

Project Development Phase
Sprint - 2 (Soil Monitoring System)

Date	10 October 2022
Team ID	PNT2022TMID00408
Project Name	SmartFarmer - IoT Based Smart Farming Application

Aim:

To design and develop a soil monitoring system based on soil parameters using tinkercad application and arduino.

Apparatus required :

- Breadboard - Small
- Arduino UNO R3
- Piezo
- Soil Moisture Sensor
- LED
- Wires

Program :

```
int moisture_data = 0;
```

```
void setup()
```

```
{
```

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

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

```
    pinMode(12, OUTPUT);
```

```
    pinMode(6, OUTPUT);
```

```
}
```

```
void loop()
```

```
{
```

```
    moisture_data = analogRead(A0);
```

```
Serial.println(moisture_data);

if (moisture_data < 21) {

    digitalWrite(12, HIGH);

    digitalWrite(6, HIGH);

} else {

    digitalWrite(12, LOW);

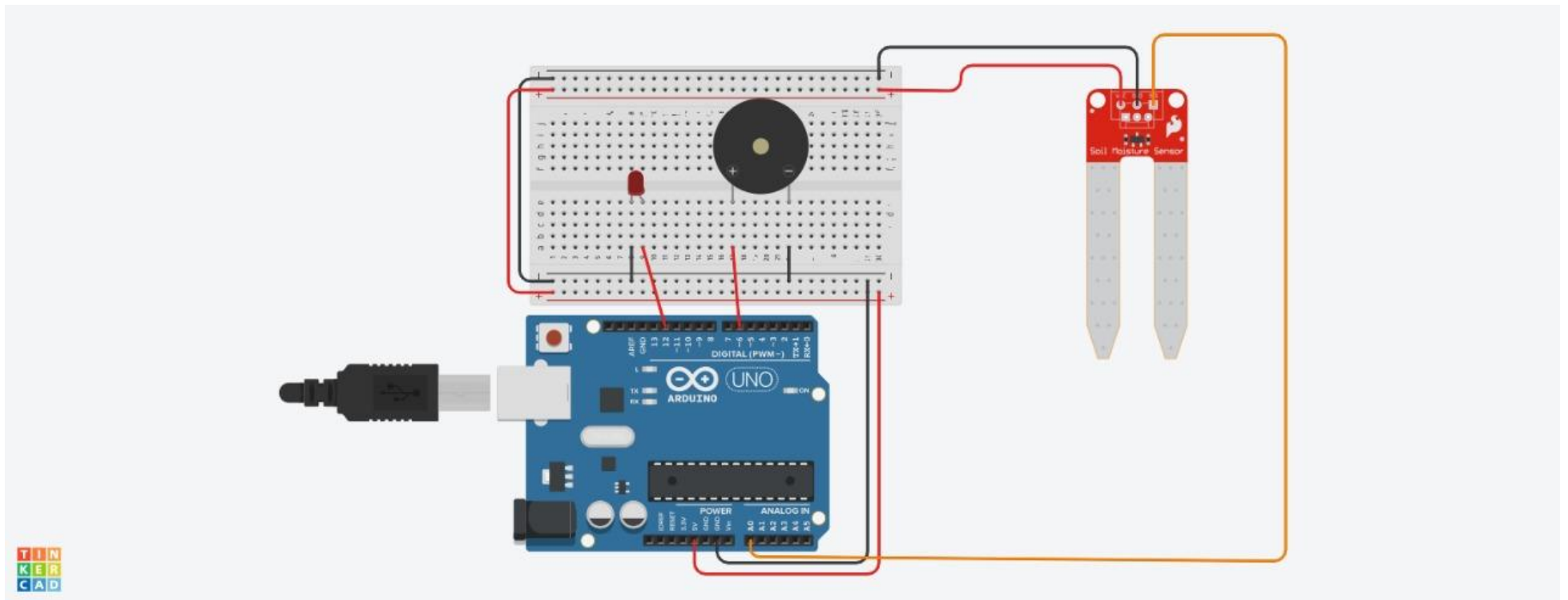
    digitalWrite(6, LOW);

}

delay(10); // Delay a little bit to improve simulation performance

}
```

Output :



Result :

Thus, to design and develop a soil monitoring system based on soil parameters using tinkercad application and arduino has been successfully completed.