*PixelOn Photo Capturing & Sharing Application with Fingerprint Authentication*

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***Abstract:***

***Biometric recognition refers to use distinctive anatomical and behavioral characteristics or identifiers for automatically recognising a person. Questions related to recognising the person are routinely asked in variety organizations in both public and private sectors. Password based security is no longer secure enough compared to biometric secured systems (fingerprints, face, iris, voice, hand geometry). Because biometric identifiers cannot be easily implaced, forget or reshaped, they are considered more reliable for person recognition than traditional passwords. As biometric fingerprint has already created and developed enough to secure the privacy, FeP uses it in a variety and efficient ways.***

***When used properly, social media can be a valuable addition to a department's communications strategy. They have become the most popular way of communication, erased boundaries and distant people can communicate at almost any time of the day. Corporate social network provides the same benefits within one company, allowing employees not only to be in touch with colleagues, but also to feel part of a team. Pixelon is a relatively new form of communication where users can easily share their updates by taking photos.***

**I.*Introduction:***

*A. Motivation for the system and using fingerprint*

*PixelOn is a convenient photo capturing and sharing mobile application. It offers its users a unique way to log in with their fingerprint and share photos instantly on multiple platforms (e.g. Instagram). In addition to its photo capturing, PixelOne also provides social connectivity as Instagram that allows a user to follow any number of other users, called “friends”. Instagram’s social network is asymmetric, meaning that if a user A follows B, B need not follow A back. Besides, users can set their privacy preferences such that their posted photos and videos are available only to the user’s followers that requires approval from the user to be his/her follower. By default, their images and videos are public which means they are visible to anyone using PixelOne app. Our analysis based on the PixelOne data collected using the PixelOne API, is a qualitative categorization of PixelOne photos; and a quantitative examination of users’ characteristics with respect to their photos. The data includes profile information, photos, captions and tags associated with photos, and users’ social network that includes friends. Below, we first provide details about the dataset we used, and later discuss how we develop a coding scheme for categorizing the photos and the coding process.Historically in case security or identify of a person, fingerprint images were used on an official law paperworks by the ink-techniques. Smeared fingerprint sample was taken by pressing the hardcore paper. However in the modern era now, acquisition of fingerprint can be scanned by the general purpose fingerprint scanner and transformed into digital images. FeP offers an easy and convenient ways of using the old technique in a modern method to provide an efficient security of the Pixelon which stores your personal data and pictures of important moments. Basically FeP stores the username, password and acquisition of fingerprint on sign up process, so then next time when you log in the FeP recognize your fingerprint and let you to access to your profile. Differentiable part of this project is FeP allows you to access your profile with the single tap of electric fingerprint scanner on any device.*

*B.Problem Statement of the System*

*Every business from the small auto shop in our neighborhood to a big national corporations are worried about the same thing, keeping sensitive data safe, either by storing the physical paperwork in a secure room or by strengthening computer security measures. Data needs to be handling with care and monitored all the time to make sure that the integrity of files has not been corrupted. Plus, data collected and stored in serves needs to be protected from any type of disaster either physically or electronically. We also aiming to keep secure the data on our newly made application (PixelOn) and making our customers feel on trusting our security system. But there is always some difficulties and problem on securing data. While making the application we face the problem that we cannot store the fingerprint samples on database because it is not secure enough and easy to hack it.*

