



# **SMART HYDRATION SENSORY SYSTEM**



## **PROJECT PHASE II REPORT**

*Submitted by*

<b>AKASH PANDIAN P</b>	<b>(181101007)</b>
<b>LIVIN KUMAR M</b>	<b>(181101026)</b>
<b>PRAVEEN V</b>	<b>(181101040)</b>
<b>SRINIVASAN V</b>	<b>(181101051)</b>

*in partial fulfillment for the award of the degree of*

## **BACHELOR OF ENGINEERING IN MECHATRONICS**

**Department of Mechatronics**

**MAHENDRA ENGINEERING COLLEGE**  
**(Autonomous)**

**Mahendhirapuri, Mallasamudram, Namakkal DT -637 503**

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**Mahendhirapuri, Mallasamudram, Namakkal DT -637 503**

## **Department of Mechatronics**

### **BONAFIDE CERTIFICATE**

Certified that this project report “**SMART HYDRATION SENSORY SYSTEM**” is bonafide work of “**AKASH PANDIAN P (181101007), LIVIN KUMAR M (181101026), PRAVEEN V (181101040), SRINIVASAN V (181101051)**” who carried out the project work under my supervision.

#### **SIGNATURE**

**Dr.T.JESUDAS, M.E., Ph.D**

**HEAD OF THE DEPARTMENT**

Department of Mechatronics,  
Mahendra Engineering College,  
Mallasamudram, Namakkal – 637 503.

#### **SIGNATURE**

**Mr.R. BASKAR, M.E,**

**SUPERVISOR**

Assistant Professor,  
Department of Mechatronics,  
Mahendra Engineering College,  
Mallasamudram, Namakkal – 637 503.

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**Mahendhirapuri, Mallasamudram, Namakkal DT -637 503**

## **Department of Mechatronics**

### **CERTIFICATE OF PROJECT APPROVAL**

This is to certify that the project report phase – II titled **SMART HYDRATION SENSORY SYSTEM** is the approved record of work done by **AKASH PANDIAN P (181101007), LIVIN KUMAR M (181101026), PRAVEEN V (181101040), SRINIVASAN V (181101051)** in partial fulfillment for the award of the Degree of Mechatronics during the academic year 2021- 2022.

**SUPERVISOR**

**HEAD OF THE DEPARTMENT**

**Date:**

Submitted for the end semester viva voce examination held on \_\_\_\_\_

**INTERNAL EXAMINER**

**EXTERNAL EXAMINER**

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## **ABSTRACT**

Agriculture is the source of living of majority Indians and it also has a countless influence on economy of the country. The objective of our project is to reduce this manual involvement by the farmer by using an automated irrigation system which purpose is to enhance water use for agricultural crops. This paper presents the design and implementation of wireless sensor network that can monitor the air temperature, Humidity, light intensity in a crop field and from remote places also. The system consists of nodes, which are equipped with small size application specific sensors and radio frequency modules. The inspiration for this project came from the countries where economy is based on agriculture and the climatic conditions prime to shortage of rains & scarcity of water. The farmers working in the farm lands are only dependent on the rains and bore wells for irrigation of the land. Even if the farm land has a water-pump, manual involvement by farmers is required to turn the pump on/off when needed. The project is intended to cultivate an automatic irrigation system which controls the pump motor ON/OFF on sensing the moisture content of the soil. In the field of agriculture, use of appropriate technique of irrigation is essential. The advantage of using this technique is to reduce human intervention and still certify proper irrigation. A software application was developed by predetermining the threshold values of soil moisture, temperature and water level that was programmed into an arm controller. This paper presents the controlling and monitoring the level of water and detecting the soil moisture content.

## **TABLE OF CONTENTS**

<b>CHAPTER NO.</b>	<b>TITLE</b>	<b>PAGE NO.</b>
	<b>ABSTRACT</b>	<b>v</b>
	<b>LIST OF TABLES</b>	<b>vii</b>
	<b>LIST OF FIGURES</b>	<b>viii</b>
<b>1</b>	<b>INTRODUCTION</b>	<b>1</b>
	1.1 WIRELESS SENSOR NETWORK	1
	1.1.1 Application	3
	1.1.2 Area monitoring	4
	1.1.3 Characteristics	5
<b>2</b>	<b>LITERATURE REVIEW</b>	<b>7</b>
<b>3</b>	<b>EXISTING SYSTEM</b>	<b>12</b>
<b>4</b>	<b>PROPOSED SYSTEM</b>	<b>13</b>
	4.1 ADVANTAGES	15
	4.2 BLOCK DIAGRAM	16
	4.3 ARCHITECTURE DIAGRAM	17
<b>5</b>	<b>HARDWARE REQUIREMENTS</b>	<b>20</b>
	5.1 ARDUINO UNO R3	20
	5.2 BASIC DESIGN AND OPERATION	30
	5.3 ARDUINO	37
	5.3.1 POWER SUPPLY	39
	5.3.2 IC VOLTAGE REGULATORS	42
	5.3.3 SOIL MOISTURE SENSORS	44
	5.4 SOFTWARE DESCRIPTION	51
<b>6</b>	<b>CONCLUSION</b>	<b>60</b>
	<b>REFERENCES</b>	<b>61</b>

## **LIST OF TABLES**

<b>TABLE NO.</b>	<b>TITLE</b>	<b>PAGE NO.</b>
5.1	MICRO CONTROLLER	22
5.2	PIN DESCRIPTION	35

## LIST OF FIGURES

FIGURE NO.	TITLE	PAGE NO.
1.1	WIRELESS SENSOR	3
4.1	BLOCK DIAGRAM	16
4.2	ARCHITECTURE DIAGRAM	17
5.1	ARDUINO UNO R3	20
5.2	ATmega328	24
5.3	SDA and SCL	26
5.4	16 x 2 LCD	33
5.5	LCD PIN DETAILS	33
5.6	ARDUINO UNO SMD R3	38
5.7	FLOWCHART POWER SUPPLY	40
5.8	IC VOLTAGE REGULATOR	43
5.9	MOISTURE SENSOR	45
5.10	RESISTANCE TEMPERATURE STRUCTURE	50