**AWS Coding**

#include<Servo.h>

#include<Stepper.h>

Servo servometal;

Servo servowet;

#define STEPS 2048

Stepper stepper(STEPS, 8, 10, 11, 12);

int pos = 180;

int metalPin = A0;

int wetPin = 13;

int val = 0;

const int trigPin = 2;

const int echoPin = 3;

// defines variables

long duration;

int distance;

void setup()

{

servometal.attach(9);

servowet.attach(5);

servometal.write(180);

servowet.write(180);

pinMode(trigPin, OUTPUT); // Sets the trigPin as an Output

pinMode(echoPin, INPUT); // Sets the echoPin as an Input

pinMode(wetPin, INPUT);

Serial.begin(9600); // Starts the serial communication

}

void loop()

{

// Clears the trigPin

digitalWrite(trigPin, LOW);

delayMicroseconds(2);

// Sets the trigPin on HIGH state for 10 micro seconds

digitalWrite(trigPin, HIGH);

delayMicroseconds(10);

digitalWrite(trigPin, LOW);

// Reads the echoPin, returns the sound wave travel time in microseconds

duration = pulseIn(echoPin, HIGH);

// Calculating the distance

distance = duration \* 0.034 / 2;

// Prints the distance on the Serial Monitor

Serial.print("Distance: ");

Serial.println(distance);

delay (1500);

val = analogRead(metalPin);

delay(100);

if (val >= 1000)

{

Serial.println("Metal Detected");

for (pos = 170; pos >= 100; pos -= 1)

{

servometal.write(pos);

delay(50);

}

}

delay(2000);

servometal.write(180);

if (digitalRead(13) == LOW)

{

Serial.println(" WET DEtected");

for (pos = 170; pos >= 100; pos -= 1)

{

servowet.write(pos);

delay(50);

}

}

delay(2000);

servowet.write(180);

if (distance >= 5 && distance <= 7)

{

stepper.setSpeed(15); // 1 rpm

stepper.step(1024); // do 2038 steps -- corresponds to one revolution in one minute

delay(1000); // wait for one second

}

}