



## **Secure File Vault**

### **User Manual**

**Author:** Jack Hooton Byrne

**Student ID:** C00230173

**Project Supervisor:** James Egan

**Recipient:** Institute of Technology Carlow

**Date:** Friday 30<sup>th</sup> April 2021

## Abstract

Secure File Vault protects individual files or data by encrypting them using different encryption methods. When the user wants to view the files, they login into the cloud to view the files which have been decrypted for the user. The cloud is a Raspberry Pi which stores the valuable data.

Have you ever run out of storage space on your laptop or computer and had to invest in external memory? Have you ever thought about any other options?

Unfortunately, this has happened to me and has led me to create my project. Many people each day run out of storage space on there on devices. But not many people think about using cloud storage to store their data. People are afraid of storing their data in a cloud because they don't know where the cloud is. A cloud is just a set of servers that are stored on an offsite location. Users are also afraid of how their data is being stored. Recently there have been many cyber-attacks on cloud systems. According to the 2020 Trustwave Global Security Report, attacks on cloud services have doubled from 2019 and have accounted for 20% of investigation incidents. Cloud systems are now the third most targeted environment for cyber-attacks. The purpose of my project is to create the most secure cloud system on the market.

## Table of Contents

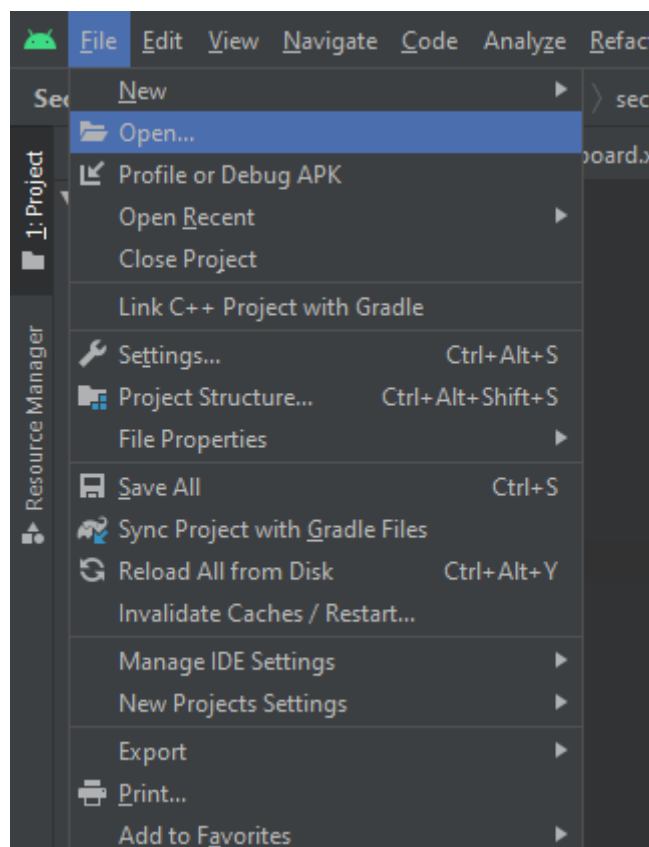
<b>Introduction.....</b>	<b>4</b>
<b>Installation .....</b>	<b>4</b>
<b>Troubleshooting .....</b>	<b>8</b>

## Introduction

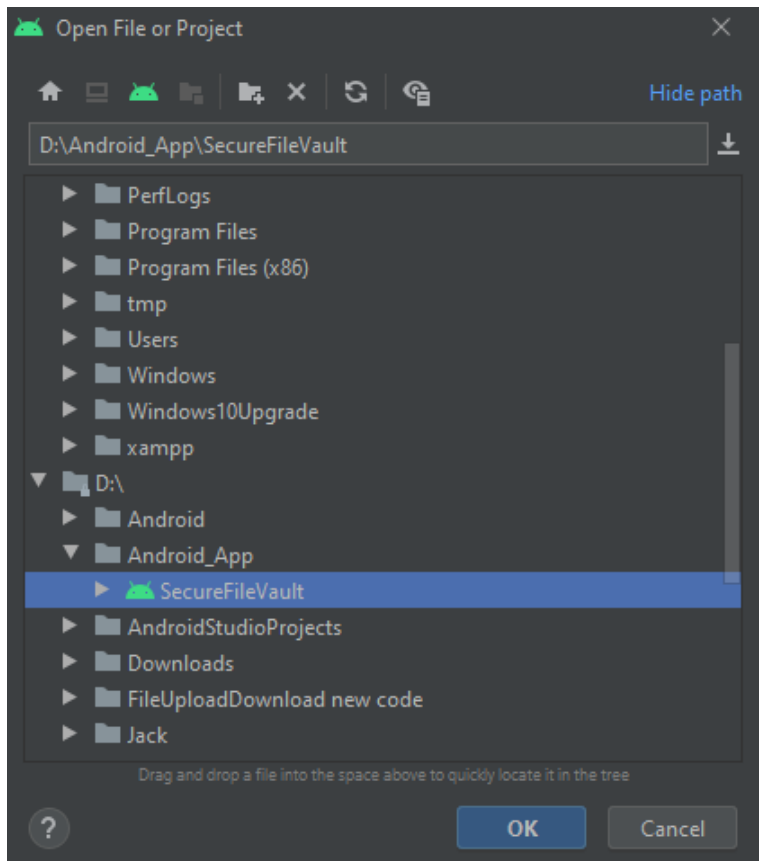
Secure File Vault is quite simple to set up. Three main configurations must be set up. Android studio XAMPP and phpMyAdmin can be downloaded onto your computer. If you have the Raspberry Pi, minor adjustments will have to be made.

