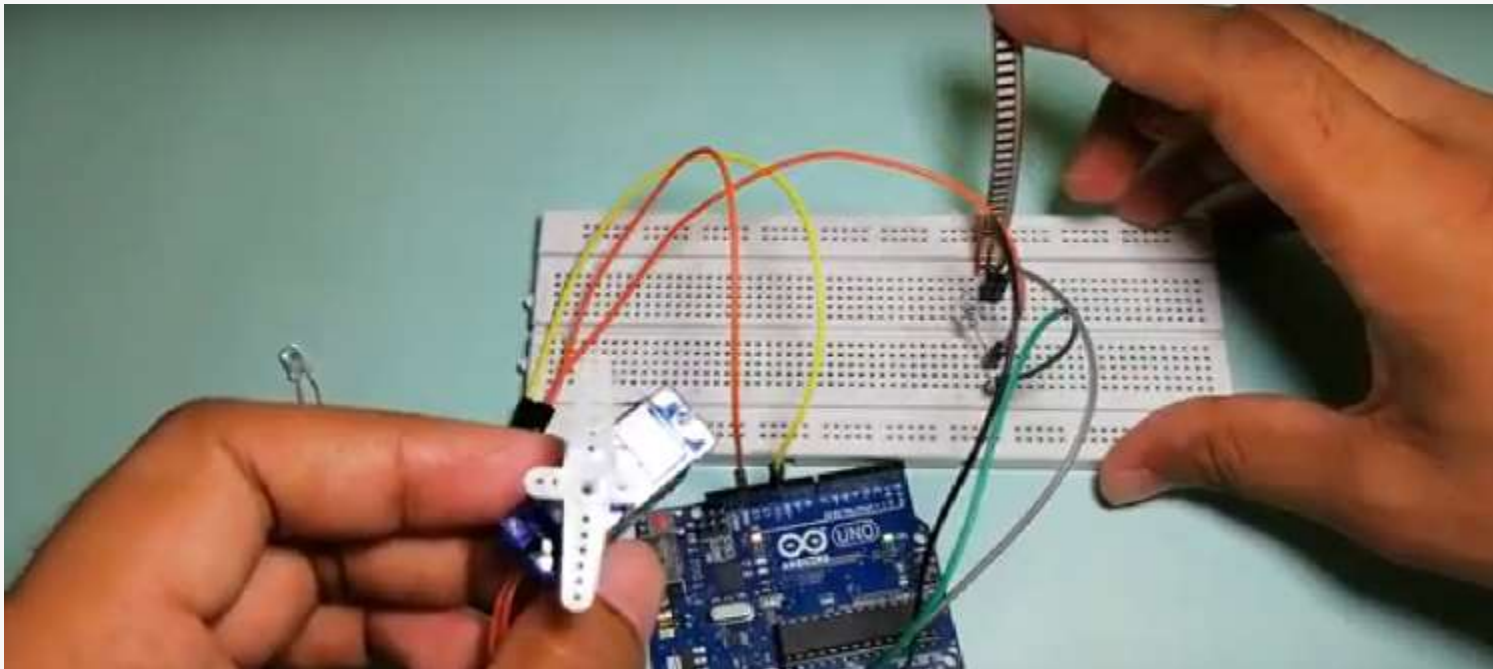
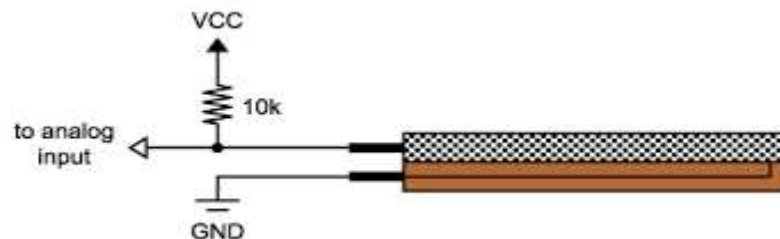


Automatic door lock system using Flex sensor



Flex sensor

A **Flex sensor** or **Bend sensor** is a sensor that measures the amount of deflection or bending. Usually, the sensor is stuck to the surface, and resistance of sensor element is varied by bending the surface. Since the resistance is directly proportional to the amount of bend it is used as goniometer, and often called flexible potentiometer.



Servo Motor

A **Servo motor** is an electrical device which can push or rotate an object with great precision. If you want to rotate an object at some specific angles or distance, then you use **servo motor**. It is just made up of simple **motor** which runs through **servo** mechanism.

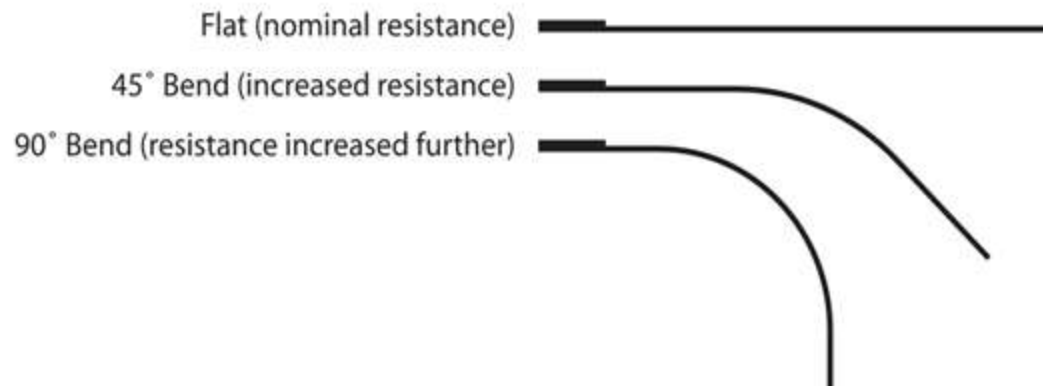
It consists of three parts:

1. Controlled device
2. Output sensor
3. Feedback system



Working of project

In this project we have interfaced Flex sensor with Servo motor and Arduino Mega. Objective behind this project is to make automatic door lock attached with Servo motor which is automatically controlled by flex sensor. Flex sensor is bled at different angles according to which gate will open.



Components Required

- Arduino Mega
- Flex Sensor
- Servo Motor
- LED
- BreadBoard
- Resistor 10kohms
- Jumper wires



Connections

1. Connect first pin of flex sensor with Ao of Arduino.
2. Connect first pin again with resistor of 10k and then connect resistor with ground pin of Arduino.
3. Connect another pin of flex sensor with Vcc (+5V) of Arduino.
4. Now connect positive of LED with 22 pin of Arduino.
5. Connect negative of LED with ground of Arduino.
6. Connect Red wire of servo with Vcc(+5V) of Arduino.
7. Connect Black wire of servo with GND of Arduino.
8. Connect orange wire of servo with 7 pin Arduino.

Project Link : <https://youtu.be/IdkIHfCM2pw>