
Safe Folder Application

*Submitted in partial fulfillment of the
requirements for the degree of Bachelor of
Engineering*

by

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Certificate

This is to certify that the project entitled **Safe Folder Application** is a bonafide work of **Jha Nishantkumar (Roll No.26)**, **Yeole Gauresh (Roll No.63)**, **Suryarao Ketan (Roll No.51)** submitted to the University of Mumbai in partial fulfillment of the requirement for the award of the degree of **Undergraduate** in **DEPARTMENT OF INFORMATION TECHNOLOGY**.

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Project Report Approval for B.E.

This thesis / dissertation/project report entitled **Safe Folder Application** by **Jha Nishantkumar (Roll No.26), Yeole Gauresh (Roll No.63), Suryarao Ketan (Roll No.51)** is approved for the degree of **DEPARTMENT OF INFORMATION TECHNOLOGY**.

Examiners

1.....

2.....

Date.:

Place:

Declaration

I declare that this written submission represents my ideas in my own words and where others' ideas or words have been included, I have adequately cited and referenced the original sources. I also declare that I have adhered to all principles of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea/data/fact/source in my submission. I understand that any violation of the above will be cause for disciplinary action by the Institute and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been taken when needed.

Signature

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Roll No.63

Date.

Abstract

Now a day's most of the user are facing problem for providing the security to our personal files like images, videos, or some important files and folder so that it will not be accesses by the unauthorised user. Taking in action all these problems I have designed a application which will provide a best security to our files and folder and also save it from the unauthorised user using strong password. This app store your privacy very securely and it also protect your data even after uninstalling this application. We can try to make a user friendly application and also we try to make this application as a cloud based application which is more secure than other application which is currently available in the play store.

Acknowledgments

Success is nourished under the combination of perfect guidance, care blessing. Acknowledgment is the best way to convey. We express deep sense of gratitude brightness to the outstanding permutations associated with success. Last few years spend in this esteemed institution has molded us into content and aspiring Engineers. We express our sense of gratitude towards our project guide Prof. V.M Kharche. It is because of his valuable guidance, analytical approach and encouragement that we could learn and work on the project. We will always cherish the great experience to work under their enthusiastic guidance. We are also grateful to our principle Dr. M.J. Lengare who not only supporting us in our project but has also encouraging for every creative activity. We extend our special thanks to all teaching and non-teaching staff, friends and well wishers who directly or indirectly contributing for the success of our maiden mission. Finally, how can we forget our parents whose loving support and faith in us remains our prime source of inspiration. Lastly we would like to thank all those who directly and indirectly helping to complete this project. We would also like to acknowledge with much appreciation the crucial role of the staff of Information Technology Department, who gave the permission to use the all required software/hardware and the necessary material to completing to the project.

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Chapter 1

INTRODUCTION

Introduction

- A mobile application, most commonly referred to as an app, is a type of application software designed to run on a mobile device, such as a smartphone or tablet.
- Mobile applications frequently serve to provide users with similar services to those accessed on PCs.
- Safe Folder App or we referred to as an SecreApp is a lightweight Android app that enables users to apply a lock on our personal type of files or folder on their devices, private data without a password.
- The most basic functionality of the security feature is to lock your file so that nobody can access or view your personal data without your permission.
- An app secure Your all types of data like your images, videos, any files, or it can also encrypt your folder. This app store your privacy very securely and it also protect your data even after crashing, stolen by someone or uninstalling this application from your device.

Objectives

- Develop a secure Safe Folder App.
- Apart from images, videos and files this application also hide your folder which you don't want to show anyone without your permission.
- We are also working on that we make this application a cloud based application in which all the data which user want's to hide from everyone is store in a google drive of that user which is more secure. And also user feel free to use this application as our app is more secure, reliable to use.
- We are also working on restoring the hiding data of the user by backup from google drive even after crashing, stolen by someone or uninstalling accidentally this application from your device.

Purpose, Scope, and Applicability

Purpose

Our main purpose of this project is to develop a more secure app. To build a system that can encrypt images, videos and files. The system design will be an alphanumeric authentication system. Build a new algorithm for the security model for the data encryption and decryption.

Scope

- This Application will be the right choice for the users.
- In future lots of new features were updated like new themes, customized app, time lock in that auto lock/unlock according to time, location lock according to location.
- Hidden App icon and also provide advanced protection which prevent app being killed by task killer.
- We can also add app widget in which user can enable/disable app with one tap.
- We can also give the low memory usage and power saving mode from which user can use device even after the low battery.

Applicability

Safe Folder Application have immense areas of applicability, we list some of them that are practical interest to us:

- It build a system that can encrypt images, videos and files.

Application design will be an alphanumeric authentication Application. Build a new algorithm for the security model for the data encryption and decryption.

No Data is Sent Over the Internet.

Improve the level of security.

Organization of Report

The paper is organized as follows: Chapter 1 includes Introduction, Scope, Objectives and Applicability of our project. Chapter 2 Focuses on the previous work done in the field of study and gives a brief comparison of the papers referred. Chapter 3 Defines the problem statement and system requirements of our project. Chapter 4 gives general idea of System's Work Flow and Design. Chapter 5 gives general idea of Implementation and Testing done. Chapter 6 concludes with Future Scope of the project.

Chapter 2

LITERATURE SURVEY

1. Research on a Normal File Encryption and Decryption

Author : Guy-Armand Yandji, Lui Lian Hao, Amir-Eddine Youssouf, Jules Ehoussou

Year : May 2011

In this paper, our strategy used is to apply the encryption methods of the AES and MD5 following some steps in the encryption process in order to produce an outcome of a file that will, as a result, be hashed and strongly decrypted through the robust software for file storing.

2. Separable reversible encrypted data hiding in the encrypted image using AES Algorithm and Lossy technique

Author : Parag Kadam, Akash Kandhare, Mangesh Nawale, Mukesh Patil

Year : April 2013

In this paper, the author suggested encrypted data hiding in the encrypted image using AES Algorithm and Lossy technique as a solution. In this sender encrypt data and image separately using AES algorithm, hides encrypted data in the encrypted image using LSB technique, system auto-generate the all three respective keys.

3. Implementation of AES algorithm using VHDL

Author : Amit Kumar, Manoj Kumar, P. Balramudu

Year : Feb 2018

AES algorithm is a symmetric block cipher that can be used for encrypting (encipher) and decrypting (decipher) data.

4. Implementation of Reconfigurable Data Encryption Technique using different AES versions

Author : Anirudh P S, Lalu V

Year : March 2011

The Advanced Encryption Standard is widely used for encrypting data today. Unauthorized individuals will not be able to access data encrypted using AES. This paper presents the implementation of three different variants of AES in FPGA using Reconfiguration.

5. Encryption and decryption implementation in Java-based on Poco libraries

Author : Wang Fei, Luo Ming, Hu Fangming

Year : October 2011

The conventional Java based method of data encryption and decryption exists such problems as low efficiency and complicated programming. To resolve these problems, an efficient implementation which combines the third-party open source Poco library with JNI is proposed in this paper.

Chapter 3

REQUIREMENTS AND ANALYSIS

Problem Definition

Providing security to the applock application is most challenging job for the developers to be developed which will neither access or decrypted by the crackers. While hiding any images, videos or files our most challenging job is it should hide quickly and store there proper place. All the hiding Information should be encrypted or decrypted by the user without facing any internal problem. Also while restoring hiding data from google drive the data of the user are properly decrypted without facing any error. Therefore, the challenge of creating a safe folder app need arise, and creating one with a secure and reliable source of authentication.

Requirements Specification

In this phase we define the requirements of the application. The Requirements Specification describes the things in the application and the actions that can be done on these things. The requirements of the application are divided into two parts I.e Hardware requirements and Software requirements.

HARDWARE REQUIREMENTS :-

- i3 Processor Based Computer or higher
- 4GB RAM
- 250 GB Hard Disk

SOFTWARE REQUIREMENTS :-

- Windows 7 or higher.
- Java
- Android Studio

Chapter 4

SYSTEM DESIGN

Our project consists of this following Diagrams like, use case diagram, Block Diagram, Activity Diagram. Below it is clearly mentioned that how our project look like and hw its works and how it's function. The Design of the project is shown in figure. It can give the idea of how this application function. App design and development is a lengthy process, which means there's more time for things to go wrong. But what if you had a system in place that ensured your app was built the right way from the get-go, regardless of which team member (new or old) was working on it? That's what design systems do.