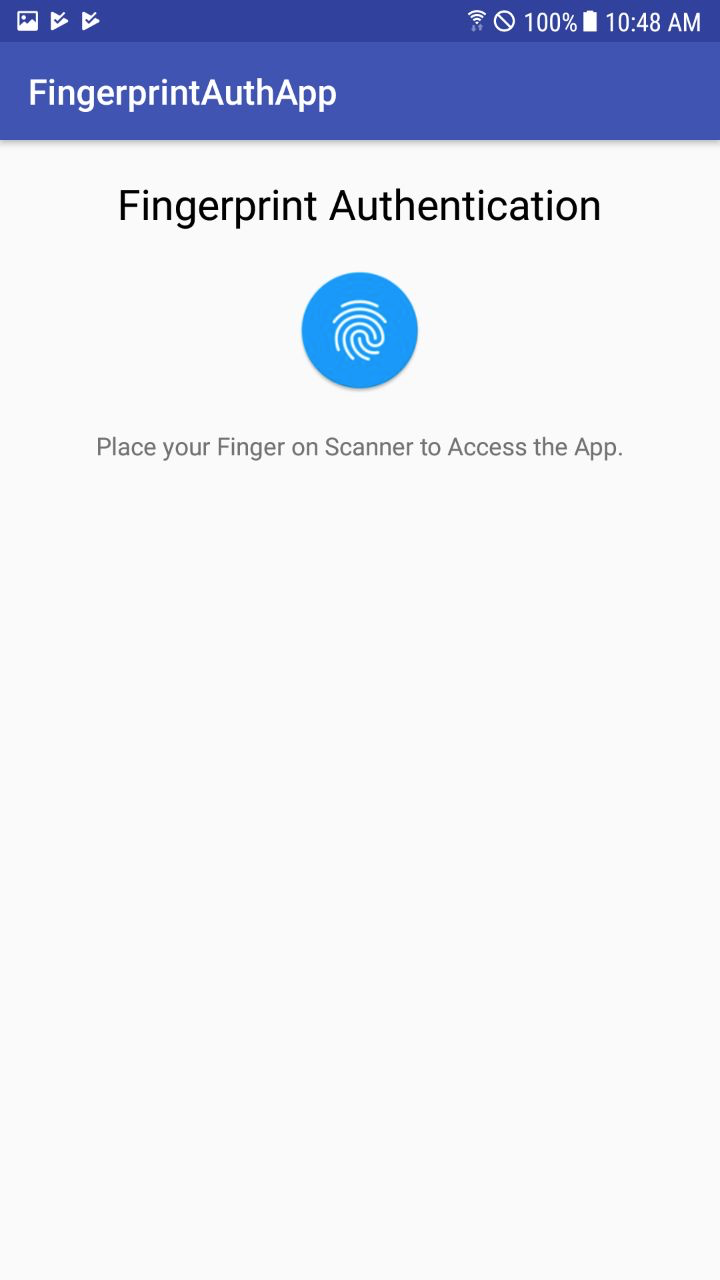
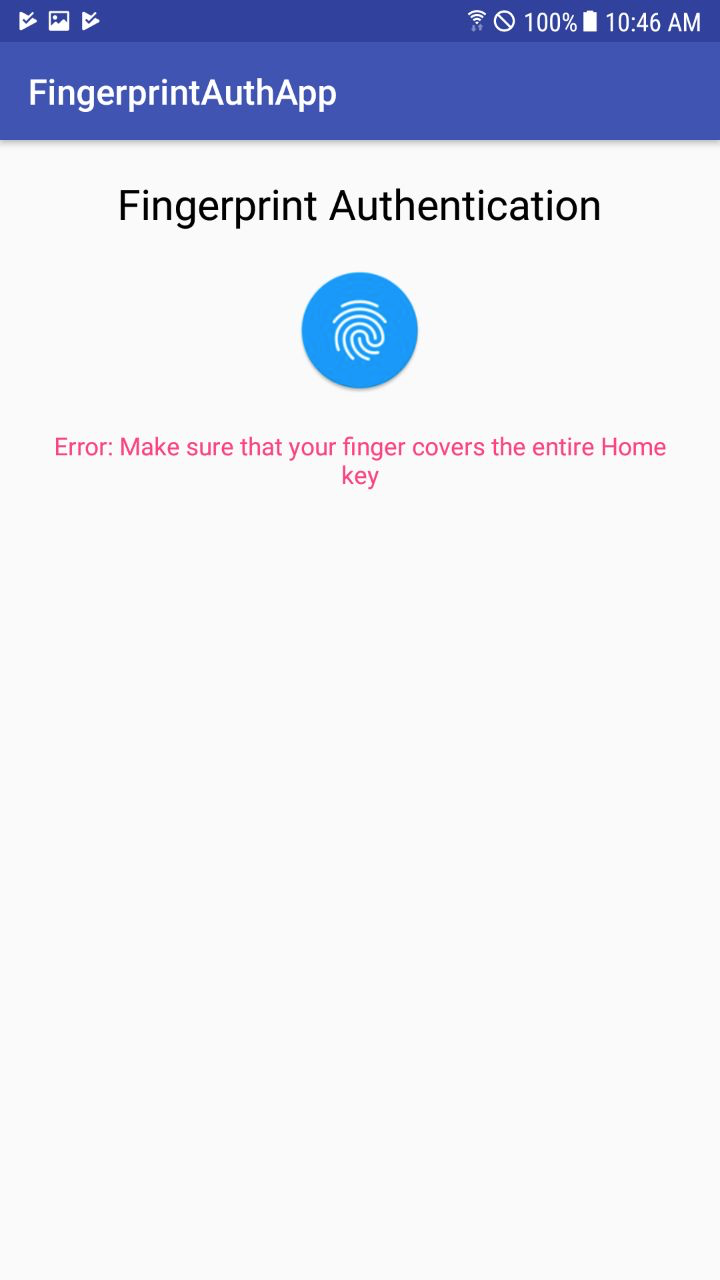
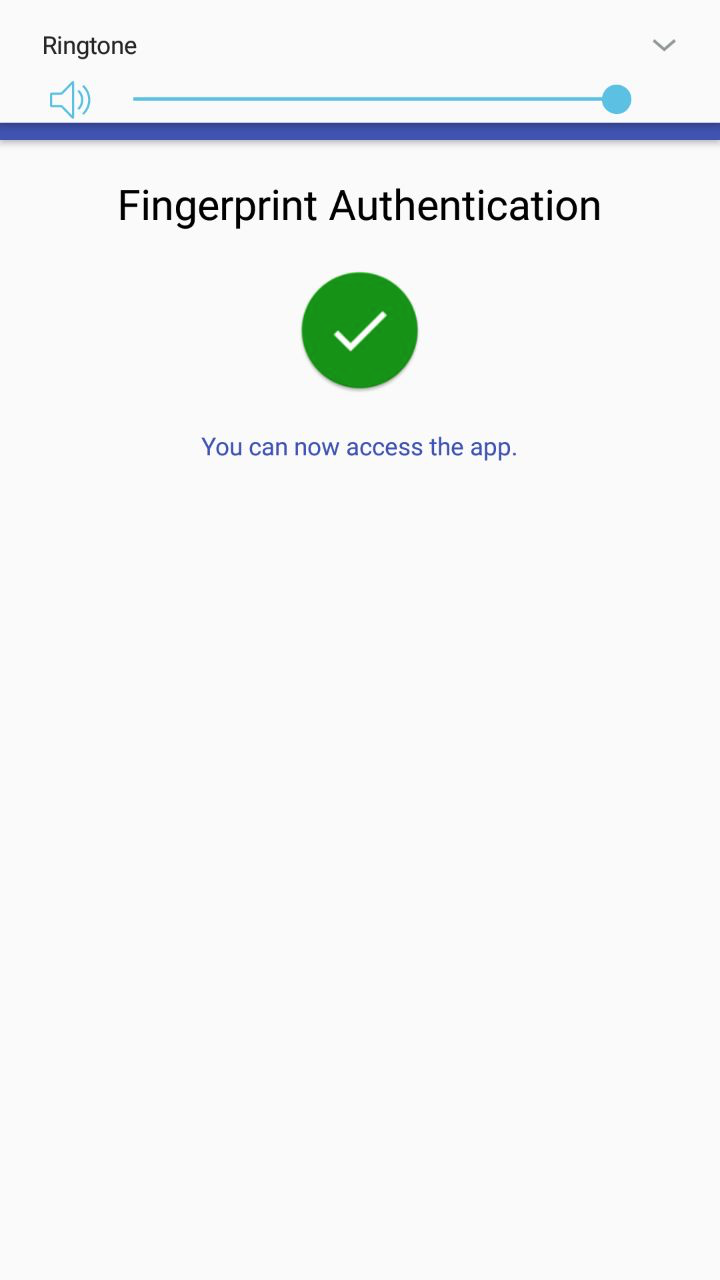
*In this chapter, we have just given a few problem statements and some motivations for the system and for using a Fingerprint on the security process. In the second section, we will describe a Project Design of our security based System including design specification, functional analysis and design organization. Next, we will try to give information about implementations of the System. Then we will try to provide results and tests of the proposed system followed by future plans in the fifth and sixth sections, respectively. Finally, we will conclude our paper in the last section.*

II.*PROJECT DESIGN*

*In this section, we are going to describe the design features and the functionalities of our System. This gives a good comprehension and understanding for the users.*

1. *Design Specification*

*In the beginning we were going to use Arduino to use the application when the user need to scan the fingerprint but later along doing the project we decided to secure the PixelOn by using the device’s fingerprint scanner so now we don’t need to use arduino but the complexity of the project slightly increased. So the design of the application is to be set by android studio only. The application has first page designed to secure the actual application which basically asks user to use the fingerprint or ordinary way of login with username and password. When user open the app, it will ask the user to register first Once the user is registered, next time user will be asked to place the finger on the device’s scanner. If the user uses the wrong finger or some who is not registered tries to login, application says that the scanning has an error and it will not allow the user to access the PixelOn. And finally user uses the right finger and place it properly on the scanner, user will be allowed to access the PixelOn.*

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