

## **ABSTRACT**

*Nowadays, more and more Indonesian people want to learn Korean language. This is due to increased fan of Korean dramas, Korean pop music lovers (K-pop) and the reality show. In addition, Indonesia also has a cooperative relationship with Korea in various areas, such as education, economy and employment. Korean language is one of a fairly difficult language to learn. Because we have to understand the overall meaning of the letters (Hangeul), writing procedures, procedures for the pronunciation of the language and grammar. Learning methods are limited as well be one factor in the difficulty of learning the Korean language.*

*In this final project has designed a system to recognize the pattern in words form using Artificial Neural Network Learning Vector Quantization to know the segmentation pattern and recognize the letters using Template Matching. In general, the process starting from image acquisition, preprocessing, syllable segmentation, feature extraction, feature identify to determine the patterns, patterns recognition, words segmentation and then letters recognition. The way to analyze system performance is to compare the truth of the output data in identifying the type of pattern with the input data.*

*From the test results obtained the best average accuracy for Syllable stage of 91.11%, while accuracy Word stage at 78.37%, and 88.26% for Letter stage. The accuracy obtained from 430 images which consists of 900 syllables and consists of 2428 letters with Block Overlapping size 10 x 10, 0% overlapping, 200 neuron hidden layer, 800 epoch.*

**Keywords:** *Digital Image Processing, Korean, Artificial Neural Network-Learning Vector Quantization, Hangeul*