ARDUINO LINE FOLLOWER ROBOT CAR

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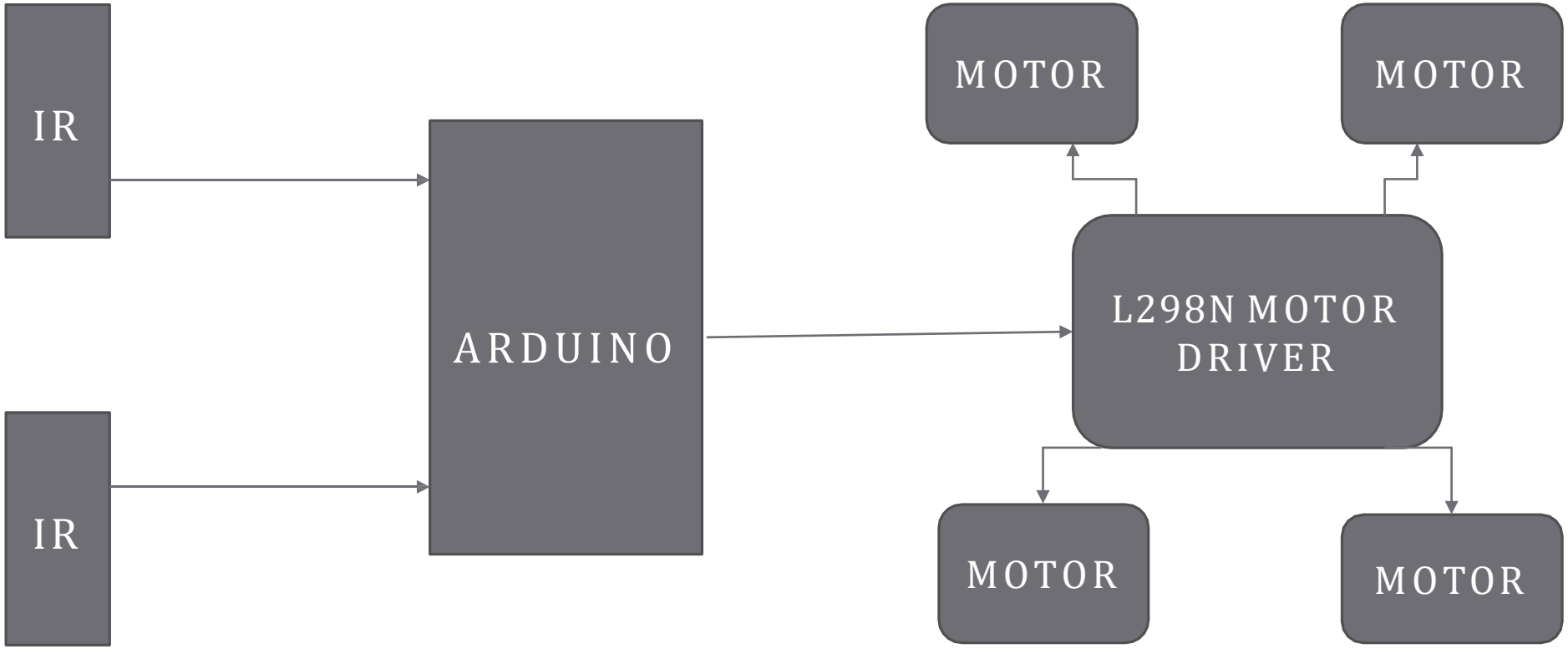
Introduction:

- The robot cars are programmed not to break the laws.
- They are lighter and they reduce the fuel consumption.
- They helps the people who have difficulties with driving such as disabled people and older citizens.

