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LAMPIRAN

CODING PROGRAM ALAT

```
#include <DS3231.h>
#include <Wire.h>
DS3231 rtc (SDA, SCL);
#include <LiquidCrystal_I2C.h>
LiquidCrystal_I2C lcd(0x27, 16, 2);
Time  t;
int Hor;
int Min;
int Sec;
const int trigPin = 13;
const int echoPin = 12;
const int trigPin1 = 11;
const int echoPin1 = 10;
const int buzzer = 8;
const int ledPin = 2;
const int ledPin1 = 4;
#include <Servo.h>
Servo servo;
Servo servo1;

long duration;
int distance;
int safetyDistance;
```

```
long duration1;
int distance1;
int safetyDistance1;



void setup() {
pinMode(trigPin, OUTPUT); // Sets the trigPin as an Output
pinMode(echoPin, INPUT); // Sets the echoPin as an Input
pinMode(trigPin1, OUTPUT); // Sets the trigPin as an Output
pinMode(echoPin1, INPUT);
pinMode(buzzer, OUTPUT);
pinMode(ledPin, OUTPUT);
pinMode(ledPin1, OUTPUT);
servo.attach(1);
servo1.attach(3);

Wire.begin();
rtc.begin();
Serial.begin(9600);
lcd.begin();
lcd.setCursor(0,0);
lcd.print("ALI IMRON");
lcd.setCursor(0,1);
lcd.print("5 PANDAWA");
rtc.setDOW(WEDNESDAY);     // Set Day-of-Week to SUNDAY
```

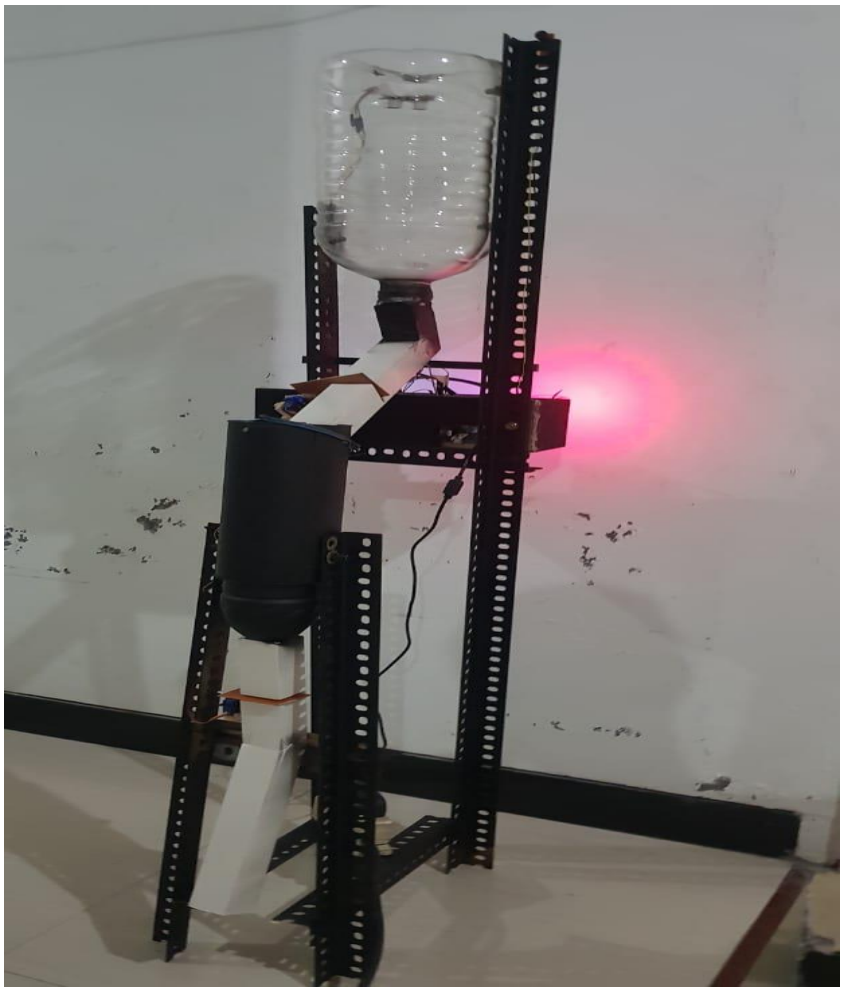
```
rtc.setTime(12, 0, 0);     // Set the time to 12:00:00 (24hr format)
rtc.setDate(27, 7, 2019);   // Set the date to January 1st, 2014
delay(2000);
}
void loop() {
digitalWrite(trigPin, LOW);
delayMicroseconds(500);
digitalWrite(trigPin, HIGH);
delayMicroseconds(500);
digitalWrite(trigPin, LOW);
duration = pulseIn(echoPin, HIGH);
distance= duration*0.034/2;
safetyDistance = distance;

if (safetyDistance >= 10){
  digitalWrite(buzzer, HIGH);
  digitalWrite(ledPin, LOW);
}
else{
  digitalWrite(buzzer, LOW);
  digitalWrite(ledPin, HIGH);
  }

digitalWrite(trigPin1, LOW);
delayMicroseconds(500);
```

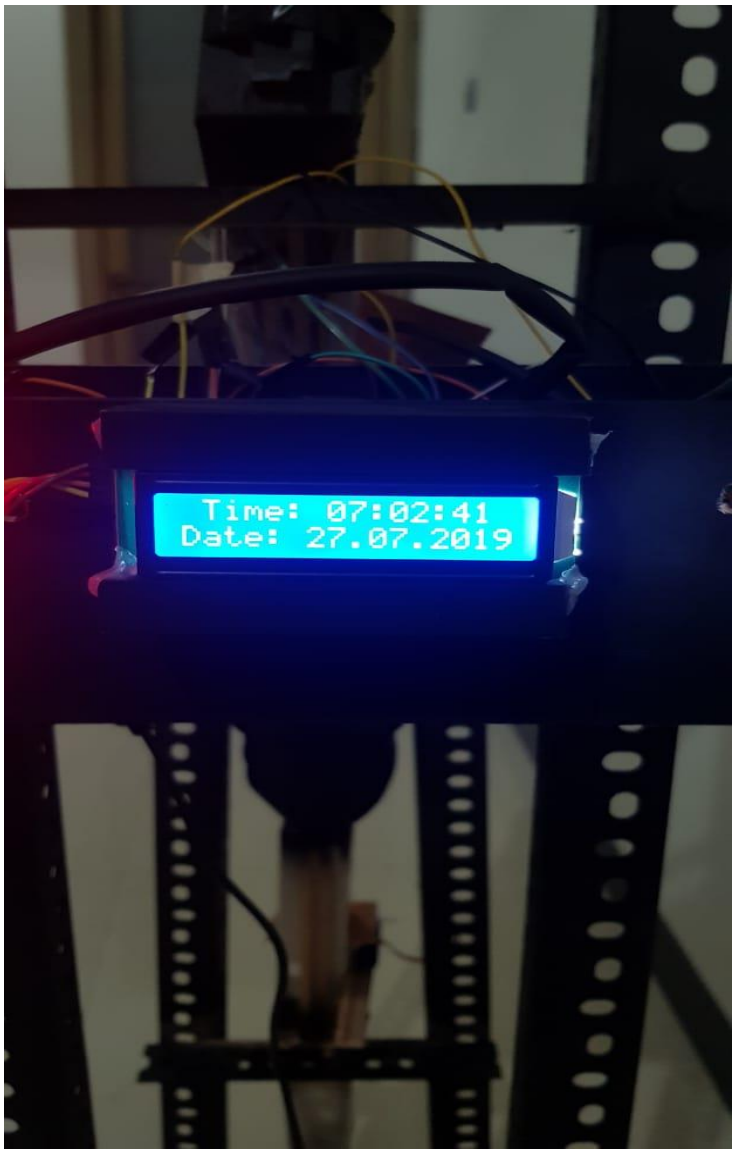
```
digitalWrite(trigPin1, HIGH);
delayMicroseconds(500);
digitalWrite(trigPin1, LOW);
duration1 = pulseIn(echoPin1, HIGH);
distance1= duration1*0.034/2;
safetyDistance1 = distance1;

if (safetyDistance1 >= 10)
{
  servo.write(90);
  digitalWrite(ledPin, HIGH);
   delay(50);
  }
else{
 servo.write(0);
 digitalWrite (ledPin, LOW);
   delay(50);
  }
t = rtc.getTime();
Hor = t.hour;
Min = t.min;
Sec = t.sec;
lcd.setCursor(0,0);
lcd.print("Time: ");
lcd.print(rtc.getTimeStr());
```

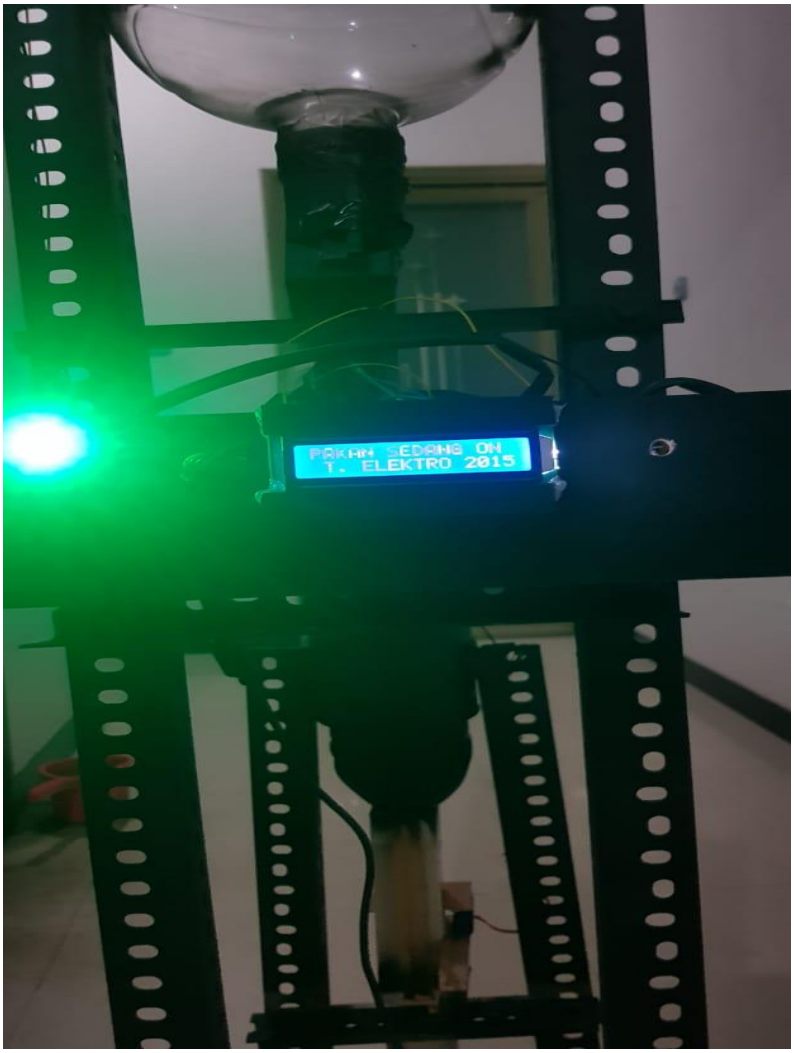
```
lcd.setCursor(0,1);
lcd.print("Date: ");
lcd.print(rtc.getDateStr());

if( Hor == 12 &&  (Min == 01 || Min == 30)) //Comparing the current time with the Alarm time
{
 lcd.setCursor(0,0);
 lcd.print("PAKAN SEDANG 0N");
 lcd.setCursor(0,1);
 lcd.print(" T. ELEKTRO 2015");
servo1.write(90);
digitalWrite (ledPin1, HIGH);
delay(50);
}
if( Hor == 16 &&  (Min == 00 || Min == 30)) //Comparing the current time with the Alarm time
{
 lcd.setCursor(0,0);
 lcd.print("PAKAN SEDANG 0N");
 lcd.setCursor(0,1);
 lcd.print("T. ELEKTRO 2015");
servo1.write(90);
digitalWrite (ledPin1, HIGH);
delay(50);
}
if( Hor == 20 &&  (Min == 00 || Min == 30)) //Comparing the current time with the Alarm time
```

```
{
 lcd.setCursor(0,0);
 lcd.print("PAKAN SEDANG 0N");
 lcd.setCursor(0,1);
 lcd.print("T. ELEKTRO 2015");
servo1.write(90);
digitalWrite (ledPin1, HIGH);
delay(50);
}
delay(50);

}
```

FOTO ALAT




Time: 07:02:41
Date: 27.07.2019


PAKAN SEDANG ON
T. ELEKTRO 2015