

ABSTRACT

Smartphone android has more advantage beside to communication. Time development makes mobile phones has various functions not as calling or messaging only, such as email, entertainment, games, etc as named smartphone. Due to its benefit, created variety of security system such as using pin, manuals, fingerprint, and sound recognition. In its development there are many unexpected people could access it, the user must be more focus on keeping their smartphone's security so that the important data inside couldn't be accessed by unimportant user.

The writer intent to develop unlock screen system by utilizing the accelerometer sensor that has been existed in smartphone, The way of working is by moving the smartphone. The writer analyzes some ways of moving smartphone by the users and got distinctive movement.

In this thesis, identifying process is done by Learning Vector Quantization (LVQ) method to get the characteristic of the movement. After the movement is being known, the input data would be compared to data that has been process by LVQ, by using Euclidean Distance as algorithm classification. The output system determine how far the distance is created between the input data with the data in database. The result of the design and implementation of this system produces the best accuracy on index 30 and at 135 threshold where the value of accuracy reached 82.22 %

Keyword : smartphone, unlock screen, LVQ, Euclidean Distance, accelerometer.