

ABSTRACT

Indonesian people generally have their own busyness so that sometimes forget the obligation to cultivate plants in their homes because plant sprinklers are done manually. With the busyness of man so that there is no time to water the plants and do not know how much water is needed on the plant. With the development of technology, it is now possible to create an automatic watering technology. The purpose of this research is the design of an automatic plant watering tool on planter bag plants and applying them to the chili plant bhut jolokia. The final task was done by designing, creating and implementing system components that include Arduino as controller, relay driver to disabled and turn off the Water pump, LCD (Liquid Cristal Display) to display the soil moisture value. In this study, the design of automatic watering tools using soil moisture sensors using 3x3 pots for vertical garden. Based on research that has been done that the design of automatic plant making has an accuracy rate of 92.74% and can streamline time. The author hopes this product can be developed and help farmers to overcome problems in irrigation of their crops and can also be used in city parks and people's homes.

Keywords: *Microcontroler, Planter Bag, Soil Moisture Sensor, Vertical Garden.*