

# WELCOME TO OUR PROJECT PRESENTATION

**Non-contact AC Line Checker**

**Course Title: Physics**

**Course Code: PHY– 103**

**Section: 231 (D1)**



# Green University

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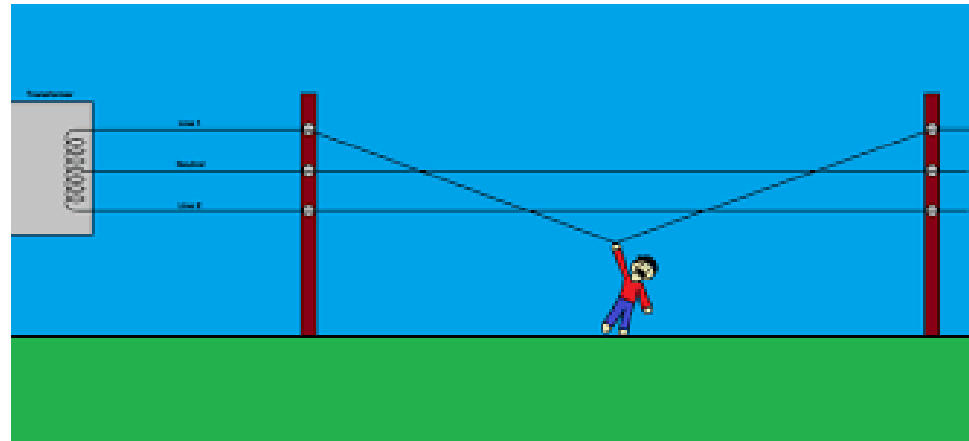
# Overview:

- **Introduction**
- **Real World applications**
- **Apparatus**
- **Making Process**
- **Working Principle**
- **Project Image**
- **Sustainability**
- **Environmental Effect**
- **Discussion**

# **INTRODUCTION**

- 1.Importance of Non-Contact AC Line Checkers**
- 2.Safety in Electrical Work**
- 3.Operational Mechanism Overview**
- 4.Diverse Types Available**
- 5.Safe Handling and Usage Standards**

