ABSTRACT

Almost everyone craves an ideal body weight, because this is a good thing in terms of physical appearance and in terms of health. Height and weight are one of the physical quantities that are often measured in various purposes that require data on height and weight in adolescents and adults. The application of height gauges and weight counting equipment is needed for users who want to know the ideal weight for their users.

In this final task designed a tool of height and weight, so that in this study design a tool and implement hardware and soft lifting on a meter of height and weight with sound output that works together so that it can calculate the ideal body of the user. This tool uses Arduino uno as its brain, ultrasonik sensors to measure height, and Load cell sensors as weight measuring tools. Data from both sensors is processed by Arduino to get a body mass index (BMI). The value of height, weight, and ideal body weight will be displayed on the LCD. Furthermore, sound information regarding the condition of weight that is thin, normal, fat will be released by the speakers.

The measurement results of the subjects that have been done show an average success value on ultrasonik sensor experiments of 96,24% with an average error of 3,75%, and an average success value on sensor load cell experiments of 95,89% with an error average of 4,27%.

Keywords: *digital measuring instrument, Arduino uno, body weight, height, body mass index* (BMI)