IoT BASED BIDIRECTIONAL VISITOR COUNTER

Under the Guidance of
Guide Name : Mr. Ch. Anil Kumar
Designation : Assistant Professor

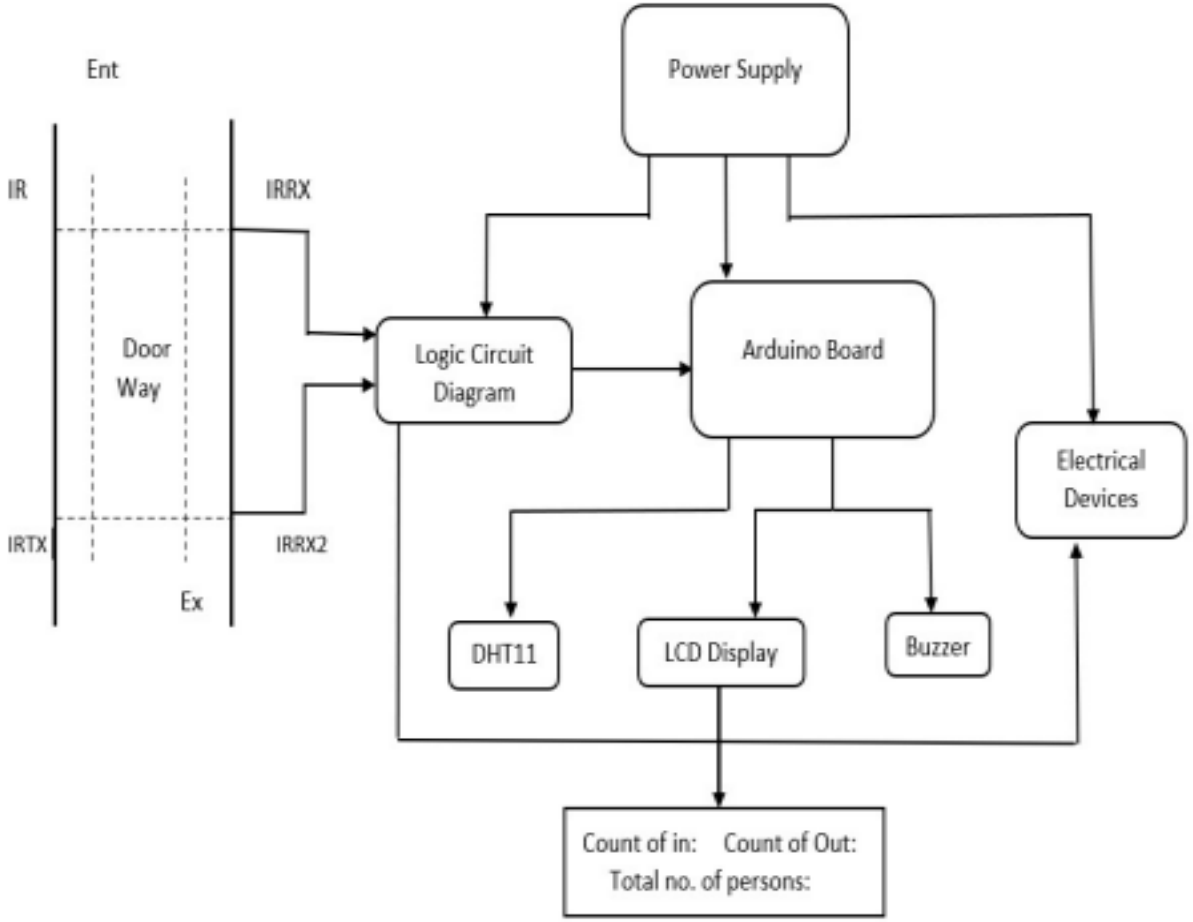
Team – 5
G Esha(19WH1A1221)
P Preethi(19WH1A1231)
M Harshini(19WH1A1233)
I Harshitha(19WH1A1257)

Summary of Stage I

- Stage 1 concludes counting no of visitors incoming and outgoing and display the count on LCD.

- We have used two IR sensors and Arduino as microprocessor

Architecture



Modules

- Visitor Counters
- Device Automation
- Environment Monitoring
- Buzzer

Functionality of Project

1. Visitor Counter

```
void IN()
{
    count++;
    lcd.clear();
    lcd.print("no of persons:");
    lcd.setCursor(0,1);
    lcd.print(count);
    delay(1000);
}

void OUT()
{
  count--;
    lcd.clear();
    lcd.print("no of persons");
    lcd.setCursor(0,1);
    lcd.print(count);
    delay(1000);
}
```

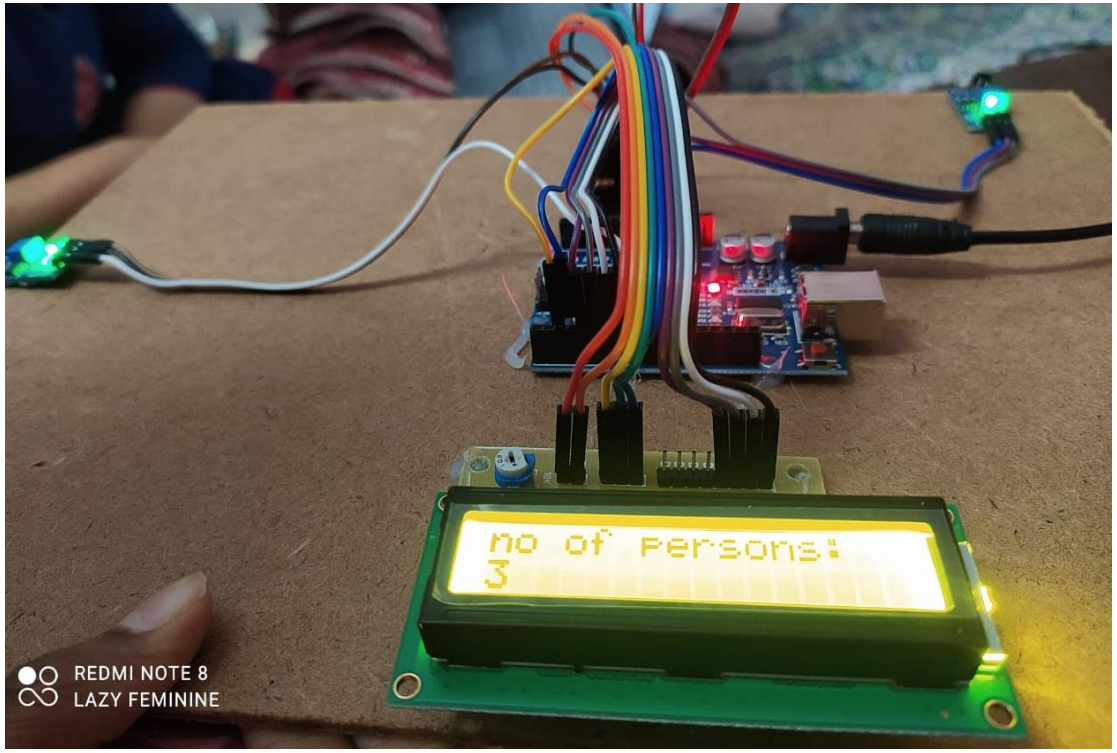


Fig 1: Count of the visitors

Functionality of Project

2. Device Automation

```
if(count<=0)
{
  lcd.clear();
  digitalWrite(light1, LOW);
  digitalWrite(light2, LOW);
  digitalWrite(light3, LOW);
  lcd.clear();
  lcd.print("No person in mall");
  lcd.setCursor(0,1);
  lcd.print("Light are Off");
  delay(1000);
}

else
{
  if(count>0)
  {
  digitalWrite(light1, HIGH);
  digitalWrite(fan1, HIGH);
  }
  else
  {
  digitalWrite(light1, LOW);
  digitalWrite(fan1, LOW);
  }
```

