

Assignment -1

Assignment Date	19 September 2022
Student Name	Mr. S.Sathishkumar
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Maximum Marks	2 Marks

Question-1:

Write code for home automation using Arduino in Tinkercad.

Solution:

```
#include<Servo.h>
Servo s;
int t;
int n;
int c;
int p;
int a;
int b;
int distance;
void setup()
{
  Serial.begin(9600);
  pinMode(2,OUTPUT);
  pinMode(3,INPUT);
  pinMode(4,OUTPUT);
  pinMode(7,OUTPUT);
  pinMode(A0,INPUT);
  pinMode(8,INPUT);
  pinMode(13,OUTPUT);
  pinMode(12,OUTPUT);
  s.attach(4);
}
void loop()
{
  digitalWrite(2,HIGH);
  delayMicroseconds(10);
  digitalWrite(2,LOW);
  t=pulseIn(3,HIGH);
  distance=((t*0.034)/2)+2;

  if(distance<=60)
  {
    s.write(90);
  }
  else
```

```

{
  s.write(0);
}

n=analogRead(A0);
c=map(((n-20)*3.04),0,1023,-40,125);
Serial.println(c);

if(c>=20)
{
  digitalWrite(7,HIGH);
}
else
{
  digitalWrite(7,LOW);
}

p=digitalRead(8);
Serial.println(p);
digitalWrite(13,LOW);
if(p){
  Serial.println("***Motion Detected***");
  digitalWrite(13,HIGH);
}
delay(1000);
}

```

