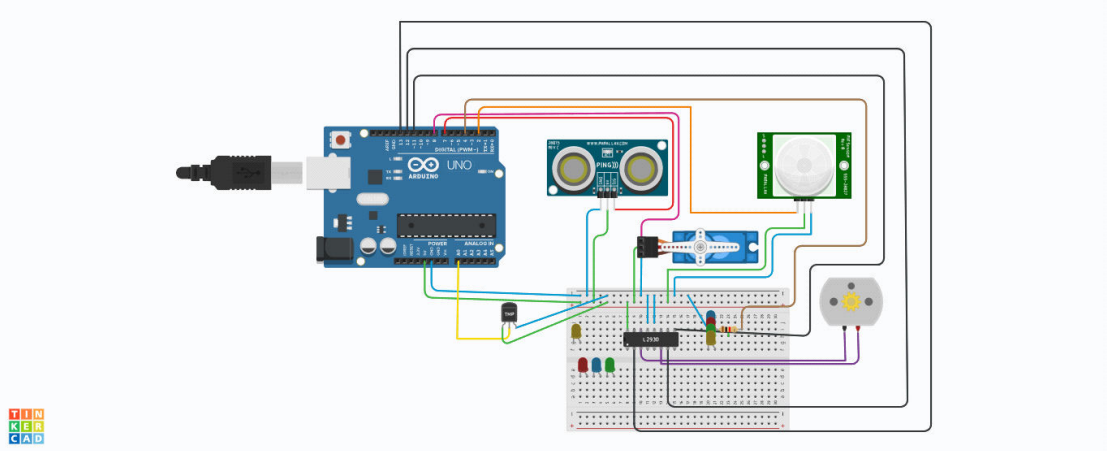
Smart homing system using two sensors

DIAGRAM:



CODE:

Smart home using ultrasconic sensor, led sensor

```
int distanceThreshold = 0;
```

```
int cm = 0;
int inches = 0;long
readUltrasonicDistance(int triggerPin,
int
echoPin)
{
  pinMode(triggerPin, OUTPUT); // Clear
the trigger
  digitalWrite(triggerPin, LOW);
  delayMicroseconds(2);
  // Sets the trigger pin to HIGH state for
10 microseconds
  digitalWrite(triggerPin, HIGH);
```

```
  delayMicroseconds(10);
  digitalWrite(triggerPin, LOW);
  pinMode(echoPin, INPUT);
  // Reads the echo pin, and returns the
sound wave travel time in microseconds
  return pulseIn(echoPin, HIGH);
}
void setup()
{
  Serial.begin(9600);
  pinMode(2, OUTPUT);
  pinMode(3, OUTPUT);
  pinMode(4, OUTPUT);
```

```
}
void loop()
{
  // set threshold distance to activate
LEDs
  distanceThreshold = 350;
  // measure the ping time in cm
  cm = 0.01723 *
readUltrasonicDistance(7, 6);
// convert to inches by dividing by 2.54
  inches = (cm / 2.54);
  Serial.print(cm);
  Serial.print("cm, ");
```

```
  Serial.print(inches);
  Serial.println("in");
if (cm > distanceThreshold) {
  digitalWrite(2, LOW);
  digitalWrite(3, LOW);
  digitalWrite(4, LOW);
  }
  if (cm <= distanceThreshold && cm >
distanceThreshold - 100) {
  digitalWrite(2, HIGH);
  digitalWrite(3, LOW);
  digitalWrite(4, LOW);
  }
```

```
if (cm <= distanceThreshold - 100 && cm
>
distanceThreshold - 250) {
  digitalWrite(2, HIGH);
  digitalWrite(3, HIGH);
  digitalWrite(4, LOW);
  }
  if (cm <= distanceThreshold - 250 &&
cm
> distanceThreshold - 350) {
  digitalWrite(2, HIGH);
  digitalWrite(3, HIGH);
  digitalWrite(4, HIGH);
  }
```

```
  if (cm <= distanceThreshold - 350) {
  digitalWrite(2, HIGH);
  digitalWrite(3, HIGH);
  digitalWrite(4, HIGH);
  }
  delay(100); // Wait for 100
millisecond(s)
}
```