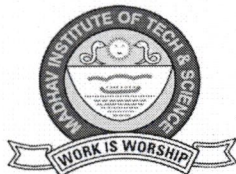


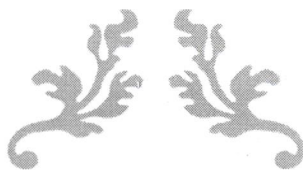
MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE GWALIOR

Deemed to be University

NAAC Accredited with A+ + Grade



Department of Electrical Engineering



WORKSHOP

ARDUINO BASICS



AUGUST, 2024

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE GWALIOR

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Department of Electrical Engineering

Subject: Report on Workshop on “Arduino Basics”

Arduino Basics - An Overview

The Arduino Basics Workshop was held on 24 August 2024. This workshop aimed to introduce participants to the fundamentals of Arduino, an open-source electronics platform that allows users to create interactive projects. In the workshop session, Twenty-five (25) students were enrolled.

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DEPARTMENT OF ELECTRICAL ENGINEERING

WORKSHOP ON ARDUINO BASICS

A step by step
Introduction to the
basics of Arduino
using Tinkercad

Saturday 24 August 2024
SAVE YOUR SPOT!

Scan this QR code to participate

e-certificates will be
given to participants

Faculty Coordinators
Prof. Kuldeep Swarnkar Dr. Vikram

Handwritten signatures and date:
24/08/2024

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Objective

1. Familiarize participants with Arduino hardware and software.
2. Teach basic programming concepts related to Arduino.

Salient Points - Session Details

1. Introduction to Arduino

- **Overview of Arduino:** Participants learned about the history, components, and applications of Arduino boards.
- **Hardware Components:** Discussion on various Arduino models, sensors, and actuators.

2. Setting Up the Environment

- **Installation of Arduino IDE:** Step-by-step instructions on downloading and installing the Arduino Integrated Development Environment (IDE).
- **Connecting the Arduino:** Participants learned how to connect the Arduino board to their computers.

3. Basic Programming Concepts

- **Programming Syntax:** Introduction to the Arduino programming language, including basic syntax, functions, and variables.
- **Writing Your First Sketch:** Participants wrote their first program, a simple "Blink" example to flash an LED.

4. Hands-On Projects

- **Project 1: LED Control:** Participants created a circuit to control the brightness of an LED using PWM (Pulse Width Modulation).
- **Project 2: Sensor Integration:** Introduction to using sensors, where participants interfaced a temperature sensor with the Arduino and displayed readings on the serial monitor.

5. Troubleshooting and Debugging

- **Common Issues:** Discussion on common problems faced during programming along with troubleshooting tips.

