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# Color based Pattern Lock System

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**Abstract:** *The devices most often used for IT services are changing from PCs and laptops to smartphones and tablets. These devices need to be small for increased portability. These technologies are convenient, but as the devices start to contain increasing amounts of important personal information, better security is required. Security systems are rapidly being developed, as well as solutions such as remote control systems. However, even with these solutions, major problems could still result after a mobile device is lost. In this thesis, we present our upgraded Lock Screen system, which is able to support authentication for the user's convenience and provide a good security system for smartphones. We also suggest an upgraded authentication system for Android smartphones.*

**Keywords:** *Android, smart phone*

## I. INTRODUCTION

The project is based on Android operating system. Authenticated method has been used to track the smartphone location. Seven color positioning lock Phone tracking Important & Personal data can be erased easily. This Lock Screen, redundancy input (re-touching the circle) is allowed and when the circle is touched more than once, it changes color (maximum of seven times) so that the user can identify the correct input. In our video, we allowed 20 inputs and were able to make over one quadrillion passwords. In the Home Launcher, the Guest mode can be entered by shaking the mobile phone. In the Guest mode, there are a limited number of apps allowed along with the Dockbar, in which we cannot use the App drawer button; we can only use the buttons that are freed by the user's setting. The security power depends upon the size of the key space; the bigger the key space, the more difficult is a brute force attack. It can also be made larger by increasing the number of repetitive touches. This shows the usages of smart phones are increasing from year to year. We store our personal information in these devices. In case if we tend to lose our smart phones there can be outflow of personal and business information such as internet banking information. This could prove disastrous as most of the smart phones are having simple password lock or slide lock. These lead many researchers to develop new invention new mechanism to secure our data & prevent leak out private information in smart phones. The purpose of this paper is to design and implement a mobile backup system. As mentioned previously, losing data from a mobile phone is a big problem for cell phone users. In this research, attempt is made to address the problem by designing a suitable mobile application for backing up mobile data.

## II. RELATED WORK

The Lock Screen consists of nine circles. Each circle changes its colour maximum of seven times by retouching the circle. There is no specific order for touching the circles. Once retouching is done a password string is generated. This password string is then confirmed by clicking on ok button. If the string is matched then the phone is unlocked. that the owner of the smartphone will first generate .apk file using eclipse. Then owner of the smartphone will install this .apk file in his smartphone. After installing this .apk file owner will proceed to set up the screen lock on his smartphone. In stock Android, every user has six different options to choose from lock screen, all of which offer their levels of security. If a user has a non-stock Android device like the Galaxy S3, then there are some differences in functionality but for the most part they all act in a similar fashion. First, to access the lock screen options, the universal location tends to be in Settings-Security. From there, one should see an option towards the top called "Screen lock," which then takes us to the lock screen options once tapped. This shows the usages of smart phones are increasing from year to year. We store our personal information in these devices. In case if we tend to lose our smart phones there can be outflow of personal and business information such as internet banking information. This could prove disastrous as most of the smart phones are having simple password lock or slide lock. These lead many researchers to develop new invention new mechanism to secure our data & prevent leak out private information in smart phones.

- A. Redundancy input (re – touching the circle) is allowed and when the circle is touched more than once , it changes color (maximum of 9 times) so that the user can identify the correct input.
- B. In the Home Launcher, the Guest mode can be entered by shaking the mobile phone.

C. we can only use the buttons that are freed by the user's setting.

### III. METHODOLOGY

Authentication is the act of confirming the truth of an attribute of a single piece of data claimed true by an entity. In contrast with identification, which refers to the act of stating or otherwise indicating a claim purportedly attesting to a person or thing's identity, authentication is the process of actually confirming that identity. It might involve confirming the identity of a person by validating their identity documents, verifying the authenticity of a website with a digital certificate determining the age of an artifact by carbon dating, or ensuring that a product is what its packaging and labeling claim to be. In other words, authentication often involves verifying the validity of at least one form of identified.

#### A. Application Installation

This module is used to fetch the real data from user and store into database using SQLite.

#### B. SIM change Detection

This service starts automatically in stealth mode when one SIM is removed and another is inserted

#### C. Color based pattern

Color based pattern to verify the user if pattern get wrong then all contact get deleted from mobile and get the backup on mail id.

#### D. SMS Alert

For wrong pattern get message alert on alternate number of registered mobile owner.

### IV. APPLICATION

- A. The Screen receives the "On/Off Broadcast Receiver" so it is processed with Intent from Screen-On, activating the Lock Screen Activity.
- B. Can erase your phone memory or SD card with a preformatted SMS so that no one can access your secured data.
- C. If your phone is stolen the same preset text can be used to lock the phone, so lost phone detection process will not be a time consuming process.

### V. CONCLUSION

In this paper, we analyzed the defects in current Home Launcher Lock Screens & also suggest on improving the authentication systems for Android smart phones. User convenience and security power is improved, when we divide the mode of entry into the authentication system. Android is being installed in tablets, smart phones and many other IT devices that require good security systems. Security is a major concern in these devices. The use of our improved two way lock authentication system ensures protection of personal information. As a future work, we need to implement the feature which enables us to locks our device, if entire authentication fails for three successive attempts a warning message should be sent to preregistered user & using finger print scanners to bring in the biometric authentication system.

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