Code1:


```
4  int en2=6;
5  int in1=5;
6  int in2=4;
7  int in3=2;
8  int in4=3;
9  int trigpin=9;
10 int echopin=8;
11 int distance=0;
12 int duration=0;
13 void setup()
14 {
15   pinMode(en1,OUTPUT);
16   pinMode(en2,OUTPUT);
17   pinMode(in1,OUTPUT);
18   pinMode(in2,OUTPUT);
19   pinMode(in3,OUTPUT);
20   pinMode(in4,OUTPUT);
21   pinMode(trigpin,OUTPUT);
22   pinMode(echopin,INPUT);
23
24   digitalWrite(in1,LOW);
25   digitalWrite(in2,LOW);
26   digitalWrite(in3,LOW);
27   digitalWrite(in4,LOW);
28   Serial.begin(9600);
29 }
30
31 void loop()
32 {
33   digitalWrite(trigpin,LOW);
34   delay(50);
35   digitalWrite(trigpin,HIGH);
36   delayMicroseconds(10);
37   digitalWrite(trigpin,LOW);
38   duration=pulseIn(echopin,HIGH);
```
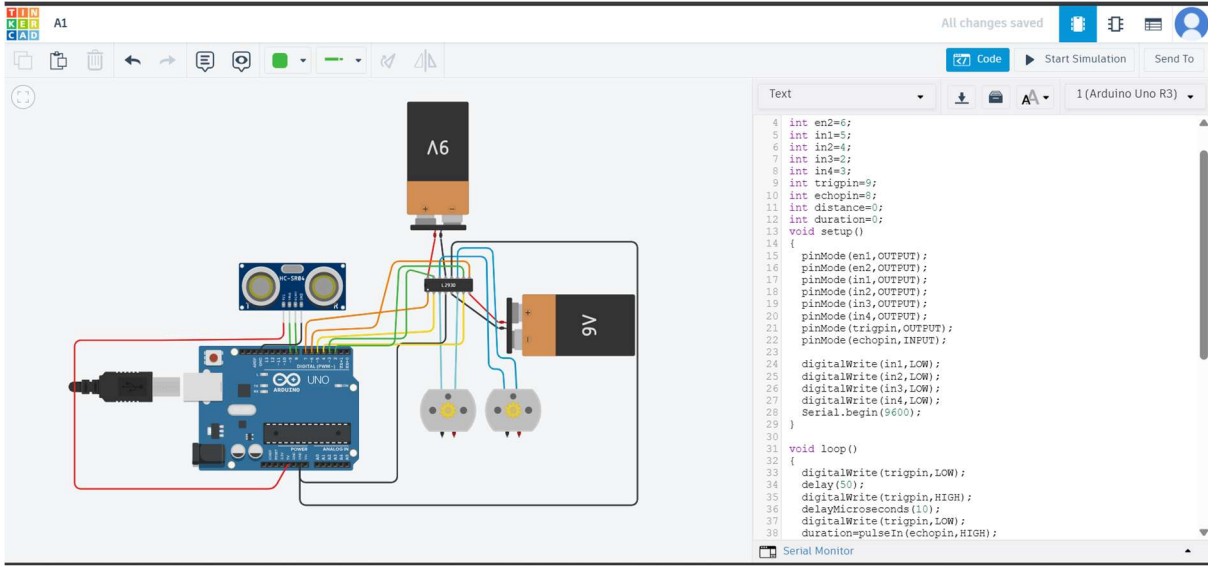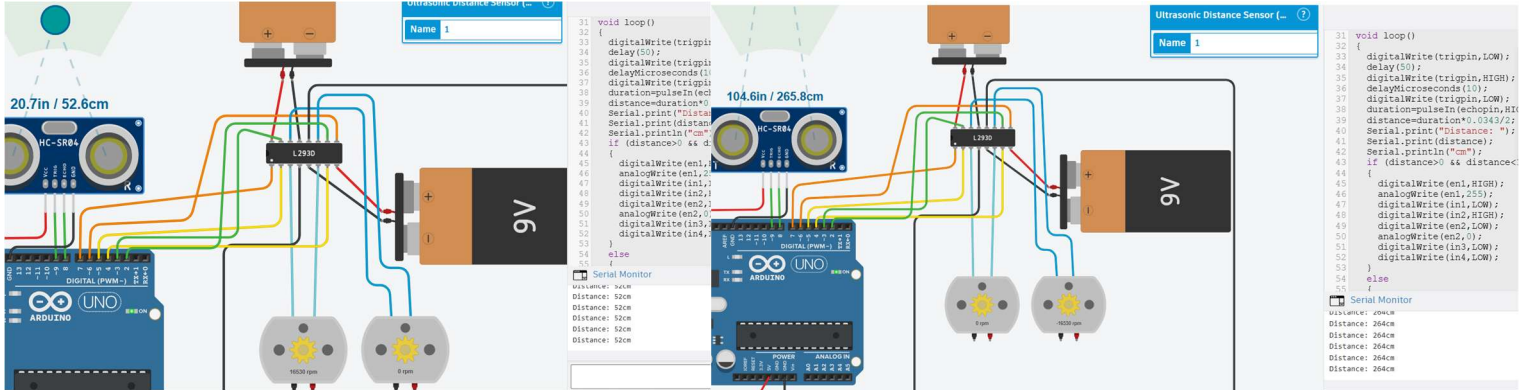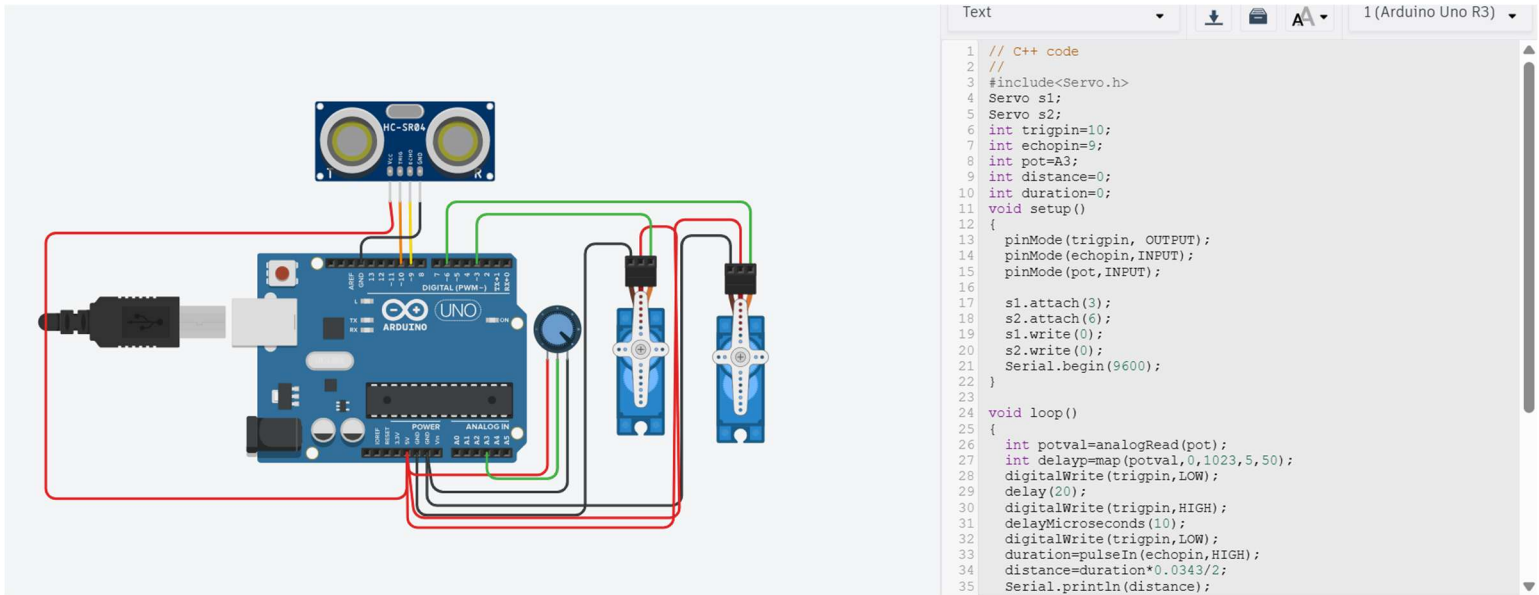
```
void loop()
{
  digitalWrite(trigpin,LOW);
  delay(50);
  digitalWrite(trigpin,HIGH);
  delayMicroseconds(10);
  digitalWrite(trigpin,LOW);
  duration=pulseIn(echopin,HIGH);
  distance=duration*0.0343/2;
  Serial.print("Distance: ");
  Serial.print(distance);
  Serial.println("cm");
  if (distance>0 && distance<150)
  {
    digitalWrite(en1,HIGH);
    analogWrite(en1,255);
    digitalWrite(in1,LOW);
    digitalWrite(in2,HIGH);
    digitalWrite(en2,LOW);
    analogWrite(en2,0);
    digitalWrite(in3,LOW);
    digitalWrite(in4,LOW);
  }
  else
  {
    digitalWrite(en1,LOW);
    analogWrite(en1,0);
    digitalWrite(in1,LOW);
    digitalWrite(in2,LOW);
    digitalWrite(en2,HIGH);
    analogWrite(en2,255);
    digitalWrite(in3,LOW);
    digitalWrite(in4,HIGH);
  }
}
```

