# ABSTRACT

Leonardo/ 55150166/ 2019/ Data Security Application with Android-Based "International Data Encryption Algorithm" Method / Yunus Fadhillah Soleman, S.Kom., M.Kom.

# The development of technology in this era of globalization make data easier to obtain. With the ease of sharing the data, the data that is owned becomes vulnerable and easily obtained or used by irresponsible parties. Many types of data that must be secured and the lack of ways to secure data are also causes of easy data to be misused.

# One way to secure data is by encrypting the data using a good password and supporting data encryption algorithms using passwords in the security. Many algorithms that support encryption by using a password are using the International Data Encryption Algorithm method. In addition, the IDEA algorithm will be implemented into the Java framework for Android applications.

# This research will be conducted by observing the data with a qualitative approach. Data analysis was carried out by descriptive method, describing the results of the experiment in measuring data in the form of tables that would interpret the results of these observations using MD5 Hash as a tool to verify the integrity of encrypted and decrypted data. In addition, there are also literature studies from books, journals, and websites that can be used as references on the IDEA algorithm, MD5 Hash, and others.

# The design of the application created will include the system architecture described by the UML Diagram to better illustrate the program created. Applications that will be generated are the application of encryption and decryption files on Android, as well as a discussion of the integrity and validity of data encryption using a table that will compare encrypted files using the IDEA method and the results of the MD5 Hash file.

## The encryption application that is produced is intended to be able to provide solutions regarding the data security that is the problem that exists. This application can help in securing important files on Android by using a password as a security device.

# Keywords: Data Security, International Data Encryption Algorithm, Java, Android, MD5 Hash