Don Bosco Institute of Technology, Mumbai -400070

Department of Computer Engineering

Report on: Workshop on **'Coding Arduino'**

Title: Workshop on 'Coding Arduino'

Date: 24th March, 2023

Time: 3:00 PM to 5:00 PM

Venue: Computer Centre

Participants Present: 32

Resource Person: Ms. Sasha Rebello

Organizing Department / Committee / Authority: ACM Student Chapter

Faculty Coordinator: Ms. Sejal Chopra, Mr. Imran Mirza

Objective:

- To learn the foundational principles that make the Arduino work, such as circuits and electricity.
- To become familiarized with the physical components of the Arduino, like resistors and sensors.
- To acquire knowledge on the basics of the Arduino programming language and how to control inputs and outputs.
- To gain understanding on how Arduino can be integrated in work and projects.

Outcome:

- To understand how to program Arduino using code written in Arduino IDE.
- To gain knowledge about the hardware implementation of Arduino along with hands-on experience of working with Arduino.
- To learn how to use sensors and various other components using a breadboard and to build innovative projects with Arduino.

Report:

The workshop was organized by Ms. Sejal Chopra. ACM's hands-on ARDUINO workshop was held on the 24th of March, 2023 from 03:00 pm to 05:00 pm in the Computer Centre. The primary purpose of this workshop was to provide students with the fundamental knowledge of the Arduino processor along with hands-on practice. Arduino is an open-source development board used by developers and hobbyists for creating projects and prototypes. It has a vast collection of supporting libraries developed by open-source users across the world. Learning this platform will help students in rapid prototype development of their future projects. Based on these facts the content of the workshop was designed. The workshop was held exclusively for the second-year students of the computer engineering department.

Ms. Sasha Rebello conducted the workshop. Throughout the workshop she made sure all the students got a clear understanding of what she was teaching. She commenced the workshop by giving a general introduction on Arduino, she informed the students that Arduino consists of both a physical programmable circuit board or micro controller and a software, IDE (Integrated Development Environment) that runs on the computer and that it is used to write and upload computer code to the physical board. She first explained the hardware aspects of the Arduino, followed by a crash course on programming. She started by explaining the components of Arduino uno and its key parts with the help of a detailed power-point presentation. Followed by that, she discussed its various functions. She explained setup n loop functions. Further On, she spoke about its applications. Later, she explained the interfacing of an ultrasonic sensor with Arduino.

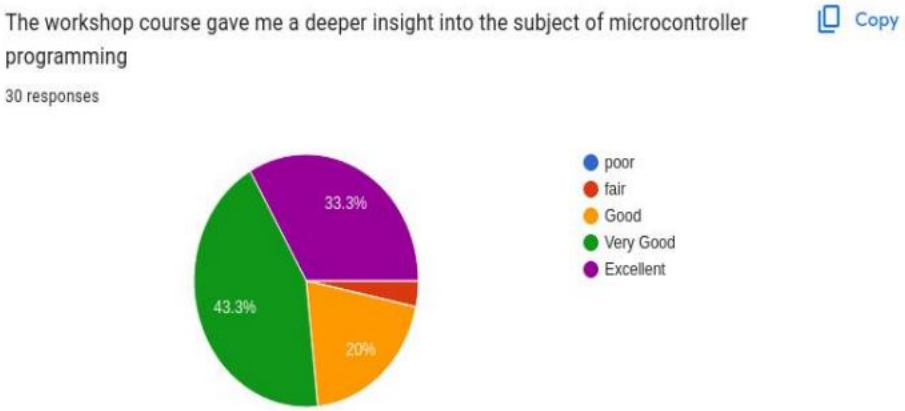
Advancing, she began with the hand-on workshop. Students were divided into groups of six and each group was provided with a volunteer from the third year to help them out when needed and solve their queries and doubts. Ms. Sasha gave a detailed explanation and demonstrated the basic working of a blinking LED, the Hello World of microcontrollers and told students to experiment themselves. After which she displayed how to interface an ultrasonic sensor with Arduino and view the distance on the serial monitor by uploading code to the Arduino. Students were told to experiment this as well.

Towards the end of the workshop there was a Q&A session, wherein all the doubts and queries put forth by the students were clarified. Lastly the participants were requested to fill the feedback form which was circulated on the WhatsApp group to ensure that the session was helpful marking the end of the hands-on workshop. A total of 32 SE students attended the session.

Snapshot of the event:

Poster:

Feedback Analysis:



The course was delivered in such a way that it created enthusiasm

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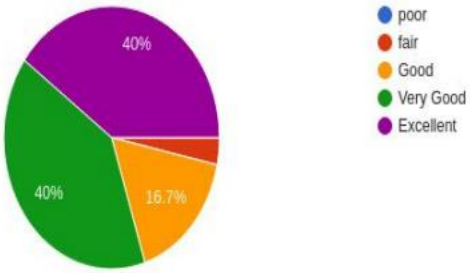
30 responses



The workshop course content was clearly appending a hands-on with each theory concepts

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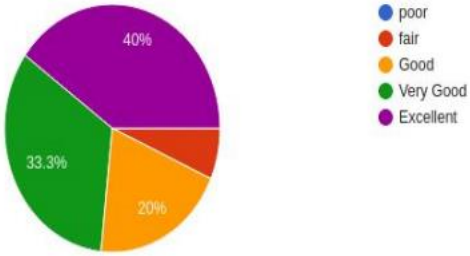

The workshop enthused me to self learn and read beyond the syllabus

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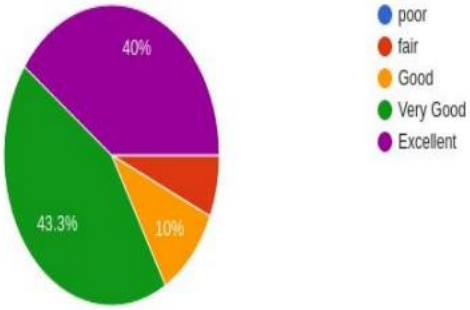

Report Prepared By:

Ms. Sejal Chopra

(Faculty Coordinator)

Report Approved By:

Dr. Shaikh Phiroj

(HOD – COMPS Dept.)