

## **ABSTRACT**

*In the world of health donating blood is one of the Government Programs that benefit a person, not only for donor recipients but also for donors. Each year, the Indonesian Red Cross (PMI) is targeting a blood bag according to national blood requirements of up to 4.5 million blood bags, adjusted to World Health Organization (WHO) standards of 2% of the population. Therefore, blood donor activities are always routinely held. PMI Bandung does not know the system of Sistole Diastole based on Radio Frequency Identification (RFID) in blood donor management activities, search process, data processing and report making is still manual that is with Microsoft Office Excel, causing Administration employees having difficulty in presenting identity. reports, donor data, blood pressure tests and blood bag stock. In the blood donor information notes also still use blood donor cards manually which will be vulnerable lost and also for the measurement of blood still takes a long time by using Sfigmomanometer.*

*To overcome the above problems, then made a tool design that serves to accelerate the search for the identity of blood donor profile with RFID Tag Reader and the design is a blood pressure measuring tool with heart rate using Sistole Diastole.*

*From the results of tests conducted on the system that has been made. It can be said that this tool can work well, with blood pressure sensor measurements that have an average diastolic error of 2,1 mmHg, for cystole of 3,8 mmHg, and an average error in the heart rate of 2.5 PRbpm.*

**Keywords : Mikrokontroler, Arduino uno, RFID , Sistole Diastole**