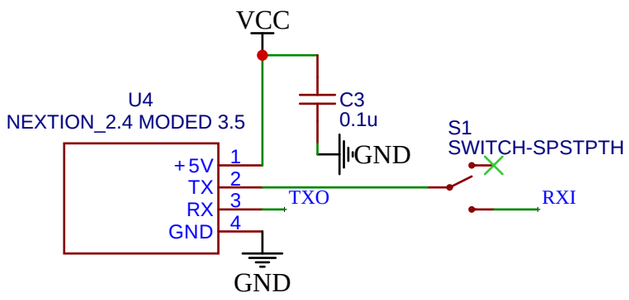
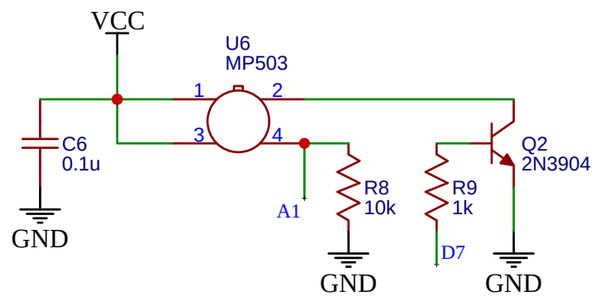
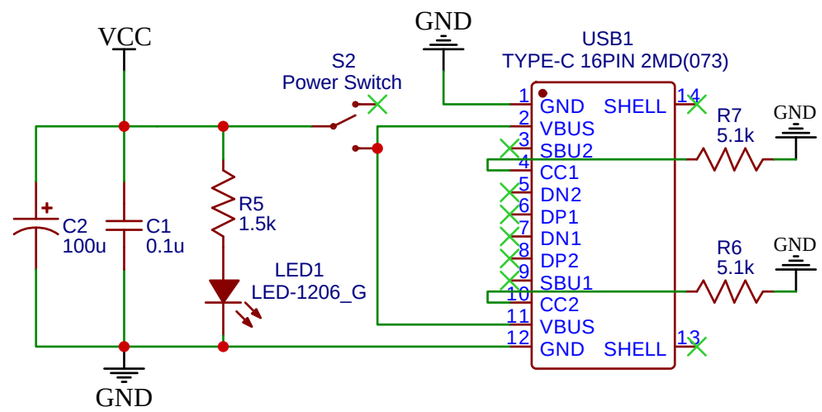
Nextion touchscreen display connected via UART to show real-time sensor readings and system status.



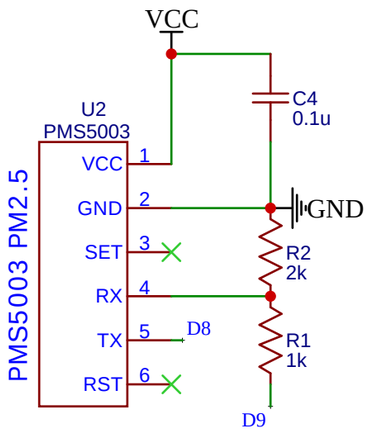
MP503 VOC gas sensor circuit with a 10 kΩ pull-down resistor for analog output (A1) and a 2N3904 transistor controlled by D7 to switch the sensor ' s heater.



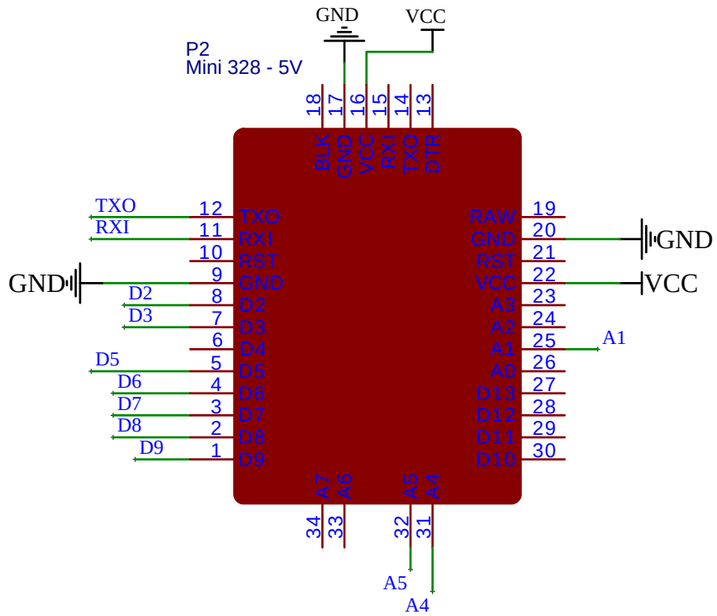
USB-C 5 V power input circuit with 5.1 kΩ CC resistors for compatibility, capacitors for voltage smoothing, a power switch for control, and an LED indicator to show when power is on.



