```cpp
#include <Servo.h>
int distance = 0;
int motion = 0;
Servo servo_3;
long readUltrasonicDistance(int triggerPin, int echoPin)
{
  pinMode(triggerPin, OUTPUT);  // Clear the trigger
  digitalWrite(triggerPin, LOW);
  delayMicroseconds(2);
  // Sets the trigger pin to HIGH state for 10 microseconds
  digitalWrite(triggerPin, HIGH);
  delayMicroseconds(10);
  digitalWrite(triggerPin, LOW);
  pinMode(echoPin, INPUT);
  // Reads the echo pin, and returns the sound wave travel time in
microseconds
  return pulseIn(echoPin, HIGH);
}
void setup()
{
  servo_3.attach(3, 500, 2500);
  pinMode(13, OUTPUT);
}
void loop()
{
  int p=digitalRead(7);
 Serial.println(p);
 digitalWrite(13,LOW);
 if(p)
 {
   Serial.print("motion detected");
   digitalWrite(13,HIGH);
 }
  servo_3.write(0);
  distance = 0.01723 * readUltrasonicDistance(4, 4);
  if (distance <= 50) {
    servo_3.write(90);
    delay(5000); // Wait for 5000 millisecond(s)
    servo_3.write(0);
   delay(10000);
  }
  delay(100);
 }
```