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Recover Whatsapp Deleted Messages And Media

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Abstract: This Project is based on Android platform will be developed using android studio. This project will help the user to recover deleted messages and deleted medias of WhatsApp application. Will provide a better user interface for hassle free navigation. Main objective of project is, from minimum permission provide most features without violating user privacy. Project will work on local SQLite Database. Project doesn't require internet connection but for receiving WhatsApp messages we require internet. App will be reading WhatsApp messages from then notification and store it in a local database.

Media's which are deleted only they will be shown in our application. Deleted Media's can be downloaded or shared over the internet.

Index Terms - Android, SQLite, GBWhatsapp, Recover whatsapp Messages, FileObserver.

I. INTRODUCTION

WhatsApp is a popular messaging application that is used to send billions of messages every day and has wide number of active users daily. However, this massive user base has also attracted a large number of cybercriminals who misuse the platform for various malicious activities, such as cyber harassment, cyberstalking, financial fraud, and social engineering.

One of the features of WhatsApp, the 'delete for everyone' option, has its benefits, but it can also be abused by malicious users to conceal their activities. Therefore, this research aims to identify new forensic artefacts of WhatsApp, such as recovering deleted messages and recently shared media files and proposes a new technique for the forensic recovery process of WhatsApp's deleted data. This will help forensic investigators to gather digital evidence from WhatsApp in cases of cybercrimes and other legal proceedings.

This is an Android application that helps users recover deleted messages, media files, and documents from WhatsApp. The application is designed in such a way that it helps the users to have easy access to their deleted files without compromising their privacy.

The application has several useful features, including the ability to read messages offline, save other users' WhatsApp statuses without them knowing, and recover deleted messages, images, videos, audio, documents, and voice notes. Additionally, the application allows users to download the recovered files for later use.

The application is designed with a simple and user-friendly interface, making it easy for users to navigate and use without any difficulty. The application is particularly useful in situations where important messages or media files are accidentally deleted or lost. The recovered data can be useful in various situations, such as business communication, legal proceedings, and personal communication.

Overall, the application provides an efficient solution for recovering deleted data from WhatsApp, allowing users to retrieve important information that they may have accidentally deleted or lost. The research aspect of the paragraph emphasizes the importance of identifying new forensic artefacts to ensure that WhatsApp users are protected from cybercriminal activities and to aid forensic investigators in gathering digital evidence in legal proceedings.

II. EXISTING SYSTEM

GBWhatsapp is an mod version of Regular whatsapp, It has many extra features than the regular whatsapp like Hide story view, Hide/Freeze Last seen, Themes etc. Existing system doesn't concern any privacy policy it directly replaces the regular whatsapp with another third party app which might be vulnerable. It has many privacy concerns such as it can read private messages and it doesn't has any particular organization. GBWhatsapp is not even verified by Google play that's the reason its not listed over it.

III. PROPOSED SYSTEM

Development of the project is done in android studio which is specifically for android apps, main technologies used in this are Java, XML & SQLite

The Idea of the project came from the cyber bullying over the whatsapp app. We planned our project flow/architecture by observing the way of storing whatsapp medias and reading notification of the same.

App Reads Messages from the notification bar, as message consist of sender name (group name) and message so it needs to be extracted and saved in an particular format for that it processes the whole message by extracting the phone number(name) and message from it. Mobile number/name act as a primary key for the SQLite database, for extraction of data we have used RegEx pattern matching.

For media's we have set an FileObserver on the whatsapp folder which triggers an event when any Write or Delete operation is performed on that folder, If it detects the write operation we save it to an temporary folder which is hidden and if Delete operation is performed on whatsapp folder we retrieve the file name of deleted document and from our temporary folder wo move the image to an permanent folder.

It was an challenge to run the FileObserver even if out app is closed for that we came with an solution of sticky notification where we set an notification on the device which helps our FileObserver Service to run even if app is closed.

IV. SYSTEM ARCHITECTURE

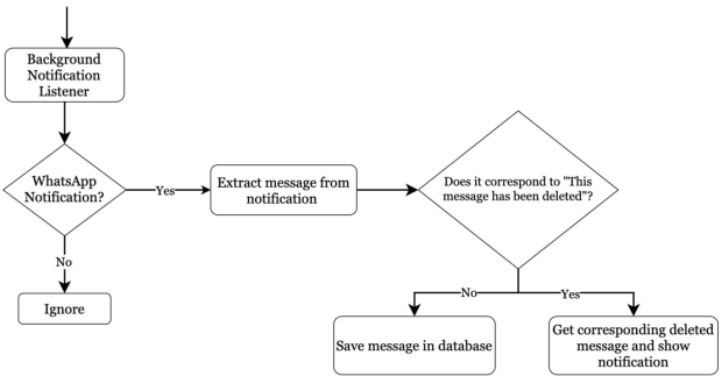

Fig. 1 System Architecture

For Text and Media messages, the methods are different to recover them.

For Text Messages, right after receiving a new message save it in the local Database. This ensures that even if the sender deletes the message, we can recover it from the local DB.

For Media Messages, right after receiving the message, read WhatsApp Directory for any create/read operations on it. If the sender implements the Delete operation, save the file in the local dictionary of the App. Then both types of messages can be retrieved for display.

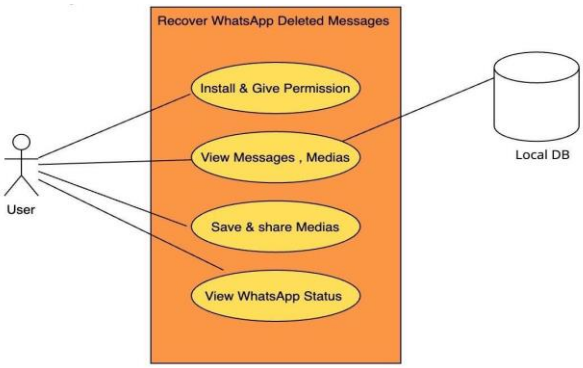

Fig. 2 Use Case Diagram

V. RESULTS

Fig. 3 Splash Screen

Fig. 4 Permission Page

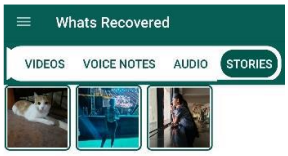

Fig. 5 Image Listing

Fig. 6 Image Viewer

VI. FUTURE SCOPE

One way to improve this project in the future is to expand its functionality beyond just recovering deleted messages and media from WhatsApp. For instance, the application could include features such as automatic backup of WhatsApp data to a cloud storage service or integration with other messaging applications such as Facebook Messenger or Signal. Furthermore, improving the efficiency and effectiveness of the proposed forensic recovery technique would be an interesting avenue for future research.

Additionally, the application's user interface could be further enhanced to improve usability and appeal. Finally, exploring opportunities to integrate machine learning algorithms could enhance the project's capabilities by enabling it to identify patterns in user behavior or identify potential security threats. Overall, there is significant scope for future research and development to build on the foundation established by this project and further improve the application's usefulness and value to users.

VII. CONCLUSION

In this paper, an Android application was developed to recover deleted messages and media from WhatsApp. The project aimed to provide a better user interface for hassle-free navigation and prioritize user privacy by requesting minimal permissions. The application worked on a local SQLite database, enabling users to access their deleted media even without an internet connection. The application also provided additional features, such as offline message reading, status saver, and easy UI. Overall, this project had the potential to assist users in recovering their lost data and improve their overall WhatsApp experience. Further research could be conducted to explore other potential forensic artefacts of WhatsApp and improve the application's performance.

ACKNOWLEDGEMENT

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