Un-authorized access for security portal in User Interface

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Abstract- This research paper mentions the vulnerability in fun touch operating system which has a built-in feature by which we can hide our confidential data. If there is any fault in keeping our important data safe then there is no reason to use this feature. This research includes how because of this vulnerability, an unauthorized user can easily get access to our confidential data. This can lead to data theft.

Keywords- vulnerability, confidential, unauthorized

I. INTRODUCTION

Nowadays we usually get panic when we hand our phone to someone and then realize we have sensitive emails, documents, Images or other files in our device, then we need a way of hiding those files from other's eyes or we have many applications to hide those files, applications, etc. Fun touch is an operating system developed by vivo. Fun touch OS includes some advanced features which normal Android operating system doesn't have. And because of this vulnerability, the unauthorized person can use our credentials for any malicious activity.

1.1-Vivo Fun Touch Operating system: -[1]

VivoMobiles Company had launched its own operating system which hinges on the current version of Android. The Fun touch OS was developed around the idea of a simple user interface (UI). The leading variance among android and Fun touch OS is that the Fun touch OS consists of more advanced features that are inaccessible in android.Fun touch OS also features several productivity-boosting functions.

1.2-User Interface: - [2]

User Interface [2] is everything which is designed into an information device with which a user can interact. It is also the way through which a user interacts with an application or a website on that device. So, this paper is on user interface level vulnerability.

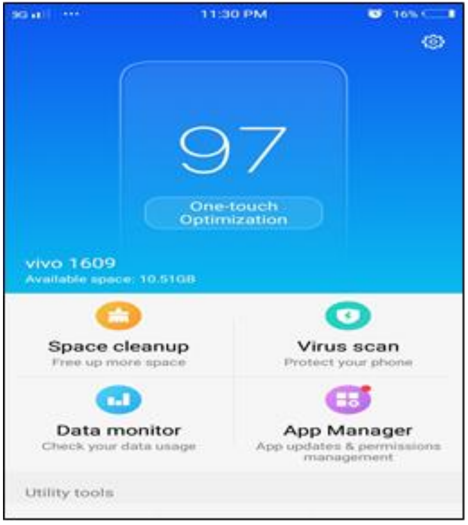
1.3- Features of Funtouch Operating System: -

- **I theme application:**

This feature permits users to transfer varied themes on-line that match their preferences, and even produce their own by dynamical the wallpapers, fonts, and lock screen set-ups

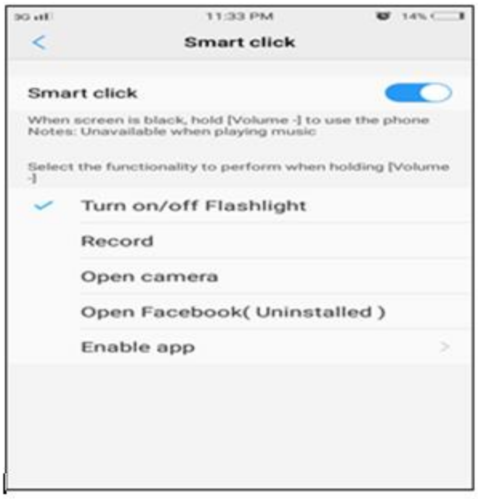
- . **I manager application:**

In this feature the user will simply clean their smartphones of unwanted files, manage put in applications, monitor their knowledge and battery consumption, and got wind of privacy filters like the non-public area and decision and message interference options. The I manager is the fun bit OS-powered Vivo smartphone's centre that helps users optimize the performance of their phones.



- **Smart wake gestures:**

This feature permits users to draw patterns on the screen of their Vivo smartphone to wake it and access apps just like the I music application, the camera application, phone application, and conjointly cyber web browser.



11:33 PM 14%

Smart click

Smart click

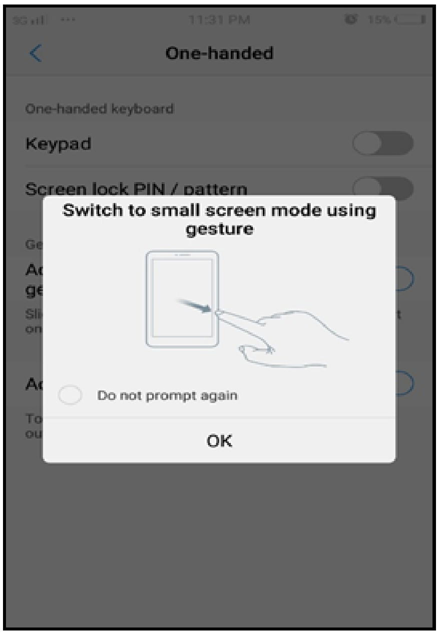
When screen is black, hold [Volume -] to use the phone
Notes: Unavailable when playing music

Select the functionality to perform when holding [Volume -]

✓ Turn on/off Flashlight
Record
Open camera
Open Facebook(Uninstalled)
Enable app >

- **One-handed operations:**

By this feature, the user can merely operate the smartphone with one hand. Users can toggle one-handed operations, accessible by slippery their fingers from the side of the screen, to the centre, and back to the side, to allow them to size the screen-this is useful for individuals United Nations agency comprehend it tough to use their smartphones with one hand.


