# Two-Wheel Line-Following Robot - Arduino Code Explanation

* This Arduino code is designed to control a two-wheel line-following robot using two infrared (IR) sensors and an L298N motor driver.
* The IR sensors are placed at the front of the robot to detect a black line on a lighter surface. Each sensor gives a digital output: it returns 0 when it detects the black line and 1 when on a white surface.
* Based on the sensor readings, the robot decides its movement direction. If both sensors detect the black line (0,0), the robot moves forward; if the left sensor detects the line and the right doesn't (0,1), the robot turns left; if the right sensor detects the line and the left doesn't (1,0), it turns right; and if both sensors are off the line (1,1), the robot stops.
* The movement of the motors is controlled using PWM signals sent to the enable pins (ENA and ENB) and digital HIGH/LOW signals to the motor direction pins (IN1–IN4).
* Additionally, the code uses Serial.print() to display the real-time IR sensor values in the serial monitor, helping with debugging and sensor alignment.
* This setup ensures that the robot can autonomously follow a predefined path by continuously adjusting its direction based on sensor feedback.