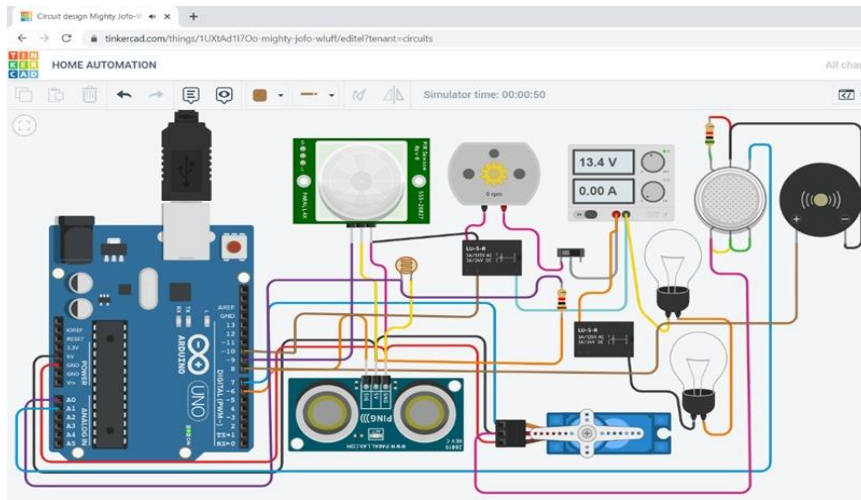


Assignment -1 Tinker Cad Circuit

Assignment Date	12 September 2022
Student Name	Ms. Shudarvizhi K L
Student Roll Number	611219106067
Maximum Marks	2 Marks



Smart Home automation in Tinker cad, using sensors

Code:

Code:

```
#include <Servo.h>
```

```
int output1Value = 0;  
int sen1Value = 0;  
int sen2Value = 0;  
int const gas_sensor =  
A1;  
int const LDR = A0;  
int limit = 400;
```

```
long  
readUltrasonicDistance  
(int triggerPin, int  
echoPin)  
{  
  pinMode(triggerPin,  
    OUTPUT);
```

```
digitalWrite(triggerPin,  
  LOW);
```

```
delayMicroseconds(2);
```

```
digitalWrite(triggerPin,  
  HIGH);
```

```

delayMicroseconds(10)
;

digitalWrite(triggerPin,
LOW);
  pinMode(echoPin,
INPUT);
  return
pulseIn(echoPin,
HIGH);
}

Servo servo_7;

void setup()
{
  Serial.begin(9600);

  pinMode(A0,
INPUT);

  pinMode(A1,INPUT);

  pinMode(13,
OUTPUT);

  servo_7.attach(7, 500,
2500);

pinMode(8,OUTPUT);

  pinMode(9, INPUT);

  pinMode(10,
OUTPUT);

  pinMode(4,
OUTPUT);

  pinMode(3,
OUTPUT);

}

void loop()
{

  int val1 =
analogRead(LDR);
  if (val1 > 500)
  {
    digitalWrite(13,
LOW);
    Serial.print("Bulb
ON = ");
    Serial.print(val1);
  }
  else
  {

```

```
        digitalWrite(13,
HIGH);
        Serial.print("Bulb
OFF = ");
        Serial.print(val1);
    }
}
```

```
    sen2Value =
digitalRead(9);
    if (sen2Value == 0)
    {
        digitalWrite(10,
LOW);
        digitalWrite(4,
HIGH);
        digitalWrite(3,
LOW);
        Serial.print("    || NO
Motion Detected    ");
    }
}
```

```
    if (sen2Value == 1)
    {
        digitalWrite(10,
HIGH);
        delay(5000);
        digitalWrite(4,
LOW);
        digitalWrite(3,
HIGH);
        Serial.print("
        || Motion
Detected!    ");
    }
}
```

```
int val =
analogRead(gas_sensor
);
    Serial.print("|| Gas
Sensor Value = ");
    Serial.print(val);
}
```

```
//val = map(val, 300,
750, 0, 100);
    if (val > limit)
    {
        tone(8, 650);
    }
    delay(300);
    noTone(8);
    sen1Value = 0.01723
*
    readUltrasonicDistance
(6, 6);
}
```

```
    if (sen1Value < 100)
    {
        servo_7.write(9
0);
    }
}
```

```
    Serial.print("
    || Door Open!
; Distance = ");

Serial.print(sen1 Value)
;
    Serial.print("\n");

    }
else
    {

        servo_7.write(0)
;
        Serial.print("
        || Door Closed!
; Distance = ");

Serial.print(sen1 Value)
;
    Serial.print("\n");
    }
    delay(10);
}
```