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Report on
Android Device Forensic
Using
FINALMobile Forensics4 Tool
Subject: Digital Forensics (CAP921)
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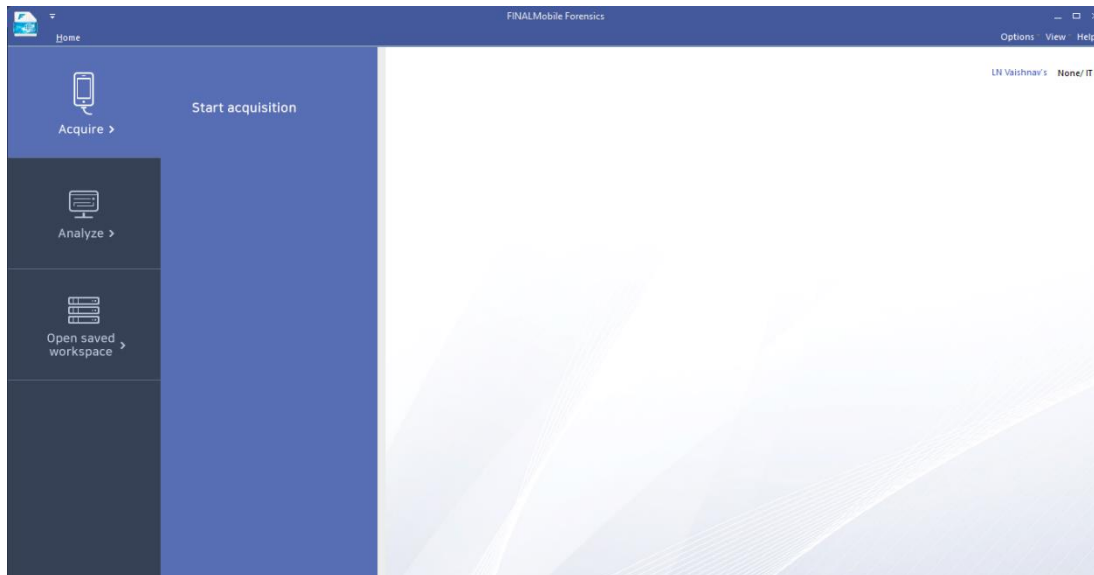
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Acknowledgement & Objective

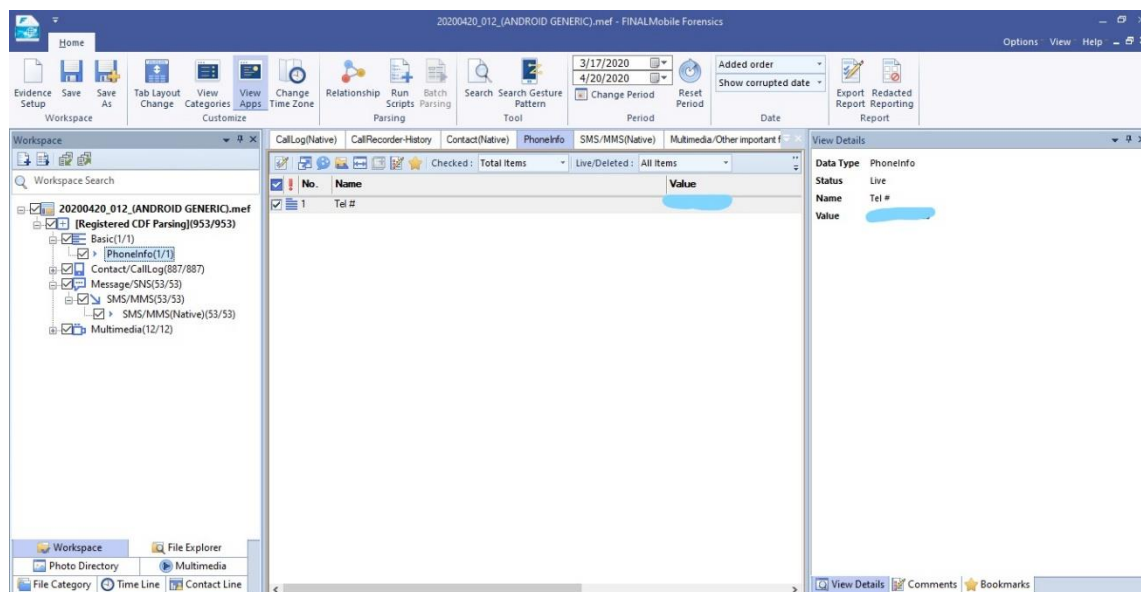
I especially want to say thanks to Ajay sir who encouraged me to learn this tool and how perfectly perform the Android forensic. This forensic operation was wonderful and I learned many things that how the mentioned tool targets the mobile device and how mobile device reacts when it loses its control over the software. I also learned many different tools which also help in various type of forensics operations.

The main objective of this forensic is to understand how the mobile device's hidden data can be used to perform a forensic analysis. The software helps a lot in the criminal cases where forensic team catches the suspected mobile device and then performs the mobile forensic operation to know all the information of the data which is lost or currently stored in the mobile device. It also helps to know the various activities of the suspected person which may be connected with the activity of the crime.

