

## ABSTRACT

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*Rice plants require a water irrigation system process to maintain temperature and humidity in the soil. The watering is done automatically to maintain the quality of the soil, human labor is still needed to monitor the equipment used at any time. This irrigation system requires automatic irrigation so that soil moisture is maintained, so this final project aims to solve the problem and will design tools that can be used by farmers easily to irrigate rice fields. The humidity sensor detects that the soil is dry and needs water, then the water pump will turn on with a humidity condition of less than 50%, if the sensor detects more than 50% then the water pump will turn off. This method contains soil moisture information which is very important for farmers to plant using temperature and soil moisture sensors in order to determine the quality of the rice soil that will be needed with the Arduino Uno as a programmed microcontroller. If the temperature decreases, then the soil needs sufficient water. All information will be displayed through the website. The website has become a means for monitoring plants and is also very common among the public in using the website. Any problems that will arise in the quality of rice will appear on the website that has been created.*

*Keywords: Arduino Uno, Website, Irrigation, Temperature, Humidity*