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IOT BASED REMOTE HEALTH MONITORING

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SYNOPSIS

The increasing prevalence of geriatric diseases worldwide increases a requirement to build an IoT based health monitoring system which helps the elderly people to take care of their health from their home itself. This project focuses on health monitoring system by using low cost wireless sensor (Node MCU) and Internet of Things technology as communication platform. Furthermore, this project proposes the prototype of a basic health parameter monitoring system which gives the information about the patient to their relatives and the health care provider by checking ThingView app installed in their smart phone.

The major healthcare parameters monitored in this project are Temperature, Blood Pressure, Pulse rate and ECG. For accurate measurements of body temperature and blood pressure, a digital thermometer and sphygmomanometer are used respectively. The output data is processed with Arduino and updated to ThingSpeak (opensource IoT platform) via a Wi-Fi module (Node MCU). Heart Rate is measured using a heart rate module (KY-039) which works on the principle of photo plethysmography and its output is interfaced with Wi-Fi module to transfer the data to ThingSpeak. Electro Cardio graph is obtained by ECG module (AD8232) which measures the electrical activity of human body. When electrodes are placed on right arm, left arm and left leg it is processed and updated to ThingSpeak via the Wi-Fi module. Pedometer is designed and implemented to check the patient’s daily activities for their better health. The

observed data can be viewed by patient relatives and the health care provider using ThingView app which is interlinked with ThingSpeak.