Practical No. 1

Aim: Introduction to Basic IoT Components.

Objectives:

1. To learn Arduino UNO basics
2. Write a program to blink Arduino onboard LED and to interface external LED with Arduino.

Theory:

Hardware:

Arduino board

LED

**Jumper wires**

Resistor (220 ohms)

Function:

The Arduino board is a microcontroller that can be programmed to control electronic devices.

The LED is a light-emitting diode, which is a semiconductor device that emits light when current flows through it.

The resistor protects the LED from too much current, which could damage it.

The jumper wires are used to connect the Arduino board to the LED and resistor.

Circuit Diagram: (Download from tinkercad.com)
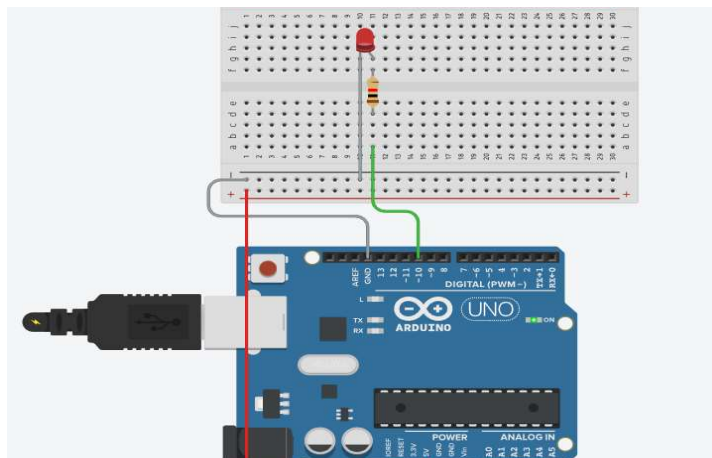
Program:

```
int brightness = 1;
void setup()
{
  pinMode(10, OUTPUT);
}
void loop() {
  digitalWrite(10, HIGH);
  delay(1000);
  digitalWrite(10, LOW);
  delay(1000);
}
```

Output: (Screenshot of LED On)

Conclusion: Thus, learnt about basic components of IoT like Arduino UNO,Breadboard,resisters,LED's and interfacing LED with Arduino.