

## **ABSTRACT**

Measure the width, height and slope distance of an object such as a building would require a tool called Measuring and fitting water. Of course, these two devices are required to be taken for workers in the field of construction such as building contractors or the like. but it brings the tool certainly not flexible because of its shape and size are big and heavy and pensettingan tool that takes a long time. From the background of this problem the author tries to make it easier for workers in the field of the building by making the gauges are easy to carry with a microcontroller and sensor-based. Based on the study of literature, one of the sensors that can be used to determine the orientation of the motion with the rest on the wheels or discs that rotate rapidly on the axis is a gyroscope.

This tool will be designed to measure the height of the building by using arduino uno R3 as a data processor, sensor mpu 6050 as a lock angle, as penginput distance keypad manually, laser as a determinant of the object and lcd as the output result of the measurement.

In this final project, a tool designed to have an accuracy rate of between 80% - 97%. The sensitivity of the sensor effect on the output produced. The influence that produced a difference in the output on Lcd

Keywords: microcontroller, sensors, gyroscope, Measurement Tools