

ASSIGNMENT – I

DOMAIN:IoT

TITLE:SMART HOME

Team Leader:

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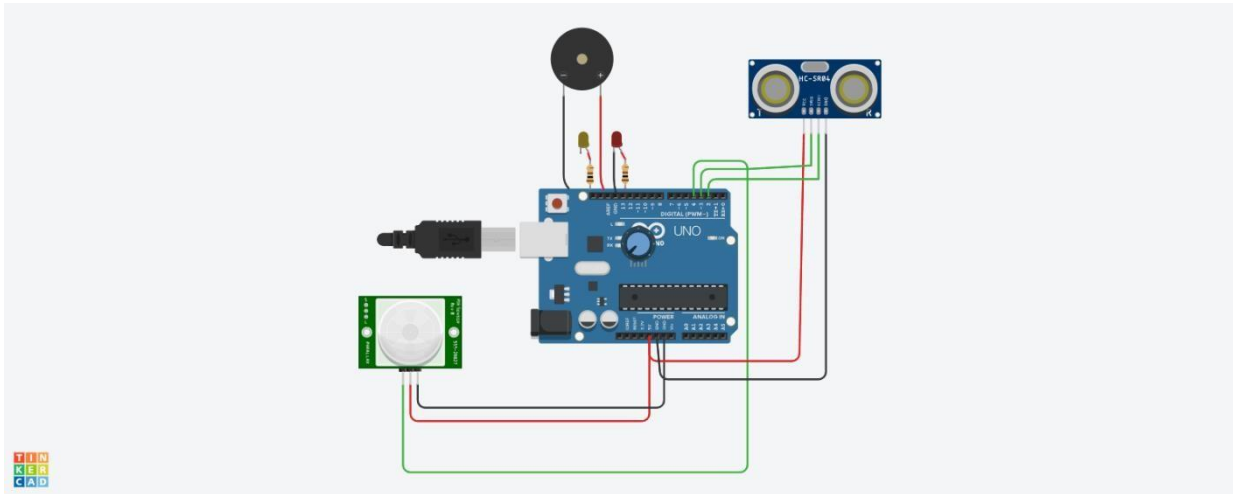
Team Members:

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SMART Home Circuit Connection:



Components Used:

- i) Arduino Uno R3 ii) Ultrasonic Distance Sensor
- iii) PIR Sensor
- iv) Yellow LED v) Resistor
- vi) Piezo
- vii) Red LED
- viii) Capacitor
- ix) Potentiometer

Code :

```
void setup()
{
  pinMode(11, OUTPUT);
  pinMode(12, OUTPUT);
  pinMode(13, OUTPUT);
  pinMode(2, INPUT); pinMode(3,
  OUTPUT); pinMode(4, INPUT);
  Serial.begin(1000);
} void
loop() { int
a=digitalR
ead(4);
//Reads the motion in the room.
```

```

//-----
if(a) { digitalWrite(11,HIGH);
//if moment is detected the light will glow for 5 minutes.
delay(5000);//5 minutes is taken as 5 seconds.
Serial.println("\n\nmotion in the room,lights is ON");
} else {
digitalWrite(11,LOW);
//if there is no motion after 5 minutes the light turns off .
Serial.println("\n\nNo motion,light is OFF");
}
//-----
digitalWrite(3,LOW);//no gen. of pulse of sound
digitalWrite(3,HIGH);//gen, of pulse of sound
delayMicroseconds(5);//10ms of sound pulse.
digitalWrite(3,LOW);//ultrasonic sensor is off. float
p=pulseIn(2,HIGH);//receives the reflected signal. float
d=(p*0.0343)/2;//calculate distance of the water level.;
if(d<50) {
tone(12,500);//the water tank is full is indicated //using
a buzzer.
Serial.println("\n\nThe Water Tank is full");
} else if
(d>250) {
noTone(12);
digitalWrite(13,HIGH);//if the water tank is empty,yellow //light
gets on indicating tank is empty.
Serial.println("\n\nThe Water Tank is empty");
} else { noTone(12); digitalWrite(13,LOW);//the
water level is normal.
Serial.println("\n\nThere is Water in the water Tank");
}
Serial.println(d);
}

```

TINKERCAD LINK:

<https://www.tinkercad.com/things/fRqDDMudAqp-assignment-1/editel?sharecode=9EKIMaKBkcvSSyoZORscH5ohvNBUAFUD37NUus87H-c>