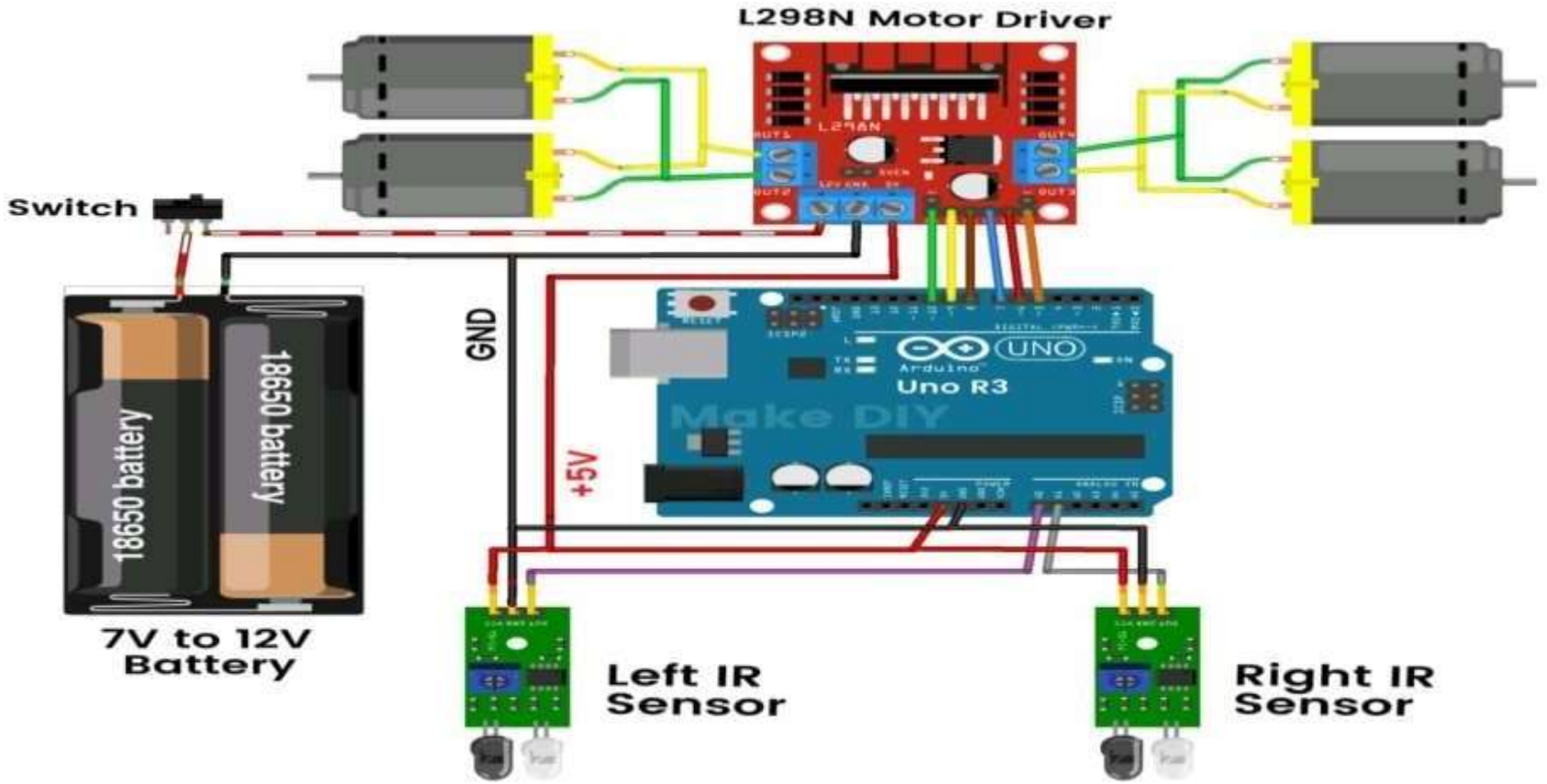
APPLICATIONS:

- **Domestic :** floor cleaning appliances.
- **Guidance:** path guidance in shopping malls.