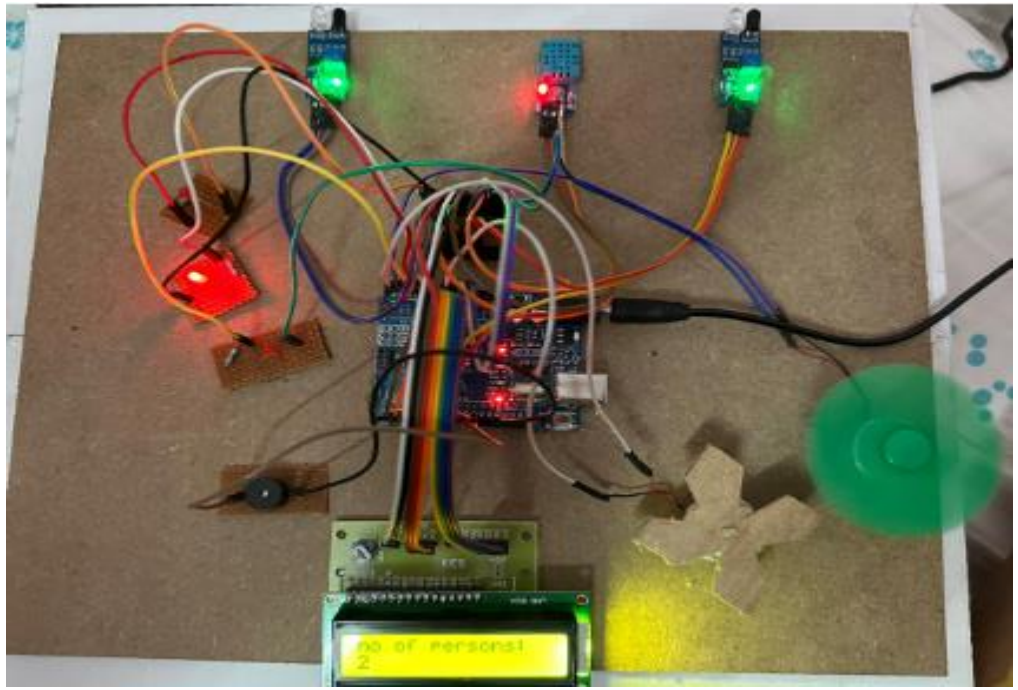


Fig 2: One light and fan are ON

Functionality of Project

```
if(count>5)
{
digitalWrite(light2, HIGH);
digitalWrite(fan2, HIGH);
}
else
{
digitalWrite(light2, LOW);
digitalWrite(fan2, LOW);
}
```

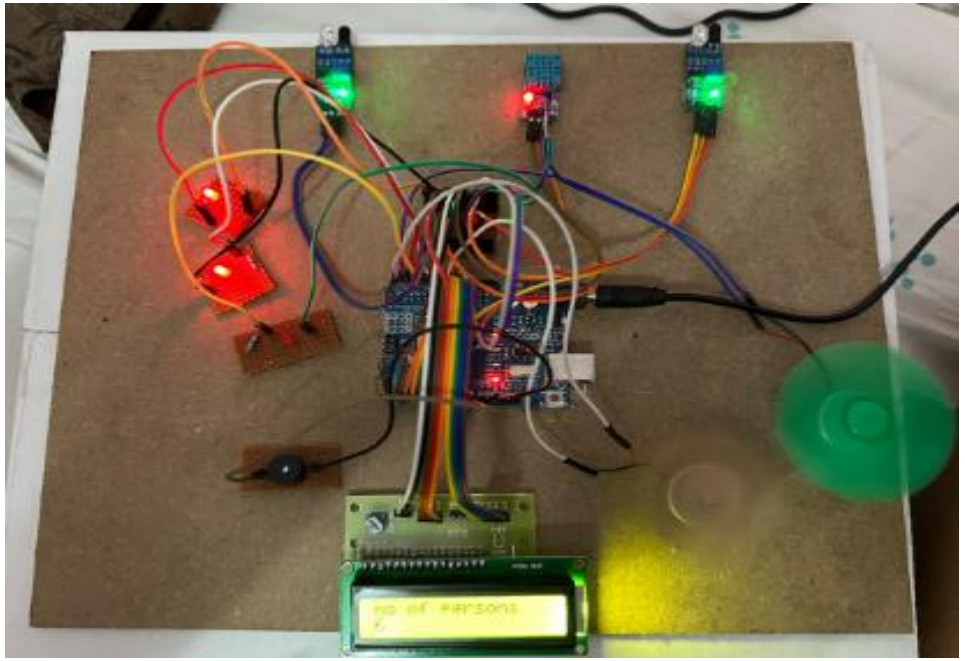


Fig 3 : Two lights and fans are ON

Functionality of Project

```
}
if(count>10)
{
digitalWrite(light3, HIGH);
}
else
{
digitalWrite(light3, LOW);
}
```

