

## **ABSTRACT**

*The growth and development of a child's body is so important because it is the starting point for a child's growth. Posyandu is a form of Community Based Health Effort (UKBM) which is managed with local people. Posyandu activities to support public health include maternal and child health, the services provided in these activities are weighing, but measuring height and weight is still not effective and conventional. Because in the measurement some posyandu still use dacin scales or analog scales to measure weight and a ruler to measure height, so the measurement becomes less than optimal.*

*Therefore, to overcome this problem, the Integrated Height and Weight Measurement Tool for the mPosyandu Application was designed. Ultrasonic Sensor HC-SR04 is used for height measurement and Load Cell Sensor as weight measurement which will be run using the ESP 32 microcontroller. The tool will send data into the mPosyandu application via Bluetooth communication technology which will be connected to the user's smartphone. With that data will be stored automatically in the mPosyandu application.*

*The test results from measuring children's height and weight showed that this tool was able to have an accuracy of 99.61% for measuring height and 99.56% of body weight. With this percentage, it can be obtained that the measurement tool can be used and functions properly, as evidenced by the level of accuracy or the level of error presentation.*

**Keywords:** *UKBM, mPosyandu, Bluetooth, Load Cell*