When creating a design system, you need it to be the go-to resource for your app team. And although the primary focus is on the UI, ownership needs to go beyond the designer. You need buy-in and support from other teams.

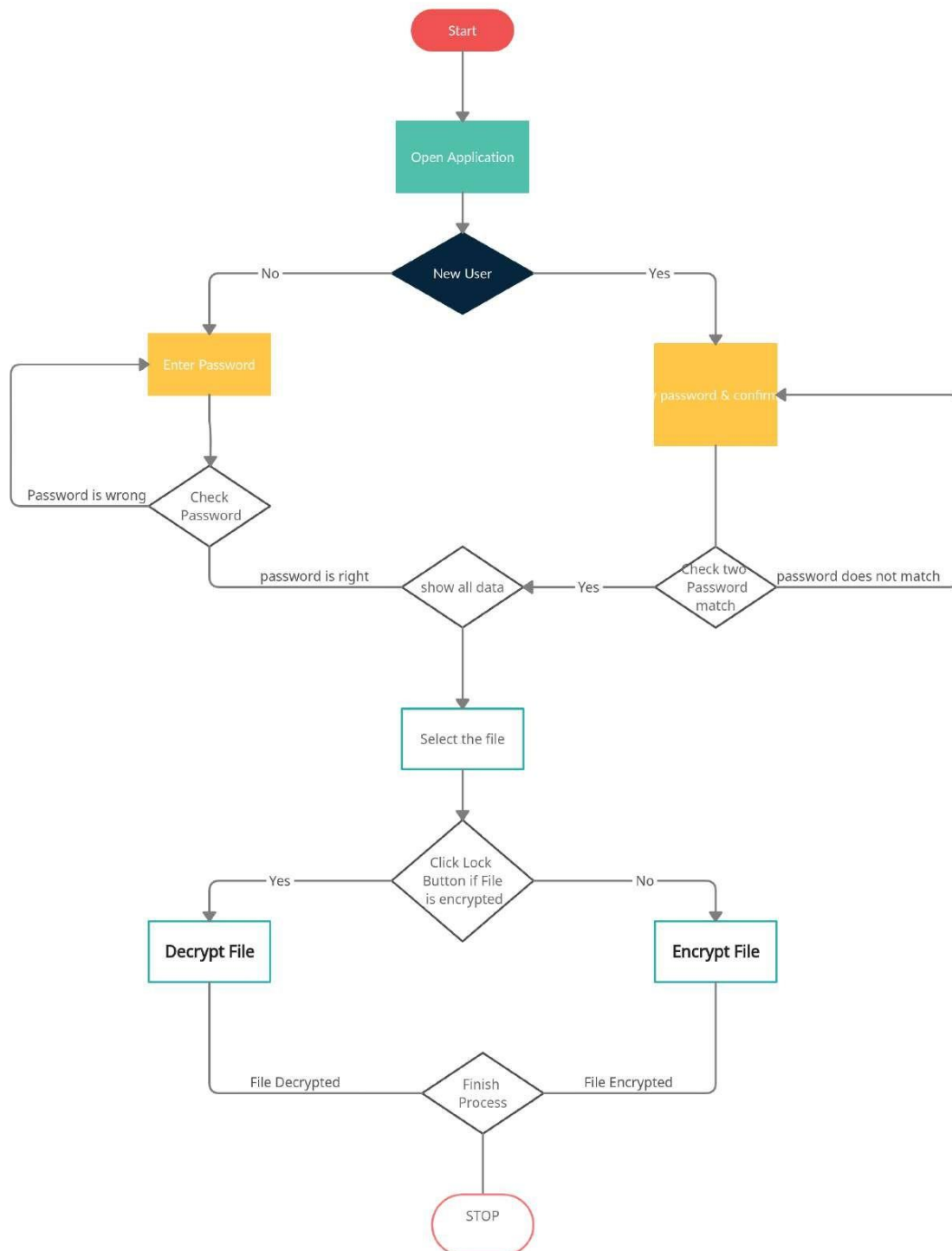
The number of owners of your design system depends on the size of your team as well as the size of your project.

For example, let's say you're building a design system for a small mobile app that's slated to take four months to build. The lead designer and frontend developer on the job might pull double-duty as the makers of the app as well as the managers of the design system.

On the other hand, let's say you're working on an enterprise web app that will take about nine months to build and then you're responsible for ongoing support.

By creating a design system before a project begins, you set the rules for the job and ensure that best practices are adhered to from start to finish.

