**Project: Room Occupancy Counter**

**Description:**

This project counts the number of people entering and exiting a room using two IR sensors. It displays the total number of entries, exits, and the current occupancy on a 16x2 LCD screen.

**Components:**

* Arduino Uno (or compatible board)
* 16x2 LCD display
* Two IR sensors (for detecting entry and exit)
* Jumper wires

**Connections:**

* LCD Pins: RS=12, Enable=11, D4=5, D5=4, D6=3, D7=2
* IR Sensor 1 (Entry): Digital Pin 6
* IR Sensor 2 (Exit): Digital Pin 7

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**code:**

**#include <LiquidCrystal.h>**

**LiquidCrystal lcd(12, 11, 5, 4, 3, 2);**

**int entryPin = 6;**

**int exitPin = 7;**

**int entryCount = 0;**

**int exitCount = 0;**

**int currentCount = 0;**

**void setup() {**

**pinMode(entryPin, INPUT);**

**pinMode(exitPin, INPUT);**

**lcd.begin(16, 2);**

**}**

**void loop() {**

**int entry = digitalRead(entryPin);**

**int exit = digitalRead(exitPin);**

**if (entry == HIGH) {**

**entryCount++;**

**currentCount++;**

**delay(500);**

**}**

**else if (exit == HIGH) {**

**exitCount++;**

**currentCount--;**

**delay(500);**

**}**

**lcd.clear();**

**lcd.setCursor(0, 0);**

**lcd.print("Entries: ");**

**lcd.print(entryCount);**

**lcd.setCursor(0, 1);**

**lcd.print("Exits: ");**

**lcd.print(exitCount);**

**lcd.setCursor(8, 1);**

**lcd.print("Curr: ");**

**lcd.print(currentCount);**

**delay(1000);**

**}**