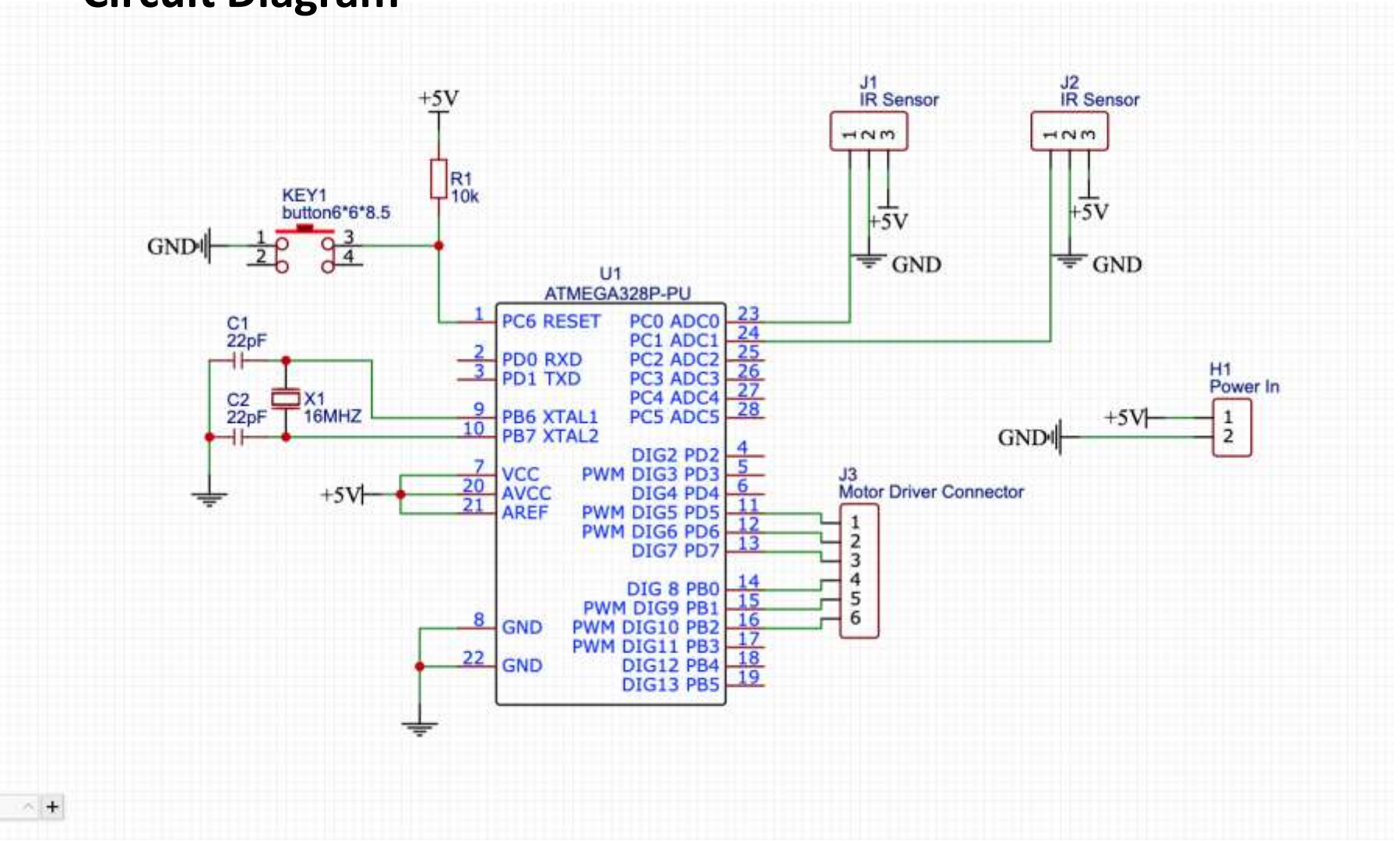
Block diagram



Circuit diagram

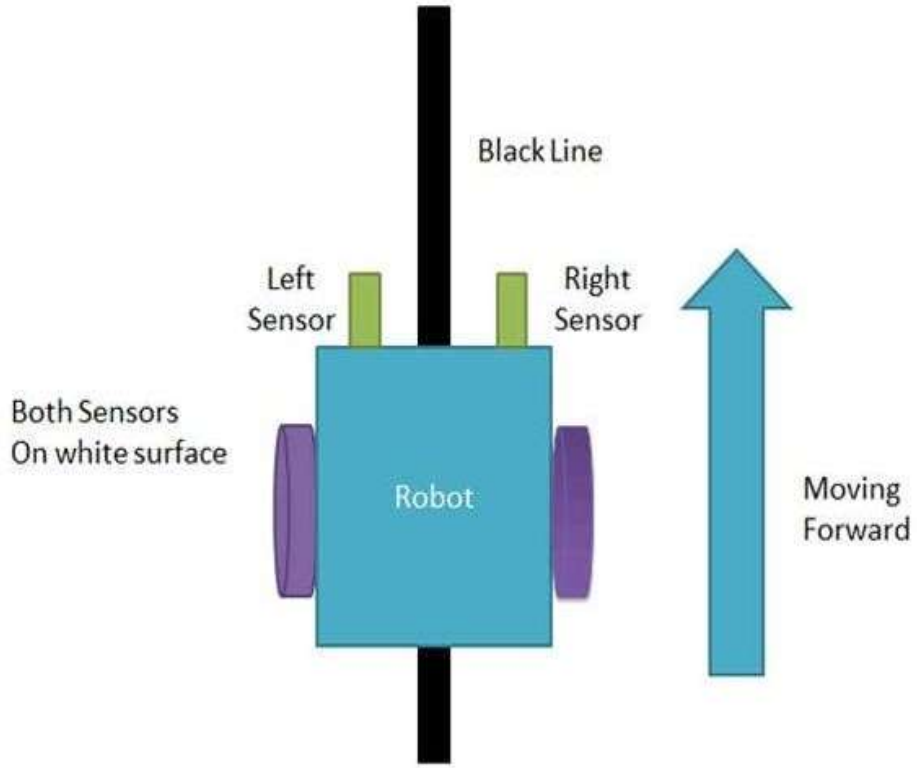


Circuit Diagram

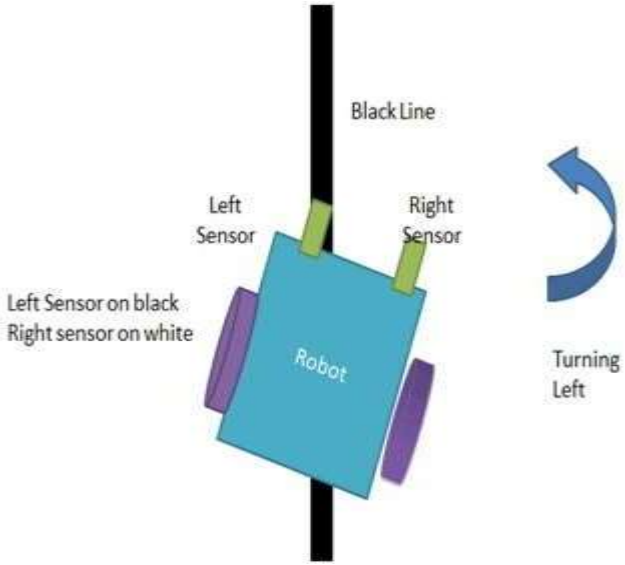


WORKING PRINCIPLE

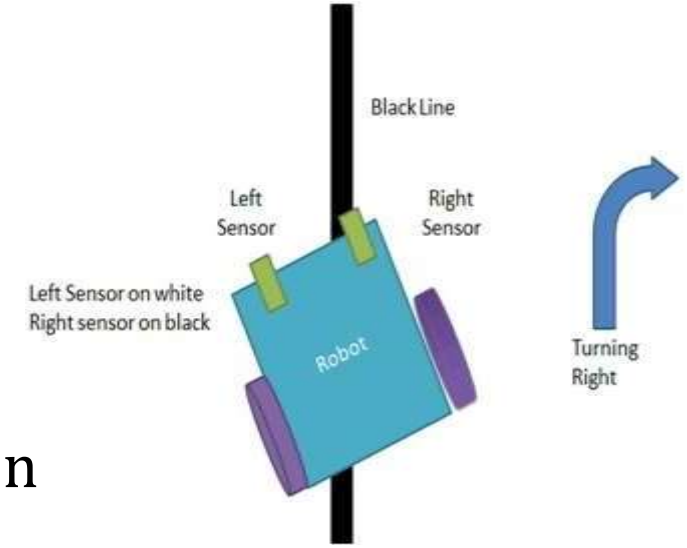
- Line follower robot senses black line by using sensor and then sends the signal to arduino.
- Then arduino drives the motor according to sensors' output.
- When both left and right sensor senses white then robot move forward.