1. OVERVIEW OF THE SOFTWARE



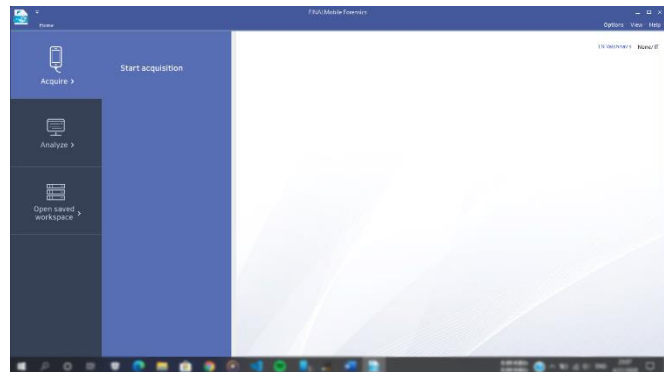
- This is the home windows of the **FINALMobile Forensics4** tool. Here, we've to choose the desire option for further process whether you want to perform initial mobile forensic or analyze the previous performed forensic data.



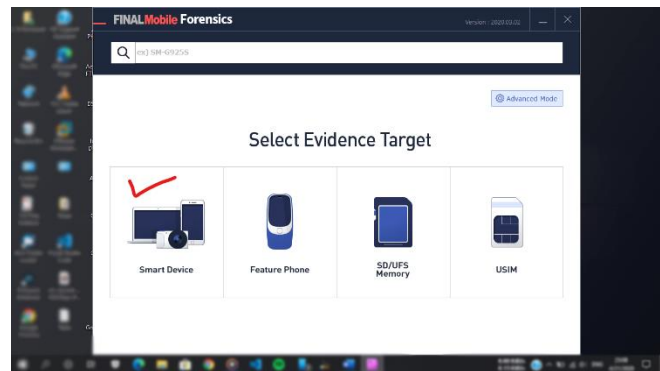
- Here, the analysis part takes the place and the examiner performs the further operations for getting results.

2. ACQUIRING THE DATA FROM THE MOBILE DEVICE

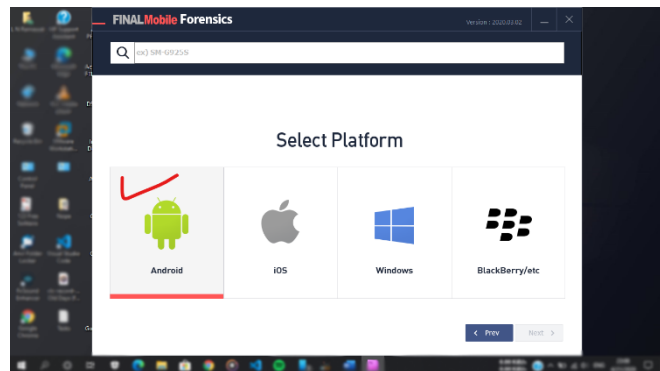
For performing this process, we need to choose to **acquire** option in this forensic tool.



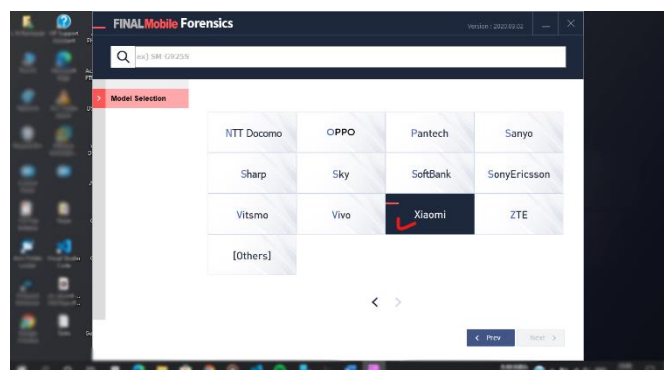
1. Now, select the type of your device.



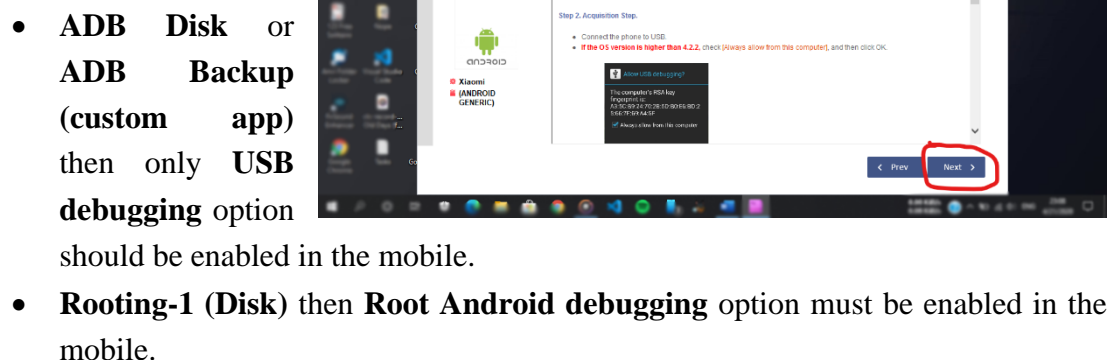
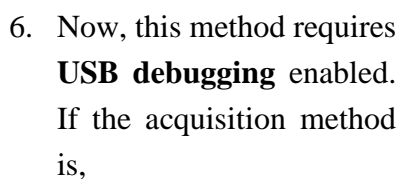
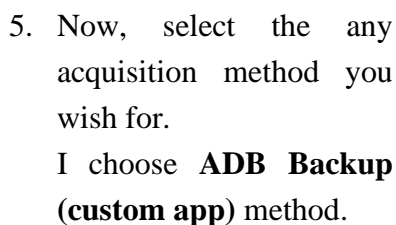
2. Now, select the platform of your device.