One-handed

One-handed keyboard

Keypad

Screen lock PIN / pattern

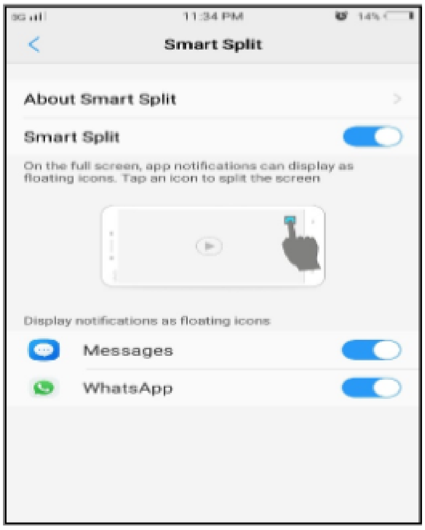
Switch to small screen mode using gesture

○ Do not prompt again

OK

- **Split screen:**

The phone pushes a floating bubble for electronic communication applications. once your area unit victimization different applications. The user has got to merely faucet on the icon to separate screen in 2 and therefore the chat while not deed the first application. This solely works within the designated applications like YouTube, VLC, and default video player.


Smart Split

About Smart Split

Smart Split ●

On the full screen, app notifications can display as floating icons. Tap an icon to split the screen

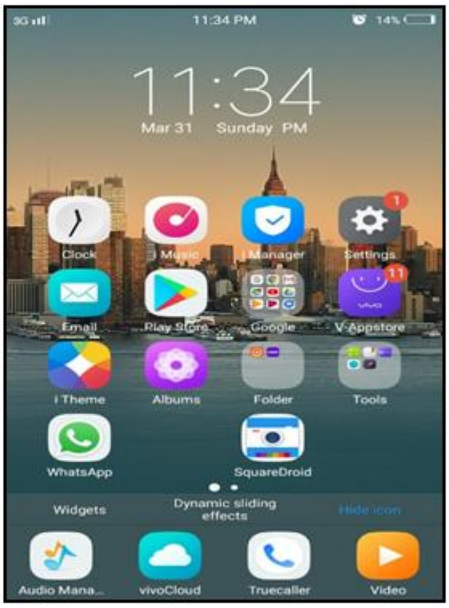
Display notifications as floating icons

Messages ●

WhatsApp ●

- **Hide application:**

This application helps the user to hide their personal and important emails, social media applications, images, etc. using this feature privacy can be maintained. And if the smartphones are in others hand this feature will hide the content and the unauthorized person cannot access it.

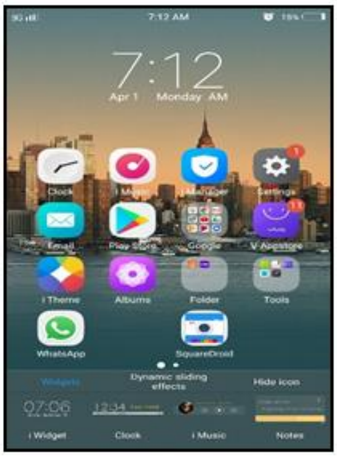


Vulnerability Found

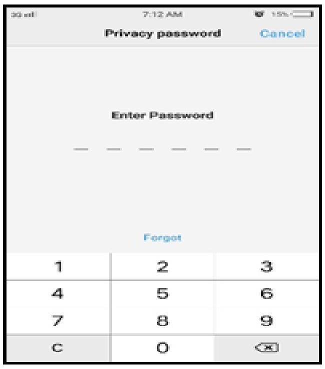
The vivo smartphones provide one feature by which we can hide application. If we hide any application, it can be easily opened by using google assistant.

