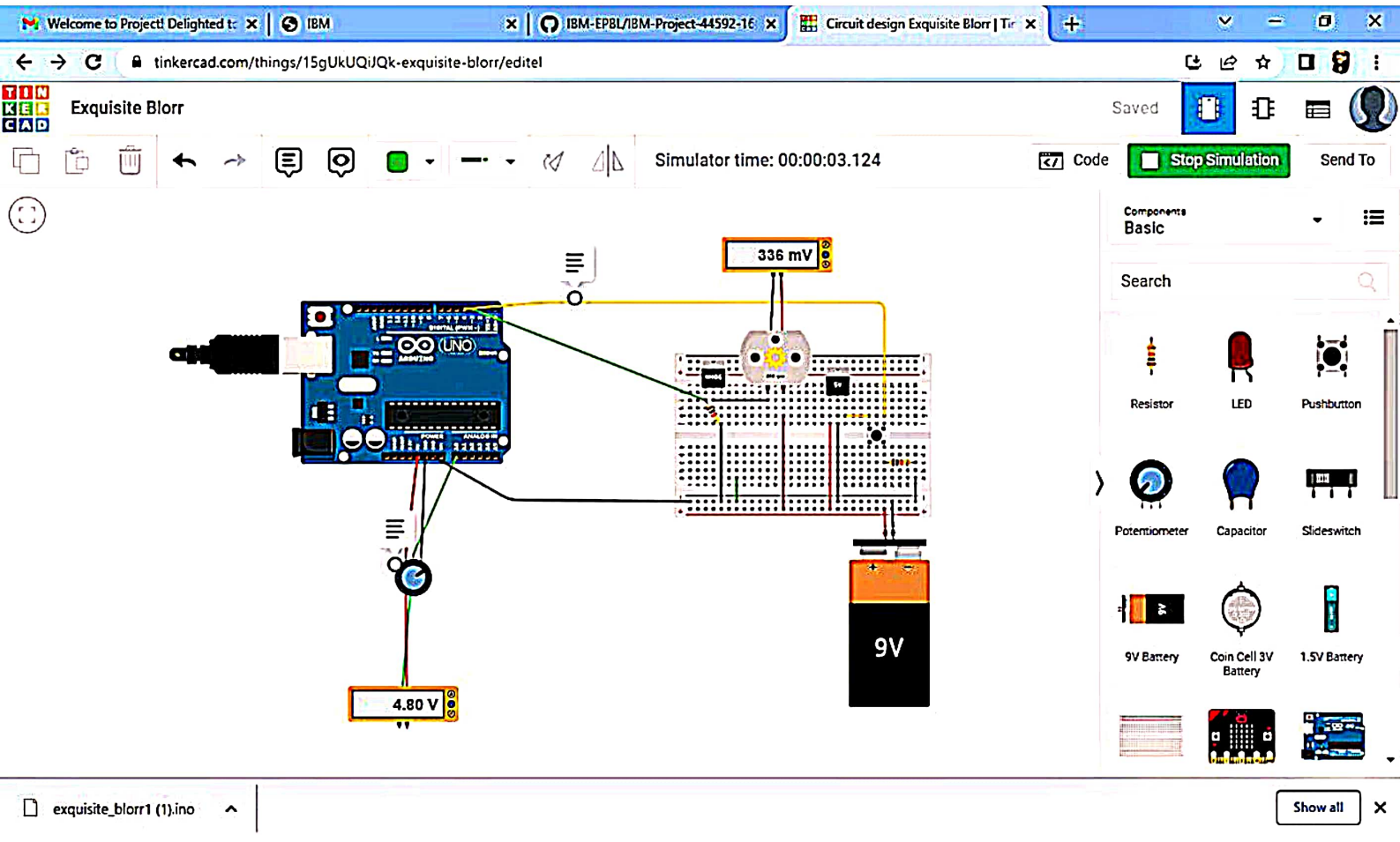
project deliverables

SPRINT 3

TEAM ID : PNT2022TMID50300



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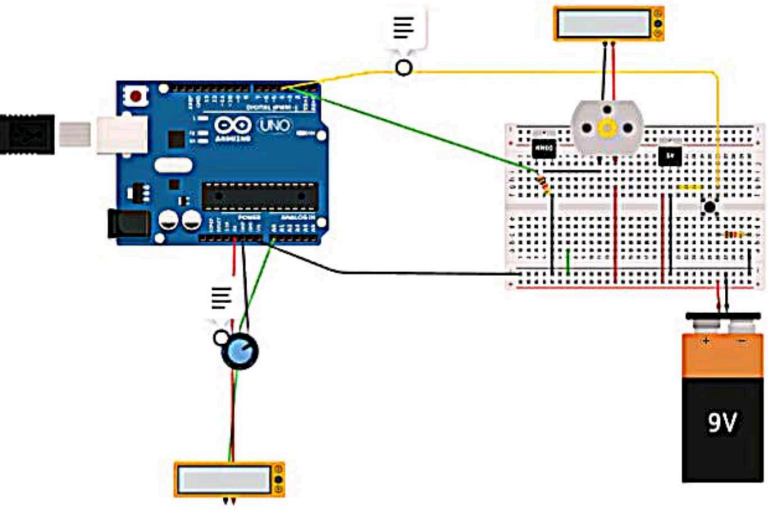
Code | Start Simulation | Send To



