

**ON LINE ELECTROCARDIOGRAM (ECG) SIGNAL MONITORING USING VISUAL
BASIC**



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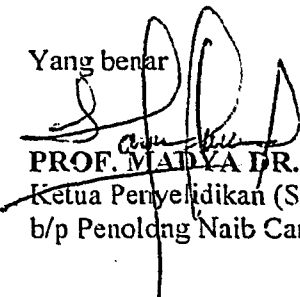
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Sekian, untuk tindakan pihak tuan selanjutnya.

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**LAPORAN AKHIR PENYELIDIKAN "ON LINE ELECTROCARDIOGRAM
(ECG) SIGNAL MONITORING USING VISUAL BASIC"**

Merujuk kepada perkara di atas, bersama-sama ini disertakan 3 (tiga) naskah Laporan Akhir Penyelidikan bertajuk "On Line Electrocardiogram (ECG) Signal Monitoring Using Visual Basic".

Sekian, terima kasih.

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ABSTRACT

The human heart produces tiny amount of electrical current during each cardiac cycle. This electrical current is spread throughout the human body and is detectable on the human skin. Electrodes placed on certain parts of the body are able to detect these electrical activities allowing the cardiac voltages to be recorded. The graphic representation of the heart activity is known as an electrocardiogram (ECG) signal. This paper presents the development of a three-lead hardware system for Electrocardiogram (ECG) signal extraction. Einthoven III lead method is used to acquire the signal from the human skin where three electrodes are placed on the specified location of the human body. The hardware comprises of amplifiers and filters to amplify and remove any unwanted signals respectively before being displayed on an oscilloscope. This project utilizes the 40Hz cut-off frequency for the low-pass filter used. The heart rate can be determined through monitoring of the R-R peak of the ECG signal. Comparison on the viability of the ECG signal obtained from the hardware developed and the heart rate were done through the use of the KENZ ECG machine for ECG extraction and also the sphygmomanometer available in the faculty Bio-Medical Lab respectively.

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