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SMS ENCRYPTION ANDROID APPLICATION

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I. Formulation of the problem

It is a common knowledge that information is disseminated through various means in today's world of technology [1,2]. One of the most common means via mobile devices is by the use of SMS (short message service) - in delivering text messages. The secrecy of the information sent via text message is held in a high regard. Therefore, the need for SMS encryption to achieve this purpose in order to ensure only the sender and the receiver get the text message readable. The sender text message is encrypted and gets decrypt at the receiver's end, ensuring a third party finds it unreadable.

II. The purpose of the work

The purpose of this research is to develop the software SMS encryption Android Application for delivering secured text messages by a sender over to a receiver.

III. Software implementation

The application of SMS Encryption using AES (advanced encryption standard) block cipher for Android OS has been designed and implemented [1]. The application is running in the smartphone and does not require any additional encryption devices.

This application was tested on Android operating system, v4.1.2 (Jelly Bean), Cortex-A5 processor mobile phone running with a 1 GHz processor, with 4 GB internal Memory and 786 MB RAM. Features of the application include: encryption and decryption of the message by both the sender and the receiver. All messages in thread are displayed in encrypted format to both sender and receiver.

Using a conceptual diagram (use case diagram), we depict the actors and the functions of the application (see fig.1).
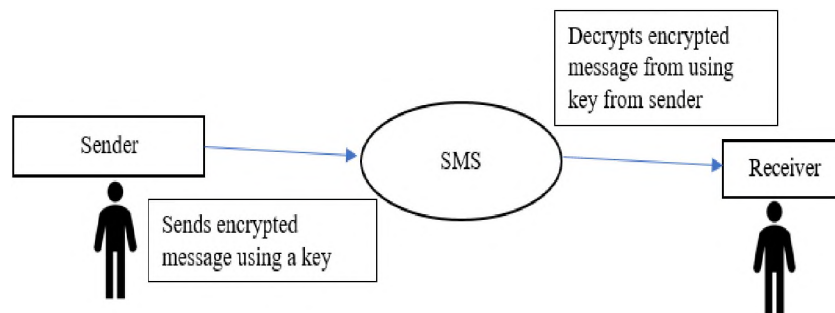

Figure 1 – Use case diagram of the developed web-based information system for education

Java programming language(Android platform) and Eclipse IDE have been used for the software implementation.

Conclusion

The requirements for speed and compactness were met. The program size is 50 kB and it can be installed into a smartphone working on Android platform. The user experiences no delays while using the program, which is a clear indication that the speed requirement is met. The user interface is simple and straight forward to use. In applications, where access control is vital, the developed application can be used to authenticate the sender of a message.

Reference

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