## Installation

Android Studio can be downloaded from the following link <https://developer.android.com/studio>. Once this has been installed, the application can be opened by accessing the folder through “File > Open” in the top right corner.



Click on where you have downloaded the Android file, and then click on Secure File Vault.

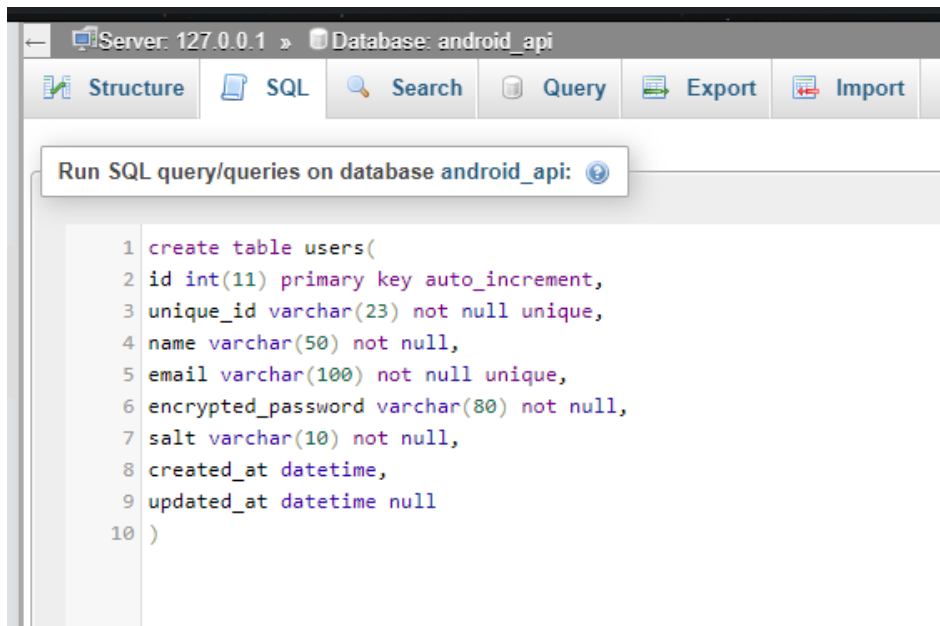


Once the application has finished building, the next step is to download XAMPP and phpMyAdmin. Which you can download from below:

XAMPP: <https://www.apachefriends.org/download.html>

PhpMyAdmin: <https://www.phpmyadmin.net/downloads>

Next, you will need to place the folder DB\_XAMP in htdocs in file explorer. In the DB\_XAMP folder, there is a created file where you will need to input this into phpMyAdmin for it to create the database, as shown below.



