**ASSIGNMENT – I**

**DOMAIN:-IOT**

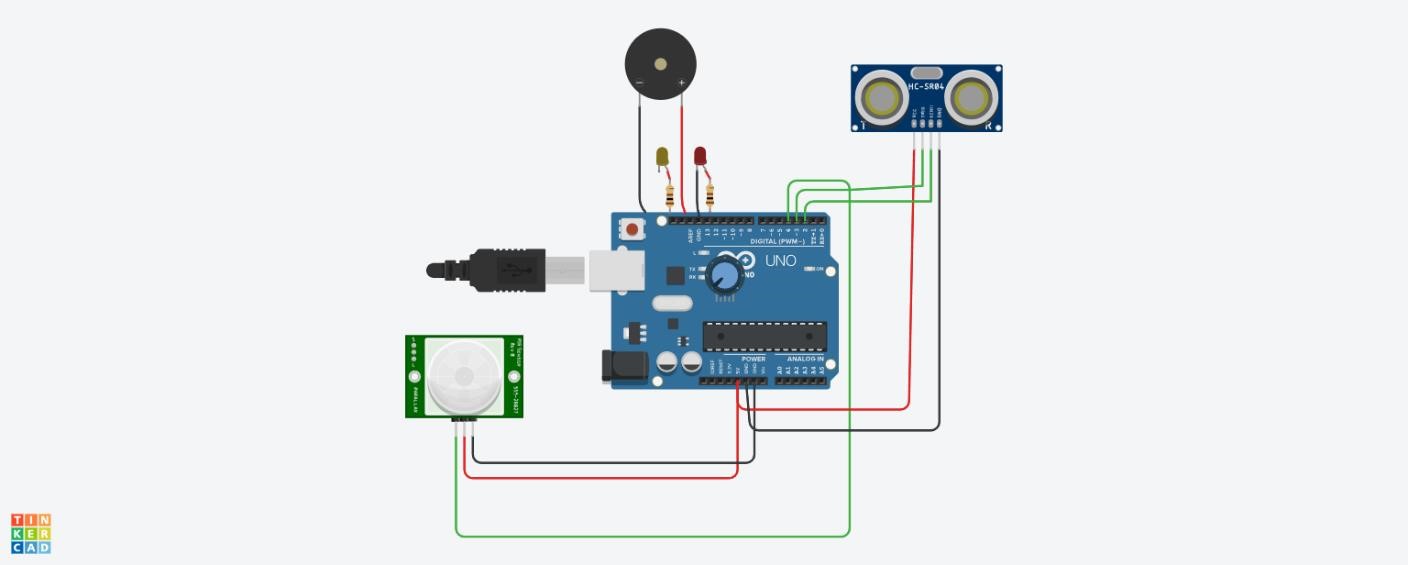
**TOPIC:-SMART HOME**

**NAME:-JOB ALEX**

**REGISTER NUMBER:-961619104023**

**COLLEGE:-**MARTHANADAM COLLEGE OF ENGINEERING AND TECHNOLOGY

SMART Home Circuit Connection:



Components Used:

i) Arduino Uno R3 ii) Ultrasonic Distance Sensoriii) PIR Sensoriv) Yellow LEDv) Resistorvi) Piezovii) Red LEDviii) 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=digitalRead(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\nNomotion,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=9EKlMaKBkcvSSyoZORscH5ohvNBUAFUD37NUus87H-c