Control ECU Pin Mapping (Sensor + Output Control):

Function	Component	MCU Pin
Temperature Sensor	Analog Input	PA0
LDR Sensor	Analog Input	PA7
IR Sensor (Garage Motion)	Digital Input	PB0
Ultrasonic TRIG	Digital Output	PD7
Ultrasonic ECHO	Digital Input	PD6
Garage Door Motor	PWM	PB3
LCD RS	16x2 LCD Control	PA1
LCD EN		PA2
LCD D4-D7	Data lines	PA3—PA6
Fan	Digital Output	PC3
Buzzer	Digital Output	PC5
Red LED	Digital Output	PC0
Green LED	Digital Output	PC1
Blue LED	Digital Output	PC2