3. Now, select the company of your device.

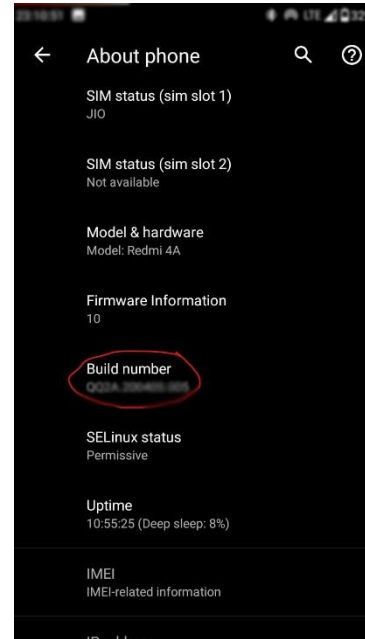
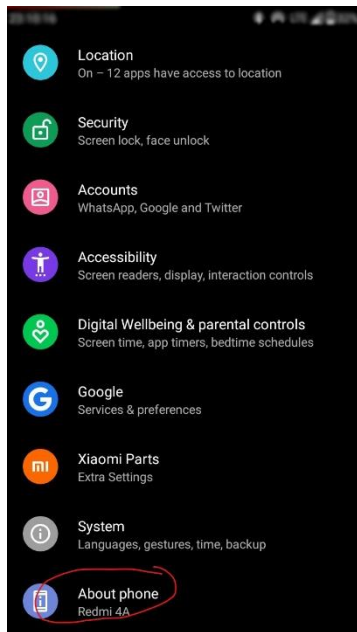


- NOTE:** If your model is not listed then select the ‘**Android Generic**’.

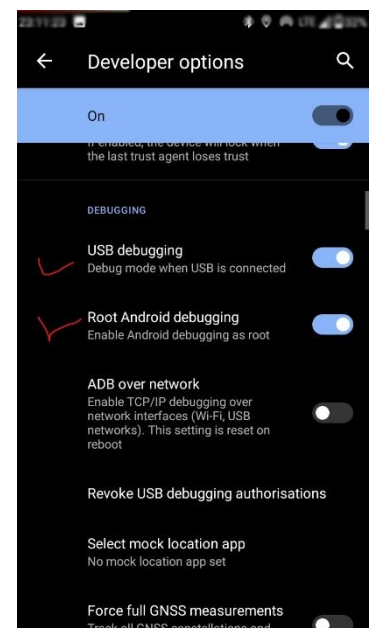
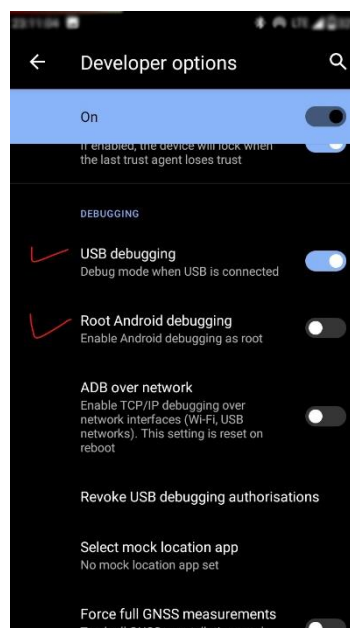
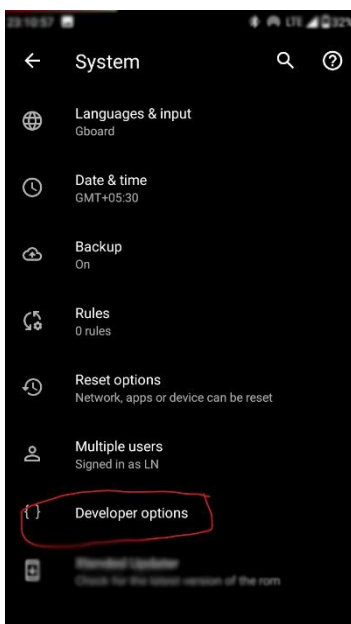


2.a Steps to enable USB debugging in Android device

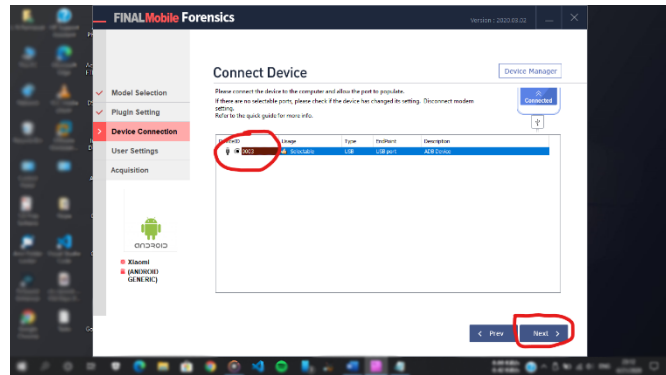
- Open **settings** of the device.
- Now, tap on **About Phone**.
- Now, continuously tap until a pop-up says, 'Developer Options' enabled



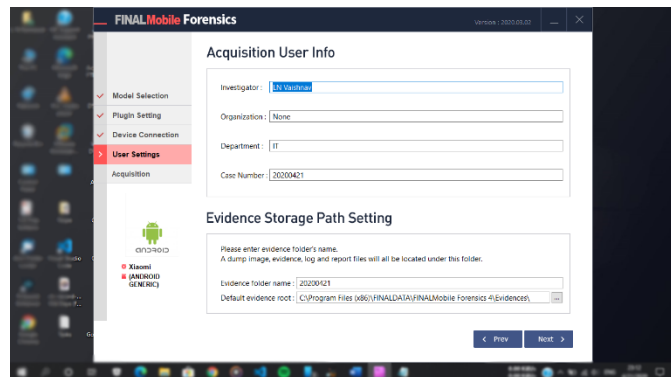
- Now, tap on **System > Developer Options**
- Now, tap on **USB debugging**.
- For **Rooting-1 (Disk)**, turn on **Root Android debugging**



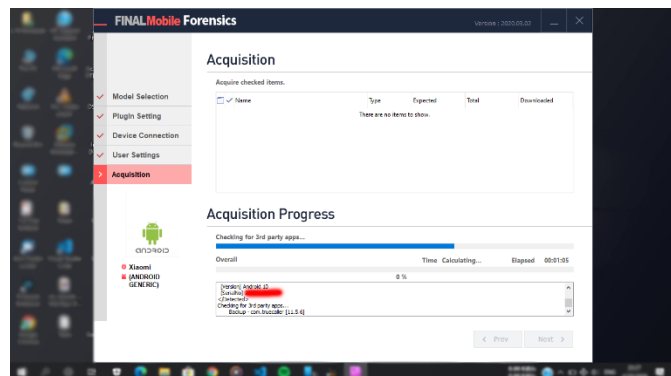
- After enabling **USB debugging**, plug-in the USB cable which connects the device and PC/Laptop. Now, the Mobile device must be connected with the PC and listed under **Connect Device**, now click on the Next button.



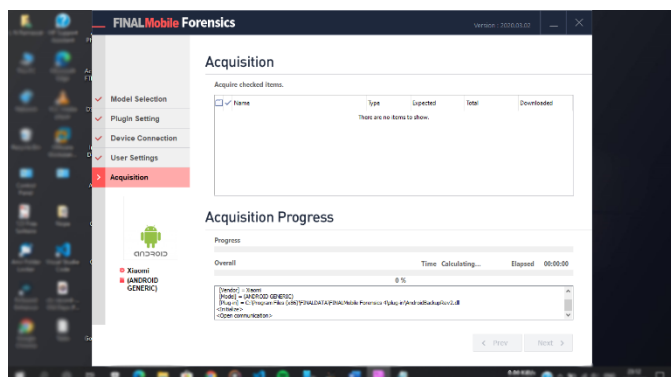
- Now, a next step will ask you to fill-up acquisition user info & path for storing the data. Fill the details and give a path or leave it on the **default** path.



- Now, the acquisition will be started.
NOTE: After sometimes, it will ask for **Mobile Desktop Password** and you've to give a password & must remember it.

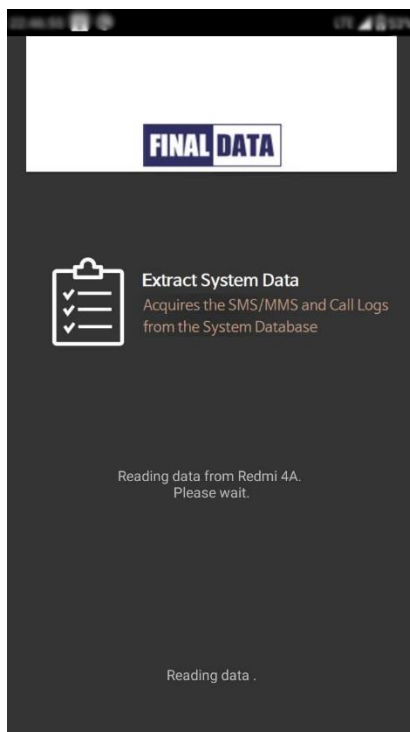


NOTE: This process will take some time. 😊

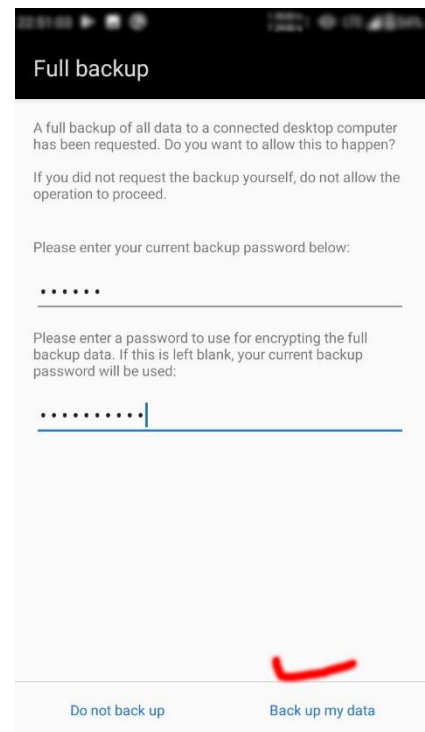
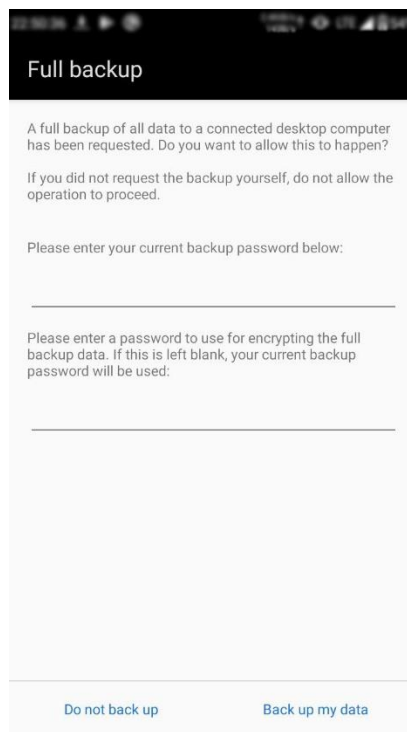


10. Go to your Android device and follow instructions. This tool will ask to install its APK file in the Mobile device for taking the data.

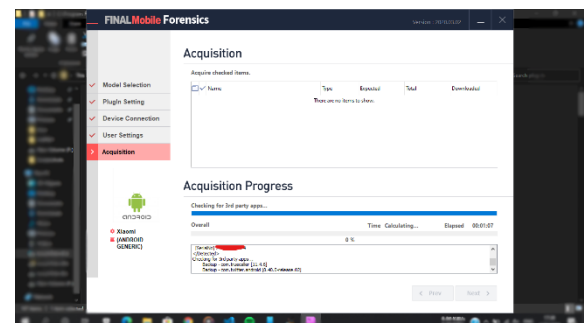
- Help the APK to be installed and give every permission which it asks.



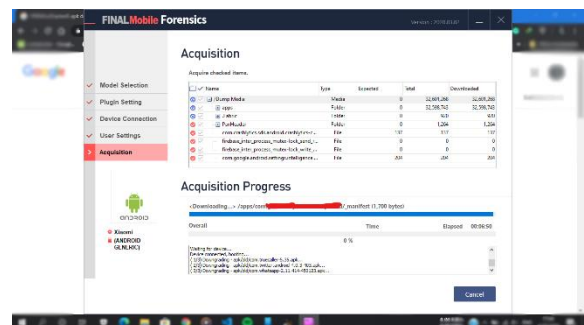
- Now, enter the **Desktop Backup Password**.



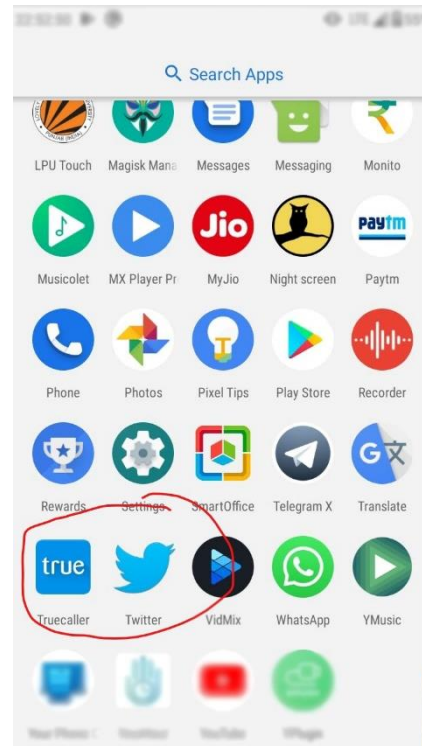
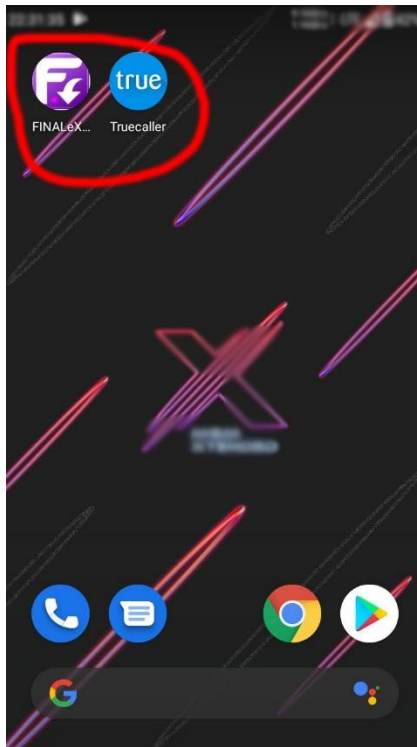
11. Now, the tool will check all 3rd party apps which are installed in the mobile.



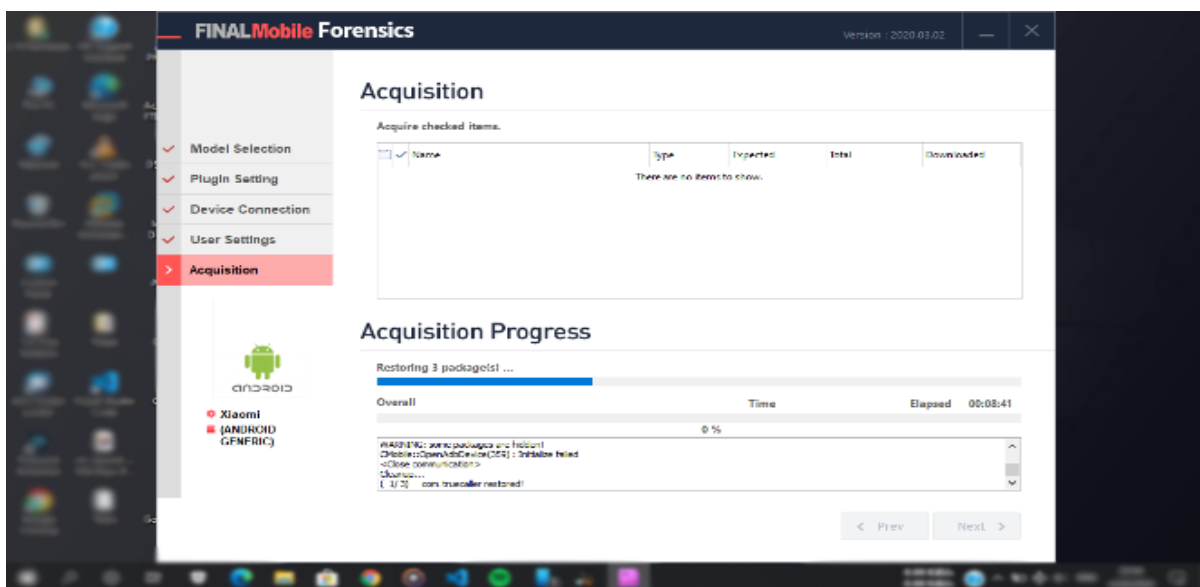
12. Now, it will downgrade the apps.



