VISVESVARAYA TECHNOLOGICAL UNIVERSITY

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Mini Project Report on

SMART IRRIGATION SYSTEM

Submitted in partial fulfillment of the requirements for the **First Semester of the Bachelor of Engineering Degree**, towards the completion of the **Mini Project** under the **Innovation & Design Thinking Laboratory**, Department of Basic Sciences.

by

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CERTIFICATE

This is to certify that the File Structures mini project entitled "SMART IRRIGATION SYSTEM" has been successfully carried out by S KRITHI(H19), S SANJANA(H20) and SWAYAMBH S(H21) bonafide students of **CMR Institute of Technology.**

The project is submitted in partial fulfillment of the requirements for the First Semester of the Bachelor of Engineering Degree, towards the completion of the Mini Project under the **Innovation & Design Thinking Laboratory, Department of Basic Sciences.**

It is further certified that all corrections and suggestions indicated during the Internal Assessment have been duly incorporated in the project report submitted to the departmental library. This File Structures mini project report has been reviewed and approved as it satisfies the academic requirements prescribed for the said degree.

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ACKNOWLEDGEMENT

I sincerely express my gratitude to **Dr. Sanjay Jain**, Principal, CMR Institute of Technology, Bangalore, for providing a supportive academic environment.

I extend my thanks to **Dr. Raveesha K H**, **HoD, Dept. of Physics, CMRIT** for his valuable guidance and support.

I am especially grateful to my internal guide, Dr. Shyamsunder Hegde, Departement of Physics, for her/his constant encouragement and guidance throughout this project.

I also thank all the faculty members, non-teaching staff, and others who contributed directly or indirectly to the successful completion of this work.

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ABSTRACT

Smart irrigation is a modern agricultural technique that uses technology to manage water efficiently. The main objective of this project is to supply water to crops only when required by monitoring soil moisture levels. It aims to reduce water wastage, save energy, and improve crop productivity through automation. Sensors collect real-time data and send it to a controller, which automatically controls the irrigation process. This system solves major problems such as over-irrigation, under-irrigation, uneven water distribution, and excessive dependence on manual labor. It is especially useful in areas facing water scarcity. By ensuring optimal use of water resources, smart irrigation supports sustainable farming, reduces operational costs, and helps farmers achieve better yields with minimal effort.

RELEVANT TERMS: Smart Irrigation System, Soil Moisture Sensor, Water Conservation, Automation, IOT(Internet of things).