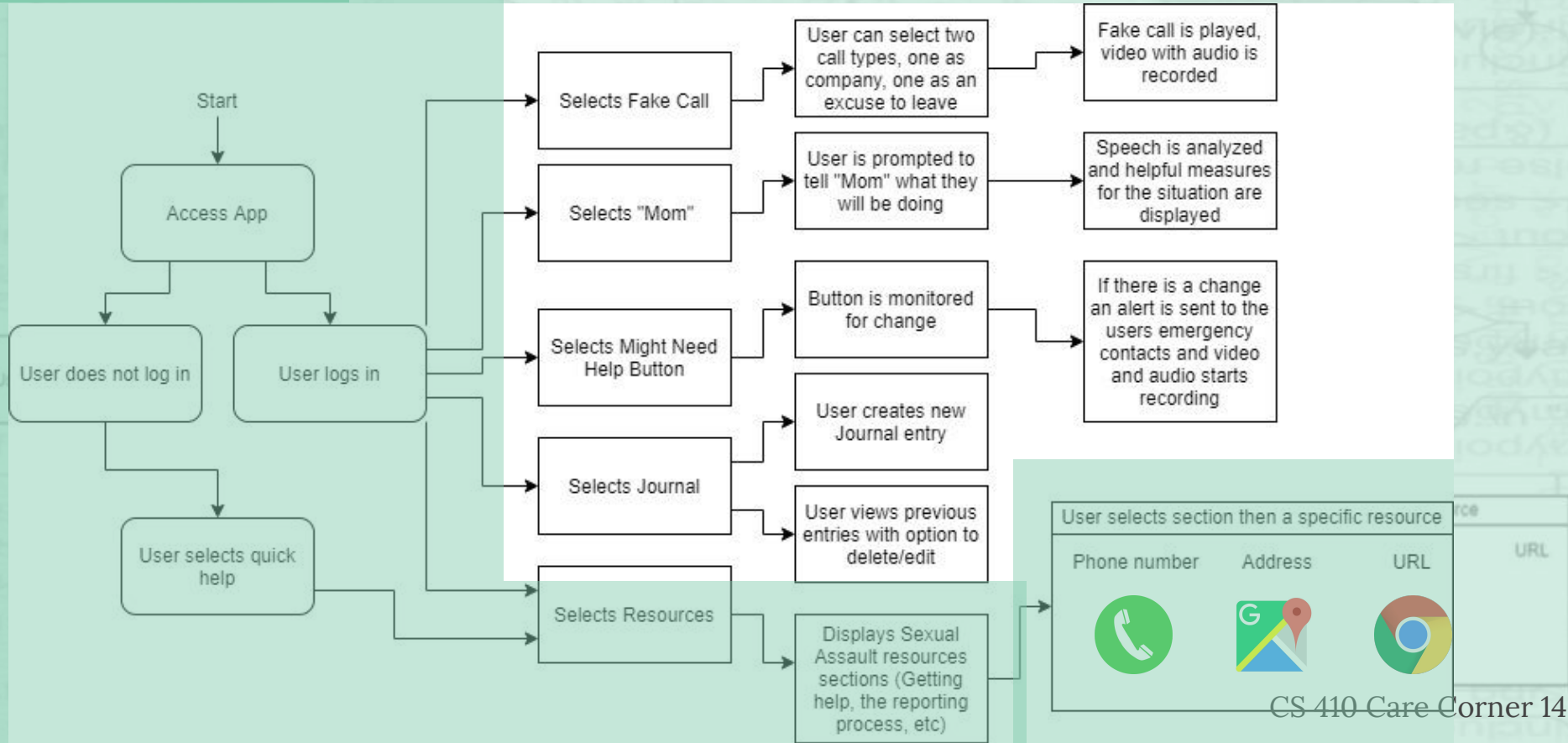
User will receive a fake phone call to ease their current situation. Someone to 'chat' with while walking alone or an fake emergency to get out of an uncomfortable situation.