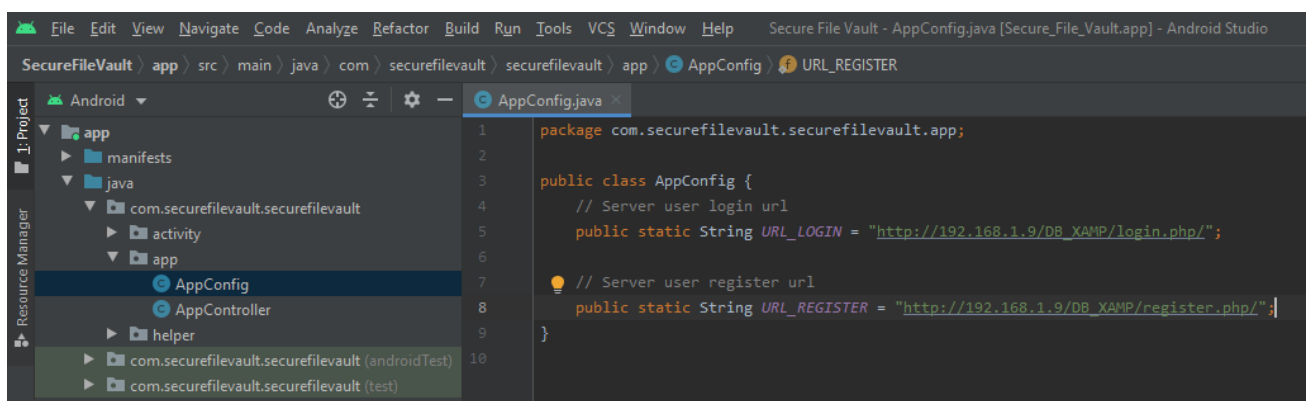
Server: 127.0.0.1 » Database: android\_api

Structure SQL Search Query Export Import

Run SQL query/queries on database android\_api:

```
1 create table users(  
2 id int(11) primary key auto_increment,  
3 unique_id varchar(23) not null unique,  
4 name varchar(50) not null,  
5 email varchar(100) not null unique,  
6 encrypted_password varchar(80) not null,  
7 salt varchar(10) not null,  
8 created_at datetime,  
9 updated_at datetime null  
10 )
```

Once this is set up, you will need to open command prompt and type in Ipconfig once you find your IP address. Go to android studio and navigate to the file shown below.



SecureFileVault - AppConfig.java [Secure\_File\_Vault.app] - Android Studio

SecureFileVault > app > src > main > java > com > securefilevault > securefilevault > app > AppConfig > URL\_REGISTER

```
1 package com.securefilevault.securefilevault.app;  
2  
3 public class AppConfig {  
4     // Server user login url  
5     public static String URL_LOGIN = "http://192.168.1.9/DB_XAMP/login.php/";  
6  
7     // Server user register url  
8     public static String URL_REGISTER = "http://192.168.1.9/DB_XAMP/register.php/";  
9  
10 }
```

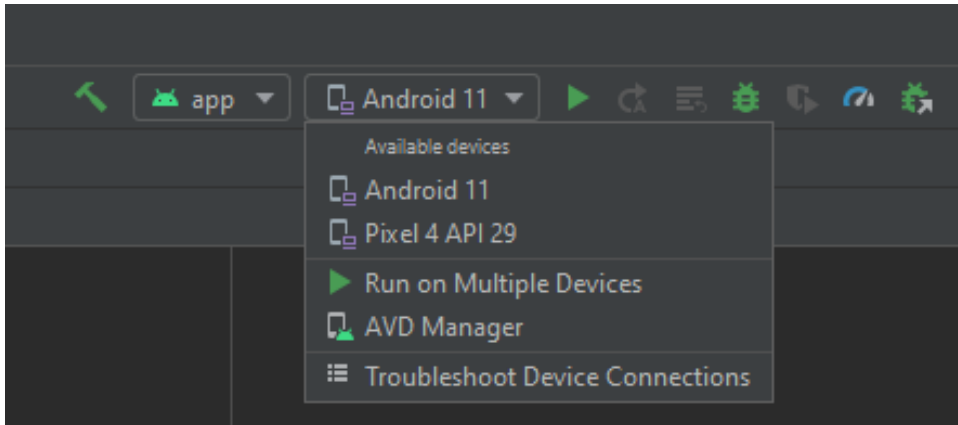
In the AppConfig.java file, you will change the IP to your Ip address for both URLs.

Next, you will need to turn on the Raspberry Pi, which connects the power cable to the Raspberry Pi. On the Raspberry Pi, go to the terminal and type ifconfig, and note the Ip address it gives you. Go back to android studio and now navigate to the string.xml file as shown below.

Change each of the IP addresses to the IP address of the Raspberry Pi. Once this is complete, you are now able to run the application.

To run the application, connect your phone to the computer and make sure you have debugging mode on. If you don't want to run the application, you can create an emulator in Android Studio to run the application. Click on AVD manager to create an Android Virtual Device. Once that is created, you can click the green arrow, and the application will soon appear on your device or the AVD.

7



## Troubleshooting

If you are experiencing any problems, please contact me by email at [jackhbyrne2000@gmail.com](mailto:jackhbyrne2000@gmail.com)