Output:

Code2:


```cpp
// C++ code
//
#include<Servo.h>
Servo s1;
Servo s2;
int trigpin=10;
int echopin=9;
int pot=A3;
int distance=0;
int duration=0;
void setup()
{
  pinMode(trigpin, OUTPUT);
  pinMode(echopin,INPUT);
  pinMode(pot,INPUT);

  s1.attach(3);
  s2.attach(6);
  s1.write(0);
  s2.write(0);
  Serial.begin(9600);
}

void loop()
{
  int potval=analogRead(pot);
  int delayp=map(potval,0,1023,5,50);
  digitalWrite(trigpin,LOW);
  delay(20);
  digitalWrite(trigpin,HIGH);
  delayMicroseconds(10);
  digitalWrite(trigpin,LOW);
  duration=pulseIn(echopin,HIGH);
  distance=duration*0.0343/2;
  Serial.println(distance);
```
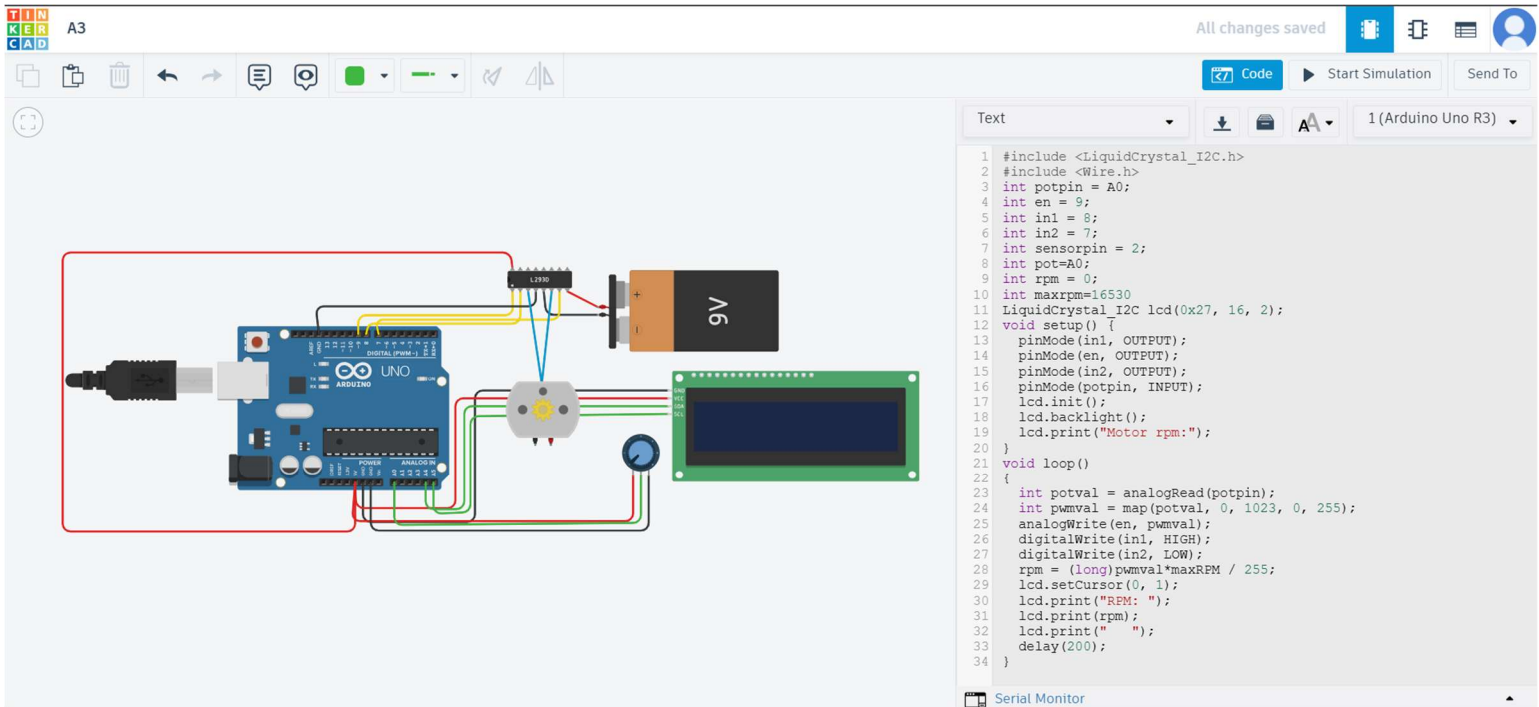
```cpp
void loop()
{
  int potval=analogRead(pot);
  int delayp=map(potval,0,1023,5,50);
  digitalWrite(trigpin,LOW);
  delay(20);
  digitalWrite(trigpin,HIGH);
  delayMicroseconds(10);
  digitalWrite(trigpin,LOW);
  duration=pulseIn(echopin,HIGH);
  distance=duration*0.0343/2;
  Serial.println(distance);
  int delayu=map(distance,0,332,5,50);
  for(int i=0;i<=180;i++)
  {
    s1.write(i);
    delay(delayp);
    s2.write(i);
    delay(delayu);
  }
  for(int i=180;i>=0;i--)
  {
    s1.write(i);
    delay(delayp);
    s2.write(i);
    delay(delayu);
  }
}
```

