

ABSTRAK

Achmad Aripin, 2022, Rancang Bangun Alat Pengukur Dan Monitoring Detak Jantung Berbasis Microcontroller Dan Android, Skripsi, Program Studi Teknik Elektro, Universitas PGRI Adi Buana Surabaya, Dosen Pembimbing Ke 1 Akbar Sujiwa , S.Si., M.Si. dan Dosen Pembimbing Ke 2 Ir. Winarno Fadjar B, M.Eng.

Kesehatan jantung merupakan sesuatu yang wajib dipantau bagi setiap manusia karena jantung adalah organ yang penting dan sangat rawan terjadi kerusakan maupun gangguan, apalagi terhadap lansia maupun pasien penyakit dalam baik itu Stroke, Aritmia, Jantung lemah maupun penyakit lainnya. Biasanya alat pendeteksi detak jantung hanya di miliki oleh orang yang berprofesi sebagai petugas Kesehatan dan instansi Kesehatan, Dan jika seseorang yang sakit jantung seperti stroke dan Aritmia ingin mengecek Kesehatan jantungnya, ia harus datang ke Dokter atau Instansi Kesehatan. Maka dari itu dibuatlah alat pengukur dan monitoring detak jantung secara periodik. Alat pengukur dan monitoring detak jantung ini berbasis microcontroller dan android dengan system monitoring berbasis database periodik. Dengan menggunakan sensor MAX 30100 yang memiliki rata – rata kesalahan kurang lebih 3% dengan nilai selisih kurang lebih 2,5 bpm dengan alat ukur standart.

Kata Kunci : Detak Jantung, Jantung, microcontroller, Database.

ABSTRAK

Achmad Aripin, 2022, Design of a Heart Rate Measuring and Monitoring Device Based on a Microcontroller and Android, Thesis, Electrical Engineering Study Program, PGRI Adi Buana University Surabaya, 1st Advisory Lecturer Akbar Sujiwa , S.Si., M.Sc. and 2nd Advisory Lecturer Ir. Winarno Fadjar B, M.Eng.

Heart health is something that must be monitored for every human being because the heart is an important organ and is very prone to damage or disturbance, especially for the elderly and patients with internal diseases, whether it is stroke, arrhythmia, weak heart or other diseases. Usually a heart rate detector is only owned by people who work as health workers and health agencies, and if someone who has a heart disease such as stroke and arrhythmia wants to check his heart health, he must come to a doctor or health agency. Therefore, a measuring device and periodic heart rate monitoring were made. This heart rate measuring and monitoring device is based on a microcontroller and android with a periodic database-based monitoring system. By using the MAX 30100 sensor which has an average error of approximately 3% with a difference value of approximately 2.5 bpm with standard measuring instruments.

Keywords: Heartbeat, Heart, microcontroller, Database.