DESIGNING AND TESTING
ARRHYTHMIA DISEASE DETECTOR
BASED ON ELECTRICITY SIGNAL INPUT ON HUMAN HEART

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ABSTRAK

Heart rate is an important indication in the health sector that is useful as an effective and fast evaluation material and serves to determine the health condition of a person's body. The method of measuring the number of pulses has been used by doctors to determine stress, relaxation, physical fitness level, and medical conditions. Monitoring tool for arrhythmia detection based on input of electrical signals to the heart using a real-time and continuous method, the function of the LCD is to display the number of heart rate (BPM) and the Arduino IDE serial plotter function as a display of electrical graph waves. This tool uses an electrode sensor that is placed on the patient's body and from the electrodes connected to the AD8232 ADC as a translator of electrical activity in the heart, from the ADC AD8232 its processed with the Arduino Nano microcontroller to process the data in such a way that it can be used as information. Complex waves P, QRS, and T are analyzed to be used as information to take the R to R peak waves from the data to be used as the Buber of BPM to find out how many heartbeats in 1 minute. Based on the test results, it can be concluded the when testing the instrument, the patient's condition is required to be calm and not finished doing heavy work which can cause increased cardiac activity and when testing the tool it is also expected that the patient does not move much because this activity can affect the results of the sensor readings so that the data produced is imprecise and accurate.

Keywords: Arrhythmia Diseases, AD8232, ECG Electrode