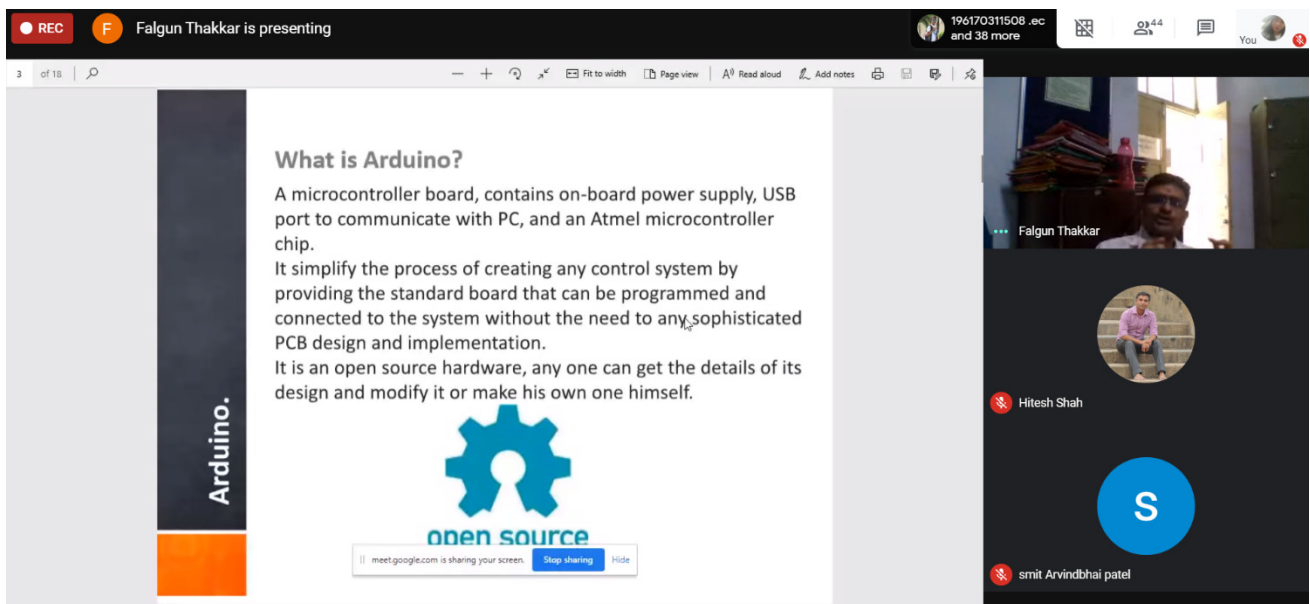


**REPORT  
OF  
THREE DAYS ONLINE CERTIFICATION COURSE  
ON  
“INTRODUCTION TO ARDUINO  
AND ITS APPLICATIONS”  
(25<sup>TH</sup> TO 27<sup>TH</sup> MAY, 2020)**

**DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING  
G H PATEL COLLEGE OF ENGINEERING AND TECHNOLOGY**

# INTRODUCTION

Department of Electronics and Communication Engineering, G H Patel College of Engineering and Technology in association with withWoman in engineering affinity group of IEEE GCET SB andPrarambh- The GCET Project Clubis organizing a **Three days online** course on**Introduction toArduino and its Applications** During 25<sup>th</sup> to 27<sup>th</sup> May, 2020. This course was aimed at providing the participants with basic exposure and demonstration of Arduino Development Board and making them aware of its applications and implementation.



The screenshot shows a Google Meet interface. At the top, a red 'REC' button and a yellow 'F' icon indicate recording. The text 'Falgun Thakkar is presenting' is visible. The meeting ID '196170311508 .ec and 38 more' is shown in the top right. The main content is a presentation slide titled 'What is Arduino?'. The slide text reads: 'A microcontroller board, contains on-board power supply, USB port to communicate with PC, and an Atmel microcontroller chip. It simplify the process of creating any control system by providing the standard board that can be programmed and connected to the system without the need to any\_sophisticated PCB design and implementation. It is an open source hardware, any one can get the details of its design and modify it or make his own one himself.' Below the text is a blue gear icon with 'open source' written underneath. A vertical banner on the left side of the slide says 'Arduino.'. At the bottom of the slide, a small notification says 'meet.google.com is sharing your screen.' with 'Stop sharing' and 'Hide' buttons. On the right side of the screen, there is a video gallery with three participants: Falgun Thakkar (video on), Hitesh Shah (video off), and smit Arvindbhai patel (video off). A blue circle with a white 'S' is also visible in the gallery.