The first method by which we can open any hidden application:

- Click on the main screen for a while then this screen will appear:_



- After clicking on that hide application button it will ask for password that was set before hiding the application:
-
- Then all the hidden applications will be visible:



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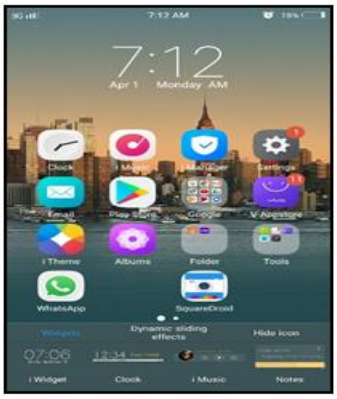
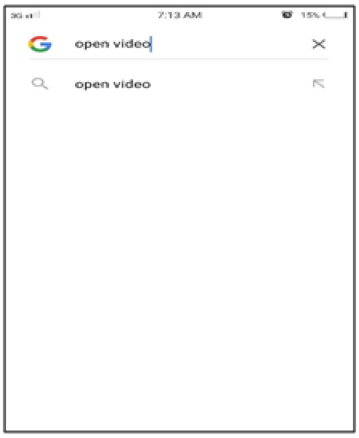


The second way for opening any hidden application is google assistant. This method is not safe. By this any un-authorized person can access to our data. If anyone can easily open any hidden by using google assistant, then there is no use of this feature. And if it is opening any hidden application this feature should ask for password at that time also but its not asking for any password by this the attack possible is data theft can happen.

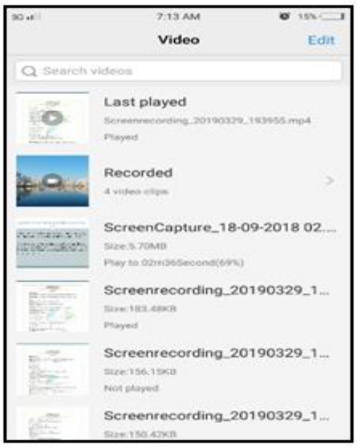
- Ask google assistant to open any application which is hidden for e.g. Open videos:



open video

open video

- After this it will directly open the application which u have asked to open without asking any password which is set for hiding the application:



Last played
Screenrecording_20190329_193955.mp4
Played

Recorded
4 video clips

ScreenCapture_18-09-2018 02....
Size:5.70MB
Play to 02m36Second(69%)

Screenrecording_20190329_1...
Size:183.48KB
Played

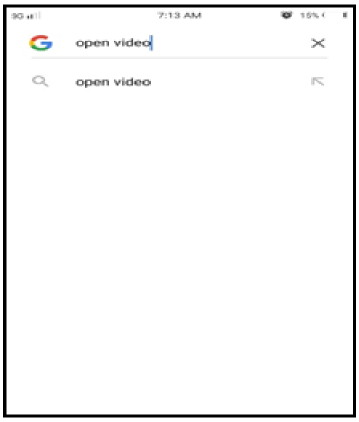
Screenrecording_20190329_1...
Size:156.15KB
Not played

Screenrecording_20190329_1...
Size:150.42KB

II. SOLUTION

When we ask google assistant of open any hidden application it should ask for password, if the password is correct then the user should get access.

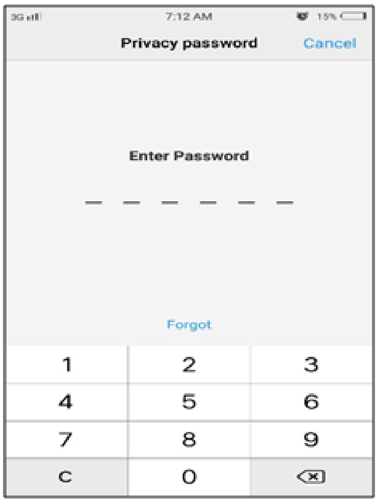
- Open google assistant and ask to open the application which is hidden.



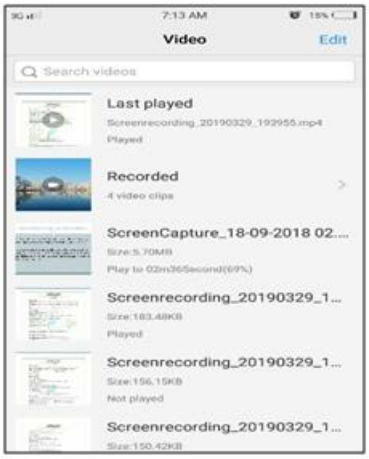
open video

open video

- Before the application opens the hide feature will ask for password.



- If the user is authorized, then the application will open.



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III. CONCLUSION

As discussed above the vulnerability, for that we have made a solution and it will help the user to hide their application or personal data and un-authorized user cannot access the application using any of the mode.

IV. ACKNOWLEDGMENT

I wish to express my sincere gratitude to Ms. Sneha Ambhore for providing me the guidelines on how to write a research paper.

V. REFERENCES

[1]. https://en.wikipedia.org/wiki/Funtouch_OS
[2]. https://searchmicroservices.techtarget.com/definition/user-interface-UI