Text | 1 (Arduino Uno R3)

```
/*
  ReadAnalogVoltage
  Reads an analog input on pin 0, converts it to voltage, and pri

  OPEN THE SERIAL MONITOR TO VIEW THE OUTPUT >>
  Attach the center pin of a potentiometer to pin A0, and the out

  This example code is in the public domain.
*/
unsigned long startMillis;
unsigned long currentMillis;
static int ButtonValueOld;
static float IntermitOutput;
static float IntermitOutput1;
static float Output_Hold;
static bool SchoolReached=false;
static bool SchoolCrossed=false;
const unsigned long period = 100;  //the value is a number of mil
//100ms = 0.1seconds

// the setup routine runs once when you press reset:
void setup() {
  // initialize serial communication at 9600 bits per second:
  Serial.begin(9600);
  pinMode(3, OUTPUT);
  pinMode(4, INPUT);
}

// the loop routine runs over and over again forever:
void loop()
{
```

Serial Monitor

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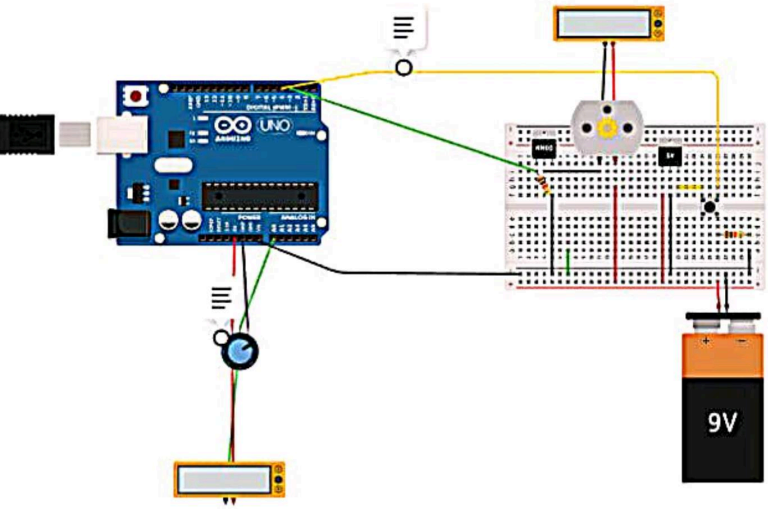

Text | 1 (Arduino Uno R3)

```
32
33    currentMillis = millis();  //get the current "time" (actually t
34    if (currentMillis - startMillis >= period)  //test whether the
35    {
36      Task_100ms();
37      startMillis = currentMillis;  //IMPORTANT to save the start t
38    }
39  }
40
41  void Task_100ms()
42  {
43    // read the input on analog pin A0:
44    int sensorValue = analogRead(A0);
45
46    // read the input on Digital pin 4:
47    int ButtonValue = digitalRead(4);
48
49    //Map the senor value according to OUTPUT
50    int outputValue = map(sensorValue, 0, 1023, 0, 255);
51
52    // change the analog out value If Button Pressed
53    if(ButtonValue==HIGH)
54    {
55      if(outputValue>100)
56      {
57        if(ButtonValueOld==LOW)
58        {
59          Output_Hold = outputValue;
60        }
61        //Filtering the Output to 100
62
63
```

Serial Monitor

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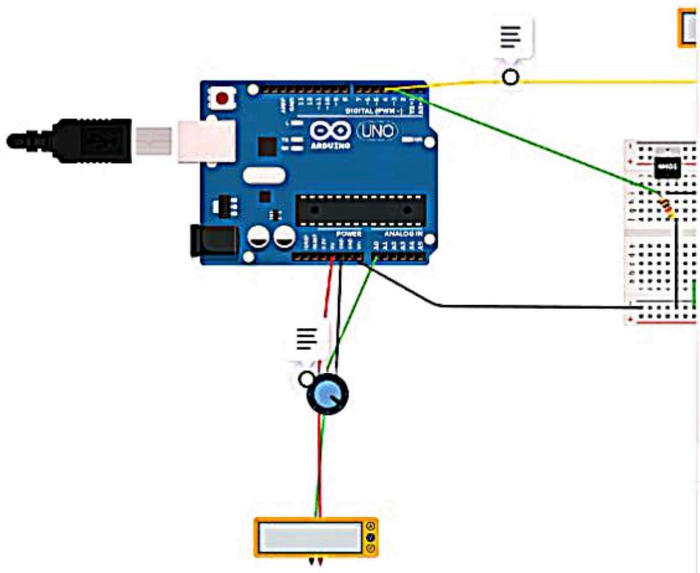

Text | 1 (Arduino Uno R3)

```
73
74      outputValue = Output_Hold;
75    }
76
77  if((ButtonValue==LOW && ButtonValueOld==HIGH && SchoolReached==
78  {
79      if(ButtonValueOld==HIGH)
80      {
81        SchoolCrossed = true;
82        SchoolReached = false;
83      }
84
85      Output_Hold = Output_Hold+((outputValue-Output_Hold)*0.1/1)
86
87      if((outputValue - Output_Hold) <= 2 )
88      {
89        //Serial.println((outputValue - Output_Hold));
90        SchoolCrossed = false;
91      }
92    outputValue = Output_Hold;
93
94
```

Serial Monitor

Send | Clear