SMART DUSTBIN

CODE:

```
#include<Servo.h>

const int trigPin = 8;
const int echoPin = 7;
const int servopin = 6;
// defines variables
Servo sg90;
long duration;
int distance;
void setup() {
  sg90.attach(servopin);
  pinMode(trigPin, OUTPUT); // Sets the trigPin as an Output
  pinMode(echoPin, INPUT); // Sets the echoPin as an 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);

  if( distance < 400)
  {
    sg90.write(0);
    delay(500);
  }
  else
  {
    sg90.write(180);
  }
}
```