

ABSTRACT

The application of robots has been widely used for various industries in the work, in increasing the efficiency of work and increasing various activities that cannot be done by human power. The robot, which is designed based on following Red, Green, and Blue (RGB) color objects, uses a webcam camera, to generate the activity the user wants. Robots are created to capture and process images on available color objects.

The processing is done by minicomputers in Raspberry Pi as the main control that uses fuzzy logic algorithms to drive the motor in a mobile robot. The extraction value of each color is required to compare the extracted values obtained due to different light condition factors. It is necessary to do several experiments to find the percentage of success and failure. The wheeled robot will recognize 12 colors, like red color, yellow, green, blue, brown, maroon, orange, purple, gray, magenta, light blue, and white. Each color produces a different output according to rule based.

Keywords: *Fuzzy Logic, RGB Color Model, Raspberry Pi, Camera, Wheeled robot.*

