Line Follower Robot

**Concepts of Line Follower**

The concept of working of line follower is related to light. We use here the behavior of light at the black and white surfaces. When light falls on a white surface it is almost fully reflected and in the case of a black surface light is completely absorbed. This behavior of light is used in **building a line follower robot**.

A diagram of different types of light

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### Circuit Explanation

The whole **Arduino line follower robot** can be divided into 3 sections: sensor section, a control section, and driver section.

**Sensor section:**

This section contains IR sensors are used to sense the line.

**Control Section:**

Arduino UNO is used for controlling the whole the process of the line follower robot. Arduino read these signals and send commands to driver circuit to driveline follower.

**Driver section:**

The driver section consists of motor driver and two DC motors. The motor driver is used for driving motors because Arduino does not supply enough voltage and current to the motor. So we add a motor driver circuit to get enough voltage and current for the motor. Arduino sends commands to this motor driver and then it drives motors.

### ****Working of Line Follower Robot using Arduino****

Building a **Line follower robot using Arduino** is interesting. The line follower robot senses a black line by using a sensor and then sends the signal to Arduino. Then Arduino drives the motor according to sensors' output.

A diagram of a computer

Description automatically generated

### Code Explanation

### When both left and right sensor senses white then the robot moves forward.

### A diagram of a robot Description automatically generated

### If the left sensor comes on a black line then the robot turn the left side.

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

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### If both sensors come on the black line, the robot stops.

### Diagram of a robot with text Description automatically generated