

## **ABSTRACT**

*Digital blood pressure on finger is the development of digital blood pressure technology on the arm and wrist. This digital blood pressure was previously used in hospital as a blood pressure monitor for patients. In this study will be developed digital blood pressure on finger to monitor the patient's blood pressure condition on a regular basis and facilitate the use of digital blood pressure when the state of mobility.*

*This digital blood pressure uses the oscillometry method to measure blood pressure on one finger between the index finger or middle finger on the left hand, and then the finger is given air pressure through a cuff. The cuff is pumped using a micropump and will expand giving pressure to the finger. The air pressure on the cuff that changes as the pressure rate on the finger blood flow will be read by the 2SMPP-03 sensor. MAP (Mean Arterial Pressure) will be detected by microcontroller and then calculated 50% of systolic pressure value from MAP and 70% of diastolic pressure value from MAP respectively. The result will be displayed on the LCD in form of systole / diastole (mmHg).*

*In this Final Project already implemented a digital blood pressure on finger. The purpose is to prove whether the results of blood pressure measurements on finger by using the oscillometry method can be used as parameters in the measurement of blood pressure such as blood pressure measurements on the arm and wrist. From the research obtained accuracy value of 98.88% in systole and 98.25% in diastole.*

*Keywords: Finger, Oscillometry, 2MPP-03 Sensor, Systole, Diastole.*