Block Diagram



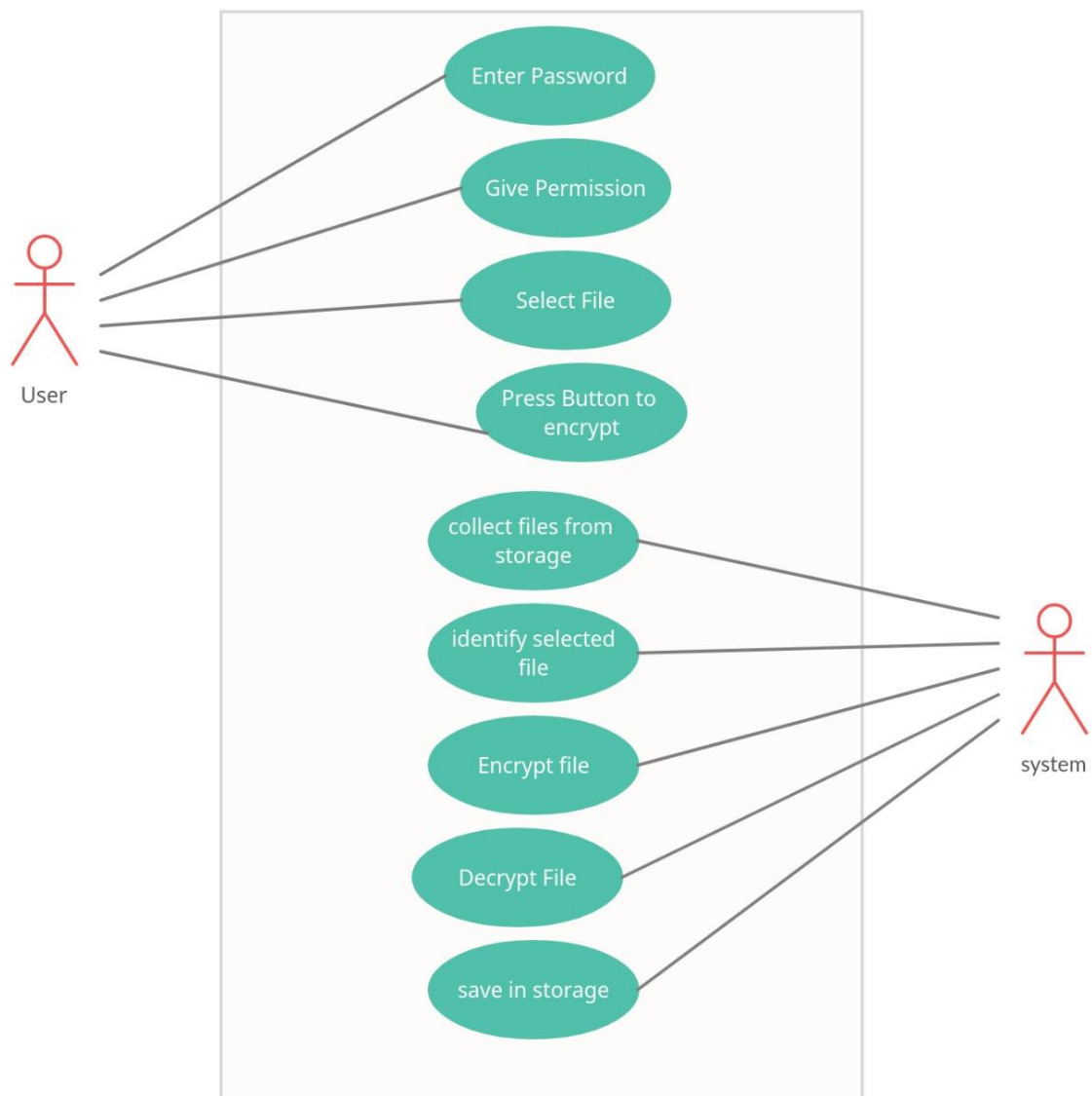


FIGURE 4.1: UseCase Diagram

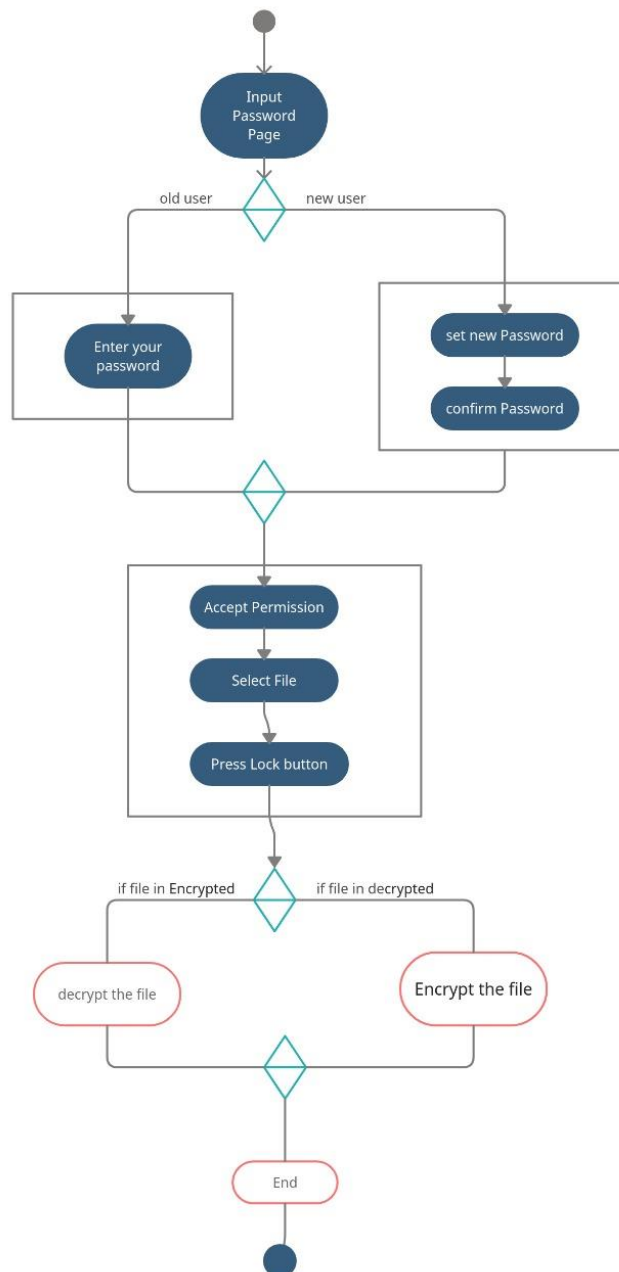
Activity Diagram

FIGURE 4.2: Activity Diagram

User interface design

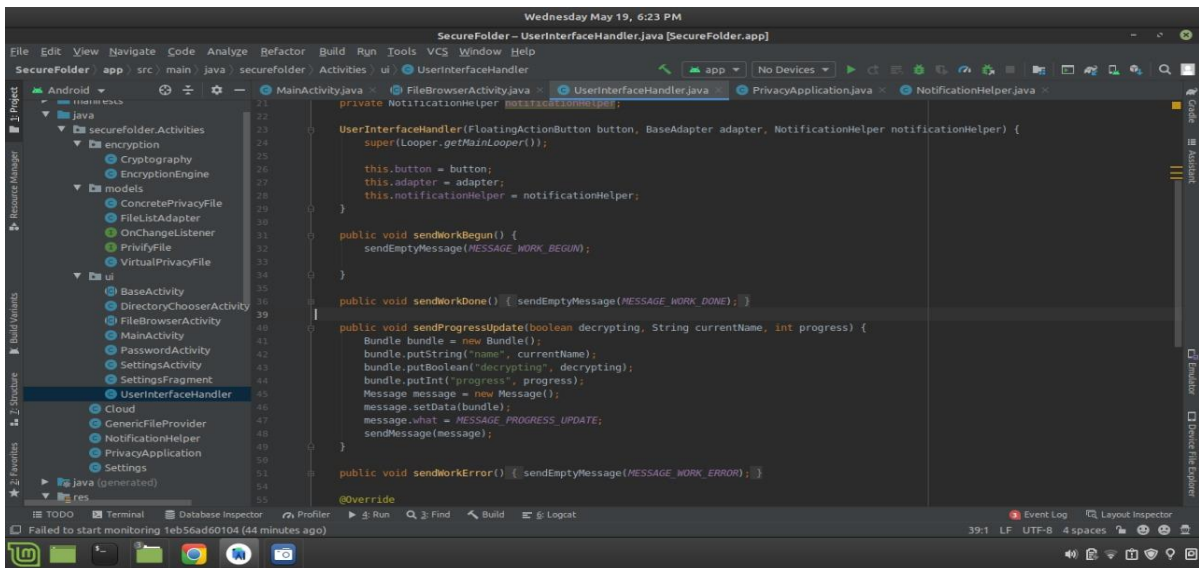


FIGURE 4.3: User interface design

When used together, design principles make the UI designer's job much easier. They remove a lot of the guesswork and make interfaces more predictable and, therefore, easier to use. Design should organize the user interface purposefully, in meaningful and useful ways based on clear, consistent models that are apparent and recognizable to users, putting related things together and separating unrelated things, differentiating dissimilar things and making similar things resemble one another. The structure principle is concerned with overall user interface architecture.

The design should make simple, common tasks easy, communicating clearly and simply in the user's own language, and providing good shortcuts that are meaningfully related to longer procedures.

The design should make all needed options and materials for a given task visible without distracting the user with extraneous or redundant information. Good designs don't overwhelm users with.

The design should keep users informed of actions or interpretations, changes of state or condition, and errors or exceptions that are relevant and of interest to the user through clear, concise, and unambiguous language familiar to users.

The design should be flexible and tolerant, reducing the cost of mistakes and misuse by allowing undoing and redoing, while also preventing errors wherever possible by tolerating varied inputs and sequences and by interpreting all reasonable actions.

