Assignment 2

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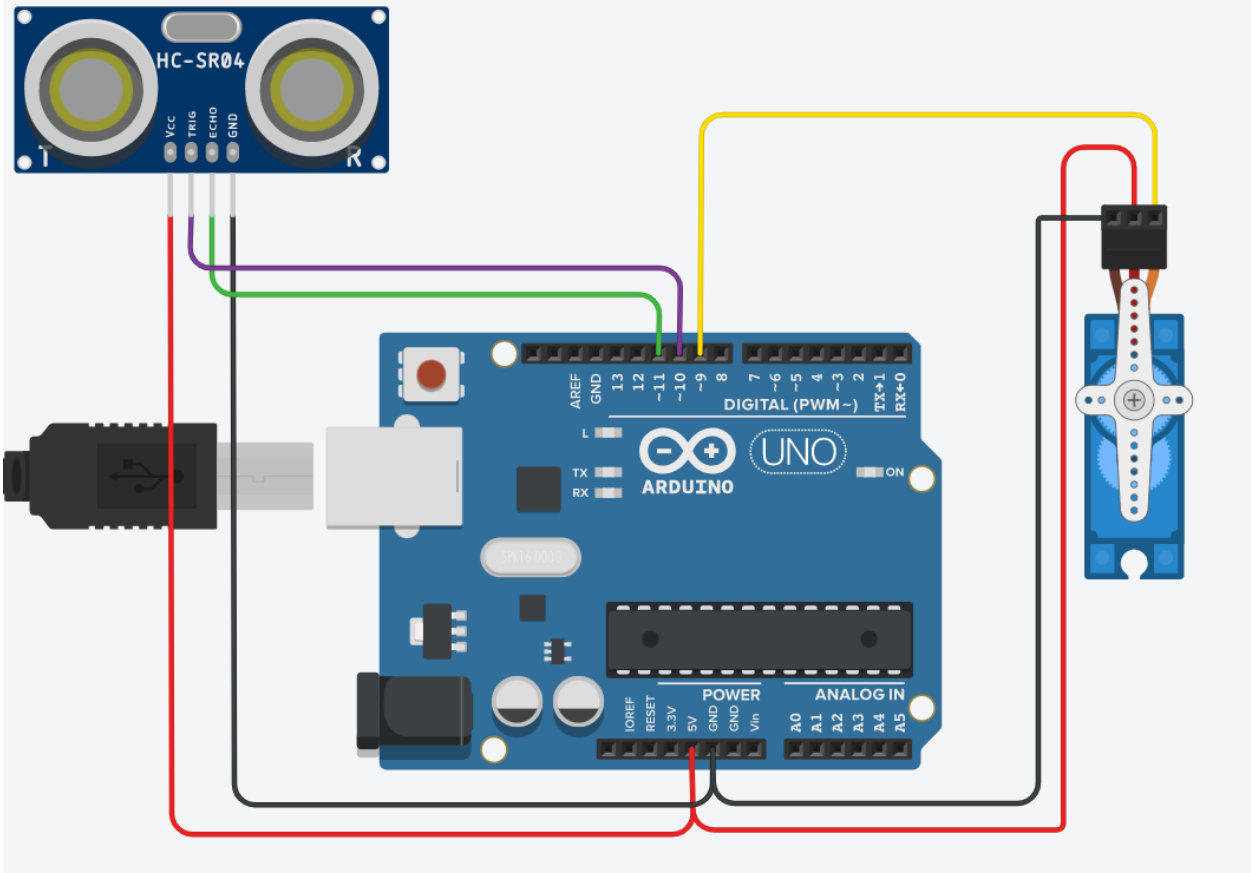
Automatic garage door opening system

Circuit diagram using TinkerCad:



Code for the application:

```
#include <Servo.h>
Servo servoMain; // Define our Servo
int trigpin = 10;
int echopin = 11;
int distance;
float duration;
float cm;

void setup() {
   servoMain.attach(9); // servo on digital pin 10
    pinMode(trigpin, OUTPUT);
    pinMode(echopin, INPUT);
}

void loop() {
  digitalWrite(trigpin, LOW);
  delay(2);
  digitalWrite(trigpin, HIGH);
  delayMicroseconds(10);
  digitalWrite(trigpin, LOW);
  duration = pulseIn(echopin, HIGH);
  cm = (duration/58.82);
  distance = cm;

  if(distance<60) {
    servoMain.write(180);  // Turn Servo back to center position (90 degrees)
   delay(3000);
  }
   else{
     servoMain.write(0);
     delay(50);
   }
}
```