



Dataflex: Secure and Seamless Data Access Anywhere

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ABSTRACT

In this project, we suggest a flexible application that, whether used online or offline, enables easy data access in the event that the primary device is lost or left at home.

When accessing data by SMS, only a passcode is required, however double verification is required when accessing data over the internet, required to achieve the highest level of data transfer security.

As a result, this application offers greater flexibility and facilitates data transfer over all types of networks.

Keywords: remote access, mobile application, primary and secondary devices, SMS, flexible data transfer

1. INTRODUCTION

Before this method was created, every data transfer required the internet, large storage, or just a small amount of offline data, switching etc. Even data transfer devices such as flash drive, smartphone, SD card and CD need to be transported carefully. If someone forgets to bring their storage device, it will be difficult. Unlike other data communication methods such as Bluetooth and Wi-Fi.

Manually transferring data over the Internet would be dangerous and could carry viruses. This method will allow us to access and store data on the web while reducing time and space complexity.

According to the American Journal of International Engineering, 95-97% of e-waste generated by hardware that becomes damaged due to the spread of the virus consists of metal, glass, plastic and potentially hazardous chemicals. In this design, we provide a customized penetration and transmission system based on personalized offline operation "where a stonemason never penetrates data or tampers with system settings from a secondary device to a primary device by simply transmitting an offline SMS (Short Message Service). or using an online operation. With the help of this program, we can make sure that the data can only be transmitted through SMS or online operations, so it is infection-free. Everything in the world moves at the same speed as a Formula 1 car on a race track. In our fast-paced reality, it can sometimes be a bit difficult to return ciders.

2. LITERATURE REVIEW

R. Saraswati, K. Shanti, H. Rasika, R.M. Pommani and Mrs S. Gousami were using mobile phones to send and receive text messages. It has features such as the use of SMS service, high reliability, popularity, ease of development and low cost. Technology (SMS). You can send and receive messages to each other using the GSM module or short message network platform. Computers and mobile devices. To develop this application that works without the internet, you have access to an Android smartphone at a distance. A remote cellular data access system can also be programmed to send a specific text message to a specific number.

In any event, cell phones are not available at this time and you must immediately contact the person you do not know how to contact. You can also check the other party's current email ID, unread SMS, missed calls from mobile, etc.

Ugendra Bubba, Mariharjuna Korapati, Ramakrishna Pamarthy: When we put our phones on silent, If you lost it somewhere nearby, you won't be able to find it even if you ring your phone. What happened to all of us? To solve this fact

As a global issue, we are developing an app called Remote Ringer. Remote ringer helps to switch the mobile phone from silent mode

Enter ringtone mode When your phone is in ringtone mode, you can ask other mobile phones to ring you.

2.1 PROPOSED WORK

If you need to access certain data or contacts on your mobile phone while at work and you left your phone at home, it is difficult without an application. Even if you accidentally leave your phone behind at work or home, if the phone is silent, finding it will be impossible.

You missed it in someplace nearby and your phone is on quiet mode. You look all over your home for your smartphone before giving up and picking up the broken-down landline to call your number. As it was in quiet mode, you couldn't find your phone. and when you require a phone and forgot to bring it home.

2.2 PROPOSED APPROACH

The application under this suggested work will need to permit operating in the background on the user's mobile device. The user must then set a passcode. To remotely access the device, the user must input a few contact numbers and set a login and passcode (if the user wants to access the mobile over the internet). The user's end contact information

Whatever was fed into the programme is now able to access the phone through installation and passcode input. The programme will then do a checksum to ensure that the number that sent the request is the same as the one that was previously entered into the system..

3. OBJECTIVES

The project's goal is to provide a versatile application that enables for easy data access when the primary device is lost or unavailable. This programme should function both online and offline, providing users with convenience and accessibility.

The programme only requires a passcode for authentication when accessing data via SMS. When accessing data through the internet, an additional layer of double verification is used to improve data transmission security. The project intends to provide the highest level of data transfer security by utilising this dual authentication technique.

Overall, the application's major purpose is to provide users with flexibility by allowing data access independent of the primary device's availability. It also intends to make data movement across platforms easier

4. COMPONENTS

This Android application communicates with the user using a graphical user interface. The UI is straightforward, basic, and self-explanatory. Once the application is opened, the user may simply enter into the flow and use all of the interfaces appropriately.