During down-gradation & restoring, the apps go in their old versions.

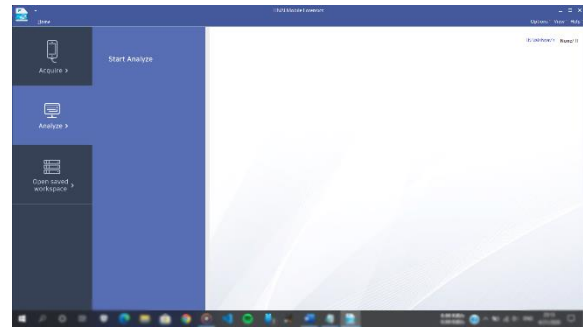


13. Now, it will restore all the downgraded apps and will do normally the mobile device.

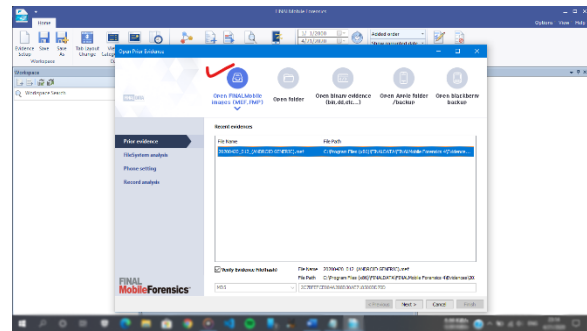


14. The process of data gathering for mobile forensic is completed.

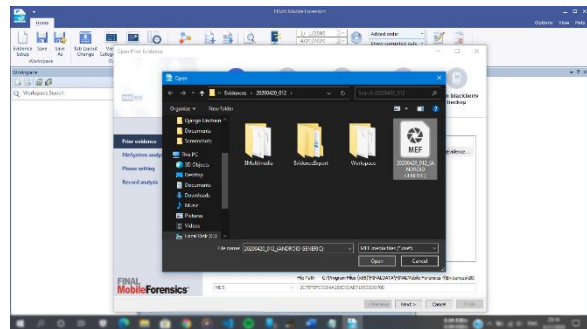
For performing the analysis part of the acquired data, we need to select the **ANALYZE** option from the mentioned forensic tool.



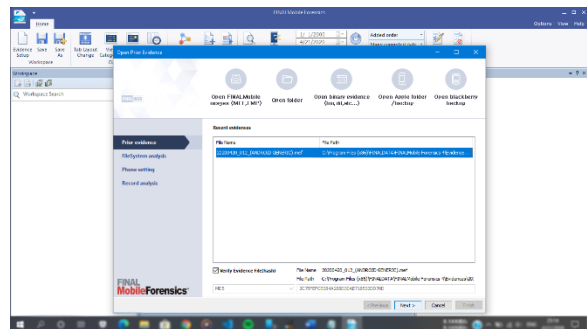
1. After selecting the Analyze option, a new window will open where we've to open previously acquired data (.MEF or .FMP format).



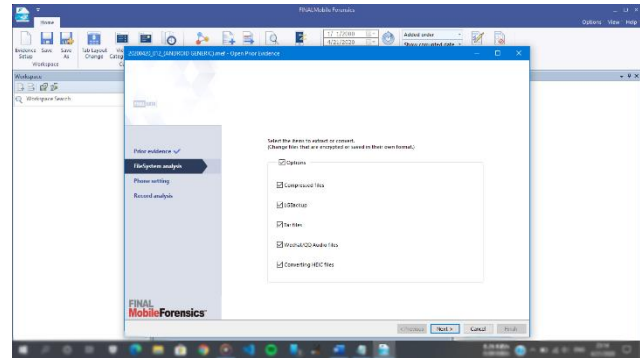
2. Now, open the source file.



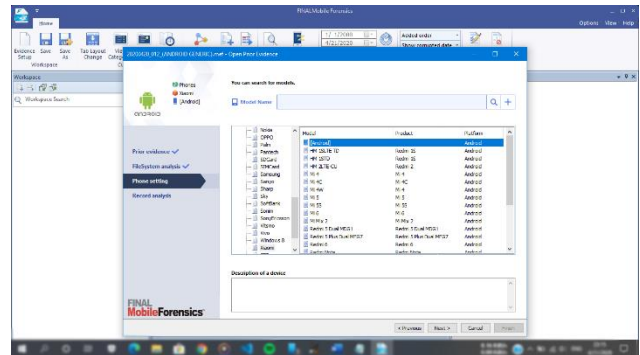
- Now, select the file and follow the next button.



