ABSTRACT

Infusion fluid is one of the needs of hospitals to help patients who suffer from electrolyte deficiency in their body. The accuracy of infusion fluid is essential to keep the patient's condition in good condition. Some things to note are the speed drops infusion fluid, the type of infusion fluid, and the availability of infusion fluid in the infusion flask patients. Therefore, regular medical personnel should always make a visit to each room to ensure that the infusion fluid provided to the patient is still functioning properly. However, not least the case of infusion fluid is not well controlled by medical personnel.

A system is required to monitor and control infusion fluid to improve the supervision of medical personnel against the provision of infusion fluid to patients. The systems created on this end task will be connected with several sensors mounted on the infusion fluid. Sensors used include LED, photodiode, Servo and shear of faders. The Data from the sensors will be delivered to the Firebase Real-time Database and will then be displayed in the Android app. So that the medical personnel will be more able to monitor and control each patient even at a long distance.

The system that has been made has an average accuracy rate of 97.89%. This indicates that the controlling system and monitoring of intravenous fluids has been running well as expected.

Keywords: Sensor, Android, Controlling, Monitoring, infusion