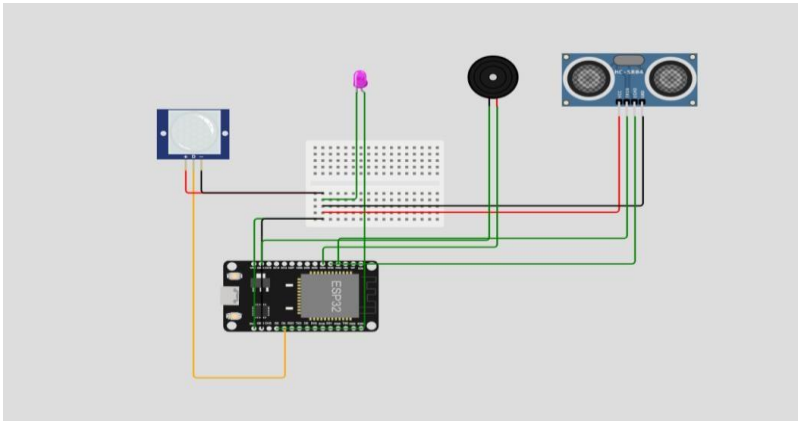
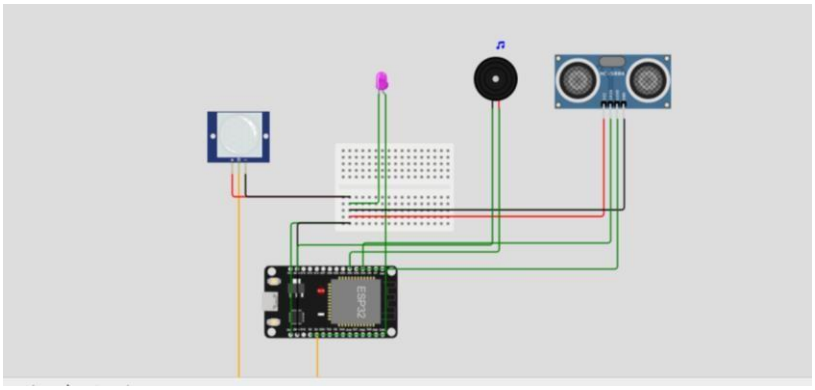
ASSIGNMENT 1

NAME: P.DHARSHINI

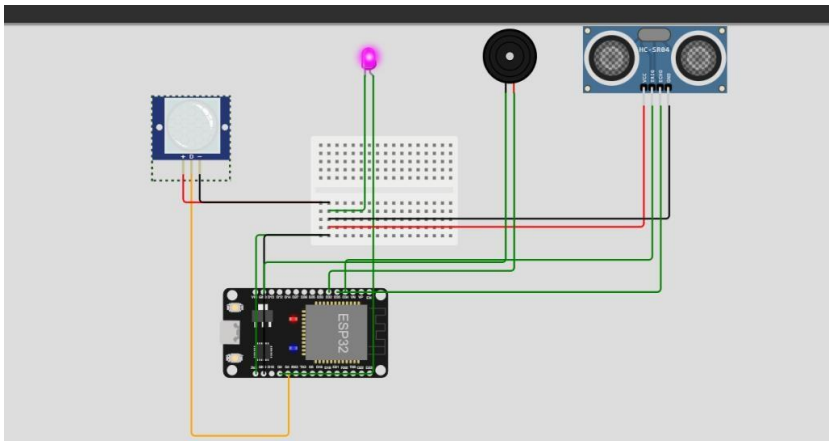
ROLL.NO E2214027



AUTOMATIC WATER TANK



AUTOMATIC LIGHT



PROGARAM:

```
#define LED_PIN 2
#define PIR_PIN 4
#define ECHO_PIN 35
#define TRIG_PIN 34
#define Buzzer_pin 32

void setup() {
  Serial.begin(115200);
pinMode(LED_PIN, OUTPUT);
pinMode(PIR_PIN, INPUT);
pinMode(Buzzer_pin, OUTPUT);
pinMode(TRIG_PIN, OUTPUT);
pinMode(ECHO_PIN, INPUT);
} float readDistanceCM() {
digitalWrite(TRIG_PIN, LOW);
delayMicroseconds(2);
digitalWrite(TRIG_PIN, HIGH);
delayMicroseconds(10);
digitalWrite(TRIG_PIN, LOW);   int
duration = pulseIn(ECHO_PIN, HIGH);
return duration * 0.034 / 2;
} void loop() {   if
(digitalRead(PIR_PIN) == HIGH) {
digitalWrite(LED_PIN, HIGH);
    Serial.println("Motion detected");
  } else {
digitalWrite(LED_PIN, LOW);
  }   delay(100); // Add a delay to reduce sensor readings and LED
flickering
   float distance =
readDistanceCM();
   bool isNearby = distance < 20;
digitalWrite(Buzzer_pin, isNearby);


  delay(100);
  }
```