Safe-hood

A Mobile Application to Addressing Violence Against Women (VAW) in the Community

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2. Introduction:

Project brief:

In simple terms, violence against women is a big problem, especially during natural disasters. But not enough research is done on why it happens or how to stop it. This study is making a special phone app to help keep women safe and teach people how to prevent violence. It's an important step in helping make the world safer for everyone.

Aim: To develop Safe-hood, a user-friendly mobile app facilitating the reporting of violence against women (VAW) and disseminating educational resources for community awareness.

Objectives: Enhancing the effectiveness of Safe-hood involves leveraging humanitarian insights to understand and address root causes of VAW, as well as compiling best practices for VAW prevention in post-disaster scenarios.

3. Literature

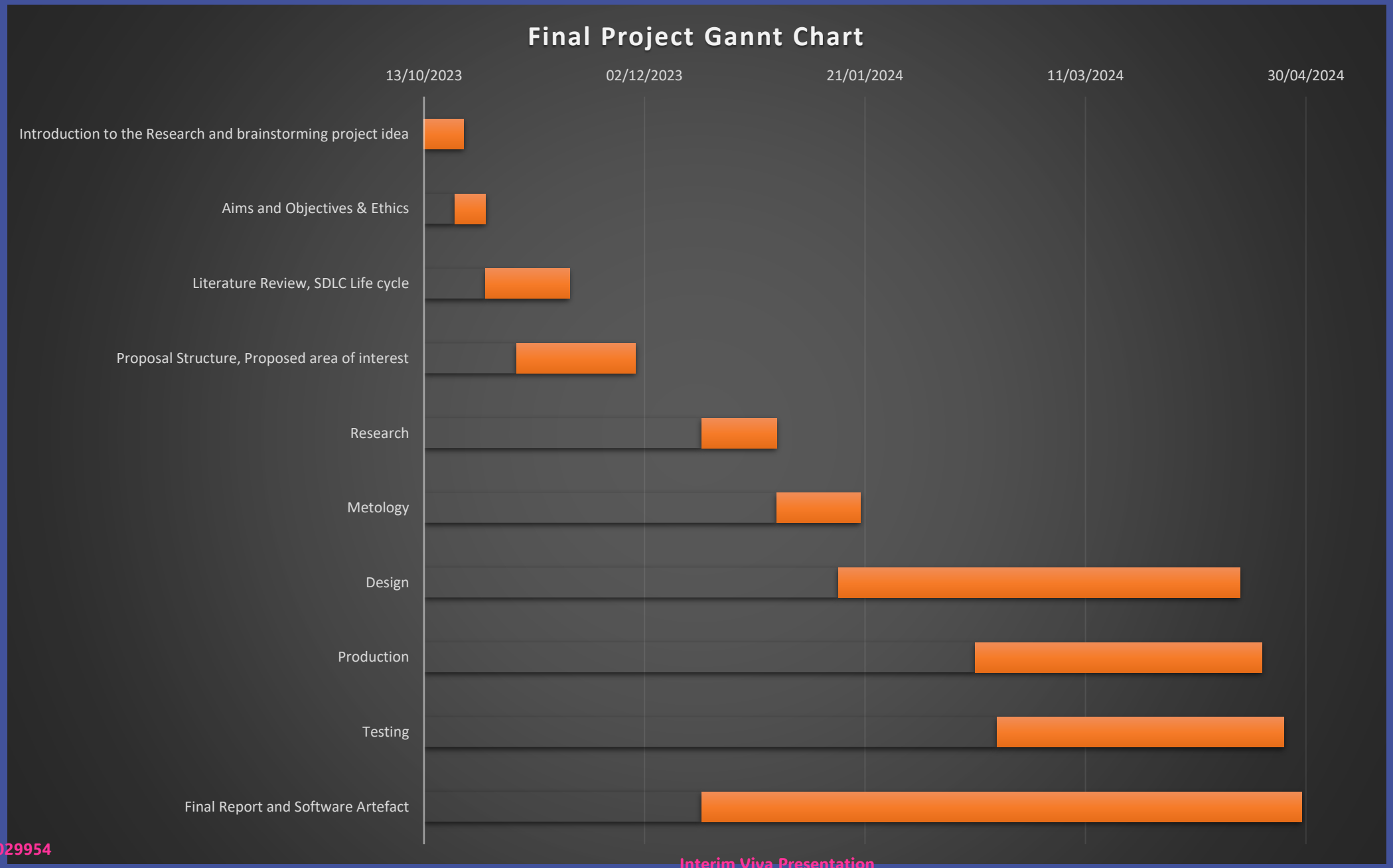
The study aims to address three key questions:

- How can the Safe-hood app be improved for reporting violence against women and sharing educational materials effectively?
- How can insights from humanitarian experiences help in understanding the causes of violence against women and enhancing the app's effectiveness?
- What are the best practices for preventing violence against women in post-disaster situations, and how can they be integrated into the Safe-hood app for better handling of such scenarios?

Safety through Mobile Technology:

Mobile technology, especially smartphones, plays a vital role in improving women's safety, with features like GPS and high-quality cameras. Safe-hood, a proposed app, combines various safety measures into one comprehensive solution, making it easier for women to seek help. While existing apps like bSafe and PeopleSafe offer useful features, they also have limitations that need addressing, such as security issues and usability problems. SaveME 999 provides emergency assistance but has usability flaws. To advance women's safety, it's crucial to innovate solutions that address these challenges and empower women through technology.

4. Chart


Final Project Gannt Chart
13/10/2023
02/12/2023
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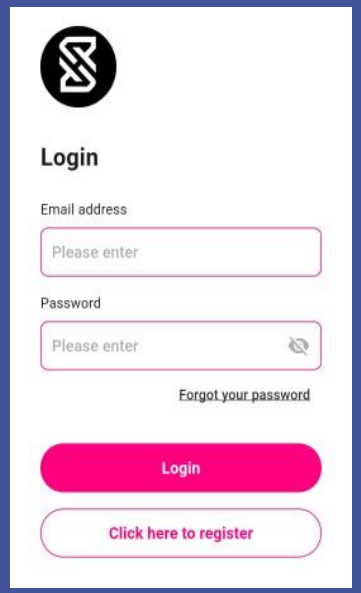
Introduction to the Research and brainstorming project idea
Aims and Objectives & Ethics
Literature Review, SDLC Life cycle
Proposal Structure, Proposed area of interest
Research
Metology
Design
Production
Testing
Final Report and Software Artefact

5. Methodology

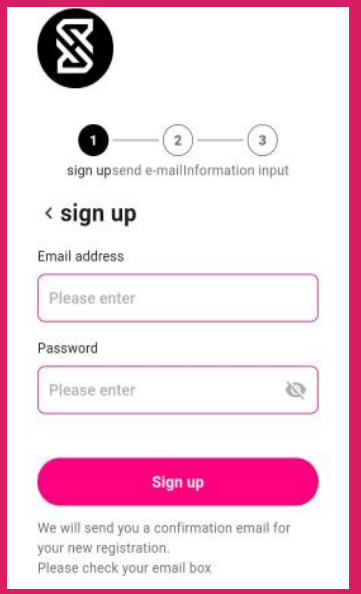
Safe-hood, a mobile app created to help women stay safe, was developed using a method called Agile Software Development Life Cycle (SDLC). This method focuses on making good software quickly and without spending too much money. The first step was to collect information about crimes like harassment and abuse from three cities. This information helped make sure the app could help in different situations. The app uses GPS to know where someone is and help them find safe places. The app was tested many times to make sure it worked well and was safe to use. We used feedback from people who tried the app to make it better. Safe-hood was made for Android phones because they are popular and many people use them. We used a special program called Android Studio to make the app. It wasn't always easy, but we worked hard to make sure Safe-hood helps keep women safe.