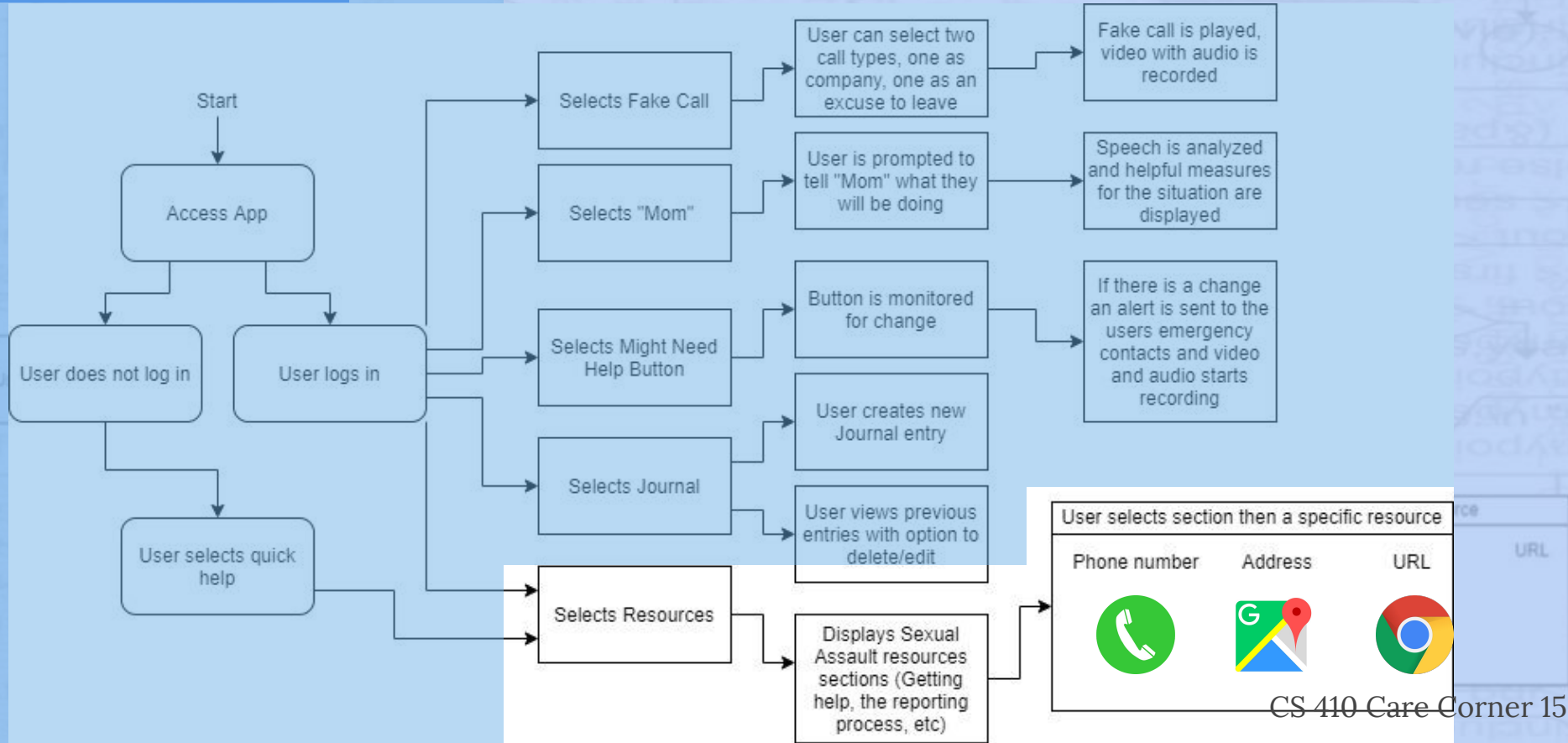
# THE SOLUTION FLOW



# THE SOLUTION FLOW



# THE SOLUTION FLOW



## “Would you download and actively use this app?” 100% said **YES**

### “What are the features that attract you to use the app?”

- 11/11 said they would use the panic button and fake phone call when they worry for their safety
- Everyone was in agreement that the reporting section would be incredibly informational and help increase rates of reporting

