

## ABSTRACTION

*Automatic note identification is an important system. The system can automatically match and compare the input data with saved database. Some people surely has a hobby in playing musical instruments, whether it's a percussion or harmonic instruments. Harmonica is played by blowing and sucking air trough brass reed. For example harmonica, there are many kind of harmonicas, it played depends on the chord of the song. Harmonica that used in this Final Project is the most common harmonica, c chord harmonica. In the calibration process of this instrument is not using digital application to identify the note. So the system was made.*

*In this Final Project was made an application to identify C chord harmonica notes while played. The making of this application using Matlab R2010a. The extraction method that used is Fast Fourier Transform method with 16 nodes. After got the features trough feature extraction then the data was classified with Generalized Matrix Learning Quantization method with 100 epoch and the distance using eculidean distance method.*

*The system can identify the harmonica notes while the instrument is played. In this final project, the system can only identify the C chord Harmonica notes. Maximum level of accuracy for this system is 73,5%. The making of this application using Matlab R2010a. This system has average computation time about 9,74 second.*

**Keyword :** *Tone identification, Chord C Harmonica, Frequency, Fast Fourier Transform, Generalized Matrix Learning Vector Quantization (GMLVQ).*