Ouput:

https://www.tinkercad.com/things/2Gi9ZtZkKLi-a2-servo-speed-control?sharecode=PfYQJSGw2e0iGsJCgMV0fgZa2LoQxwsFpCdQVFiqrbY

Code3:


```
 1  #include <LiquidCrystal_I2C.h>
 2  #include <Wire.h>
 3  int potpin = A0;
 4  int en = 9;
 5  int in1 = 8;
 6  int in2 = 7;
 7  int sensorpin = 2;
 8  int pot=A0;
 9  int rpm = 0;
10  int maxrpm=16530
11  LiquidCrystal_I2C lcd(0x27, 16, 2);
12  void setup() {
13    pinMode(in1, OUTPUT);
14    pinMode(en, OUTPUT);
15    pinMode(in2, OUTPUT);
16    pinMode(potpin, INPUT);
17    lcd.init();
18    lcd.backlight();
19    lcd.print("Motor rpm:");
20  }
21  void loop()
22  {
23    int potval = analogRead(potpin);
24    int pwmval = map(potval, 0, 1023, 0, 255);
25    analogWrite(en, pwmval);
26    digitalWrite(in1, HIGH);
27    digitalWrite(in2, LOW);
28    rpm = (long)pwmval*maxRPM / 255;
29    lcd.setCursor(0, 1);
30    lcd.print("RPM: ");
31    lcd.print(rpm);
32    lcd.print("   ");
33    delay(200);
34  }
```

Serial Monitor

Output:

Couldn't get output as the software keeps giving the error "invalid file header" when in fact the header included is proper and of correct syntax, assuming the library <LiquidCrystal_I2C.h> is broken