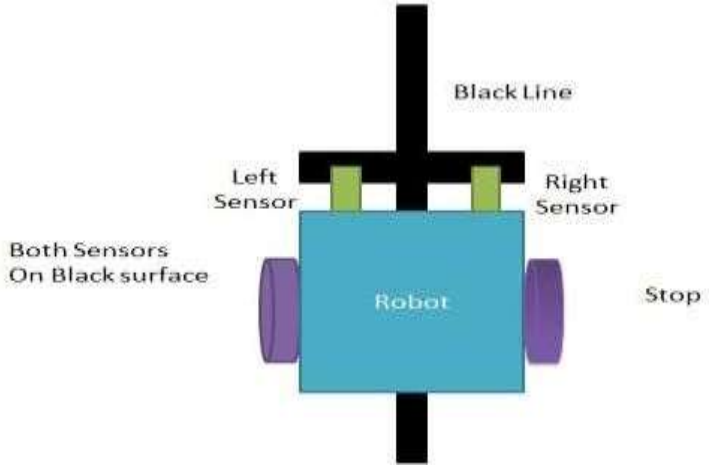
- If left sensor comes on black line then robot turn left side.



If right sensor comes on black line then robot turn right side.

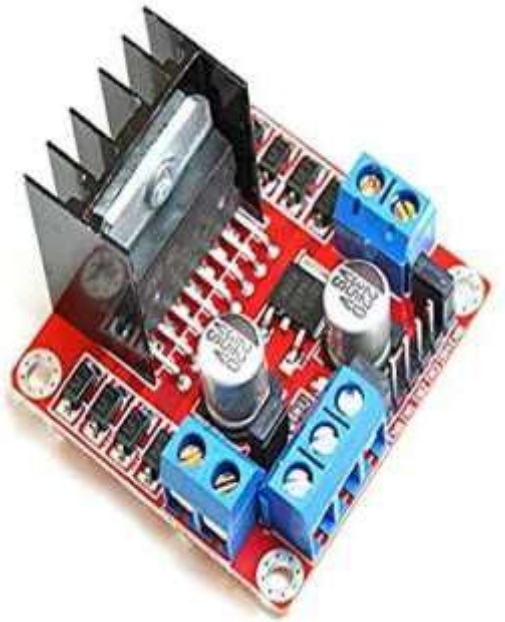


If both sensors comes on black line, robot stops.



L298N MOTOR DRIVER:

- **L298N Motor Driver Module** is a high power motor driver module for driving DC and Stepper Motors.
- **L298N Module** can control up to 4 DC motors, or 2 DC motors with directional and speed control.



IR SENSOR

- **Active infrared sensors** work with radar technology and they both emit and receive infrared radiation.
- This radiation hits the objects nearby and bounces back to the receiver of the device.

Conclusion-Learnings

- The right sensor will eventually detect the path and the program will turn off the turn motor.
- The car will oscillate around the track rather than follow it completely straight.


thank you