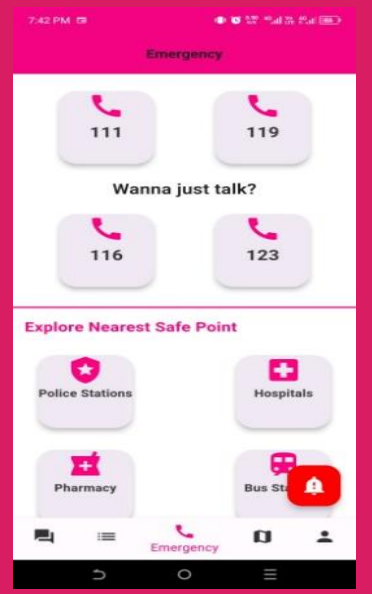
6. Design



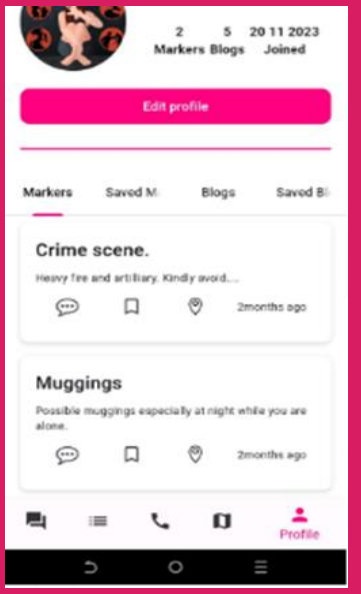
The Safe-hood system was built with a strong and complex design:

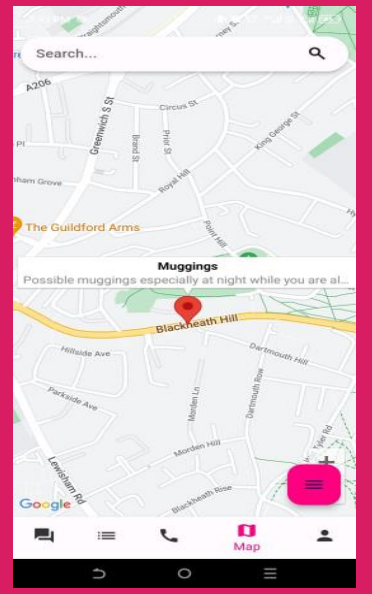
- **Quiz test - education**
- **Useful information - hyperlink (divert to web page or video)**
- **Blog page - share information and experience,**
- **Emergency calls, or send SOS message, Alarm**
- **Map - can leave note there, or can search any near safe location**





User data, including smartphone GPS location, was shared with chosen contacts through Google Maps API for emergency calls and heat maps. Smooth user experience was prioritized with careful input/output handling and Firebase Real Time Database. The app's architecture verified credentials on login and facilitated seamless screen transitions. SOS feature enabled easy emergency calls and cancellations, while tracking shared locations effectively. JSON trees in Firebase organized data efficiently, enhancing Safe-hood's effectiveness against violence targeting women.





7. Production

Backend

I have decided to adopt the route of using Backed as a Service (BaaS) provider/ using the services of Google Firebase and Cloud services to host the database. The following are the Firebase products used.

-Firebase Authentication, is supported through phone numbers, passwords, and providers such as Google, Twitter, Facebook, and others.

-Firebase Cloud Firestore, users can access Firestore from the mobile or web applications via native SDKs.

-Cloud Storage, Users gain access to Google-level upload and download security with this feature, and it is suitable for storing media files and user content.

-Crashlytics, Realtime crash reporter that enables developers to track issues, prioritizing them, and addressing them. The Crashlytics feature can be used to prevent possible stability issues.

-Google Maps API- To enable us use Google Maps features in the front end.

2.0 Front End-General public usage Flutter develop the front end. Flutter is an open-source framework developed and supported by Google. Frontend and full-stack developers use Flutter to build an application's user interface (UI) for multiple platforms with a single codebase

8. Result

The Safe-hood app was made to help women stay safe in their neighbourhoods, where violence against women is a big problem. A study found that many women don't report harassment or abuse because they're scared nothing will change. Even during the pandemic, when people were stuck at home, the violence against women didn't stop. Another study showed that most women don't feel safe in public, and many have been harassed or attacked. The app wants to change this by giving women a safe place to report incidents and get help. It's important because many women don't know how to protect themselves, and the app can make a big difference in keeping them safe.

9. References:

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10. Q and A