6. Q&A Session

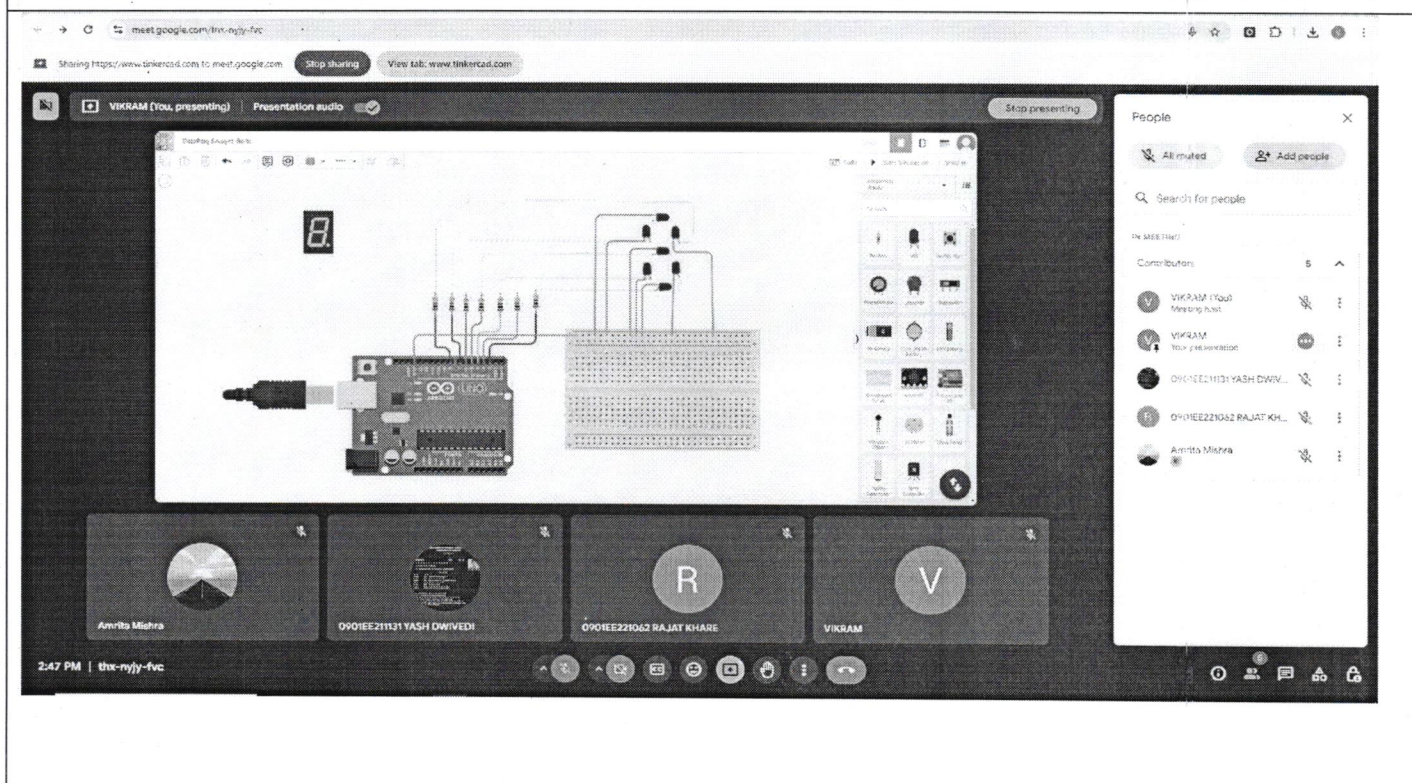
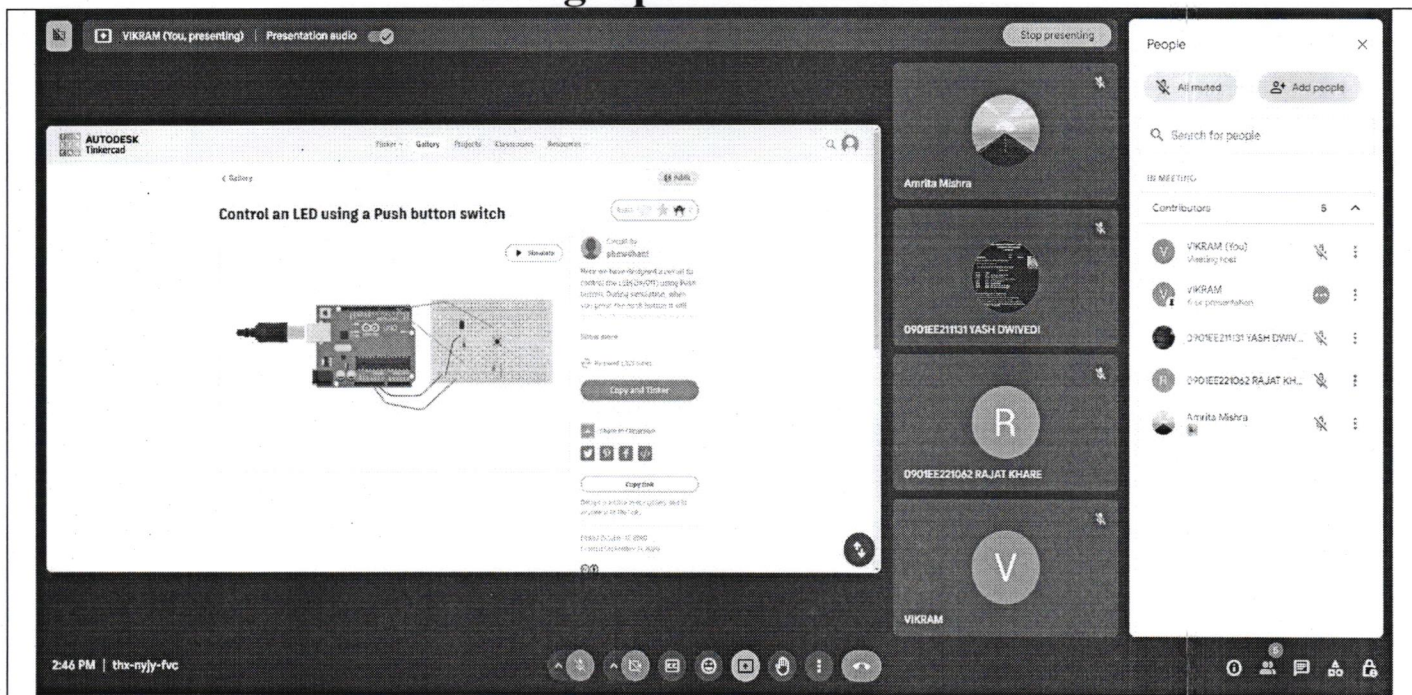
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- Participants engaged in a question-and-answer session to clarify doubts and share experiences.

Photographs/Screenshots



Vikas
27/02/2024

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Link of Photos/Recordings

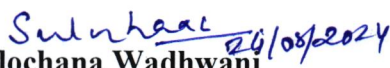


Outcomes

In summary, Participants developed foundational skills in Arduino programming and electronics. They learned to write simple code, use the Arduino IDE, and connect various components effectively. Many participants reported increased confidence in their ability to work with electronics, encouraging them to pursue independent projects.


Dr. Vikram
Coordinator, EE


Prof. Kuldeep Swarnkar
Coordinator, EE


Dr. Sulochana Wadhvani
Prof. & Head, EE