CODE

```
int inches = 0;

int cm = 0;

#include <Servo.h>

int pos = 0;
Servo servo_9;

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()
{
Serial.begin(9600);
  servo_9.attach(9, 500, 2500);
}

void loop()
{
servo_9.write(0);
// measure the ping time in cm
cm = 0.01723 * readUltrasonicDistance(7, 7);
// convert to inches by dividing by 2.54
inches = (cm / 2.54);
Serial.print(inches);
Serial.print("in, ");
Serial.print(cm);
Serial.println("cm");
delay(100); // Wait for 100 millisecond(s)
if(inches<80)
{
   // sweep the servo from 0 to 90 degrees in steps
// of 1 degrees
for (pos = 0; pos <= 90; pos += 1) {
   // tell servo to go to position in variable 'pos'
   servo_9.write(pos);
   // wait 15 ms for servo to reach the position
   delay(15);
}
```

```
    delay(60000); // Wait for 1 minute
    for (pos = 90; pos >= 0; pos -= 1) {
    // tell servo to go to position in variable 'pos'
    servo_9.write(pos);
    // wait 15 ms for servo to reach the position
    delay(15); // Wait for 15 millisecond(s)
   }
}
}
```