## ABOUT THE LECTURERS



**Dr. Falgun Thakkar** obtained **Ph.D.** from **National Institute of Technology Allahabad** in February 2018. He graduated from **Birla Vishvakarma Mahavidyalaya (BVM)** in year 2004 and completed his **Masters of Engineering in Communication** from **GCET, S P University V V Nagar** in year 2010. Dr. Falgun has **published more than 25 research articles** in various International and

National Journals and Conferences. He has served as reviewer of many international journals and conferences. His area of interests includes Antenna design, HF transmission line, Microwave Engineering, Wavelet based image and signal processing, Compress Sensing and optimization techniques like PSO and GA. He has guided more than 5 M.E. Students in their dissertation as well as more than 10 projects of B.E. Students.



**Dr. Deven Trivedi** has obtained his **Ph.D in Electronics & communication engineering** from **C.U. Shah University, Wadhwan** in June 2017. He has completed **Masters in Electronics & Communication** in **G.H Patel College of Engineering. & Technology, Vallabh Vidyanagar** in 2011. Dr. Deven has published **more than 15 research papers** in various International and National Journals

and Conferences. His main areas of interest are Biomedical Signal Processing, Satellite Communication & Image Processing.

## ABOUT THE WORKSHOP

The course was divided into **three sessions** from **25<sup>th</sup> may to 27<sup>th</sup> may' 2020**. The session was conducted by **DrFalgun Thakkar and DrDeven Trivedi** from the Electronics and Communication Engineering Department of G H Patel College of Engineering & Technology. The workshop was open for 11<sup>th</sup>, 12<sup>th</sup>, diploma engineering and First year students of degree engineering. Finally, Students ranging from school to college took part in the workshop.

**DAY 1:** In the first session basics about Arduino was explained. **Micro-Controller, Arduino UNO, Sensors and Arduino Coding** were some of the topics that were covered in the first session.

The image shows a Google Meet interface during a presentation. The main content is a slide titled "Digital or Analog?". The slide text is as follows:

**Digital or Analog?**

All physical quantities are analog.  
Analog means that the quantity can take any value between its minimum value and maximum value.  
Digital means that the quantity can take specific levels of values with specific offset between each other.

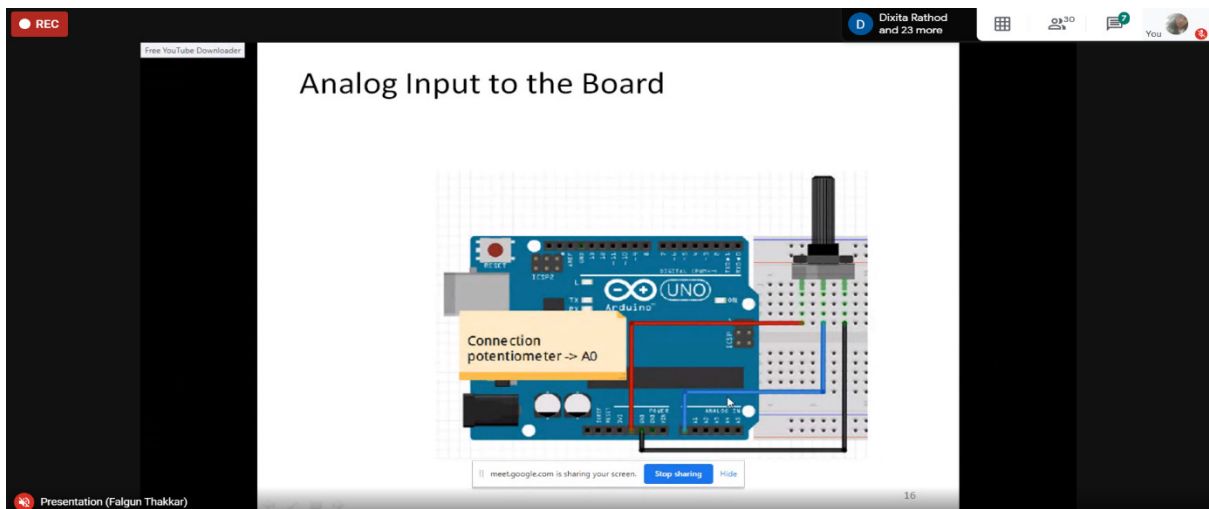
Ex: 1- Digital:  
English alpha consists of 26 letter, there is no letter between A and B.  
- Square waves are Digital.

