EP486 Microcontroller Applications

Topic 11
Arduino Apps:
Relay to control 220V lamp

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Relay

- A relay is an electrically operated switch.
- Many relays use an electromagnet to mechanically operate a switch.
Power IN

Power CUT (To Kettle or any device you want to control)

VCC

GND

SIGNAL to pin 3 of Sensor Shield
Arduino & Relay

Diagram:

- 220 V AC
- NO: Normally Open
- NC: Normally Close
- COM: Common
- RELAY
- ARDUINO UNO
  - +5V
  - GROUND
- DIGITAL PIN 2
- LAMP

Explanation:

- The circuit diagram shows a connection between 220 V AC, an Arduino Uno, and a relay.
- The relay connects to a lamp, indicating an on/off control mechanism.
- The Arduino Uno provides the necessary voltage and control signals (5V) to operate the relay.
- The relay has two states: NO (Normally Open) and NC (Normally Close), which control the flow of electricity to the lamp.
```c
int relay=2;

void setup(){
    pinMode(relay, OUTPUT);
}

void loop(){
    digitalWrite(relay,HIGH);
    delay(1000);
    digitalWrite(relay,LOW);
    delay(1000);
}
```