## Real-World Applications



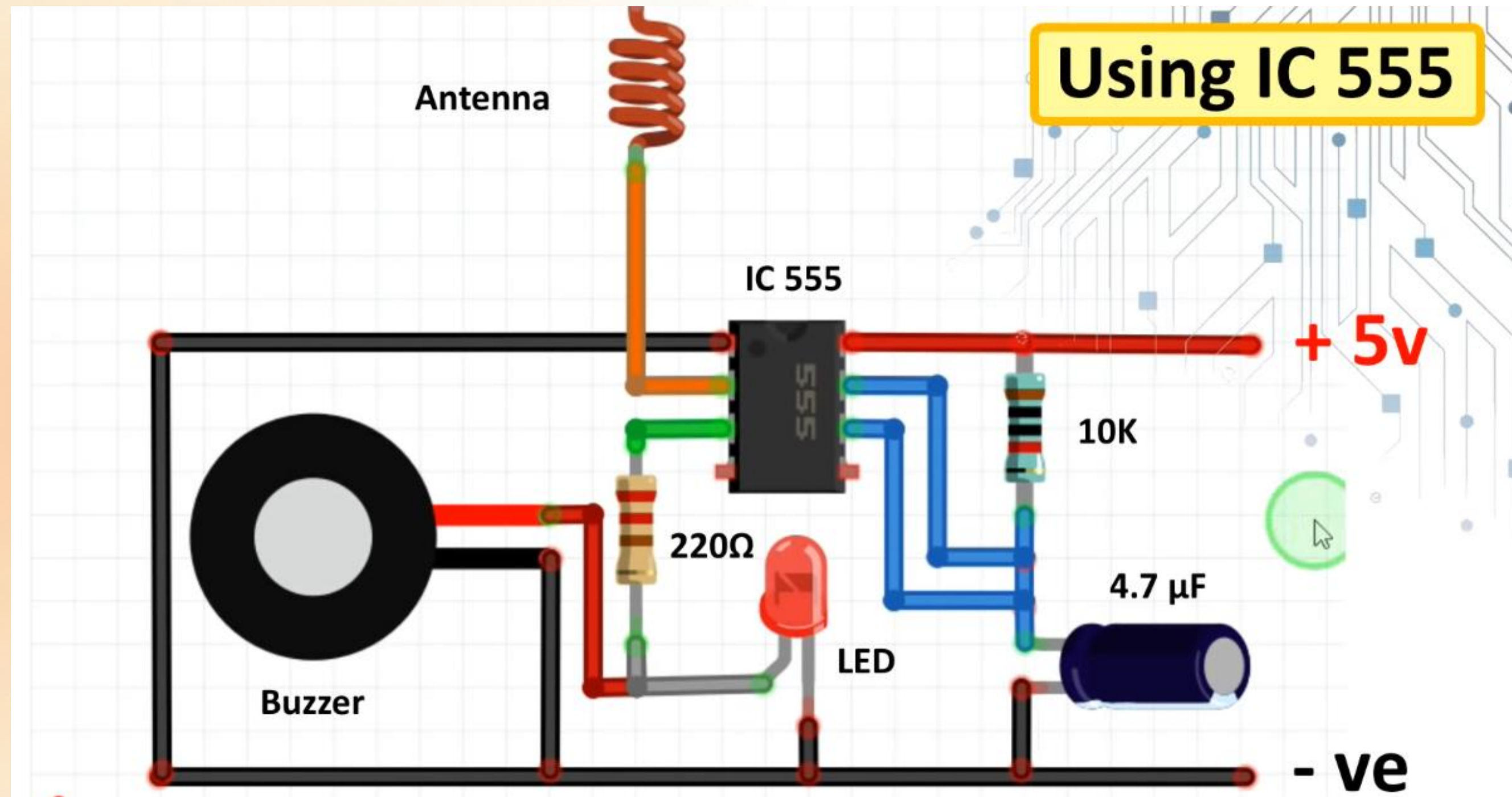
# Apparatus

1. 1 x 555 Timer IC
2. 4.7  $\mu$ f Capacitor
3. 1 x 10k $\Omega$  Resistor
4. 1 x 220 $\Omega$  Resistor
5. LED
6. Buzzer
7. Copper Wires
8. 9V Battery
9. Battery Clipper





# Making Process



# Working Principle:

- Sensing the AC field
- Signal Conversion
- Signal Processing & Analysis
- Output Indication
- Power source



# Project Image



## UNDERSTANDING HOW THEY WORK

- **Principle:** Operation based on detecting electromagnetic fields generated by live AC voltage sources.
- **Sensor Technology:** Utilizes specialized sensors to detect these fields without physical contact.

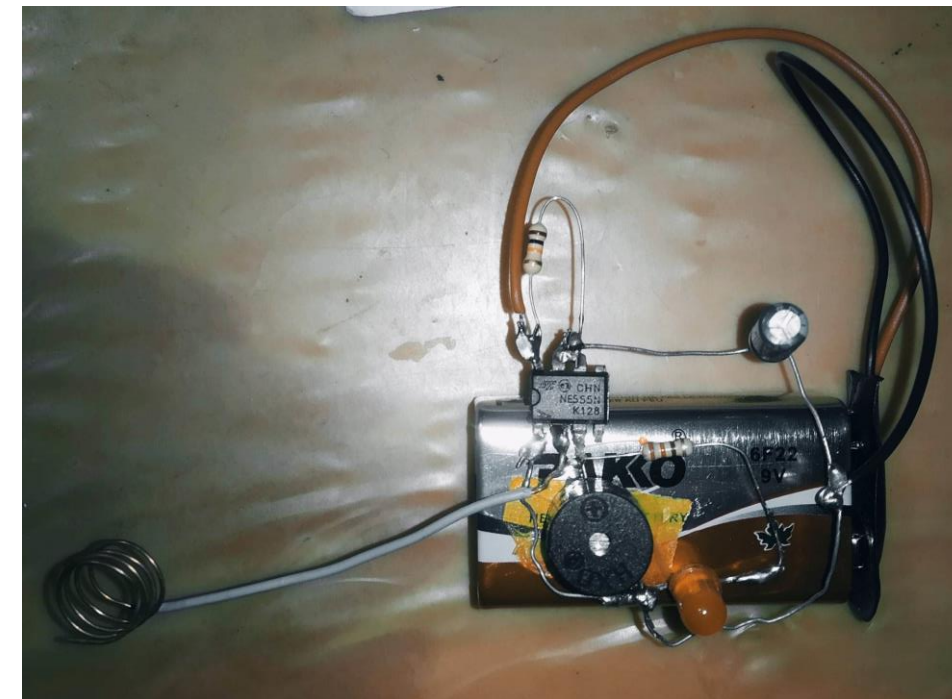
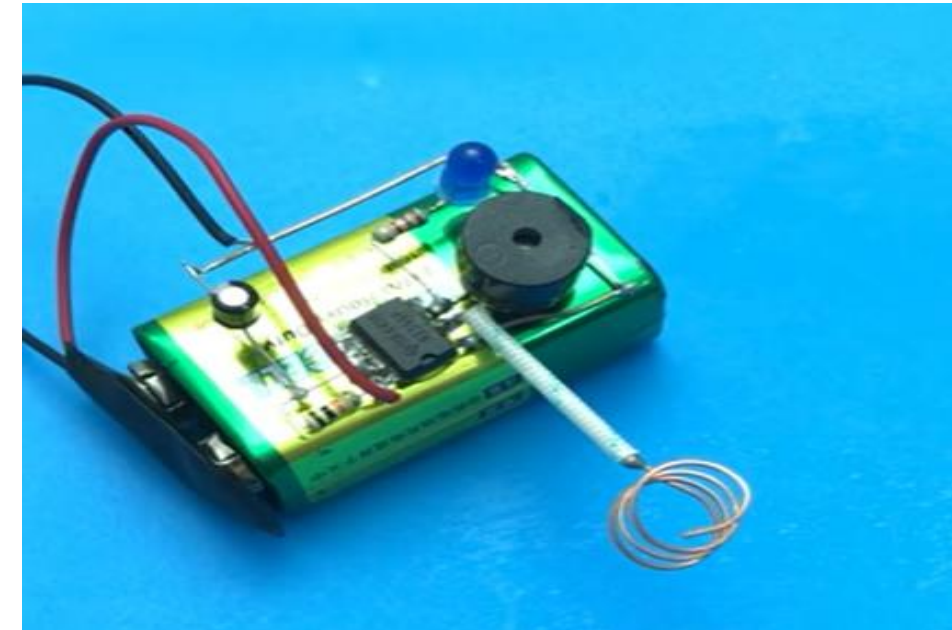
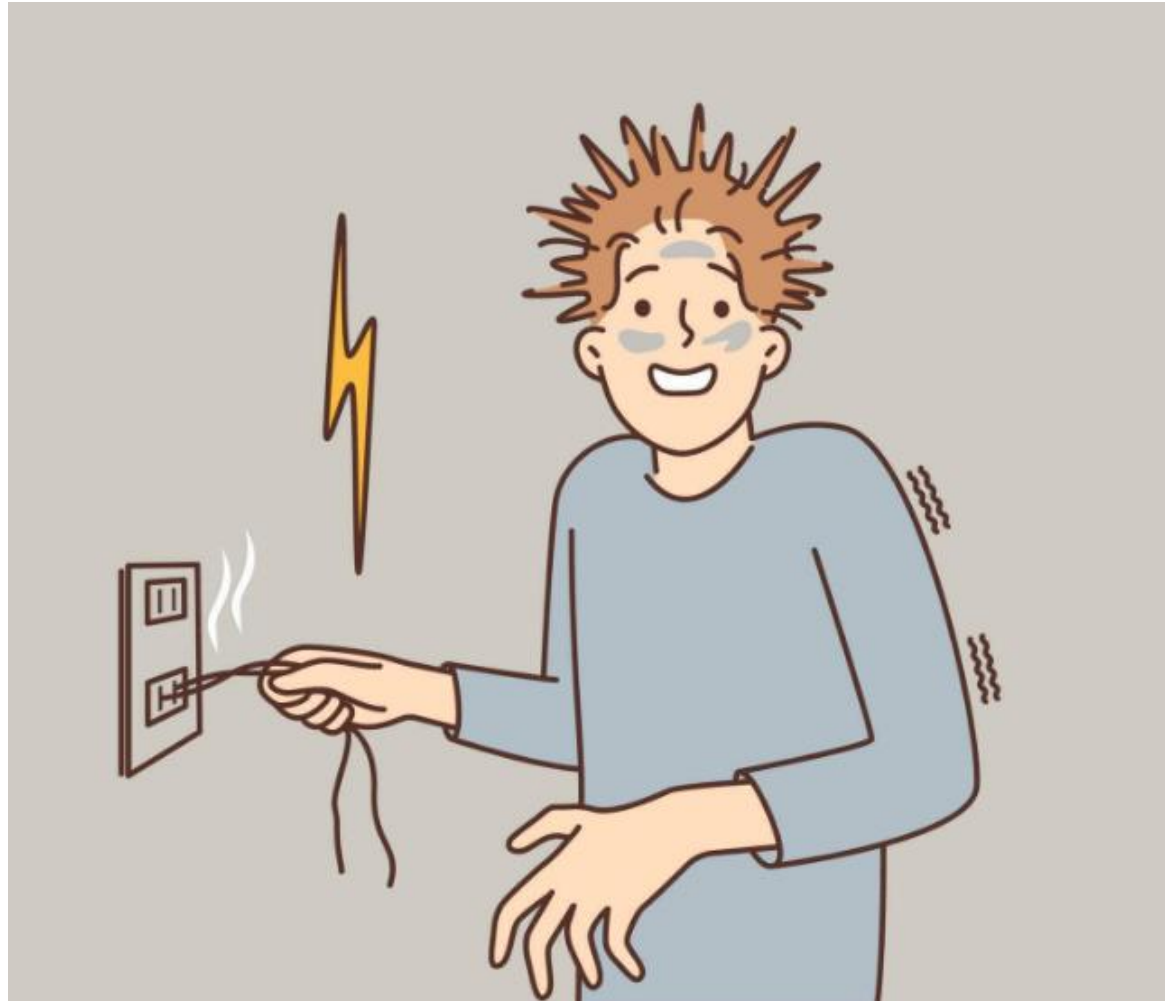
# **SUSTAINABILITY**

- **Employs reusable electronic components.**
- **Can be used repeatedly for voltage checks.**
- **Promotes electrical safety, potentially reducing accidents and equipment damage.**

# Environmental Effect

1. Humidity Impact
2. Temperature Influence
3. EMI Disruption
4. Dust and Dirt Accumulation
5. Moisture Resistance
6. Environmental Testing

- AC Live Line



# Future Development

- **Smart Connectivity**
- **Battery Efficiency**
- **Extended Detection Range**
- **Improved User Interface**



# CONCLUSION

- ❑ Safety Foundation
- ❑ Operational Insight
- ❑ Versatile Solutions
- ❑ Safety Integration
- ❑ Future Horizons
- ❑ Commitment to Safety
- ❑ Innovation and Improvement

Thank you!