

Android Multi-User Pattern Lock Based Authentication System

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Abstract— This electronic document gives the overview of Advanced Pattern Based Authentication System. This is an android application which have pattern based authentication with advantage of overlapping the pattern points 5 times each at a time. So, this is how the security of the mobile phone is maintained.

Key words: Pattern Lock, Authentication System

I. INTRODUCTION

Since your phone is with you at all times, the likelihood of it getting left behind at a restaurant, gym, or other location that you previously visited is probably pretty high. And since we live in a world that isn't always filled with angels, the chances of that left-behind-phone getting stolen and fondled deeply without your approval is probably even higher. Your first line of defense against evil achievers is your lock screen.

Most of the smart phone users use pattern locking application in order to lock the application which contains important information. This is an android application which have pattern based authentication with advantage of overlapping the pattern points 5 times each at a time. So, this is how the security of the mobile phone is maintained.

II. EXISTING SYSTEM AND PROPOSED SYSTEM

A. Problem with Current Scenario

- Most of the people doesn't lock their smartphone as it may lead to others to access their smartphone easily.
- Anyone can snoop your personal data files, messages, etc. once they access your smartphone.
- This may lead to serious issue once data is shared to other device with an unauthorized access.
- There is a need to lock the device to be safe from such kind of snooping activity.

B. Proposed System

- In our system user must specify the pattern while registering.
- The pattern is specified as 3x3 Matrix to create unique pattern.
- He must specify the locking pattern twice for the confirmation.
- When the user registered successfully, he can use the pattern to open the application by specifying the registered pattern in opposite directions.
- User need to remember the registered pattern to unlock the smartphone, else, it will stayed in locked state.
- This application allows the user to overlap the pattern.
- If the pattern matches with the registered pattern user will be allowed to access the application.
- Whenever user specifies the pattern each time pattern color will be changed. Multiple users can use this application.

III. MODULES AND THEIR DESCRIPTION

A. This system is having three modules

- 1) User Registration
- 2) User specifies the pattern
- 3) Login

B. Description

1) User Registration

In this module user must register by specifying the pattern.

2) User specifies the pattern

User must use registered pattern to open the application. He can specify the pattern maximum 5 times in opposite directions as well as he can overlap the pattern.

3) Login

Here user will enter the User-Id which was generated automatically at the time of registration in User-Id field. This Id gets incremented by 1 when new user gets registered.

IV. PROJECT IMPLEMENTATION

The project is loaded Android Development Toolkit (ADT). We used Android Development Toolkit (ADT) for Design and coding of project. Implementation is the stage of the project when the theoretical design is turned out into a working system. Thus it can be considered to be the most critical stage in achieving a successful new system and in giving the user, confidence that the new system will work and be effective.

Created and maintained all databases into SQL Server 2008, in that we create tables, write query for store data or record of project.

A. Hardware Requirements:

- I3 processor based computer
- 1GB RAM
- 5GB hard disk
- Android device

B. Software Requirements

- Windows XP, Windows 7(ultimate & enterprise)
- Android Development Toolkit (ADT)
- SQL Server 2008