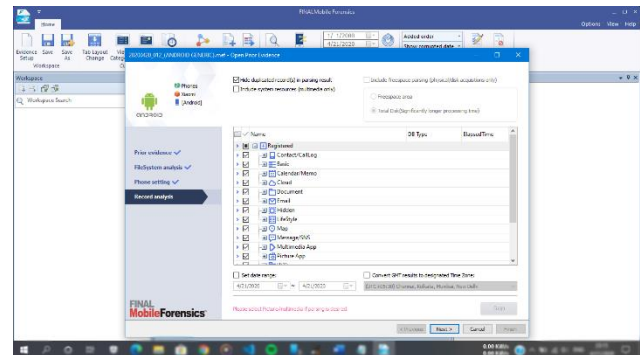
4. It's up to you that which files you're going to analyse.



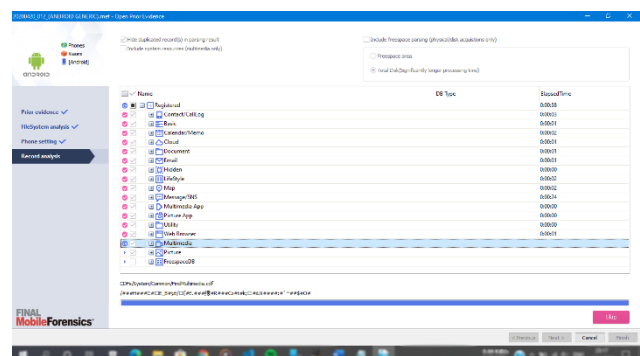
5. Now, honestly select which model you've selected previously.



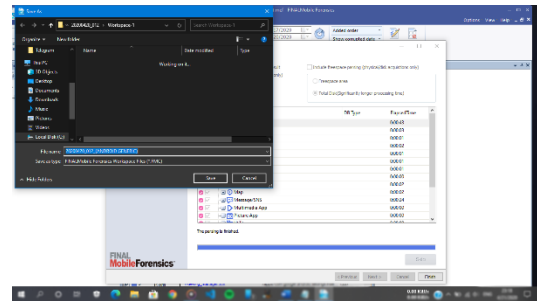
6. Now, select which files you want to analyse.



