**Shift Allocation Using RTC – Interface, Code, and LED Connections**

**Explanation:**  
The DS1302 RTC module (with its 3-wire interface) provides the current time, which is used to determine the active voting shift. The system is configured for four shifts. LEDs give visual feedback during the verification process.

#include <RTClib.h>

RTC\_DS1302 rtc; // For DS1302, use the appropriate library and wiring (CE, I/O, SCLK)

#define SHIFT1\_START 9

#define SHIFT1\_END 11

#define SHIFT2\_START 11

#define SHIFT2\_END 13

#define SHIFT3\_START 13

#define SHIFT3\_END 15

#define SHIFT4\_START 15

#define SHIFT4\_END 16

int getCurrentShift() {

DateTime now = rtc.now();

int hour = now.hour();

if (hour >= SHIFT1\_START && hour < SHIFT1\_END) return 1;

else if (hour >= SHIFT2\_START && hour < SHIFT2\_END) return 2;

else if (hour >= SHIFT3\_START && hour < SHIFT3\_END) return 3;

else if (hour >= SHIFT4\_START && hour < SHIFT4\_END) return 4;

else return 0;

}

**LED Connections:**

**Entry Verification LEDs:**

Green LED: Digital Pin D6 (via 220 Ω resistor) → GND

Yellow LED: Digital Pin D7 (via 220 Ω resistor) → GND

Red LED: Digital Pin D8 (via 220 Ω resistor) → GND

**Vote Confirmation LEDs:**

Green LED: Digital Pin D10 (via 220 Ω resistor) → GND

Red LED: Digital Pin D11 (via 220 Ω resistor) → GND