REQUIREMENTS FOR HARDWARE

The following are the minimum requirements:

1. Intel Core 3 or above processor
2. RAM: 256 MB
3. a hard drive with a capacity of 40 GB
4. Android device

REQUIREMENTS FOR SOFTWARE

1. Android 3.2 (Honeycomb) or higher is required. Android Studio 2

5. METHODOLOGY

Encryption: Implement strong encryption algorithms to protect data in transit and at rest. This ensures that even if the data is captured, it remains unintelligible without the decryption key.

Two-Factor Authentication (2FA): Use a two-factor authentication mechanism to access data over the Internet. This provides an additional level of security by requiring users to provide two types of authentication, such as a password and a one-time code sent via SMS, email or a special authentication app.

Offline data access: When accessing data offline, ensure that sensitive information is stored in an encrypted format on the user's device. Use strong encryption techniques and enforce access controls to prevent unauthorized access to stored data.

Data backup and synchronization: Implement a secure backup and synchronization mechanism that allows users to easily restore their data in case of device loss or damage. This can include regular encrypted backups to cloud storage or secure synchronization with other trusted devices.

Secure development practices: Follow secure coding practices and conduct regular security assessments, including penetration testing and code reviews. This helps identify and mitigate potential vulnerabilities in the application and ensures that security is integrated into the development process

6. IMPLEMENTATION

Android Studio gives the fastest tools for building apps on each sort of Android gadget. It is an official coordinates improvement. The environment for Google's Android working framework is built on JetBrains. It was created by Google and JetBrains .Java, Kotlin, C++. It may be a freeware authorized application utilized all over the world.

Android Studio underpins all the same programming dialects as Intelligent e.g. JAVA, C++ and more with expansions like Go and Android Studio 3.0 or afterward underpins Kotlin and all JAVA 7 dialect highlights and subsets of JAVA 8 dialect highlights that shift from Stage adaptation.

An Android smartphone combines the highlights of a individual computer working framework with other highlights that ordinarily incorporate a Touchscreen, Cellular, Bluetooth, Wi-Fi, GPS and much more making it simple to utilize and a incredible desktop elective, Computers and portable workstations. For this extend I utilized Android Studio. After deducting the client issues and work stream of the application I begun creating it as an offline application. I have utilized a Hash Table to store the contact subtle elements whereas navigating the list when the client inquires to get to the number. Arrange with two stations working.

Hash table - In computing, a hash table (hash outline) could be a information structure that executes the acquainted cluster unique information sort, a structure that can outline keys to values. A hash table employments a hash function to calculate an list into a cluster of buckets or openings, from which the required esteem can be found.

Android Studio - Android Studio is an coordinates improvement environment (IDE) from Google that gives engineers with the devices they got to make applications for the Android OS stage

7. WORKING

The dataflex feature is as follows:

A. When accessing via SMS

- 1) User must install Dataflex on their Android phone.
- 2) After installation, the user must set a username and password.
- 3) After setting the credentials, the user needs to set the mobile numbers with which he can access remotely.
- 4) Now the user has to send the login details via SMS only from the saved mobile number.
- 5) After granting access user can now request any mobile number stored in his phone which he forgot to carry.

B. When accessing via the Internet

- 1) In this method, both mobile phones must be connected via the Internet.
- 2) On the receiving side, the user has to navigate through a link through which he can access using his credentials.
- 3) User can now easily share large data files after successful login.

