ASSIGNMENT-1

Embedded C code:

#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:

