The Institution of Engineering and Technology
On Campus-CET

REPORT:PCB WORKSHOP

Organized by: IET On campus CET
Date: 25th,27th,28th of January 2025
Venue: EE207
Topic: Printed Circuit Board (PCB) Design and Fabrication

Speakers: Josin George, Arun Thomas

Introduction

- A 3 day workshop on **PCB (Printed Circuit Board) Workshop** was conducted on 25/01/25,27/01/25,28/01/25 at CET as part of **IET on campus CET** to provide participants with practical exposure to PCB design and fabrication. The workshop aimed to bridge the gap between theoretical learning and real-world electronics prototyping. The resource persons were Josin George and Arun Thomas.

Objectives

- The key objectives of the workshop were:
- To introduce the fundamentals of PCB design and fabrication.
- To familiarize participants with industry-standard PCB design software such as **KiCAD.**
- To provide hands-on experience in circuit layout, etching, drilling, and soldering.
- To enhance participants' skills in troubleshooting and assembling PCB circuits.

Sessions and Activities

Session 1: Introduction to PCB Design and hands-on PCB Design using KiCAD

- Overview of PCB types, structure, and applications in electronics.
- Explanation of PCB layers, components, and routing techniques.
- Demonstration of schematic creation and layout design using KiCAD.

- Practical exercise on trace routing, component placement, and design rule checking (DRC).

Session 2: PCB Fabrication Process

- Explanation of various PCB manufacturing techniques (etching, milling, and printing).
- Hands-on fabrication: transferring PCB layout onto a copper board, etching $FeCl_3$ and drilling component holes.

Session 3: Soldering and Assembly

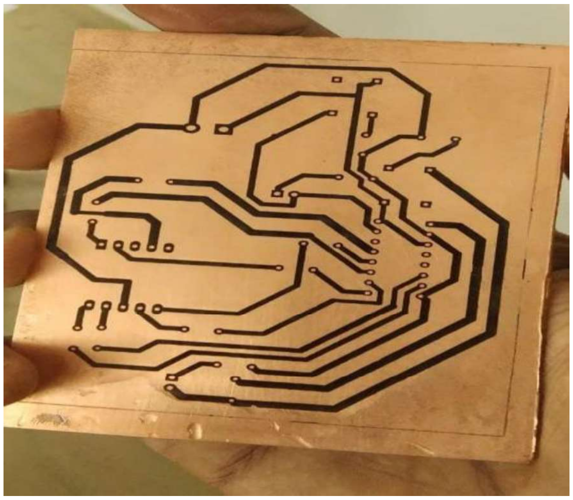
- Training on **Through-Hole** soldering techniques.
- Participants soldered components onto their fabricated PCB and tested functionality.

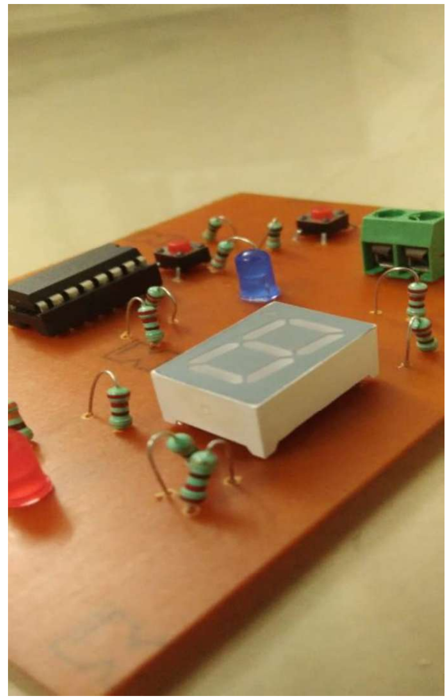
Outcome and Feedback

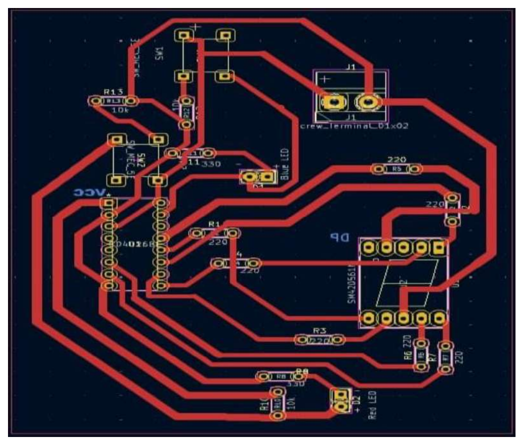
- Successful PCB Prototypes: Participants designed and fabricated their own working PCBs.
- Increased Interest: Many attendees expressed enthusiasm for further learning in electronics and PCB prototyping.

Conclusion

The PCB Workshop provided valuable hands-on experience and technical knowledge to participants. The practical approach helped attendees gain confidence in PCB design and fabrication. Future workshops may include advanced PCB manufacturing techniques, multilayer PCB design, and automation in PCB production.






VCC
DP
J1
R13
10k
R1
R3
220
330
Blue LED
Red LED