



IEEE HIT SB

ADVANCING TECHNOLOGY FOR HUMANITY

HALDIA INSTITUTE OF TECHNOLOGY

ICARE COMPLEX, HATIBERIA, HALDIA
DIST - PURBA MEDINIPUR, WEST BENGAL
PIN - 721657



REPORT

WORKSHOP: CIRCUITRIX AND ROBOTICS

Date: 15th April, 2024.

Organized by IEEE HIT SB, the **CIRCUITRIX workshop** kicked off with great enthusiasm, bringing together students eager to get hands-on with electronics. The event opened with a warm welcome and an overview of the activities planned over the three days, setting the tone for an engaging learning experience.

Day 1 was all about bringing music to life—literally. The focus of the session was on creating Music Controlled DJ Lights, a fascinating project that combined creativity with circuitry. The day started with an introduction to the concept, followed by in-depth explanations of how each component works, especially the roles of transistors and condenser microphones in responding to sound. With step-by-step guidance, participants successfully built their own working circuits. The day wrapped up with lively discussions and a sense of **accomplishment as their lights flickered to the beat of the music.**

Day 2 took the excitement up a notch with the construction of Dark Activated LED Lights. Participants explored how LDR photoresistors can detect changes in light and trigger responses in a circuit. The hands-on activity was both educational and fun, with LEDs lighting up automatically in dark conditions. The session ended with a friendly quiz, which added a competitive twist to the learning process and kept everyone energized for the final day.

Day 3 marked the conclusion of the workshop and was held in the **Electrical Engineering Department**. The morning session, led by IEEE HIT SB members, focused on designing a **Battery Level Indicator** using **resistors, diodes, and LEDs**. Each participant received a kit and was guided throughout the assembly process by dedicated volunteers.



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After a short break, the second half of the day shifted focus to building a **Fire Alarm Circuit** using an **infrared sensor**. Once again, participants were able to successfully complete their circuits with support from the organizing team. After the hands-on work, refreshments were served, giving everyone a chance to unwind and reflect on what they'd accomplished.

The workshop concluded with a felicitation ceremony for the speakers and distribution of certificates to all participants, marking the end of three productive and inspiring days of learning, building, and discovery.



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