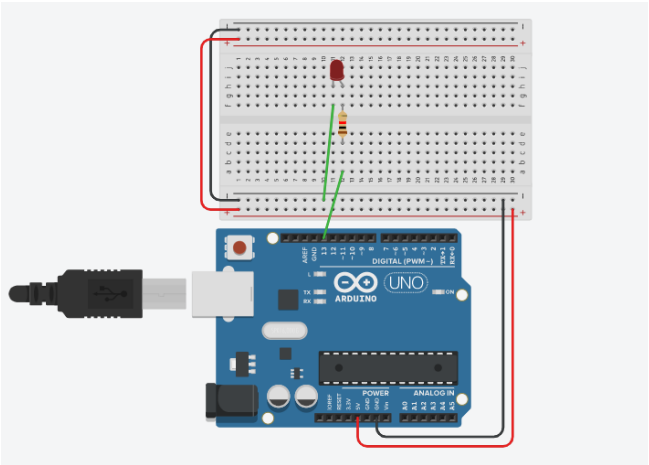
**Experiment No 1**

**Aim**: Control the LED with Arduino Board and tinkercad software.
**Objectives**: Knowledge of Arduino Board and control of output device (LED)
**Hardware Requirements:**

- 1x Breadboard
- 1x Arduino Uno
- 1x LED
- 1x 330Ω Resistor
- 2x Jumper Wires

**Circuit diagram:**




**Procedure:**

1. Create a new account in www.tinkercad.com or login with existing Gmail account.
2. Click on go to create project and create a new project
3. Open the project1 and add a description of your project as LED blinking
4. Go to create menu and select circuit
5. Select the Arduino and breadboard and place it in the design area.
6. Search the component LED and resistor, make connections as shown in above figures. Configure the resistor value as 330ohms
7. Attach the LED to an output pin of the Arduino D13.
8. Once the circuit connection is ready, programming the Arduino can be done in three ways.
   - ➢ Using code blocks
   - ➢ Using code blocks + text programming
   - ➢ With text program

**Code:**

```
/*
  Blink
  Turns on an LED on for one second, then off for one second, repeatedly.

  This example code is in the public domain.
 */

// Pin 13 has an LED connected on most Arduino  boards.
// give it a name:
int led = 13;

// the setup routine runs once when you press  reset:
void setup() {
  // initialize the digital pin as an  output.
  pinMode(led, OUTPUT);
}

// the loop routine runs over and over again  forever:
void loop() {
  digitalWrite(led, HIGH);   // turn the LED on (HIGH is the voltage  level)
  delay(1000);               // wait for a second
  digitalWrite(led, LOW);    // turn the LED off by making the voltage  LOW
  delay(1000);               // wait for a second
}
```

## Output: