INTEGRATION OF SENSOR AND ACTUATORS

#include<Servo.h>

#define servoPin 3 // Arduino Digital pin 3 is connected to Servo Signal pin

#define trigPin 11 // Arduino Digital pin 11 is used for trigpin of sensor

#define echoPin 10 // Arduino Digital pin 10 is used for echopin of sensor

#define LED 13 // Arduino Digital pin 13 is connected to LED

#define buzzer 7 // Arduino Digital pin 7 is connected to Buzzer

Servo myservo; // create servo object to control a servo

long duration;

int distance;

void setup()

{

myservo.attach(servoPin); // attaches the servo on pin 9 to the servo object

pinMode(trigPin,OUTPUT);

pinMode(echoPin,INPUT);

pinMode(LED,OUTPUT);

pinMode(buzzer,OUTPUT);

Serial.begin(9600);

Serial.print(" Intergration Code Programme");

delay(2000);

}

INTEGRATION OF SENSOR AND ACTUATORS

void loop()

{

digitalWrite(trigPin, LOW); // Clears the trigPin

delayMicroseconds(2);

digitalWrite(trigPin, HIGH); // Sets the trigPin on HIGH state for 10 micro seconds

delayMicroseconds(10);

digitalWrite(trigPin, LOW);

duration = pulseIn(echoPin, HIGH); // Reads the Echo pin

distance = duration \* 0.034 / 2; // Calculating the distance

Serial.print("Distance: "); // Prints the distance on the Serial Monitor

Serial.print(distance);

Serial.println("cm");

delay(1000);

if (distance <50) // if condition checking

{

myservo.write(180);

Serial.println("Security Alert");

digitalWrite(buzzer,HIGH);

delay(100);

digitalWrite(LED,HIGH);

} else

{

myservo.write(0);

Serial.println("Everyhing's Fine");

digitalWrite(buzzer,LOW);

INTEGRATION OF SENSOR AND ACTUATORS

delay(100);

digitalWrite(LED,LOW);

}

delay(300);

}

--------------- -------- Refrence Circuit -------------------------------------------