ABSTRACT

Sound is a sound that can be heard, which has a certain wave. Sound is also a mechanical sealing or longitudinal wave that propagates through a medium in the form of a solid or liquid medium. In addition to the human voice, which has special characteristics, the devices around humans, if the device changes its location, will also emit sounds that have special characteristics. Because in the bathroom there are several devices that are often used by humans in everyday life such as water taps and closets. This system designed will work if the microphone hardware detects the sound it recognizes with the sound pitch value for the water faucet, namely 3305 with detected class 1, while for the water closet, namely 3463 with detected class 2 and displays the original wave image recorded by the microphone. This system reads the voice it recognizes with a simple method, namely the voice recognition method with pitch. After the sound pitch value is detected, the value will be sent from Matlab to Arduino in character form and display it on the LCD screen. The method used in building this system is the literature study method which consists of several stages, namely: 1) Problem identification 2) Research objectives 3) Data collection and processing 4) Design 5) Implementation 6) Analysis and Improvement 7) Conclusions and Suggestions . The hardware used consists of 1) Microphone 2) Personal Computer / Laptop.

Keywords*: Voice, Matlab, Arduino, Microphone and LCD (Liquid Crystal Display)*