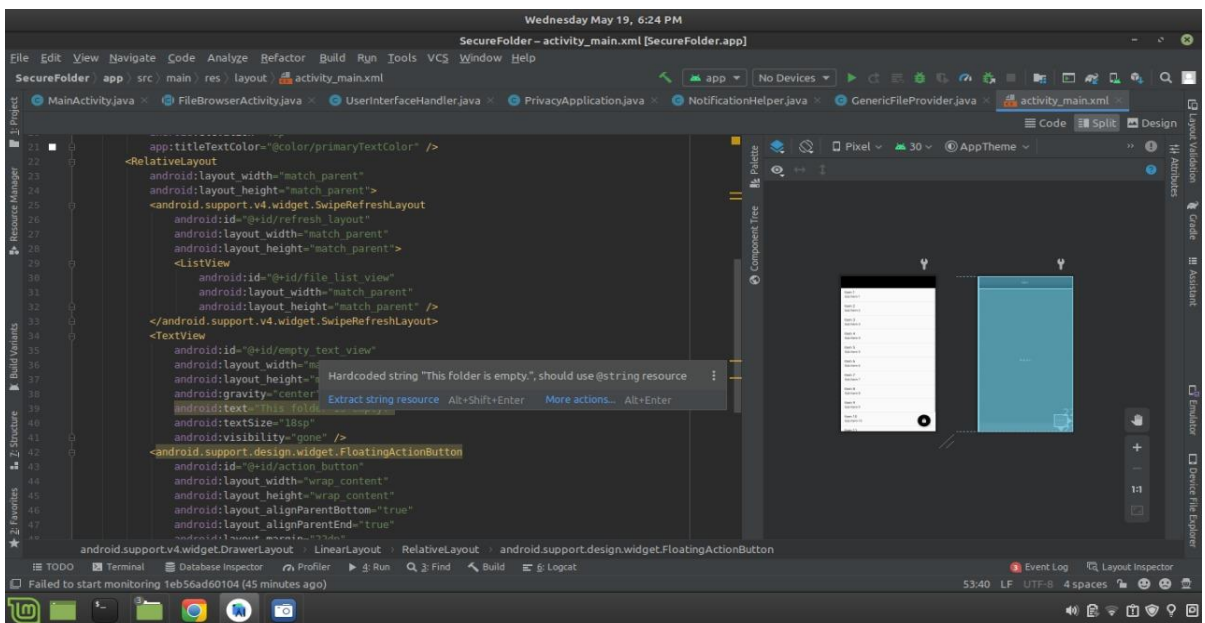
Chapter 5

IMPLEMENTATION AND TESTING

Implementation Approaches

This project is implemented in Java and XML. The main focus is done for development of a application that can encrypt the files, images or Data. This implementation clearly mentioned that how the files are encrypted or decrypted. Here we are shown the screenshots of coding, how we implement the code and run the project.

Coding Details and Code Efficiency



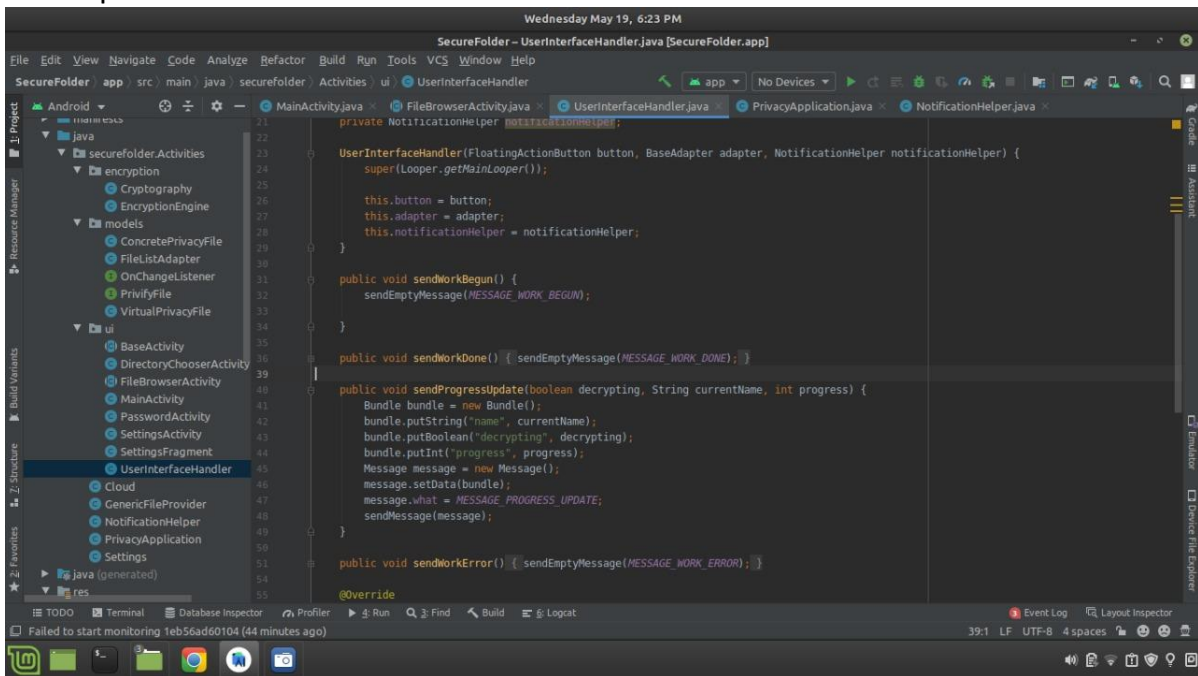
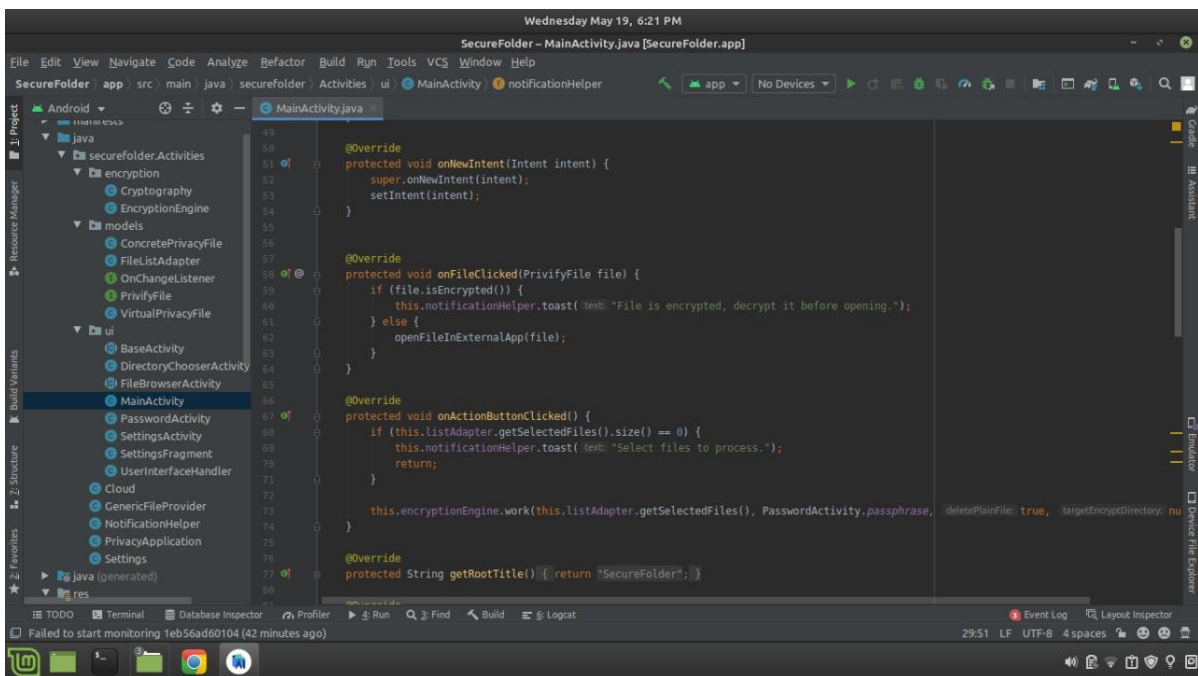
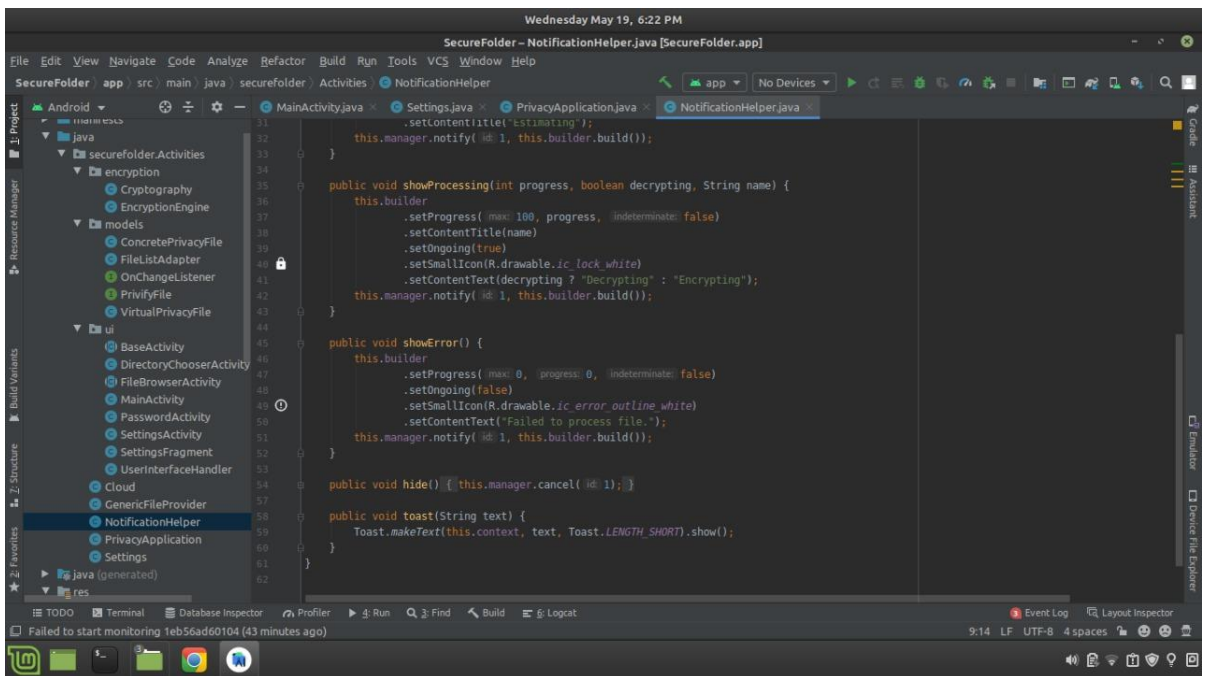


