MOTOR CONTROL:

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| import RPi.GPIO as GPIO import time  GPIO.setmode(GPIO.BOARD) GPIO.setup(11, GPIO.OUT)  pwm=GPIO.PWM(11,50)  pwm.start(5)  print("Clockwise") pwm.ChangeDutyCycle(1.5) time.sleep(1)  print("counterclockwise") pwm.ChangeDutyCycle(17.5) time.sleep(1)  GPIO.cleanup() |

PHOTORESISTOR:

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| import RPi.GPIO as GPIO import time GPIO.setmode(GPIO.BOARD)  #define the pin that goes to the circuit pin\_to\_circuit = 16  def rc\_time (pin\_to\_circuit):  count = 0    #Output on the pin for   GPIO.setup(pin\_to\_circuit, GPIO.OUT)  GPIO.output(pin\_to\_circuit, GPIO.LOW)  time.sleep(0.1)   #Change the pin back to input  GPIO.setup(pin\_to\_circuit, GPIO.IN)    #Count until the pin goes high  while (GPIO.input(pin\_to\_circuit) == GPIO.LOW):  count += 1   return count  #Catch when script is interrupted, cleanup correctly try:  # Main loop  while True:  print rc\_time(pin\_to\_circuit) except KeyboardInterrupt:  pass finally:  GPIO.cleanup() |

IR MOTION SENSOR:

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| import RPi.GPIO as GPIO from time import sleep  OUTPIN =18  LEDPIN = 23  GPIO.setmode(GPIO.BCM) GPIO.setup(OUTPIN, GPIO.IN, pull\_up\_down=GPIO.PUD\_UP) GPIO.setup(LEDPIN, GPIO.OUT) GPIO.output(LEDPIN, GPIO.LOW)  try:  while True:  if(0 == GPIO.input(OUTPIN)):  print('DETECTED')  GPIO.output(LEDPIN, GPIO.HIGH)  sleep(1)  GPIO.output(LEDPIN, GPIO.LOW) except KeyboardInterrupt:  GPIO.cleanup() |