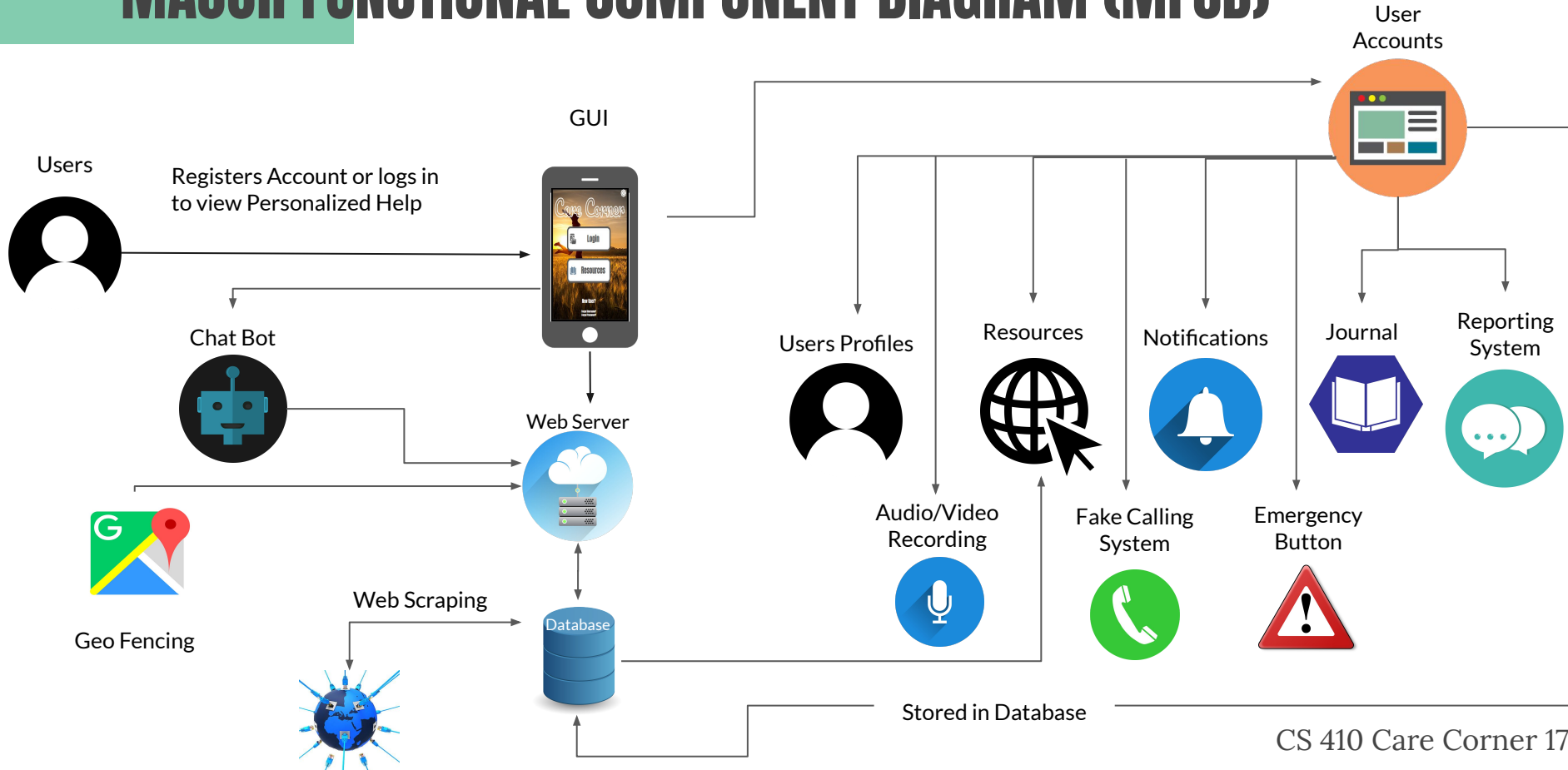


### “Other comments or specific things you want to see in this app?”

- “Multiple fake phone calls that would be able to fit different scenarios”
- “Break down the reporting section into different ways to report”(i.e. Law Enforcement, Medical Professionals, Campus/Workplace)
- User needs to be able to choose who & how many people get sent an alert using the panic button



# MAJOR FUNCTIONAL COMPONENT DIAGRAM (MFCD)



# WHAT CARE CORNER WILL NOT DO

- This application will not alert the authorities
- This application will not stop an attack, instead serving as a deterrent.
- 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 - Location used by Attacker:** A potential assailant could use GPS location to assault user
- **C4 - User Doesn't Like the Chatbot:** User refuses to, or doesn't like, using the chat box

		Impact				
		Negligible	Minor	Major	Hazardous	Catastrophic
Likelihood	Frequent					
	Probable					
	Occasional	<b>C4</b>				
	Remote		<b>C1, C2</b>			
	Improbable			<b>C3</b>		

## Mitigation

- **C1** - User can still share that they're travelling, without sharing GPS and manually search through resources
- **C2** - Previously located resources information will be stored on the phone. They can still record their trips with audio/video
- **C3** - Users location is encrypted, and only shared with a user's selected individuals.
- **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

		Impact				
		Negligible	Minor	Major	Hazardous	Catastrophic
Likelihood	Frequent					
	Probable					
	Occasional			T2, T3		
	Remote					
	Improbable		T1, T4			

## 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

		Impact				
		Negligible	Minor	Major	Hazardous	Catastrophic
Likelihood	Frequent					
	Probable					
	Occasional			<b>S3</b>		
	Remote		<b>S4</b>		<b>S1, S2</b>	
	Improbable					

## 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	bSafe	JDoe	Circle of 6
				
A Panic Button that can send your location and message to trusted people you select				
Ability to make, and schedule, a fake phone call to remove yourself from uncomfortable situation				
Takes into account if you live on college campus to connect you with campus police				
Ability to record a journey with Audio, Video, and GPS location				
Interactive chat bot that can provide best practices when planning a Journey				
A resources and education section including geo fenced resources in your area				
Ability to record the time and location of an incident				
Assistance reporting, including an area to record incident details before they're forgotten				

# CONCLUSION

- The rapidity of the event of sexual assault necessitates preparedness to forestall against being a victim. Having an app like **Care Corner** can put a user ahead of perpetrators
- Being a victim of sexual assault can be very traumatic but **Care Corner** can make the road to recovery an easier one by providing a quick, simple, and secure navigation to:
  - Hotlines
  - Chats (Text & Hands-free)
  - Local help
  - Journal
  - Reporting
  - Personalized profile

Thank you for listening to our presentation!



**QUESTIONS?**



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