```
// Smart Room Occupancy Energy Saver System
// Components: PIR Sensor, Relay Module, Arduino

int pirPin = 2;         // PIR sensor input pin
int relayPin = 3;       // Relay control pin
int motionState = LOW;  // Variable to store motion status
unsigned long lastMotionTime = 0;
unsigned long delayTime = 30000;  // 30 seconds delay before turning off

void setup() {
  pinMode(pirPin, INPUT);
  pinMode(relayPin, OUTPUT);
  digitalWrite(relayPin, LOW);  // Start with device OFF
  Serial.begin(9600);
}

void loop() {
  int motionDetected = digitalRead(pirPin);

  if (motionDetected == HIGH) {
    if (motionState == LOW) {
      Serial.println("Motion detected: Turning ON devices");
      digitalWrite(relayPin, HIGH); // Turn ON
      motionState = HIGH;
    }
    lastMotionTime = millis(); // Update last motion time
  }

  // If no motion detected for defined time, turn off devices
  if ((motionState == HIGH) && (millis() - lastMotionTime > delayTime)) {
    Serial.println("No motion: Turning OFF devices");
    digitalWrite(relayPin, LOW);  // Turn OFF
    motionState = LOW;
  }
}
```