

Program no 7

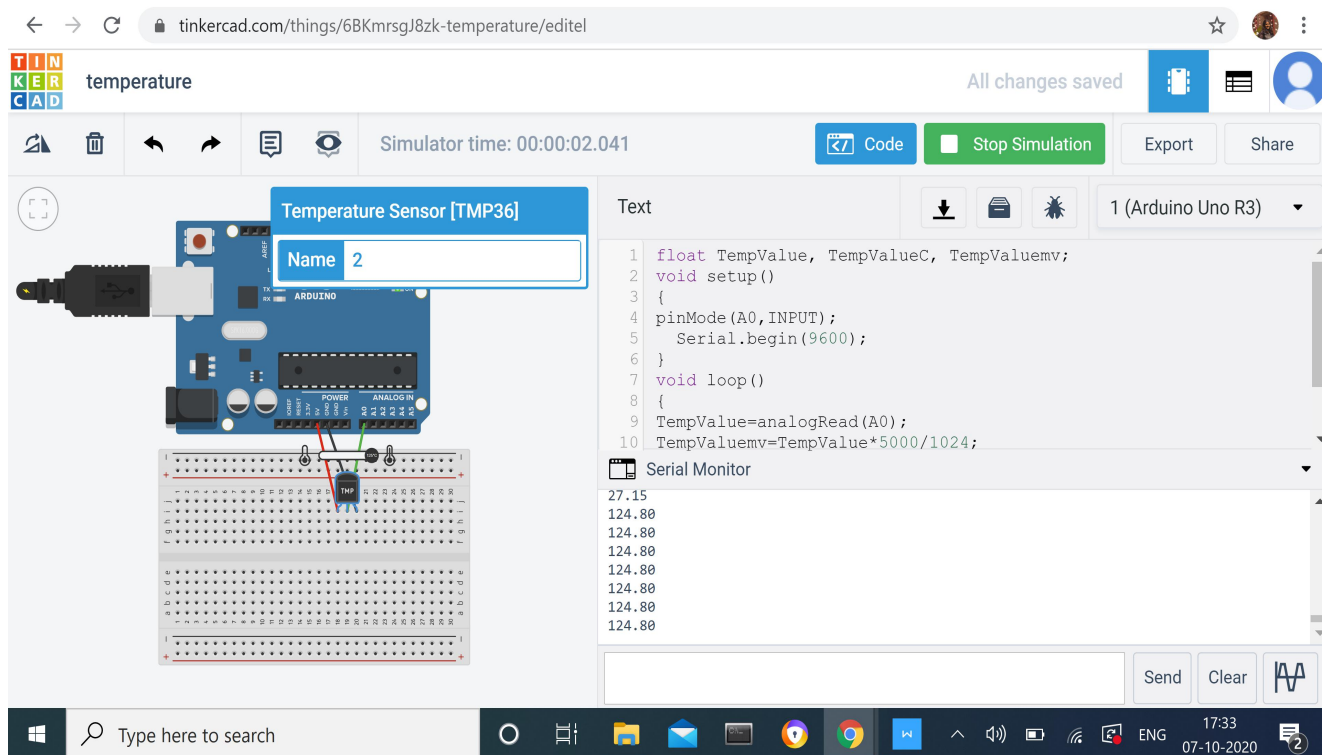
Program Title Temperature sensor

Aim: Converts degree in Celsius to Fahrenheit

Hardware Required

- Arduino Board
Temperature sensor(TM36)

Circuit Diagram



The screenshot shows the Tinkercad web interface for a temperature sensor project. The circuit diagram on the left shows an Arduino Uno R3 connected to a Temperature Sensor [TMP36]. The sensor is connected to the Arduino's A0 pin. The code in the Serial Monitor shows the sensor reading 27.15, which is converted to 124.80 degrees Fahrenheit.

```
1 float TempValue, TempValueC, TempValueF;
2 void setup()
3 {
4   pinMode(A0, INPUT);
5   Serial.begin(9600);
6 }
7 void loop()
8 {
9   TempValue=analogRead(A0);
10  TempValueF=TempValue*5000/1024;
```

Serial Monitor output:

```
27.15
124.80
124.80
124.80
124.80
124.80
124.80
124.80
```

CODE:

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Experiment 1: → Temperature Sensor .

```
float TempValue, TempValueC, TempValuemv;
```

```
void Setup()
```

```
{
```

```
  pinMode(A0, INPUT);
```

```
  Serial.begin(9600);
```

```
}
```

```
void loop()
```

```
{
```

```
  TempValue = analogRead(A0);
```

```
  TempValuemv = TempValue * 5000 / 1024;
```

```
  TempValueC = (TempValuemv / 10) + (-50);
```

```
  Serial.println(TempValueC);
```

```
}
```

Observation /Output:

Converts degree in Celsius to Fahrenheit

