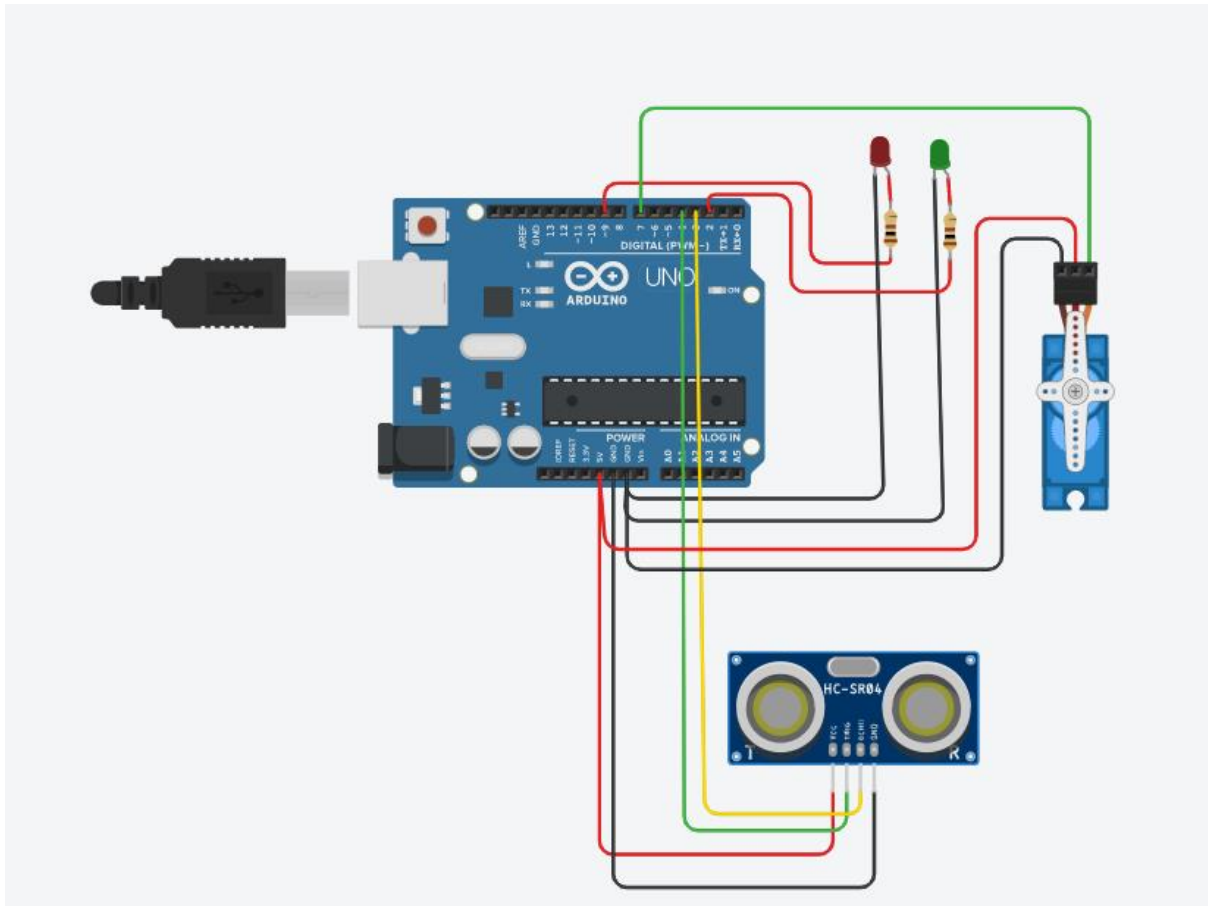# HOME AUTOMATION IN TINKERCAD
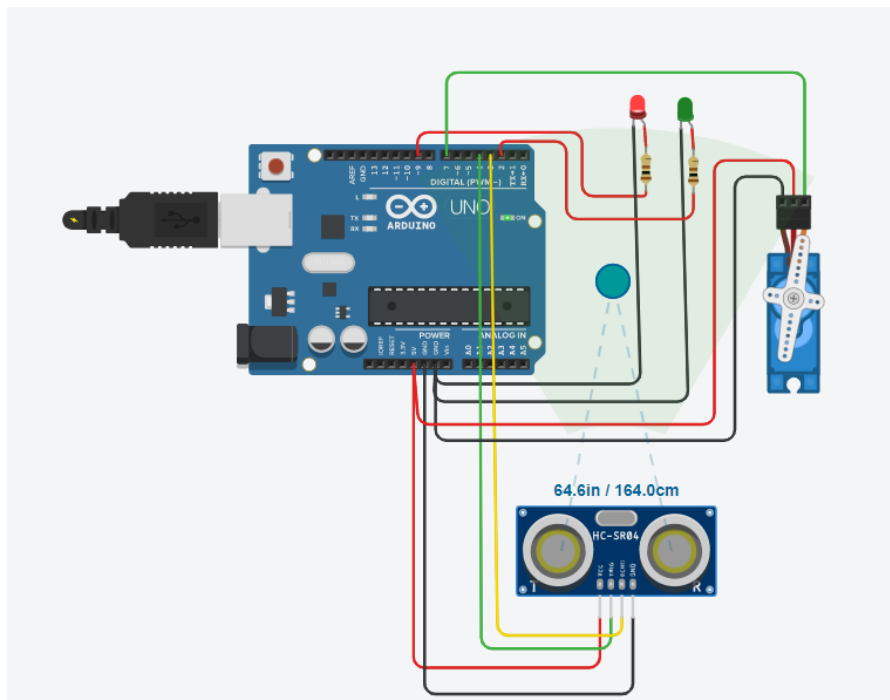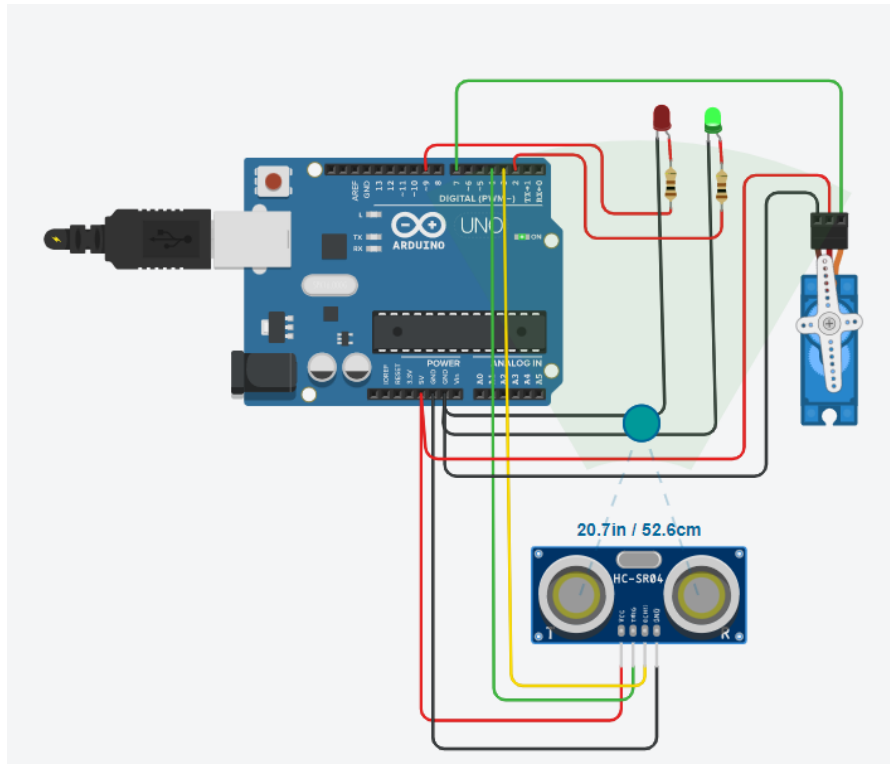
NAME: SANGAVI.D