Ex.: 2- Analog:  
Temperature, can take any value[-1,12.8,25.002,... etc.].  
- Sine waves are analog.

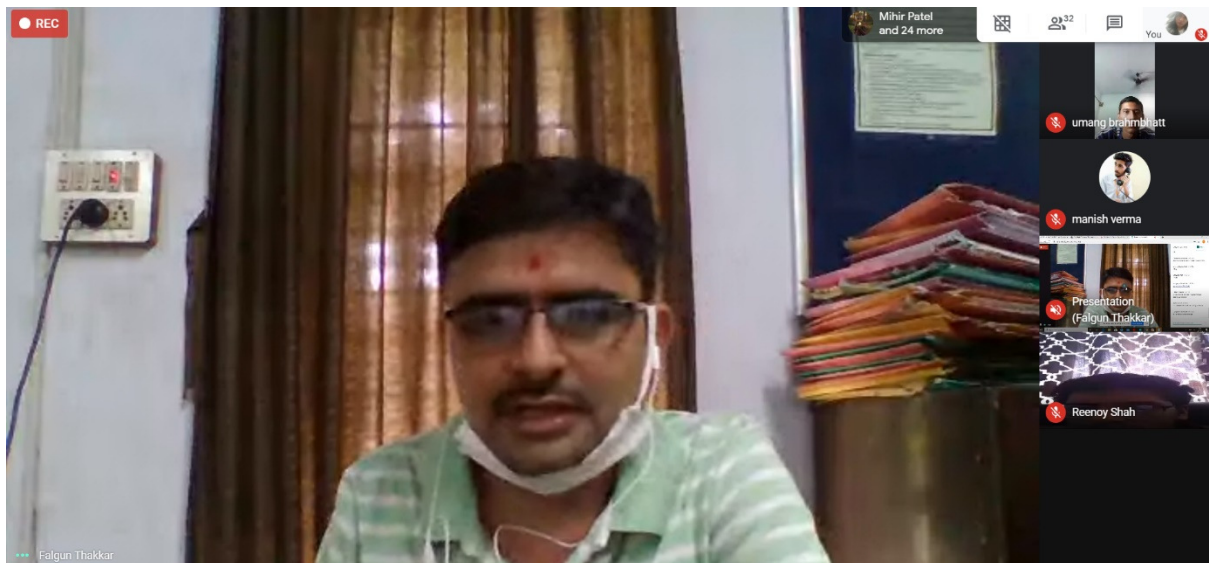
At the bottom of the slide, there is a small notification: "meet.google.com is sharing your screen" with "Stop sharing" and "Hide" buttons.

On the right side of the screen, there is a video call interface. It shows a large video of the presenter, Falgun Thakkar, and three smaller circular thumbnails for other participants: Hitesh Shah, Reenoy Shah, and another person. The top of the interface shows "REC", "F Falgun Thakkar is presenting", and "Pruthvi Patel and 38 more".

**DAY 2: Software installation, Blink LED on Board, Analog I/P, reading Analog Voltage, LDR, Servomotor Control, these were some of the topics covered in session 2.**



**DAY 3: session 3 was completely based on applications of Arduino, practical demonstration and the doubt clearing session.**



The workshop was really successful and students requested the professors to conduct many such workshops.