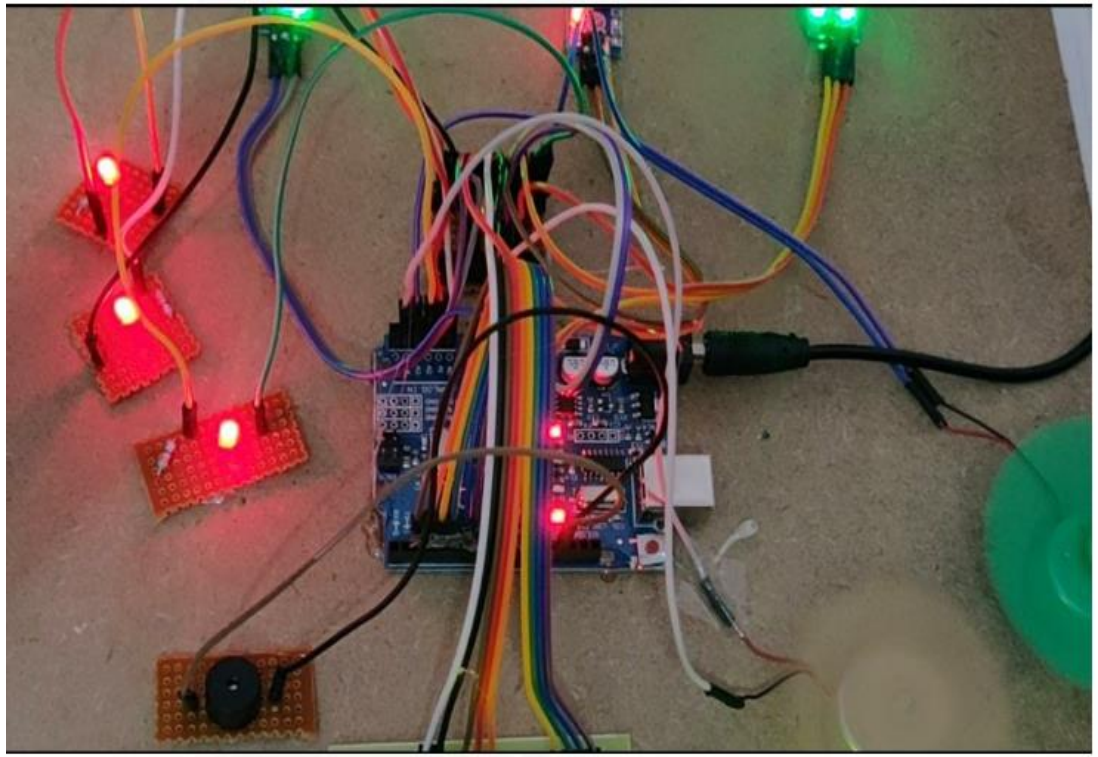


Fig 4: Three lights are ON

Functionality of Project

3. Environment Monitoring

```
String getTemperatureValue(){

   dhtObject.read(dht_apin);
   Serial.print("Temperature(C)= ");
   lcd.setCursor(0, 1);
   lcd.print("Temperature=");
   float  temp = dhtObject.temperature;
   Serial.println(temp);
   lcd.print(temp);
   delay(1000);
   return String(temp);

}


String getHumidityValue(){

   dhtObject.read(dht_apin);

   Serial.print(" Humidity in %=");
   lcd.clear();
   lcd.print("Humidity%=");
   float humidity = dhtObject.humidity;
   Serial.println(humidity);
   lcd.print(humidity);
   delay(1000);
   return String(humidity);
  }
```

Fig 5: Temp and Humidity

Functionality of Project

4. Buzzer

```
if(count>15)
{
digitalWrite(buz, HIGH);
}
else
{
digitalWrite(buz, LOW);
}
```

Fig 6: Buzzer

VISHNU
UNIVERSAL LEARNING

Conclusion

- Count of incoming and outgoing visitors is completed.
- Device automation is completed.
- Environment monitoring is completed.
- Publication work is in progress abstract introduction literature survey and components is done.

VISHNU
UNIVERSAL LEARNING

THANK YOU