ABSTRACT

Heart disease is the most dangerous disease and becomes a disease with the highest number of deaths in the world today. This is due to symptoms. What appears in heart disease cannot be seen with the bare eye. Heart disease It can be detected using a device commonly called an electrocardiograph (ECG). Electrocardiograph is a tool commonly used for health monitoring heart in the hospital. During this pandemic, access to monitoring Going directly to the hospital can be said to be limited. Therefore, a prototype is needed. monitoring of the health of the heart so that it can be done remotely.

On this occasion, the author will create a tool to do so. IoT and android-based hearts health monitoring. This tool is designed to facilitate the monitoring process so that it can be done remotely. This tool designed using NodeMCU microcontrollers and AD8232 sensors or common ones It is called an ECG sensor. NodeMCU will then send data on the Antares platform where the output on the application will display the results of monitoring the user's heart health. The output results of the data will be presented through the android application Simple but effective to use.

The result of the tool created also needs its level of accuracy. Level of accuracy from the tools made later will be compared with the tools in the hospital Like an oximeter. This is done so that the author can perform parameter calculations QoS (Quality of Service) of the designed tool.

The delay results on NodeMCU-Antares are in the range of 28 ms as the smallest value and 188 ms as the largest value with an average delay of 165 ms, then for throughput it is in the range of 1120 bps as the smallest value and 6197 bps as the largest value with an average throughput of 1393 bps. Then for Antares-application on android, the delay result is in the range of 10 ms as the smallest value and 63 ms as the largest value with an average delay of 40 ms. Then for throughput it is in the range of 3582 bps as the smallest value and 7733 bps as the largest value with an average throughput of 4794 bps.

Keywords : internet of things, heart disease, QoS, AD8232, application android