VISVESVARAYA TECHNOLOGICAL UNIVERSITY,

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Microcontroller and Embedded System (21CS43)

Submitted as subject assignment Report on
Soil moisture detection Project

BY

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This is to certify that, assignment work for the subject " Microcontroller and Embedded System (21CS43)" has been successfully completed and submitted report by Abhishek R G- 4AL21CS006 during the academic year 2022–2023. It is certified that all corrections/suggestions indicated presentation session have been incorporated in the report and scored 9 Marks out of 10 and deposited in the departmental library.

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SOIL MOISTURE SENSOR TO DETECT THE HUMIDITY OF WATER

1.Introduction:

we manage water usage in agriculture, landscaping, and other outdoor applications. These sensors play a crucial role in ensuring that plants receive the right amount of water at the right time, leading to improved water efficiency, healthier plants, and reduced costs.

These sensors work by measuring the moisture content in the soil, which directly relates to the available water for plant roots. They can be inserted into the ground at various depths, depending on the type of plants and the root zone. Soil moisture data collected by these sensors is then transmitted to a central control system, which can be a dedicated irrigation controller or part of a larger smart agriculture platform.

Smart irrigation systems utilize this real-time soil moisture information to make intelligent decisions about when and how much to water. By monitoring soil moisture levels, these systems can prevent overwatering, which can lead to water waste, root diseases, and nutrient leaching. Conversely, they also prevent underwatering, which can cause stress to reduce yields.

2.Block Diagram:

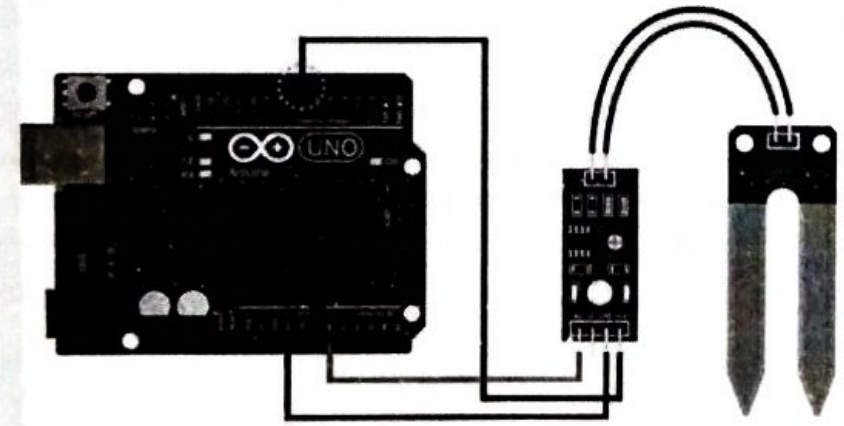

Fig.no:1.0 block diagram of soil moister detection.