FIGURE 5.2 : UserInterfaceHandler.java





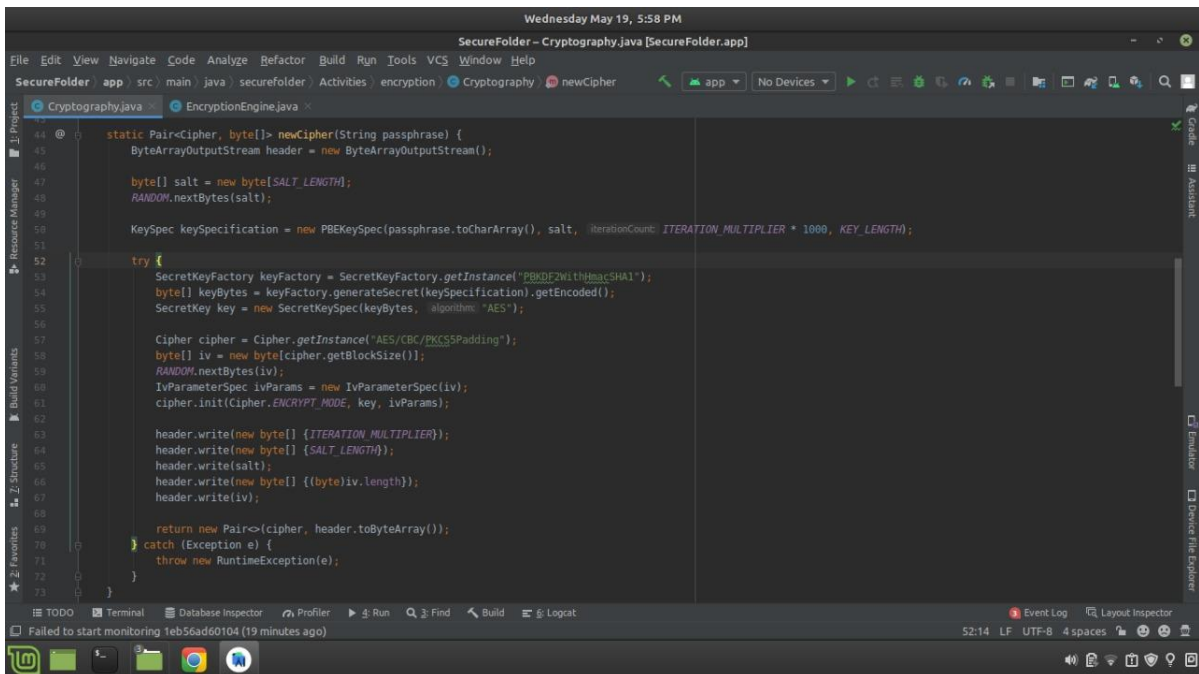


Figure 5.7 : Cryptography.java

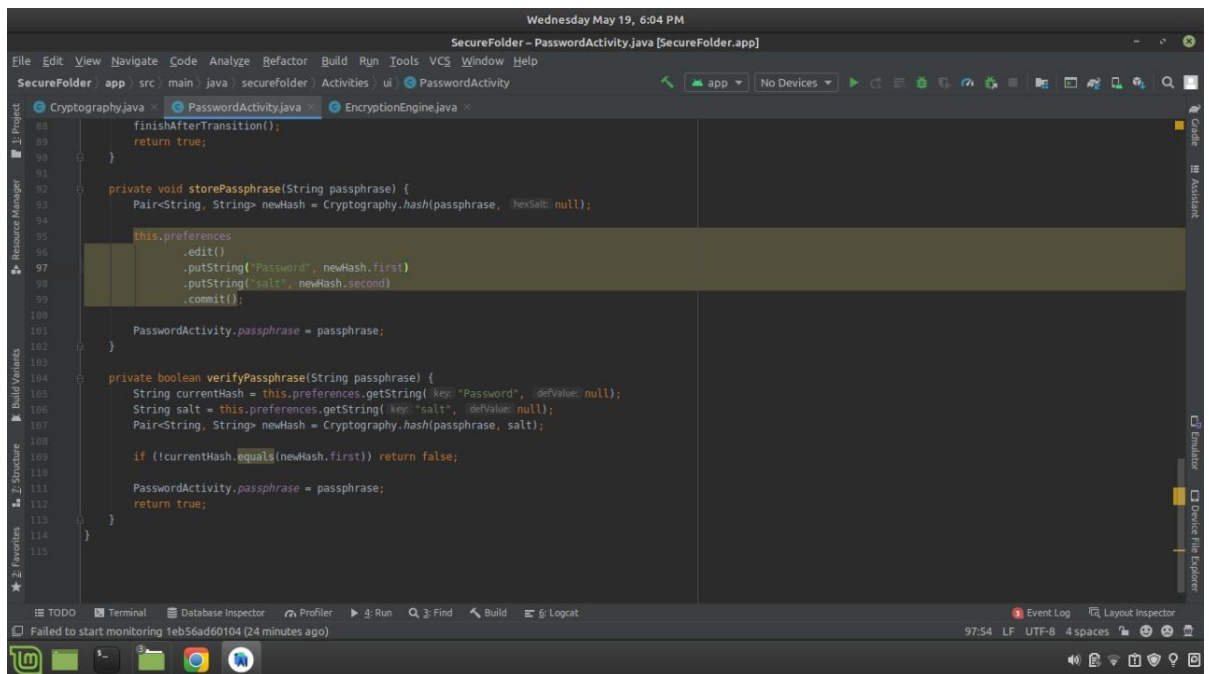
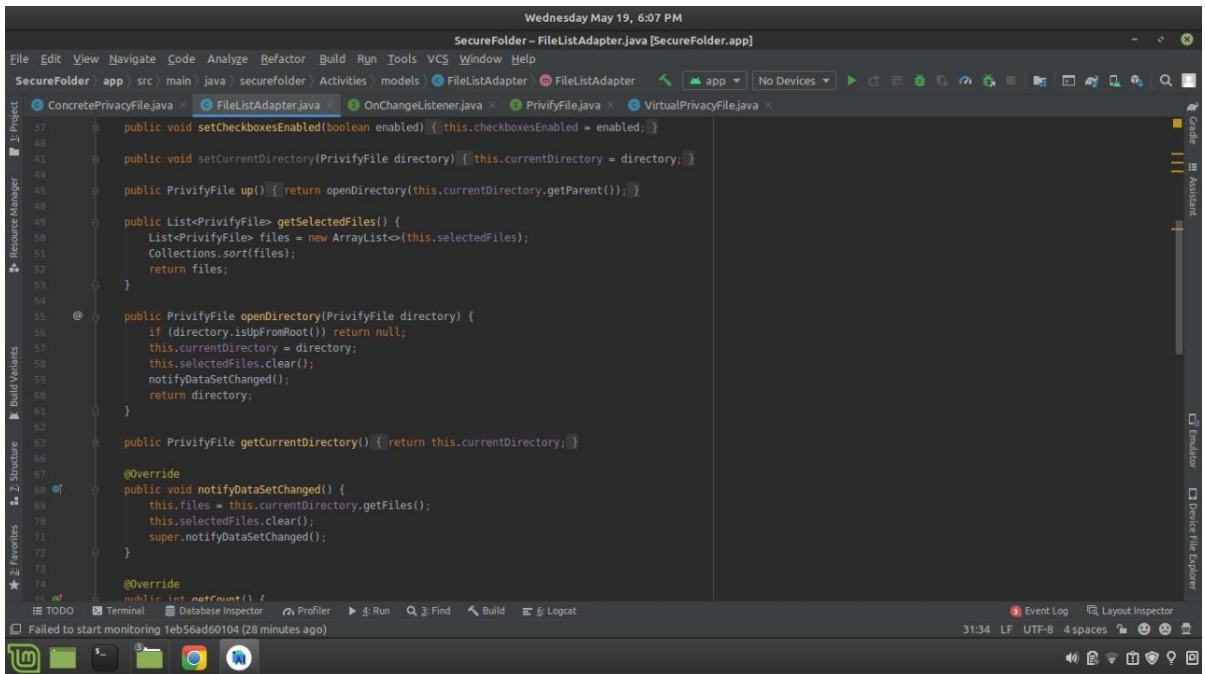


