# Abstract

Learning hijaiyah letter is the initial stage for someone to be able to read the Quran. This process is usually done by a learner and their mentors that serve to introduce and teach lessons hijaiyah letters. Speech recognition is a system used to process voice signals into data that can be recognized by the computer. By utilizing this system, the expected role of a mentor in introducing and correct pronunciation of the letters can be replaced so hijaiyah learning to read letters hijaiyah do more independent. By utilizing this system, the role of a mentor in introducing and correct pronunciation of the Hijaiyah letters can be replaced so hijaiyah learning process can be performed more independent.

Hijaiyah letter recognition problems can be solved by using the Mel Frequency cepstrum Coefficients (MFCC) for extracting feature of voice signal and Hidden Markov Model (HMM) for building voice and performing voice classification. In general, the voice recognition system has two important processes, testing and training. Training is a process of building model from each voice. Testing is a process classification / labeling of a voice signal.

After testing the system with a several scenarios, the best accuracy obtained is 67.75% in recognizing 50 words. Accuracy is obtained from the testing with 16kHz sample rate, codebook 64 and 5 state in HMM.

**Keywords**: *MFCC, HMM, Speech Recognition, Hijaiyah*