VISVESVARAYA TECHNOLOGICAL UNIVERSITY,

BELAGAVI – 590 018

An ASSIGNMENT REPORT ON

Arduino-Based Water Dispenser

Submitted as subject assignment work,

for the subject

Microcontroller And Embedded System (21CS43)

By

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY

MOODBIDRI-574225, KARNATAKA

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CERTIFICATE

This is to certify that **Mohammed Abrar** bearing USN **4AL21CS071** has successfully demonstrated the working of **Arduino-Based Water Dispenser** as the assignment work for the subject **"Microcontroller and Embedded System (21CS43)"** and submitted a report during the academic year 2022–23 even Semester. It is certified that all corrections/suggestions indicated in the presentation session have been incorporated into the report & scored 09 Marks out of 10 and deposited in the departmental library.

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This is to certify that **Naorem Shitaljeet Singh** bearing USN **4AL21CS082** has successfully demonstrated the working of **Arduino-Based Water Dispenser** as the assignment work for the subject **"Microcontroller and Embedded System (21CS43)"** and submitted a report during the academic year 2022–23 even Semester. It is certified that all corrections/suggestions indicated in the presentation session have been incorporated into the report & scored 09 Marks out of 10 and deposited in the departmental library.

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This is to certify that **Preethesh Clive D Souza** bearing USN **4AL21CS102** has successfully demonstrated the working of **Arduino-Based Water Dispenser** as the assignment work for the subject **"Microcontroller and Embedded System (21CS43)"** and submitted a report during the academic year 2022–23 even Semester. It is certified that all corrections/suggestions indicated in the presentation session have been incorporated into the report & scored 09 Marks out of 10 and deposited in the departmental library.

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ARDUINO-BASED WATER DISPENSER REPORT

1. Introduction:

The Arduino-based water dispenser is a project that aims to automate the process of dispensing water using an Arduino microcontroller. This report outlines the design, components used, working principle, and potential applications of the water dispenser.

An Arduino-based water dispenser is a project that utilizes an Arduino microcontroller board to create an automated system for dispensing water. This project involves connecting various components, such as water pumps, sensors, and valves, to the Arduino board to control the flow of water. The Arduino board processes user input or sensor data and triggers the water pump to dispense a desired amount of water through a nozzle or valve.

The primary goal of an Arduino-based water dispenser is to provide a convenient and automated way to dispense water. This can be particularly useful in scenarios where manual dispensing might be inconvenient or where accurate measurement of water volume is desired.

2.Design and Components:

The water dispenser consists of the following main components:

2.1 Arduino Microcontroller:

An Arduino board serves as the brain of the system. It receives inputs, processes them, and controls the output components accordingly. Arduino consists of both a physical programmable circuit board (often referred to as a microcontroller) and a piece of software, or IDE (Integrated Development Environment) that runs on your computer, used to write and upload computer code to the physical board.

Arduino Uno is a microcontroller board based on the ATmega328P (datasheet). It has 14 digital input/output pins (of which 6 can be used as PWM outputs), 6 analog inputs, a 16 MHz ceramic resonator (CSTCE16M0V53-R0), a USB connection, a power jack, an ICSP header and a reset button.