FIGURE 5.8 : PasswordActivity.java



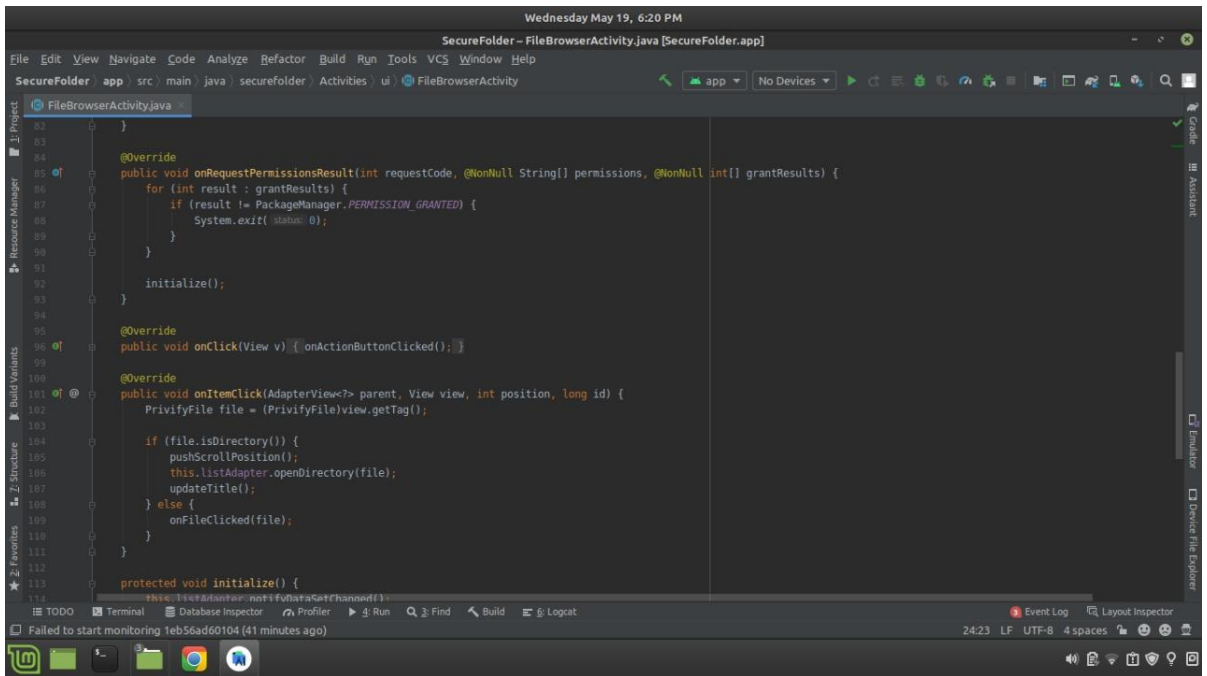


FIGURE 5.11: FileBrowserActivity.java

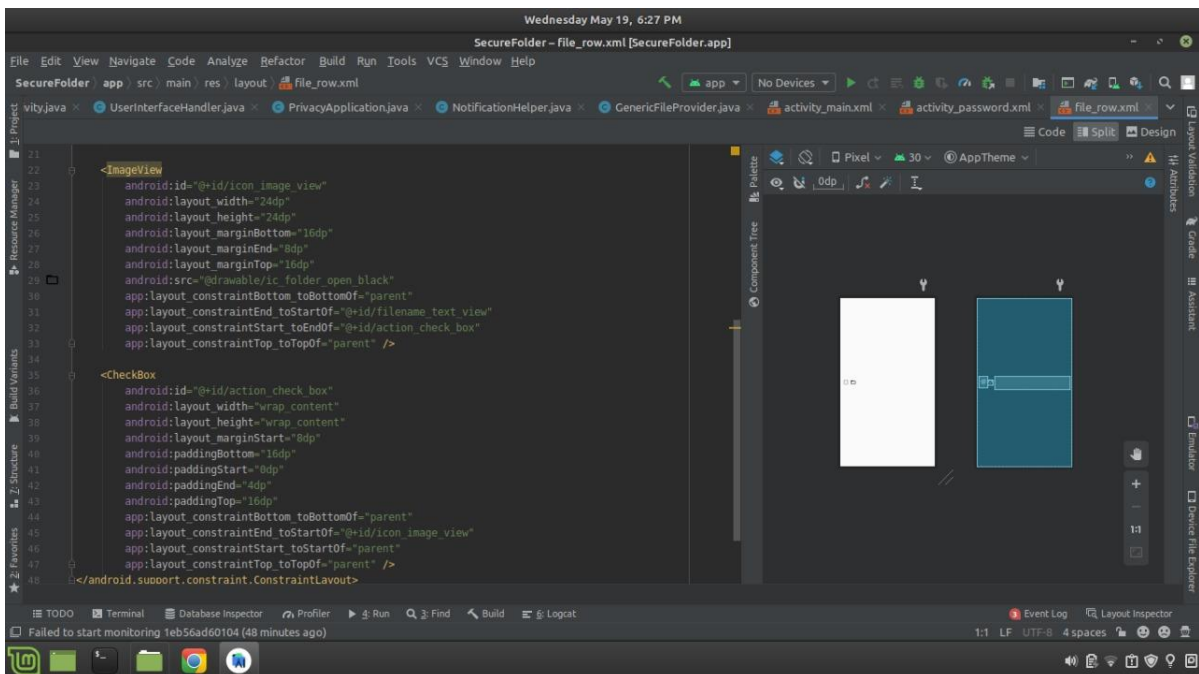


FIGURE 5.12: File_row.xml

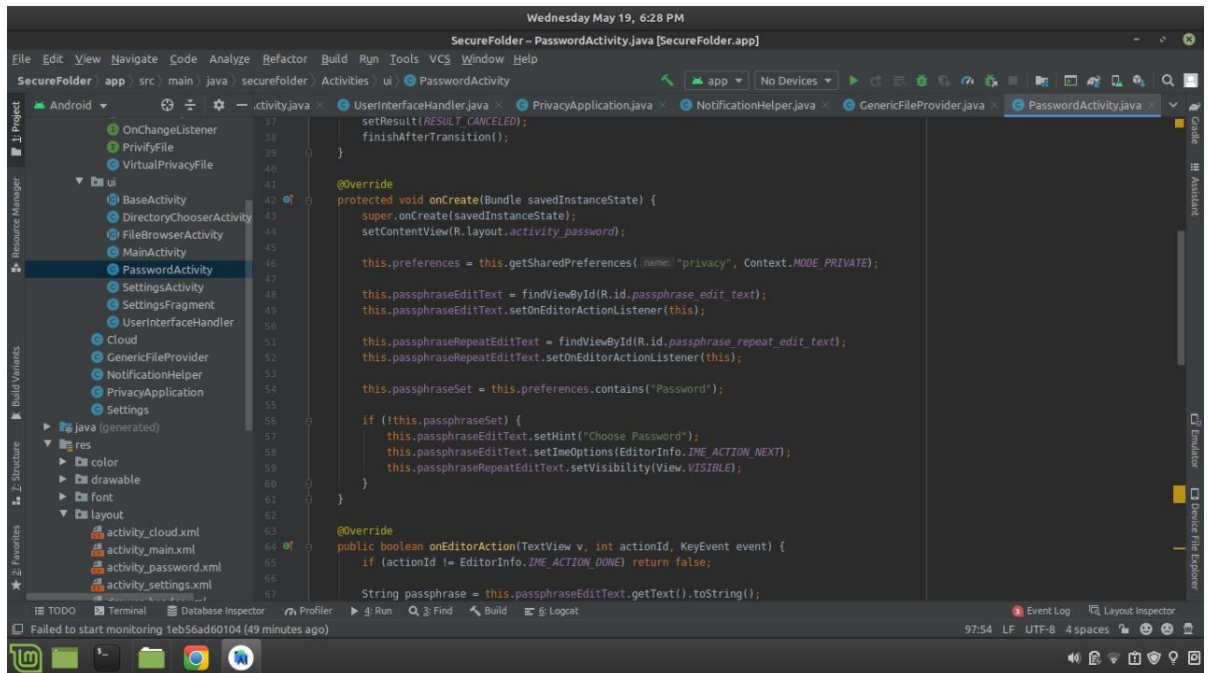


FIGURE 5.13 : PasswordActivity.java

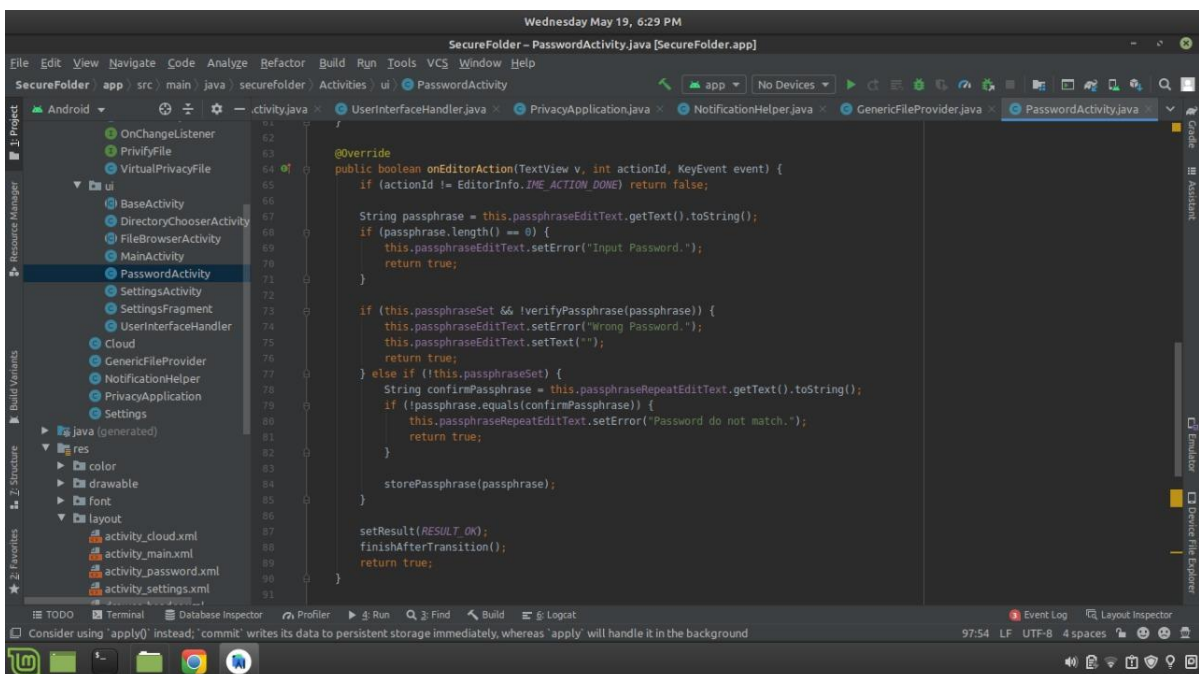


FIGURE 5.14 : PasswordActivity.java

Chapter 6

RESULTS AND DISCUSSION

6.1 Running Application

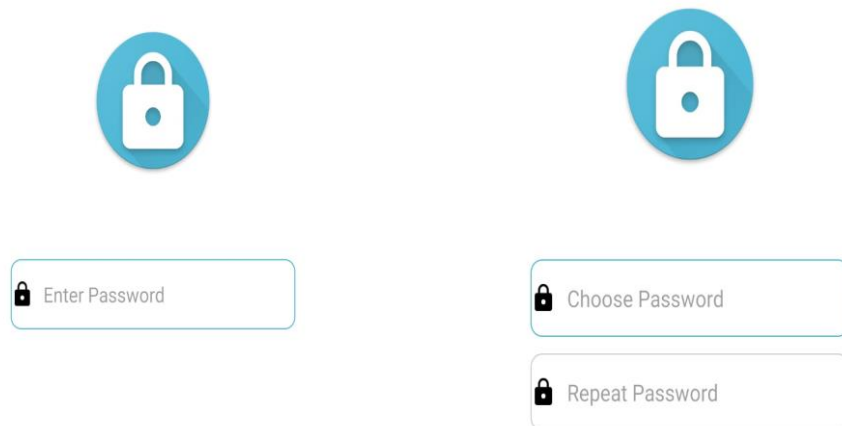


FIGURE 6.1: Example Image

Figure 6.1 clearly show the sample of running application. This is the first screen of the application. When the user click on the Icon of the applock