C. Screenshots of project in work

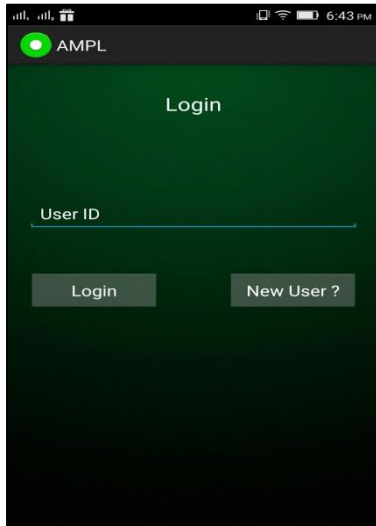


Fig. 1: Home Screen

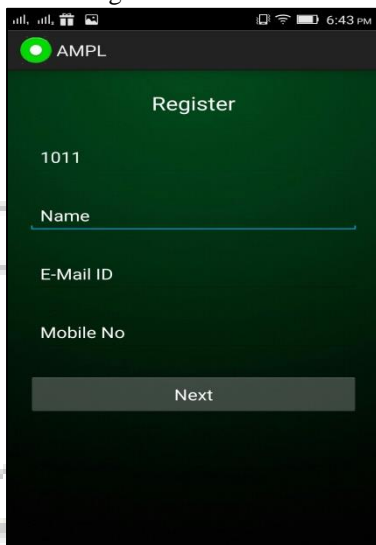


Fig. 2: Registering User

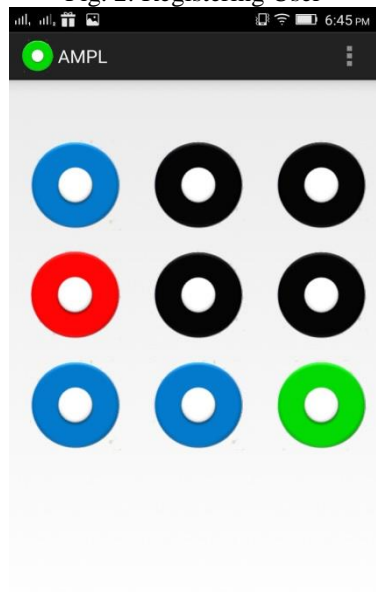


Fig. 3: Setting pattern

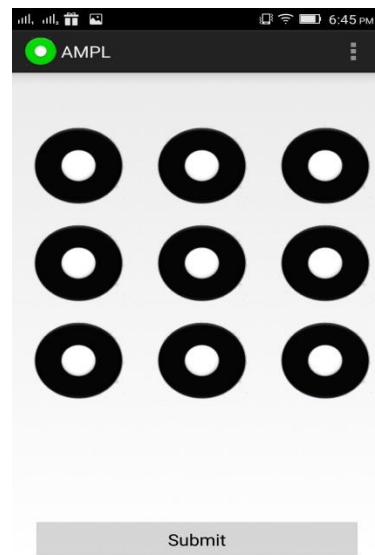


Fig. 4: Submitting Pattern.

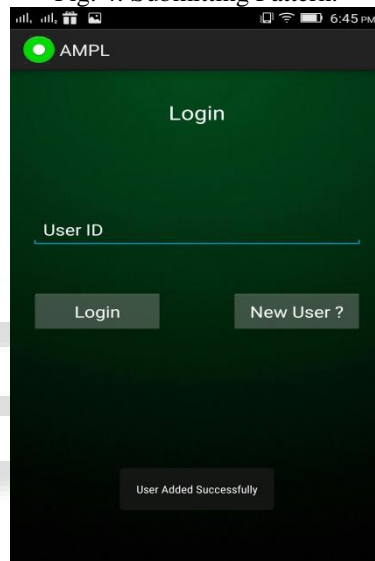


Fig. 5: User Added

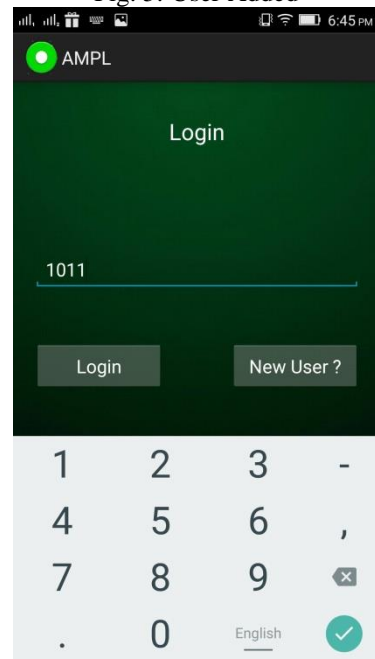


Fig. 6: Login User

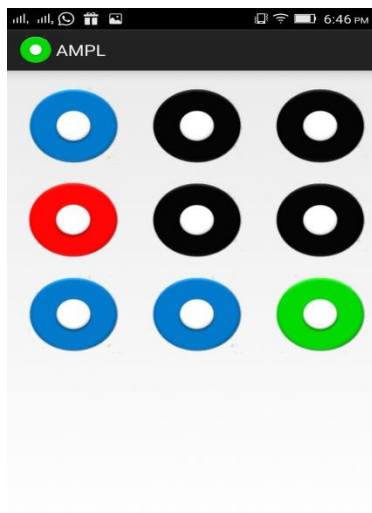


Fig. 7: Login Pattern

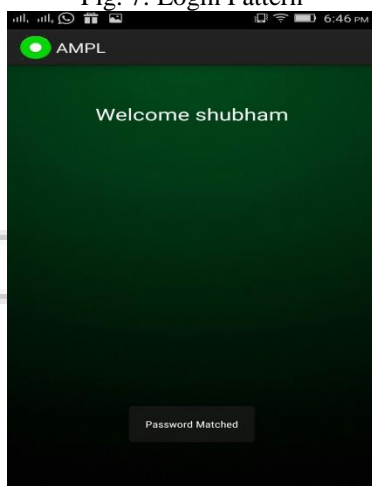


Fig. 8: Pattern Matched

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V. CONCLUSION

The main aim of developing this application is to secure every smartphone device from external threats which we never know when they access our smartphone read or share our private data, messages, images, etc. as the device doesn't have any locking facility from snooping.

This application secure all your personal files, data, etc. once the device is locked using this security application.

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