REGISTER NUMBER: 2019504051

CIRCUIT BEFORE SIMULATION

CIRCUIT AFTER SIMULATION

CODE

```
#include<Servo.h>

Servo servo;

const int trig = 4;

const int echo = 3;

int red = 9;

int green = 2;

long dura,cm;

void setup()

{

  pinMode(trig, OUTPUT);

  pinMode(echo, INPUT);

  pinMode(red, OUTPUT);

  pinMode(green, OUTPUT);

  servo.attach(7);

  servo.write(0);

}

void loop()

{

  digitalWrite(trig,LOW);

  delay(100);

  digitalWrite(trig,HIGH);

  delay(100);

  digitalWrite(trig,LOW);


  dura = pulseIn(echo,HIGH);

  cm = dura*0.034/2;


  if(cm>=60)
```

```
  {

   digitalWrite(red,HIGH);

   digitalWrite(green,LOW);

   servo.write(180);


  }

  else if(cm<=59)

  {

   digitalWrite(red,LOW);

   digitalWrite(green,HIGH);

   servo.write(0);

  }

}
```

WORKING

- Here, ultrasonic sensor is used to measure the distance.
- When distance is greater than or equal to 60 centimetres the red led glows and the servo motor is at 0.
- If the distance is less than 60 centimetres the green LED glows and servo motor which is considered to be door knob turns 180.