the first screen will be look like this. In that first screen the user have to first register or signup on this app. Once he/she signup successfully the user have to enter password so that he can access his/her own applock application. After the successfully enter the password the next screen be look like which are shown in figure 6.2.

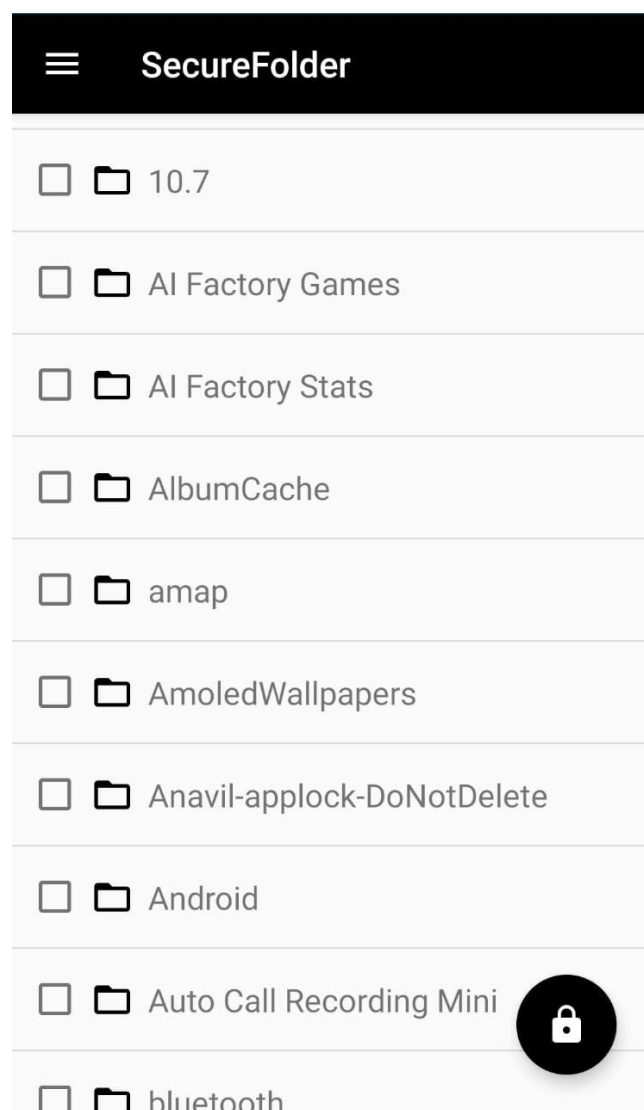


Figure 6.2 Sample Image

In this figure 6.2 it's is clearly shown the second screen or main screen of the safe folder application. In that many folder are created there so that user can encrypt there data or files on there own particular folder.