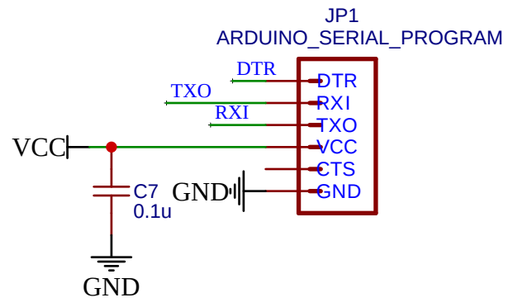
PMS5003 dust sensor module connected via UART (D8, D9) with pull-down resistors for stable signals and a 0.1 µF capacitor for power-line noise filtering.

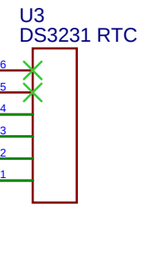


Arduino Pro Mini (ATmega328, 5 V version) serving as the main controller, handling sensor inputs, serial communication, and overall system operation.

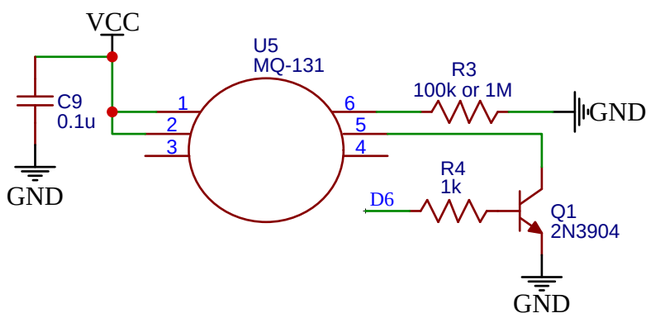


Serial programming header for uploading code to the Arduino, with a 0.1 µF capacitor for reset stability during programming.

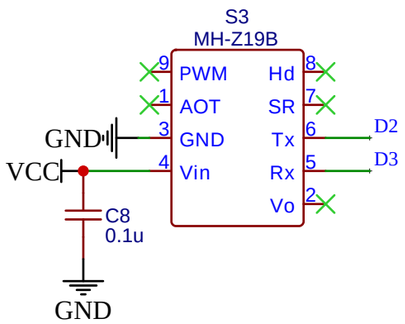




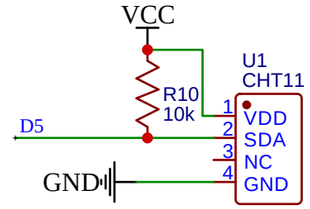
MQ-131 ozone gas sensor circuit with a selectable 100 kΩ – 1 MΩ load resistor for sensitivity adjustment, a 2N3904 transistor controlled by D6 for heater switching, and a 0.1 µF capacitor for power-line noise filtering.



MH-Z19B CO_2 sensor connected via UART (pins D2 and D3) for communication with the Arduino, powered by 5 V and stabilized with a 0.1 µF decoupling capacitor.



CHT11 temperature and humidity sensor with a 10 kΩ pull-up resistor on the data line for reliable digital communication.



TITLE: Smart Air Quality Monitoring Device		REV: 1.0
	Company: Team 8	Sheet: 1/1
	Date: 2025-10-23 Drawn By: altalhi	