ASSIGNMENT-1

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Embedded C code:

```c
#include <Servo.h>
int dist = 0;
long readUltrasonicDistance(int triggerPin, int echoPin)
{
  pinMode(triggerPin, OUTPUT  digitalWrite(triggerPin, LOW);
  delayMicroseconds(2);
  digitalWrite(triggerPin, HIGH);
  delayMicroseconds(10);
  digitalWrite(triggerPin, LOW);
  pinMode(echoPin, INPUT);
  return pulseIn(echoPin, HIGH);
}
Servo servo_8;
void setup()
{
  servo_8.attach(8, 500, 2500);
  pinMode(2, INPUT);
  pinMode(12, OUTPUT);
  pinMode(A0, INPUT);
  pinMode(9, OUTPUT);
}
void loop()
{
  dist = 0.01723 * readUltrasonicDistance(7, 7);
  if (dist <= 100) {
    servo_8.write(90);
    delay(1000);  } else {
    servo_8.write(0);
    delay(1000);
  }  if (digitalRead(2) == 1) {
    digitalWrite(12, HIGH);
    delay(1000);  } else {
    digitalWrite(12, LOW);
    delay(1000);  }
  if (analogRead(A0) > 200) {
    digitalWrite(9, HIGH);
    delay(1000
```

```
  } else {
  digitalWrite(9, LOW);
  delay(1000);  }
}
```

Circuit connections:

PIR Sensor

Name	1
Target X	-20.66
Target Y	-316.01
Target Y	-201.02