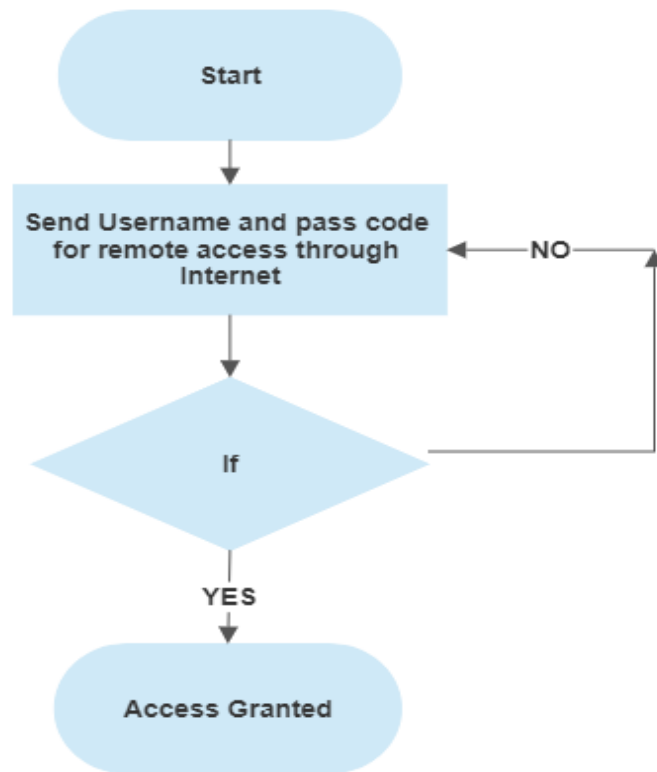


Fig 7.1: Algorithm of Remote Accessing using Internet

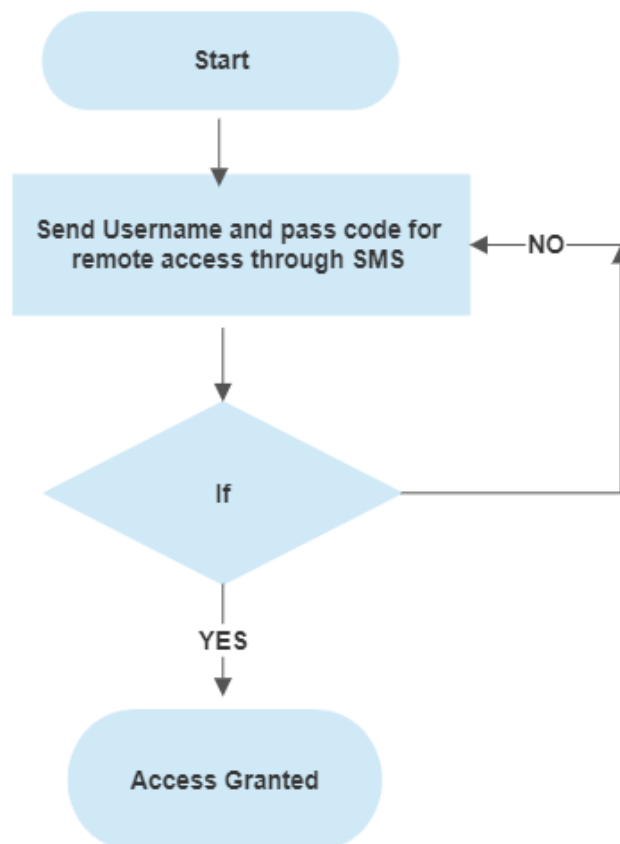


Fig 7.2: Algorithm of Remote Accessing using SMS

8.CONCLUSION

We proposed a viable and secured strategy of remotely versatile information manipulating/accessing. As in the event that the client barely tends to disregard his phone anywhere, this program makes a difference to him to discover his/her phone back either by GPS following or by changing the sound profile from noiseless to common. Common utilization of this computer program is that, it can moreover be utilized to exchange information remotely. The information can either be contact number, any record, etc. Its beginning with advantage is that we are able to work a few highlights in offline mode such as remotely commanding to share a few contact numbers and the client versatile will send it naturally as the computer program will work in foundation.

Other highlights such as call log sharing, message log sharing, record sharing and controlling settings at a few extinct is conceivable as it were by online mode. As able to make changes in framework settings, higher assurance is utilized through login qualifications. In spite of the fact that, sharing contact number too needs confirmation, we have allotted offline login as well..

9.FUTURE SCOPE

- A: If someone sends a message to the user's mobile phone to change the sound profile, it will do so automatically.
- B. One can also advance the authentication process by changing the login methods to OTP (One Time Password).
- C. Multiple verification numbers can be stored/entered in user mobile and server for user data security.
- D. The data transfer rate can be increased.
- E. User can also login from the website.
- F. To facilitate future planning is to add a location finder.
- G. In the future, the system can be improved to maintain a list of the last tracked locations and a route map. Offline access should be preferred and will be easy

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