7. Now, the tool will start the analysis part and wait until it finishes.

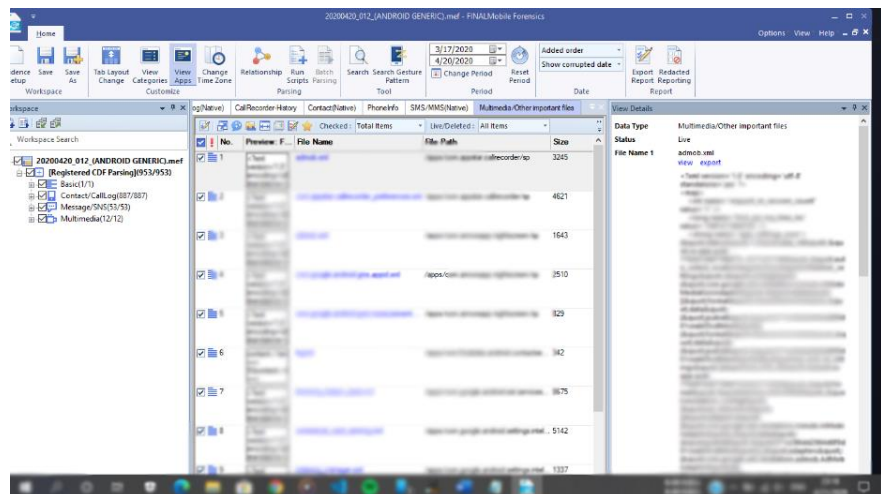


8. You can also save this analysis part (Ctrl + S).

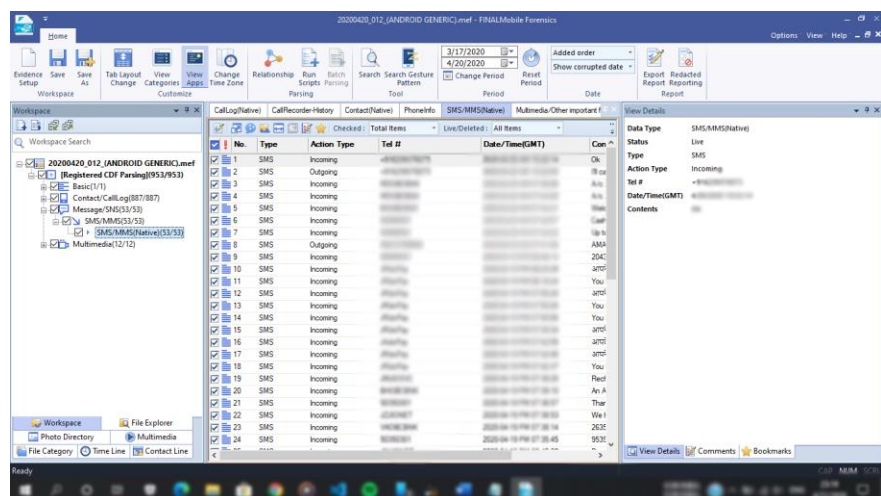


☺ Let's analysis the Mobile Data ☺

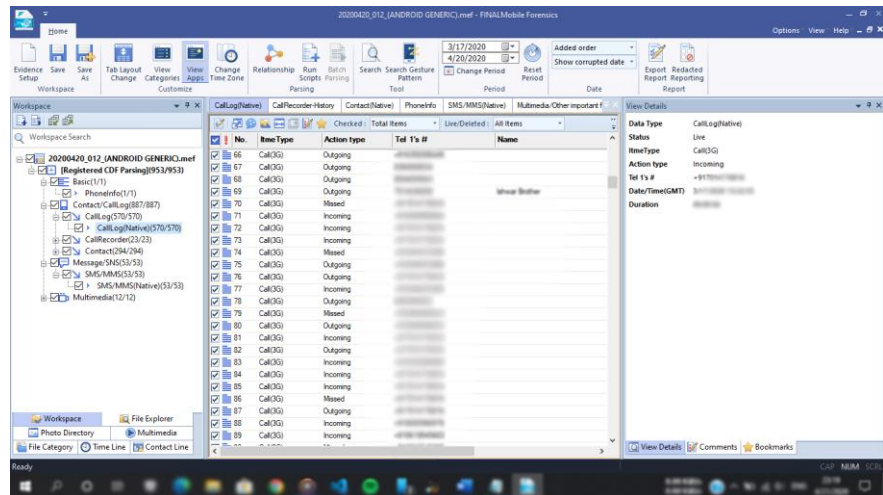
- **Multimedia and other Android data.**



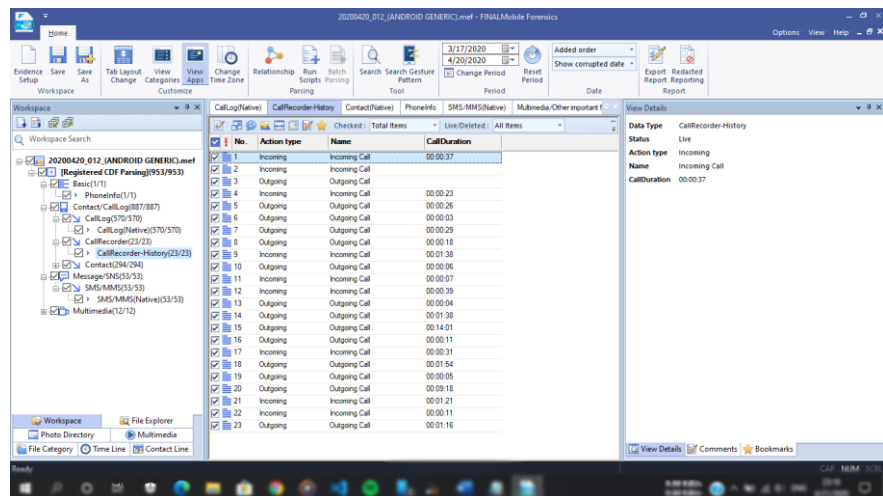
- **SMS/MMS.**



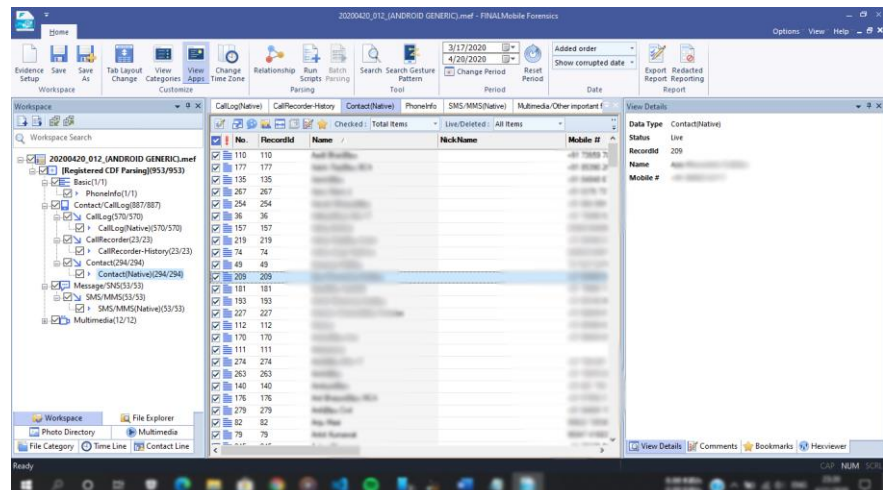
- Call Logs.



- Call-Recorder History.



- Contacts.



4. Conclusion

This tool helps a lot to analyse the deep of the Mobile Device. It works in three different ways where the examiner has to choose the kind of acquisition.

If the acquisition is the type of,

1. **ADB Disk**, then the type of the acquisition will target the **Physical Disk**. The targeted OS will be the user selected in the earlier step. It will take the data of the physical disk of the mobile and will create an image file for further process of forensic.
2. **ADB Backup (custom app)**, then the type of the acquisition will target the 3rd party installed applications. The targeted OS will be the user selected in the earlier step. This tool will force the mobile device to install an external APK for getting the data. And later, it'll downgrade the apps and after completion of the acquisition process, the mobile device will return in its normal condition.
3. **Rooting-1 (Disk)**, then the type of the acquisition will target the **Physical Disk**. The targeted OS will be the user selected in the earlier step. This acquisition goes into the depth of the mobile and gathers the maximum data as possible. This process takes much time than other type of acquisitions. In the result, it creates an image file for further analysis of forensic.

In the analysis part, we have to select the acquisition file and go on for on for further processes. This process takes less time than acquisition part and, in the result, gives the confidential information. We can sort the resulted data in the different ways for a better understanding. There are multiple options for analysing the data in unique ways.

In the left side, it briefly shows the kind of data. In the middle side, it shows all entries of the selected kind of data (like Call logs). In the right side, it gives the full details of the selected item from the middle side.

This software is really helpful for the forensic of the mobile device to know the truth. It worthies software which helps for analysing the truth about someone and proves the right decision about something like crime etc.

Thanks, 😊