

Report On Mini Project

AUTOMATIC IRRIGATION SYSTEM

Submitted by

Group no-06

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INSTITUTE OF TECHNOLOGY
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CERTIFICATE

This is to certify that the mini project work entitled **AUTOMATIC IRRIGATION SYSTEM**, Presented by Mr. MD. Sahil Haque (Roll NO: 22024121) and Mr. Arkeet Roy (Roll No: 22024106) and Ms. Bandaru Sravanthi (Roll No: 22024109) and Mr. Katarapu Vinay Kumar (Roll No: 22024148), students of B.Tech IV Semester, Civil Engineering Department, Guru Ghasidas Vishwavidyalaya, has been completed successfully and satisfactorily.

This project report is submitted in partial fulfillment of the requirements for the award of the degree of Bachelor of Technology in Civil Engineering, SOS, Engineering & Technology, Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.).

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ABSTRACT

Watering the plant is the most important cultural practice and one of the labour intensive tasks in daily operation, also knowing when and how much to water is two important aspects of watering process. Now, the automatic irrigation system provides a perfect solution to these challenges of when and how much to water. These automatic irrigation systems ease the burden of getting an optimal amount of water to plants when they need it. To ease the gardening and irrigation works, the automatic irrigation system is developed to water to the plants automatically using a microcontroller (Arduino Uno). This automatic irrigation system uses a microcontroller (Arduino Uno), which is programmed such that it gives the interrupt signals to the motor via the relay. Soil sensor is connected to the Arduino board, which senses the moisture content present in the soil. Whenever there is a change in the moisture content of the soil, the sensor senses the change, giving a signal to the microcontroller so that the pump (motor) can be activated. Hence, water wastage is reduced Also to utilize full potential of automatic irrigation system and further reduce water wastage we have designed and developed an optimal watering system where there will be negligible overlapping of watering patterns and no presence of blind spots (the area left out without getting watered) for a particular given rectangular area. In our project, we used pressure-varying techniques to remove the overlappings and blind spots that were faced in normal conventional sprinkler watering systems.