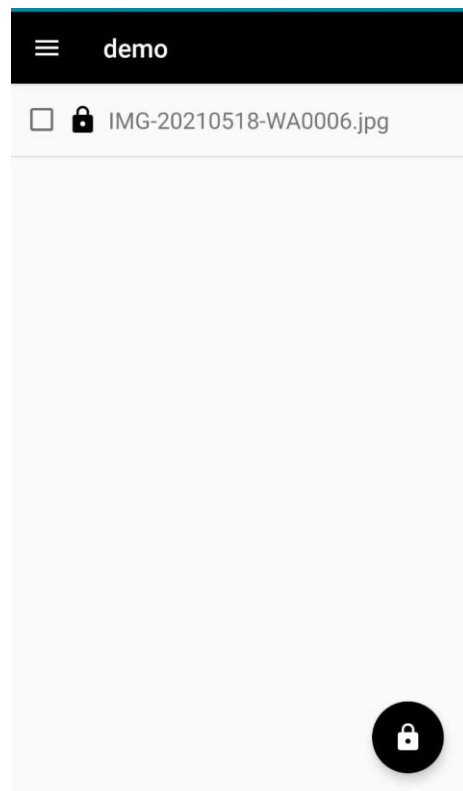


Figure 6.3 : Sample Image

Figure 6.3 shows the sample image of Encryption File. When any image is encryption it's look like this.

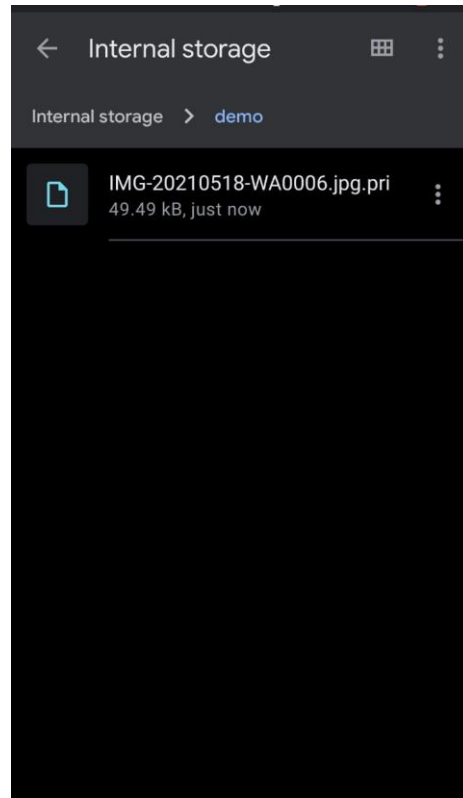


Figure 6.5 : Sample Image

Figure 6.5 shows the sample image of Encrypted File. When any image is Encrypted it's look like this.

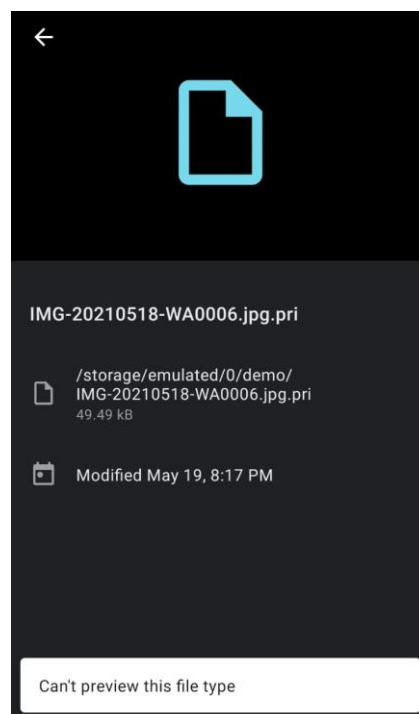


Figure 6.6 : Sample Image

Figure 6.6 shows the sample image of after the open of any Encrypted File. When any Encrypted file we open it's look like this.

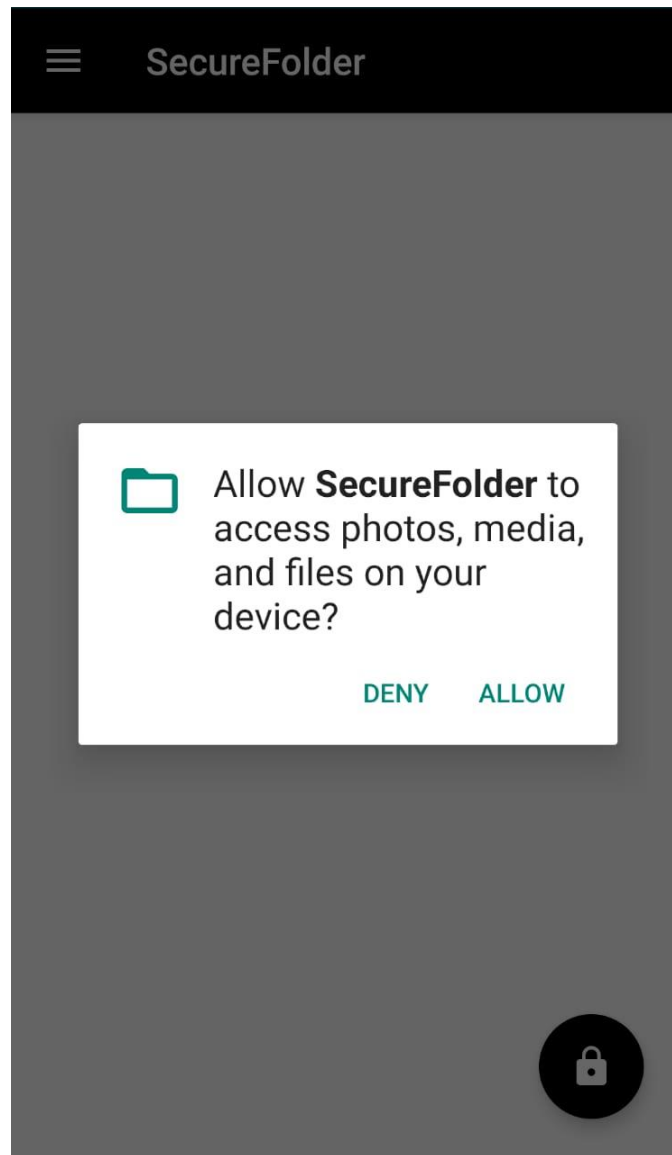


Figure 6.7 : Sample Image

Figure 6.7 shows the sample image of Permission Box. When you open first time this application need some access from your side. You have to allow some permission t access this Secure Folder app.

Chapter 7

ADVANTAGES AND DISADVANTAGES

ADVANTAGES :

- This app is encrypting sensitive files directly on the SD card
- No data is sent over the internet

DISADVANTAGES :-

- This application works only on android devices.

Chapter 8

CONCLUSIONS

Conclusion

Safe Folder App is the best app for the today's generation. This the app gives many features to the user and this is safely to use. We are highly satisfied and motivated by the results obtained at the end of this project. The Project was a new experience when it came to the testing phase. Safe Folder App has many possibilities for future enhancement and availability for better privacy of the user. In future we will try to add more features in this app and making more easier, reliable and user-friendly.

Limitations of the System

- This application is available for only android user.
- User can't change their Password.
- User can store their personal files and folders with limited space only.
- User cannot customized the application

Future Scope of the Project

- This Application will be the right choice for the users.
- In future lots of new features were updated like new themes, customized app, time lock in that auto lock/unlock according to time, location lock according to location.
- Hidden App icon and also provide advanced protection which prevent app being killed by task killer.
- We can also add app widget in which user can enable/disable app with one tap.
- We can also give the low memory usage and power saving mode from which user can use device even after the low battery.

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