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RESOURCE PERSON

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VIMAL JYOTHI ENGINEERING COLLEGE
Affiliated to APJ Abdul Kalam Technological University &
Kannur University | Approved by AICTE
Under the Archdiocese of Thalassery

"SYSTEM DESIGNING USING ARDUINO"

**Department of Computer Science
Artificial Intelligence &
Data Science (ADS, 2023-27)**

S3 ADS A

SEPTEMBER 23-25 & 28-29, 2024

VIMAL JYOTHI ENGG COLLEGE CHEMPERI

Lesson Plan

DAY 1: 23-09-2024

- Course Introduction
- Hardware Overview
- Download and Install the Arduino IDE
- Arduino IDE and Sketch Overview
- Understanding Arduino
- Fading- digital Read () and Serial Port Communication
- Reading Analog Pins and Converting the Input Voltage
- Fade an LED with Pulse Width Modulation using analog Write ()

DAY 2: 24-09-2024

- Analog I/O & Serial Communications
- Analog Input Calibration Smoothing Data
- Blinking of LEDs Fading of LED
- Circling of LEDs (FOR loop)
- Blinking of EVEN and ODD states of LED, LED Dice , Traffic light system
- Controlling of LEDs from computer
- Reading analog and digital inputs

Lesson Plan

DAY 3: 25-09-2024

- Controlling LED using push button,Joystick
- Controlling a DC motor, PWM
- Changing the brightness of LEDs using potentiometers
- Wiring of LCD screen with Arduino 6. Displaying a message , Screen navigation in LCD screen
- Turn ON a LED by entering the password
- Scrolling of text- Displaying room temperature using LM 35 temperature sensor

DAY 4: 28-09-2024

- Simple automatic countdown and count up Increment or decrement a number by using push button
- Controlling Motor with Joystick Indexing of motor
- Direction control of Motor, Motor based Projects Synchronizing 2 Motors

Lesson Plan

DAY 5: 29-09-2024

- Projects using Relay DHT 11 (Temperature and Humidity), Sensor HC SR04 Ultrasonic sensor
- IR Module
- Soil Moisture, Sensor Motor, Driver, Seven segment LED4x4 Keypad, Joystick
- Different Projects using these modules Example : Automatic gate- Automatic irrigation system- Thermometer- Home automation Etc..

Time Schedule :

- 23-25 September : Offline
- 28-29 September : Online