Assignment 2:
(Using servo motor)

Code:

```
#include<Servo.h>          //servo header file
const int MIN_DIST = 100; // centimeters
Servo s;                   //
void setup()
{
  Serial.begin(9600);
  pinMode(2, OUTPUT);    // set arduino pin 2 to output mode
  pinMode(3, INPUT);     // set arduino pin 3 to input mode
  s.attach(7);           // attaches the servo on pin 7 to the servo object
  s.write(0);
}
void loop()
{
  digitalWrite(2, HIGH);
  delayMicroseconds(10);
  digitalWrite(2, LOW);    // generate 10-microsecond pulse to TRIG pin

  float dur = pulseIn(3, HIGH);
  float dis = (dur*0.0343)/2;       // calculate the distance
  if(dis <MIN_DIST)
     s.write(90);       // rotate servo motor to 90 degree to open garage door

  delay(2000);
  s.write(0);            // rotate servo motor to 0 degree to close garage door

  Serial.print("Distance in cm: ");
  Serial.println(dis);//display the dsitance
}
```

OUTPUT: