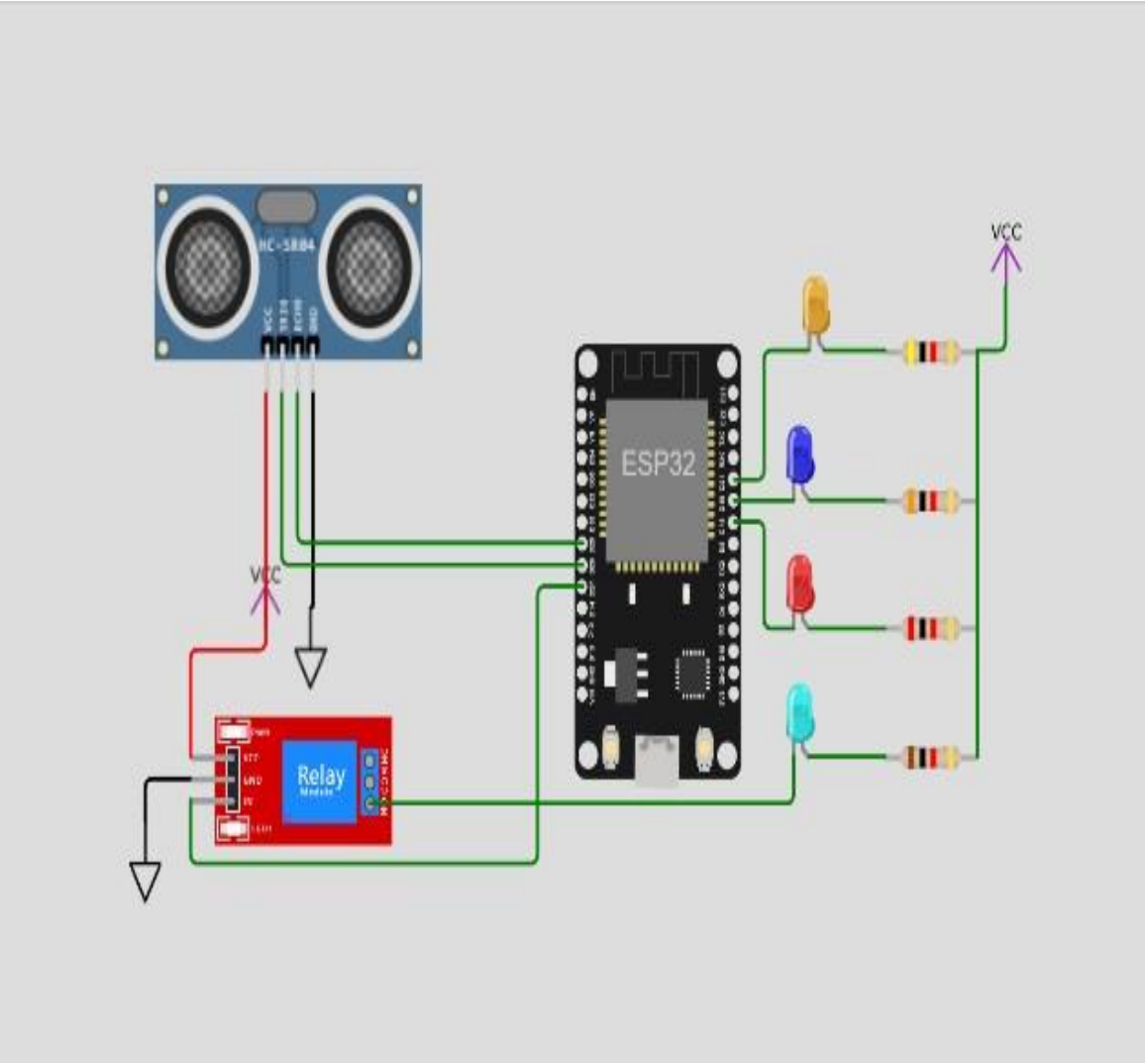
Project Design Phase-3

Date	18 October 2023
Team ID	444
Project Name	4123-Smart Water Management
Team Name	Proj_227234_Team_1
Team Members	5

Smart Water Management Block Diagram:



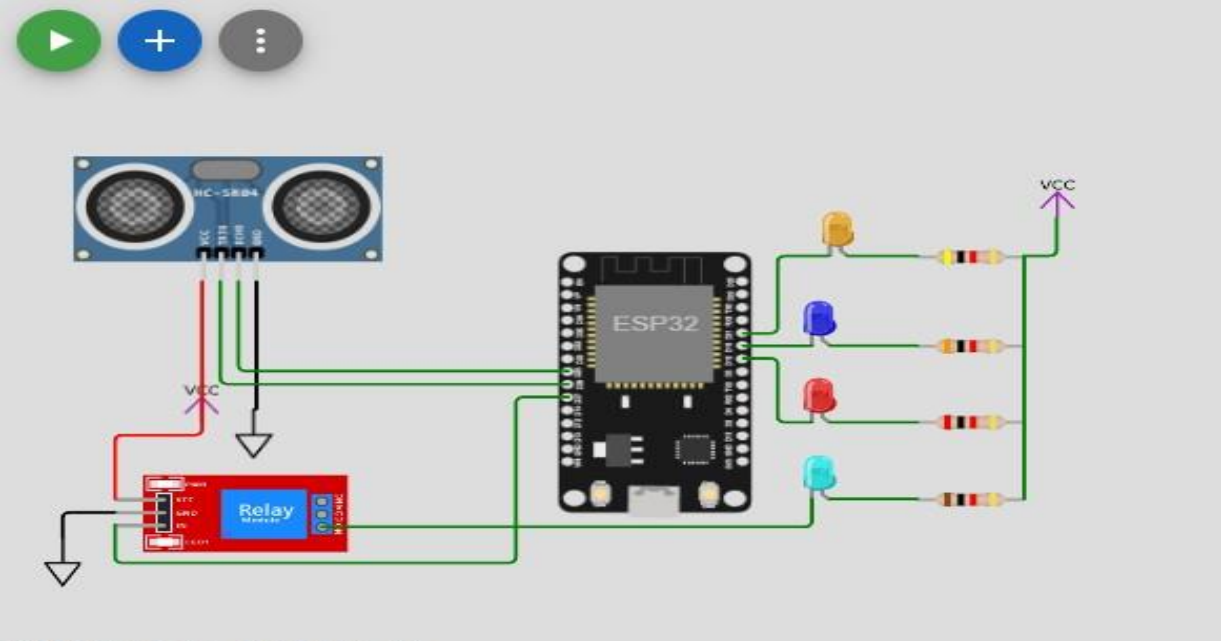
Program code for SWM:

sketch.ino | diagram.json | Library Manager

```
#define PIN_TRIG 26
#define PIN_ECHO 25
#define LOWLED 18
#define MIDLED 19
#define HIGHLED 21
#define MOTOR 27
unsigned int level = 0;

void setup() {

  pinMode(LOWLED, OUTPUT);
  pinMode(MIDLED, OUTPUT);
  pinMode(HIGHLED, OUTPUT);
  pinMode(MOTOR, OUTPUT);
  digitalWrite(LOWLED, HIGH);
  digitalWrite(MIDLED, HIGH);
  digitalWrite(HIGHLED, HIGH);
  digitalWrite(MOTOR, LOW);

  Serial.begin(115200);
  pinMode(PIN_TRIG, OUTPUT);
  pinMode(PIN_ECHO, INPUT);
}

void loop() {
  // Start a new measurement:


  digitalWrite(PIN_TRIG, HIGH);
  delayMicroseconds(10);
  digitalWrite(PIN_TRIG, LOW);

  // Read the result:
  int duration = pulseIn(PIN_ECHO, HIGH);
  Serial.print("Distance in CM: ");
  Serial.println(duration / 58);
  Serial.print("Distance in inches: ");
  Serial.println(duration / 148);

  level = (duration / 10);

  if(level < 100)
  {
    digitalWrite(LOWLED, LOW);
    digitalWrite(MOTOR, HIGH);
    digitalWrite(HIGHLED, HIGH);
    digitalWrite(MIDLED, HIGH);
  }

  else if ((level > 200 ) && (level < 400))
  {
    digitalWrite(LOWLED, HIGH);
    digitalWrite(HIGHLED, HIGH);
    digitalWrite(MIDLED, LOW);
```

```
49
50      else if ((level > 200 ) && (level < 400))
51      {
52        digitalWrite(LOWLED, HIGH);
53        digitalWrite(HIGHLED, HIGH);
54        digitalWrite(MIDLED, LOW);
55      }
56
57      else if (level >= 400 )
58      {
59        digitalWrite(HIGHLED, LOW);
60        digitalWrite(MIDLED, HIGH);
61        digitalWrite(LOWLED, HIGH);
62        digitalWrite(MOTOR, LOW);
63      }
64      delay(1000);
65    }
66
```

OUTPUT:




```
Distance in inches: 60
Distance in CM: 153
Distance in inches: 60
Distance in CM: 153
Distance in inches: 60
Distance in CM: 153
Distance in inches: 60
```

Reference:https://wokwi.com/projects/378900005565787137