Component Specifications Summary

1. MSP430G2553: 16-bit RISC MCU, 3.3V operation, Timer_A PWM, UART/I2C/SPI support.
2. Arduino UNO R3: ATmega328P, 14 digital I/O, 5V logic, easy prototyping.
3. L298N Motor Driver: Dual H-Bridge, 5V logic, 12V motor control, 2A/channel.
4. HC-SR04: Ultrasonic sensor, 2–400cm range, 5V supply, 15° beam angle.
5. 12V DC Motors: 100RPM, 2-5kg·cm torque, 6–12V operation.
6. Power Supply: 12V motor battery, 9V logic battery, common ground.
7. Caster Wheel, Chassis, Jumper Wires: Mechanical and connection support.